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1954-1955 Bulletin

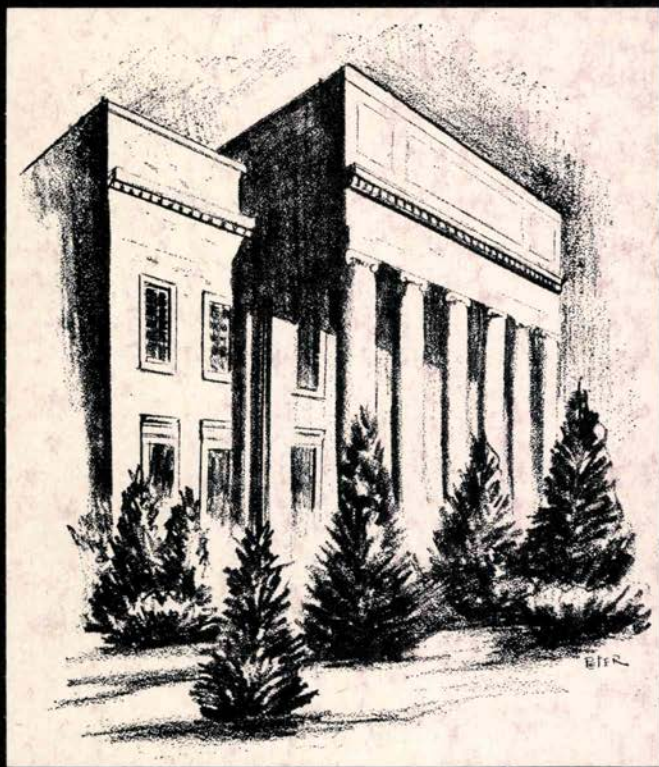
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UNIVERSITY
OF
DAYTON



BULLETIN

CATALOGUE 1954 • 1955

UNIVERSITY OF DAYTON BULLETIN

ONE HUNDRED AND FIFTH YEAR

CATALOGUE

1954-1955

COLLEGE OF ARTS AND SCIENCES

COLLEGE OF ENGINEERING

TECHNICAL INSTITUTE

VOLUME LXV

MARCH, 1954

NUMBER 2

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UNIVERSITY OF DAYTON

College of Arts and Sciences

DIVISION OF ARTS
DIVISION OF BUSINESS ADMINISTRATION
DIVISION OF EDUCATION
DIVISION OF SCIENCE

College of Engineering

CHEMICAL ENGINEERING
CIVIL ENGINEERING
ELECTRICAL ENGINEERING
INDUSTRIAL ENGINEERING
MECHANICAL ENGINEERING

Technical Institute

ELECTRICAL TECHNOLOGY
INDUSTRIAL TECHNOLOGY
MECHANICAL TECHNOLOGY

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The DIRECTOR OF ADMISSIONS
UNIVERSITY OF DAYTON
DAYTON 9, OHIO

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1954

SEPTEMBER

S	M	T	W	T	F	S
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OCTOBER

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NOVEMBER

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1955

JANUARY

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MAY

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JULY

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AUGUST

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CALENDAR

Day Classes, 1954-1955

FIRST SEMESTER

Sept. 7, 8, Tuesday, Wednesday, 8:20 a.m.	Placement tests for all new students, including transfer students, who have not already taken these tests at the University of Dayton Guidance Center.
Sept. 7, Tuesday	Registration for upperclassmen of Dayton area.
Sept. 8, Wednesday	Registration for all transfer students, including U. D. students changing to a different division.
Sept. 9, Thursday	Registration for all beginning freshmen, A to L.
Sept. 10, Friday	Registration for all beginning freshmen, M to Z.
Sept. 11, Saturday	Registration for boarding students and those whose permanent residence is not in Dayton.
Sept. 13, Monday	Classes begin at 8:00 a.m. Evening classes begin on Sept. 20.
Sept. 16, Thursday	Mass in honor of the Holy Ghost.
Sept. 18, Saturday	Last day for late registration or change in schedules.
Sept. 20, Monday	Evening classes begin.
Oct. 4, Monday	As of this date, all withdrawals are recorded as WP or WF.
Sept. 27-Oct. 1 Monday-Friday	Annual Retreat.
Nov. 1, Monday	Feast of All Saints. No day classes.
Nov. 6, Saturday	Mid-term progress reports.
Nov. 24, Wednesday	Thanksgiving recess begins at 1:00 p.m.
Nov. 28, Sunday	Campus students return before 11:50 p.m.
Nov. 29, Monday	Classes resume at 8:00 a.m.
Dec. 8, Wednesday	Feast of the Immaculate Conception. No day classes.
Dec. 18, Saturday	Christmas recess begins at 1:00 p.m.

1955

Jan. 3, Monday	Campus students return before 11:50 p.m. (First meal served on following day in campus dining room.)
Jan. 4, Tuesday	Classes resume at 8:00 a.m.
Jan. 22, Saturday	Chaminade Day.
Jan. 24-28 Monday-Friday	Semester examinations.

SECOND SEMESTER

Jan. 31, Feb. 1 Mon., Tues., 8:20 a.m.	Placement tests for all new students, including transfer students, who have not already taken these tests at the University of Dayton Guidance Center.
Feb. 2, Wednesday	Registration for students of Dayton area.
Feb. 3, Thursday	Consultation and registration for all new students, and for U. D. students transferring to a different division.
Feb. 4, Friday	Registration for boarding students and those whose permanent residence is not in Dayton.
Feb. 7, Monday	Classes begin at 8:00 a.m.
Feb. 12, Saturday	Last day for late registration or change in schedules.
Feb. 23, Wednesday	Ash Wednesday.
Feb. 28, Monday	As of this date, all withdrawals are recorded as WP or WF.
April 2, Saturday	Mid-term progress reports.
April 6, Wednesday	Easter recess begins at 1:00 p.m.
April 11, Monday	Campus students return before 11:50 p.m.
April 12, Tuesday	Classes resume at 8:00 a.m.
May 19, Thursday	Feast of the Ascension. No day classes.
May 27, Friday	Honors Convocation.
May 29, Sunday	Baccalaureate service.
May 30, Monday	Memorial Day. No day classes.
May 31-June 3 Tuesday-Friday	Semester examinations.
June 4, Saturday	Commencement, 2:30 p.m.

Evening Classes, 1954-1955

FIRST SEMESTER

Sept. 15-18 Wednesday-Saturday	Registration. Wednesday, Thursday, Friday, 6:00 p.m. to 9:00 p.m. Saturday, 8:00 a.m. to 12:00 noon.
Sept. 20, Monday	Evening classes begin on campus and at Wright-Patterson Air Force Base.
Sept. 25, Saturday	Last day for late registration or change of classes.
Nov. 8, Monday	Mid-term progress reports.
Nov. 24, Wednesday	No evening classes; beginning of Thanksgiving recess.
Nov. 29, Monday	Evening classes resume.
Dec. 8, Wednesday	Feast of the Immaculate Conception. No evening classes.
Dec. 20, Monday	No evening classes; beginning of Christmas recess.

1955

Jan. 4, Tuesday	Evening classes resume.
Jan. 24-29 Monday-Saturday	Final examinations. (Examinations are to be given on the evening of the last scheduled class meeting of this week.)

SECOND SEMESTER

Feb. 2-5 Wednesday-Saturday	Registration. Wednesday, Thursday, Friday, 6:00 p.m. to 9:00 p.m. Saturday, 8:00 a.m. to 12:00 noon.
Feb. 7, Monday	Evening classes begin on campus and at Wright-Patterson Air Force Base.
Feb. 12, Saturday	Last day for late registration or change of classes.
April 4, Monday	Mid-term progress reports.
April 6, Wednesday	No evening classes; beginning of Easter recess.

April 12, Tuesday	Evening classes resume.
May 19, Thursday	Feast of the Ascension; no evening classes.
May 30, Monday	Memorial Day. No evening classes.
May 31-June 4 Tuesday-Saturday	Final examinations. (Examinations are to be given on the evening of the last scheduled class meeting of this week.)

SUMMER SCHOOL
June 20-July 31, 1955

ENROLLMENT

DAY CLASSES
September, 1953

	Men	Women	Total
Seniors	249	64	313
Juniors	251	73	324
Sophomores	380	97	477
Freshmen	670	153	823
Unclassified	37	33	70
Religious	127	62	189
	1,714	482	2,196

EVENING CLASSES
September, 1953

Men	Women	Total
1,198	521	1,719

GOVERNING BOARDS

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ADMINISTRATION

ADMINISTRATIVE OFFICERS

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Director of Veterans' Affairs*

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JAMES F. WILSON, *Publicity*

JAMES F. CLARKE, *Publicity*

MARY SHAY, *Alumni Secretary*

*—————

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E. J. McLAUGHLIN, M.D., *Consulting Physician*

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MRS. JOSEPH UNGER, *Student Union Counselor*

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JOHN R. WESTERHEIDE, B.M.E., *Assistant Director*

CHARLES R. ANDREWS, B.M.E.; GERALD E. BUSCH, B.S.; EDWARD J. FREEH, M.S.;
WILLIAM J. HOVEY, B.E.E.; EDWARD A. JANNING, B.S.; JACK E. KESTER, B.S.;
ROBERT R. LUTHMAN, B.S.; GORDON W. MILLS, B.E.E.; EDWARD J. SCHLEI,
B.M.E.; DALE H. WHITFORD, A.E.; THOMAS K. WIMSATT, B.C.E.

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HUGH D. GORDON, PHILIP A. GRAF, CHARLES D. HUTCHINS, BERNARD V.
MAHLE, ROBERT H. MCENHEIMER, JAMES C. MCKIERNAN, HERBERT F. MIL-
DRUM, JR., JOHN E. MOREAU, DUANE O. PAGE, FREDERICK J. PESTIAN, JAMES
G. SHANESY, ELIZABETH J. SMITH.

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CATALOGUE AND CURRICULUM

FATHER KOBE, *Chairman*

Fathers COLLINS, RHODES; *Brothers* BELLMER, FAERBER, MERVAR, NAGEL, PARR.

STUDENT AID

FATHER COLLINS, *Chairman*

FATHER KOBE, *Brothers* GROSS, LACKNER, MCAVOY

FACULTY AFFAIRS

FATHER KOBE, *Secretary for the Faculty, Chairman*

MR. CHAMBERLAIN, MR. LEARY, MRS. MILLER, BROTHER NAGEL, MR. SCHRAUT, MR. SNYDER.

RELIGIOUS ACTIVITIES

FATHER LEIMKUHNER, *Chairman*

Fathers HOELLE, MONHEIM

PUBLIC RELATIONS

FATHER SEEBOLD, *Chairman*

BROTHER LACKNER, MR. CLARKE, MR. WILSON, MISS SHAY

RESOLUTIONS

BROTHER W. O. WEHRLE, *Chairman*
SR. GENEVIEVE MARIE, BROTHER PRICE

HONORARY DEGREES

FATHER KOBE, *Chairman*; BROTHER W. O. WEHRLE, *Secretary*
FATHER COLLINS, MR. O'LEARY, MISS WHETRO, BROTHER WOHLLEBEN

ATHLETICS

Faculty Representatives

FATHER COLLINS, *Chairman*; MR. BAUJAN, *Athletic Director*
Brothers BELLMER, MCAVOY, WOHLLEBEN

Representatives at Large

JAMES HANBY, BERNARD L. KEITER, LOUIS R. MAHRT, J. ELLIS MAYL, DR.
G. J. RAU, PAUL WAGNER, CHARLES W. WHALEN, JR.

BUDGET

BROTHER GROSS, *Chairman*
FATHER KOBE; *Brothers* HOLIAN, LACKNER, MCAVOY, NAGEL

BUILDINGS AND GROUNDS

BROTHER HOLIAN, *Chairman*
FATHER COLLINS; *Brothers* BELLMER, BRUNNER, CHUDD, LACKNER, MCAVOY

Faculty

(Day and Evening Classes)

The year appearing in parenthesis indicates the date of the first appointment to the University.

RUBY M. ADAMS (1953)

Part-time Instructor in Education, 1953.

B.S., Columbia University, 1925; M.S., Columbia University, 1929.

RUSSELL G. ALBERTS (1950)

Assistant Professor of Mechanical Engineering, 1952.

B.A.Sc., University of Toronto, 1947.

CLAUDE E. ALLEN, M/SGT. (1948)

Assistant Instructor in Military Science and Tactics, 1948.

RICHARD A. ANDUZE (1951)

Part-time Instructor in Spanish, 1951.

B.S., University of Dayton, 1945.

RICHARD RUSSELL BAKER (1947)

Associate Professor of Philosophy, 1948.

A.B., University of Notre Dame, 1931; M.A., University of Notre Dame, 1934; Ph.D., University of Notre Dame, 1941.

EDWARD J. BALDINGER (1947)

Assistant Professor, 1950, and Acting Head of Department of Civil Engineering, 1952.

B.S., Civil Engineering, University of Notre Dame, 1940; M.C.E., University of Michigan, 1951; Prof. Eng.

WALTER CHARLES BARNES (1945)

Part-time Instructor in Accounting, 1945.

A.B., Coe College, 1929.

JOHN S. BARNEY (1949)

Part-time Instructor in Biology, 1953.

B.S., Ohio University, 1945; M.S., Ohio University, 1947.

REV. GEORGE B. BARRETT, S.M. (1952)

Instructor in Education, 1952.

A.B., University of Dayton, 1932; M.S. in Ed., Fordham University, 1945.

- REV. JAMES W. BARTHOLOMEW, S.M. (1949)
Assistant Professor of Classical Languages and Religion, 1951.
A.B., University of Dayton, 1929; M.A., The Catholic University of America, 1942.
- HARRY CLIFFORD BAUJAN (1922)
Associate Professor of Physical and Health Education, 1939; Athletic Director, 1947.
Ph.B. of C., University of Notre Dame, 1917.
- ERVING EDWARD BEAUREGARD (1947)
Assistant Professor of History, 1950.
A.B., University of Chicago, 1942; M.A., University of Massachusetts, 1944.
- WILLIAM ANTHONY BECK, S.M. (1912)
Professor of Biology, 1926.
B.S., University of Dayton, 1908; M.S., University of Fribourg (Fribourg, Switzerland), 1912; Ph.D., University of Fribourg, 1926.
- WILLIAM JOSEPH BELLMER, S.M. (1927)
Head of Department and Professor of Mathematics, 1935; Associate Dean, Head of the Division of Science, 1953.
B.S., University of Dayton; 1921; M.A., The Catholic University of America, 1932.
- CHARLES JOHN BELZ, S.M. (1928)
Professor of Civil Engineering, 1937.
B.S., University of Dayton, 1912; B.C.E., University of Dayton, 1928; M.C.E., The Catholic University of America, 1934; Prof. Eng.
- FERNE R. BERNER (1945)
Assistant Professor of Nursing Education, 1949.
B.S., University of Dayton, 1945; R.N.
- HAROLD TODD BEVAN (1953)
Instructor in Psychology, 1953.
Ph.B., University of Detroit, 1951.
- GEORGE C. BIERSACK (1952)
Instructor in Speech, 1952.
B.S., University of Dayton, 1952
- LEONARD THOMAS BLACKBURN (1947)
Instructor in Physical and Health Education and Head Basketball Coach, 1947.
A.B., Wilmington College, 1931
- REV. CHARLES C. BLOEMER, S.M. (1948)
Assistant Professor of Philosophy, 1951.
A.B., University of Dayton, 1930; M.A., University of Fribourg (Fribourg, Switzerland), 1936; M.A., The Catholic University of America, 1950.

LAWRENCE LEO BOLL, s.M. (1927)

Professor of English, 1927.

A.B., University of Dayton, 1912; M.A., The Catholic University of America, 1925; Ph.D., The Catholic University of America, 1929.

ALICE HILDA BORGH (1951)

Part-time Instructor in Art, 1951.

Francis Harrington Professional School of Interior Decorating, Chicago Art Institute; R.N.

JOSEPH EDWARD BOSSHART (1953)

Assistant Professor of Mathematics, 1953.

B.S., University of Dayton, 1932; M.A., Northwestern University, 1939.

SCOTT T. BOWERS (1946)

Assistant Professor of Psychology, 1949.

B.S., Ohio University, 1936; M.Ed., Ohio University, 1945.

LLOYD P. BRENBERGER (1951)

Instructor in Industrial Engineering, 1953.

B.S. in I.E., General Motors Institute, 1951.

J. THEODORE BROWN (1952)

Part-time Instructor in Technical Institute, 1952.

B.Ch.E., University of Dayton, 1945

JOSEPH J. BROWNE (1953)

Instructor in Biology, 1953.

B.S., University of Dayton, 1953.

REV. JOSEPH S. BRUDER, s.M. (1948)

Assistant Professor of Philosophy, 1949.

A.B., University of Dayton, 1922; S.T.D., University of Fribourg (Fribourg, Switzerland), 1935; M.A., The Catholic University of America, 1949.

EUGENE JOSEPH BURG (1952)

Athletic Ticket Manager, 1952.

B.S., University of Dayton, 1952.

ROBERT K. BURNS (1952)

Part-time Instructor in Technical Institute, 1952.

B.I.E., General Motors Institute, 1948.

EDWARD ROBBINS BURROUGHS (1938)

Assistant Professor of Art, 1941; Dean, School of the Dayton Art Institute, 1937.

Graduate, Maryland Institute of Fine and Applied Art, 1926.

- WILLIAM D. BUSCH, S.M. (1938)
Treasurer, 1950.
B.S., University of Dayton, 1929; M.A., University of Dayton, 1944.
- DOROTHY WOLKING CAMPBELL (1953)
Instructor in Mathematics, 1953.
B.S., Rollins College, 1948; M.S., University of Wisconsin, 1950.
- JOSEPH JENKS CHAMBERLAIN, JR. (1937)
Professor of Civil Engineering, 1948.
C.E., Cornell University, 1911; M.C.E., Harvard University, 1912; Prof. Eng.
- KUO-SUI LAURENCE CHANG (1953)
Instructor in Accounting and Business Organization, 1953.
B.S., Great China University (Shanghai), 1947; M.S., University of Illinois, 1950; M.A., University of Illinois, 1951; Ph.D., University of Illinois, 1953.
- CLETUS CHARLES CHUDD, S.M. (1947)
Assistant Professor of Chemistry, 1953.
B.S., University of Dayton, 1935; M.S., Western Reserve University, 1948; Ph.D., Western Reserve University, 1952.
- MARY CLAIRE CIVILE (1947)
Assistant Professor of Secretarial Studies, 1950.
B.S., Ohio University, 1934; M.Ed., University of Cincinnati, 1952.
- EVA LOUISE CLARK (1950)
Part-time Instructor in English and Speech, 1950.
B.S., Ashland College (Ashland, Ohio), 1942.
- JAMES FRENCH CLARKE (1952)
Director of Academic Publicity, 1952.
B.S., Teachers College of Connecticut, 1947.
- OMBERTO ANTHONY COCCA (1953)
Part-time Instructor in Technical Institute, 1953.
B.Ch.E., University of Dayton, 1944; M.S. in I.E., The Ohio State University, 1952.
- NED RYAN COFER (1953)
Part-time Instructor in Speech, 1953.
B.S., University of Dayton, 1952.
- REV. CHARLES LEO COLLINS, S.M. (1941)
Professor of Psychology, 1945; Director of Admissions and Dean of Students, 1946.
A.B., University of Dayton, 1925; Ph.D., Fordham University, 1941.
- ORVILLE COMER (1950)
Assistant Professor of Business Organization, 1950.
B.S. in Ret., Washington University (St. Louis, Missouri), 1948; M.S. in Ret., Washington University, 1949.

- LESTER IRWIN CONNER (1953)
Instructor in English, 1953.
 A.B., University of Minnesota, 1947; M.A., Columbia University, 1949.
- S. R. CORNELIUS (1953)
Part-time Instructor in Technical Institute, 1953.
 B.S., Wilmington College, 1930; M.S., Miami University (Oxford, Ohio), 1935.
- OVA B. CRAFT, M/SGT. (1953)
Assistant Instructor in Military Science and Tactics, 1953.
- ADDIS H. DALY (1951)
Assistant Professor of Education, 1951.
 A.B., St. Bonaventure University, 1931; Ed.M., Tufts College, 1949.
- ROBERT L. DAVISON, SFC. (1953)
Assistant Instructor in Military Science and Tactics, 1953.
- URBAN A. DEGER (1939)
Part-time Instructor in Music, 1939.
 Studied music under Michael Lurz, S.M., 1899-1902; under Dr. W. L. Blumenschein, Dayton, Ohio, 1901-1903; under Dr. W. J. Elsenheimer and Professor W. S. Sterling, College of Music, Cincinnati, Ohio, 1906-1908.
- ROBERT A. DELPINO, CAPTAIN (1953)
Assistant Professor of Military Science and Tactics, 1953.
 A.B., University of New Hampshire, 1943.
- JAMES B. DESCH (1951)
Part-time Instructor in English, 1951.
 A.B., University of Dayton, 1950.
- VINCENT DIPASQUALE (1952)
Part-time Instructor in Education, 1952.
 A.B., University of Michigan, 1933; M.A., University of Dayton, 1945.
- REV. RICHARD J. DOMBRO, S.M. (1952)
Instructor in Philosophy, 1952.
 A.B., University of Dayton, 1929; M.A., Fordham University, 1950.
- REV. JAMES E. DONNELLY, S.M. (1947)
Assistant Professor of English, 1948.
 A.B., University of Dayton, 1925.
- ROBERT EMMETT DONOVAN (1946)
Assistant Professor of Mathematics, 1948; Assistant Professor of General Engineering, 1951; Evening Classes Representative at Wright-Patterson Air Force Base and Director of Veterans' Affairs, 1951.
 B.S., University of Dayton, 1932.

- JAMES B. DOUGLASS (1953)
Instructor in Physical and Health Education, 1953.
B.S., University of Dayton, 1952.
- JOHN J. DRERUP, S.M. (1952)
Assistant Librarian, 1952.
A.B., University of Dayton, 1935; B.S. in L.S., Western Reserve University, 1943.
- ARTHUR R. DRISCOLL, JR., CAPTAIN (1953)
Assistant Professor of Military Science and Tactics, 1953.
B.S., United States Military Academy, 1949.
- CHARLES E. DUGAN (1948)
Part-time Instructor in Economics, 1951.
B.S., The Ohio State University, 1938; M.B.A., The Ohio State University, 1948.
- ORVILLE E. DUNN, JR. (1949)
Assistant Professor of Electrical Engineering, 1952.
B.S. in E.E., University of Notre Dame, 1948; M.S., University of Cincinnati, 1953; Prof. Eng.
- MARY E. EISENMAN (1953)
Part-time Instructor in Chemistry and Physics, 1953.
B.S., University of Maryland, 1951.
- REV. FLORIAN JOSEPH ENDERS, S.M. (1942)
Assistant Professor of Philosophy, 1945.
A.B., University of Dayton, 1928.
- NICHOLAS A. ENGLER (1952)
Assistant Professor of Physics, 1952.
B.S., University of Dayton, 1947; M.S., University of Cincinnati, 1949.
- ROBERT A. ENOCH (1940)
Part-time Instructor in Music, 1940.
Instruction in clarinet under Joseph Elliott of the Cincinnati Symphony Orchestra, 1939-1940; piano and composition under Dr. L. W. Sprague, 1939-1941.
- SOPHIA ERNST (1952)
Instructor in Nursing Education, 1952.
B.S., University of St. Louis, 1940; M.S., University of Minnesota, 1947; R.N.
- ALBERT R. EVANS, SFC. (1951)
Assistant Instructor in Military Science and Tactics, 1951.
- JULIA CAREY EVERETT (1940)
Assistant Professor of Nursing Education, 1946.
B.S., University of Dayton, 1940; R.N.

- SYLVESTER EVESLAGE (1948)
Assistant Professor of Chemistry, 1951.
B.S., University of Notre Dame, 1944; M.S., University of Notre Dame, 1945; Ph.D., University of Notre Dame, 1953.
- LOUIS JOSEPH FAERBER, S.M. (1948)
Associate Professor, 1949, and Head of the Department of Education, 1951; Associate Dean, Head of the Division of Education, 1951.
A.B., University of Dayton, 1930; M.A., The Catholic University of America, 1938; Ph.D., The Catholic University of America, 1948.
- PETER JOSEPH FASO (1946)
Associate Professor of Biology, 1950.
B.S., Villanova College, 1936; M.S., Villanova College, 1941.
- CON JOHN FECHER (1935)
Lecturer in Economics, 1935.
A.B., Miami University (Oxford, Ohio), 1924; M.A., The Catholic University of America, 1925; Ph.D., The Catholic University of America, 1927.
- HENRY LEO FERRAZZA (1950)
Assistant Professor of Physical and Health Education, 1953.
B.S., University of Dayton, 1949; M.A., Western Reserve University, 1950.
- REV. JOHN PAUL FINKE, S.M. (1947). Absent on leave.
Assistant Professor of Religion, 1948.
A.B., University of Dayton, 1929; B.Th., University of Fribourg (Fribourg, Switzerland), 1937.
- L. HOWARD FLATTER (1951)
Part-time Instructor in Psychology, 1951.
A.B., Wittenberg College, 1932; M.A., Wittenberg College, 1946.
- DONALD C. FLISCHEL (1951)
Part-time Instructor in Mathematics, 1951.
B.S., University of Dayton, 1949; M.S., Michigan State College (E. Lansing, Michigan), 1951.
- THOMAS H. FOGT (1951)
Part-time Instructor in General Engineering, 1951.
B.S. in M.E., The Ohio State University, 1948.
- HAROLD HERBERT FOX (1953)
Part-time Instructor in Mathematics, 1953.
B.S., Wabash College, 1943; M.S., University of Wisconsin, 1948; Ph.D., University of Illinois, 1953.
- WALTER G. FREMONT, SR. (1947)
Part-time Instructor in Business Organization, 1947.

REV. FRANCIS J. FRIEDEL, S.M. (1927)

Professor of Sociology, 1935.

A.B., University of Dayton, 1917; S.T.B., S.T.L., University of Fribourg (Fribourg, Switzerland), 1925; S.T.D., University of Fribourg, 1926; M.A., The Catholic University of America, 1935; Ph.D., University of Pittsburgh, 1950.

WILLIAM S. FRY (1951)

Part-time Instructor in Accounting, 1951.

B.B.A., Sinclair College, 1940; B.S., Miami University (Oxford, Ohio), 1941; C.P.A.

ELLSWORTH M. GABRIEL, M/SGT. (1950)

Administrative Assistant, Department of Military Science and Tactics, 1950.

JOSEPH B. GABRYS (1953)

Assistant Professor of Civil Engineering, 1953.

B.S., University of Moscow, 1919; C.E., University of Kaunas (Lithuania), 1927; Dr. Eng., University of Riga (Latvia), 1937.

HARRY F. GAEKE (1953)

Part-time Instructor in Civil Engineering, 1953.

B.C.E., University of Dayton, 1948.

JAMES EDWARD GALICO (1947)

Assistant to Director of Admissions, 1949.

B.S., Fordham University, 1935.

MARGARET WILSON GALICO (1948)

Assistant Professor of Psychology, 1949.

A.B., New Rochelle College, 1937; M.A., Fordham University, 1939; Certified Clinical Psychologist, 1947; Fellowship of American Association of Mental Deficiency.

SISTER GENEVIEVE MARIE, S.N.D., de N. (1940)

Associate Professor of English, 1951.

A.B., Trinity College (Washington, D.C.), 1913; M.A., University of Notre Dame, 1936.

JOHN E. GOODEMOTE (1953)

Part-time Instructor in Technical Institute, 1953.

B.S., in Ch.E., Purdue University, 1947.

CLEM GRABNER, JR. (1953)

Part-time Instructor in Mathematics, 1953.

A.B., Western Michigan College of Education, 1947; M.S., Indiana University, 1949.

- MICHAEL BENEDICT GRANDY, S.M. (1926)
Head of Department and Professor of Physics, 1927.
B.S., University of Dayton, 1916; M.S., University of Fribourg (Fribourg, Switzerland), 1925; Ph.D., University of Fribourg, 1926.
- KATHRYN H. GRAY (1953)
Instructor in Geology, 1953.
A.B., The College of Wooster, 1947.
- LAWRENCE L. GRIER (1951)
Part-time Instructor in Business Organization, 1951.
B.S., Ohio University, 1938.
- CLEMENT ANDREW GROSS, S.M. (1952)
Business Manager, 1952.
B.S., University of Dayton, 1940; M.A., University of Pittsburgh, 1951.
- EDWARD WILLIAM HARKENRIDER (1952)
Assistant Professor of Philosophy, 1953.
A.B., The Catholic University of America, 1944; M.A., The Catholic University of America, 1945; Ph.D., The Catholic University of America, 1952.
- OSKAR HAUENSTEIN (1953)
Assistant Professor of Engineering Drawing, 1953.
B.S., Austrian Military Engineering Academy, 1901; M.S., War College and Higher Military Technical Institute (Austria), 1908.
- RICHARD R. HAZEN (1953)
Instructor in Technical Institute, 1953.
B.E.E., University of Dayton, 1953.
- GERTRUDE D. HECKMAN (1949)
Assistant Professor of Biology, 1951.
B.S., Mary Manse College (Toledo, Ohio), 1945; M.S., University of Detroit, 1948.
- THEODORE HEIMANN (1939)
Assistant Professor of Music, 1947.
Graduate of the College of Oslo, Norway, and Koenigstadtisches Gymnasium in Berlin; Special studies, University of Berlin; studied under Lilli Lehmann, Umlauf, Lieban and Albini.
- NORRIS D. HELLWIG (1952)
Part-time Instructor in Speech, 1952.
B.S., University of Dayton, 1949; M.A., Northwestern University, 1951.
- JOHN RICHARD HERRON (1947)
Part-time Instructor in Geology, 1947.
A.B., The Ohio State University, 1938.

- RAYMOND G. HIEBER (1924)
Assistant Professor of Physics, 1953.
B.S., University of Dayton, 1922; M.S., The Ohio State University, 1924.
- JAMES C. HODGETTS (1952)
Assistant Professor of Business Organization, 1952.
B.S., University of Kentucky, 1947; M.S., University of Louisville, 1949.
- REV. PHILIP C. HOELLE, S.M. (1953)
Instructor in Religion, 1953.
A.B., University of Dayton, 1933; S.T.B., University of Fribourg (Fribourg, Switzerland), 1941; S.T.L., The Catholic University of America, 1943; M.A., The Ohio State University, 1947; Ph.D., The Ohio State University, 1953.
- ALBERT M. HOFFMAN (1946)
Part-time Instructor in General Engineering, 1946.
B.S., Miami University (Oxford, Ohio), 1927; M.A., Miami University, 1932.
- REV. CHARLES J. HOFSTETTER, S.M. (1952)
Instructor in Religion, 1952.
B.S., University of Dayton, 1940.
- AUSTIN JOSEPH HOLIAN, S.M. (1944)
Associate Professor of Electrical Engineering, 1946; Assistant Business Manager, 1952.
B.S., University of Dayton, 1931; B.S.E.E., Case Institute of Technology, 1942; M.S.E.E., Case Institute of Technology, 1944.
- NORMAN EARL HOLLY (1953)
Instructor in Technical Institute, 1953.
B.S., University of California, 1949; M.A., Columbia University, 1950.
- JAMES B. HOLTZCLAW (1953)
Part-time Instructor in Political Science, 1953.
A.B., University of Kentucky, 1928; M.A., University of Kentucky, 1930; Ph.D., University of Kentucky, 1932.
- MARY ELIZABETH HORRIGAN (1940)
Associate Director of St. Elizabeth School of Nursing and Associate Professor of Nursing Education, 1948.
B.S., University of Dayton, 1935; M.A., University of Dayton, 1942.
- CONSTANTINE HOUPIS (1953)
Part-time Instructor in Mathematics, 1953.
B.E.E., University of Illinois, 1947; M.E.E., University of Illinois, 1948.
- EDWARD ANDREW HUTH (1939)
Head of Department, 1946, and Professor of Sociology, 1950.
A.B., Heidelberg College (Tiffin, Ohio), 1921; M.A., University of Notre Dame, 1928; Ph.D., Western Reserve University, 1943.

LOIS K. ITTELSON (1953)

Part-time Instructor in Home Economics, 1953.

A.B., Smith College, 1939; M.A., Columbia University, 1940.

EDWARD A. JANNING (1953)

Part-time Instructor in Mathematics, 1953.

B.S., University of Dayton, 1951.

LAWRENCE ANDREW JEHN (1946)

Assistant Professor of Mathematics, 1950.

B.M.E., University of Dayton, 1943; M.Sc., University of Michigan, 1949.

RUSSELL ALBERT JOLY, S.M. (1941)

Head of Department, 1949, and Associate Professor of Biology, 1951.

B.S., University of Dayton, 1930; M.S., Institutum Divi Thomae (Cincinnati, Ohio), 1940.

ALMA WARD JONES (1953)

Part-time Instructor in Education, 1953.

B.S., The Ohio State University, 1937; M.A., The Ohio State University, 1942.

FRED R. JONES (1953)

Part-time Instructor in Technical Institute, 1953.

LUTHER JOHN JUNGEMANN (1953)

Part-time Instructor in Technical Institute, 1953.

B.S.E.E., South Dakota School of Mines and Technology, 1950.

NICHOLAS C. KARAS (1951)

Part-time Instructor in Business Organization, 1951.

LL.B., University of Cincinnati, 1950; B.S., University of Dayton, 1953.

NICHOLAS G. KASCHAK (1952)

Instructor in Sociology, 1952.

A.B., College of Steubenville, 1950; M.A., St. Louis University, 1953.

PAUL KATZ (1939)

Part-time Instructor in Music, 1939.

Juilliard Scholarship with Leopold Auer, 1922-1924; studied also with Heermann, Seveik, Ysaye; Theory with Reigger, Elwell, and Boulanger; B.Mus., Cleveland Institute of Music.

EDWIN ROBERT KING (1953)

Instructor in History, 1953.

B.S., University of Dayton, 1949; M.A., Western Reserve University, 1950.

OLIVER G. KINNEY, COLONEL (1951)

Head of Department and Professor of Military Science and Tactics, 1951.

A.B., University of California, 1936.

JAMES H. KLINE, S.M. (1947)

Purchasing Agent, 1947.

A.B., University of Dayton, 1930; M.Ed., University of Pittsburgh, 1945.

MARJORIE KLINE (1950)

Part-time Instructor in Music, 1950.

Studied under Edw. Waechter, Giovanni Bruno, William Smith, Paul Katz, and Scott Westerman.

REV. HENRY JOHN KOBE, S.M. (1933)

Associate Professor of History, 1943; Dean of the University, 1949.

A.B., University of Dayton, 1925.

GEORGE FRANCIS KOHLES, S.M. (1935)

Associate Professor of English, 1941.

A.B., University of Dayton, 1922; M.A., The Catholic University of America, 1932.

DOROTHY KOOGLE (1950)

Part-time Instructor in Education, 1950.

B.S., University of Dayton, 1946.

MORRIS JAMES KREIDER (1947)

Associate Professor of Mathematics, 1952.

B.S., Miami University (Oxford, Ohio), 1933; M.A., Miami University, 1941.

ROBERT E. KRIEGBAUM (1950)

Assistant Professor of Secretarial Studies, 1951.

A.B., Wittenberg College, 1939; M.A., The Ohio State University, 1950.

ALFRED R. KURTZ (1953)

Part-time Instructor in Business Organization, 1953.

B.S., University of Pennsylvania, 1953.

ELMER CHARLES LACKNER, S.M. (1940)

Associate Professor of History, 1946; Development Director, 1952.

A.B., University of Dayton, 1927; M.A., Western Reserve University, 1941.

PHILIP ALBERT LAKE (1953)

Instructor in English and Speech, 1953.

B.S., University of Dayton, 1938; M.A., University of Dayton, 1949.

DANIEL LEO LEARY (1937)

Professor of Education, 1937; Director of Student Teaching, 1951.

A.B., Creighton University, 1917; M.A., Peabody College, 1928; Ph.D., Colorado State University, 1934.

REV. CHARLES J. LEES, S.M. (1952)

Instructor in English, 1952.

A.B., University of Dayton, 1943; M.A., University of Pittsburgh, 1952.

CHARLES LEESE (1951)

Part-time Instructor in Business Organization, 1951.

B.S., Gettysburg College, 1924; M.B.A., University of Pennsylvania, 1925;
Ph.D., University of Pennsylvania, 1929.

REV. EDWIN MATTHIAS LEIMKUHNER, S.M. (1934)

Head of Department and Professor of Religion, 1934.

A.B., The Catholic University of America, 1927; M.A., The Catholic University of America, 1940.

RICHARD ALLEN LIEBLER, S.M. (1949)

Assistant Professor of Political Science and History, 1951.

B.S., University of Dayton, 1939; M.A., Western Reserve University, 1947.

SHAO KUNG LIN (1953)

Instructor in Economics, 1953.

B.S., National Central University of China, 1944; M.A., Louisiana State University and A. & M. College, 1949; Ph.D., University of Illinois, 1952.

THEODORE LLANA, JR., CAPTAIN (1952)

Assistant Professor of Military Science and Tactics, 1952.

B.S., Columbia University, 1942.

WILLIAM C. LONG, WARRANT OFFICER S.G. (1952)

Assistant Professor of Military Science and Tactics, 1952.

CLINTON E. LOTT, SFC. (1951)

Assistant Instructor in Military Science and Tactics, 1951.

BARTLETT C. LUBBERS (1949)

Assistant Professor of Education, 1952.

B.S., University of Dayton, 1947; M.A., The Ohio State University, 1949.

JOHN JOSEPH LUCIER, S.M. (1945)

Assistant Professor of Chemistry, 1952.

B.S., University of Dayton, 1937; M.S., Western Reserve University, 1950;
Ph.D., Western Reserve University, 1951.

ROBERT R. LUTHMAN (1953)

Part-time Instructor in Mathematics, 1953.

B.S., University of Dayton, 1950.

JEROME A. MCAVOY, S.M. (1937)

Comptroller, 1950.

A.B., University of Dayton, 1936; M.Ed., University of Pittsburgh, 1944.

FRANCIS GLENN MCGOVERN (1947)

Associate Professor of Economics, 1952.

B.S., Providence College, 1938; M.B.A., Boston University, 1941.

- JOHN IRA MCGRATH (1946)
Director of University Players, 1946; Associate Professor of Speech, 1951.
A.B., The Catholic University of America, 1935; M.A., The Catholic University of America, 1936; M.S.O. (Master of Science of Oratory), Curry School, 1938.
- JAMES L. MCGRAW (1952)
Part-time Instructor in Technical Institute, 1952.
B.S., Lafayette College, 1951.
- SISTER M. MINALIA, S.P.S.F. (1940)
Director of St. Elizabeth School of Nursing, 1936; Head of Department, 1941, and Associate Professor of Nursing Education, 1948.
B.S., University of Dayton, 1934; M.A., University of Dayton, 1942; R.N.
- ROBERT J. MAINS (1951)
Part-time Instructor in Accounting, 1951.
B.S., University of Dayton, 1949.
- SISTER MARIE EMILIE, S.N.D. de N. (1949)
Assistant Professor of English, 1951.
A.B., Trinity College (Washington, D.C.), 1914; M.A., Trinity College, 1915.
- SISTER MARY PELAGIA, M.S.C. (1943)
Associate Professor of Education, 1946.
A.B., Villanova College, 1927; M.A., Villanova College, 1935; Ph.D., The Catholic University of America, 1946.
- STANLEY G. MATHEWS, S.M. (1951)
Instructor in English, 1952.
A.B., University of Dayton, 1943; M.A., Western Reserve University, 1949; M.S.L.S., Western Reserve University, 1952.
- ROBERT E. MAUSHARDT, M/SGT. (1952)
Assistant Instructor in Military Science and Tactics, 1952.
- JOSEPH A. MENDELSON (1953)
Lecturer in Psychology, 1953.
M.D., Temple University, 1915; Fellow of American College of Physicians, 1934.
- JOSEPH J. MERVAR, S.M. (1951)
Director of Evening Classes and Registrar, 1951.
B.S., University of Dayton, 1935; M.A., The Catholic University of America, 1945.
- DONALD C. METZ (1951)
Associate Professor and Director of Technical Institute, 1951.
B.S.E.E., Purdue University, 1930; M.S.I.E., Purdue University, 1949; Prof. Eng.

- EDWIN J. MILLER (1952)
Part-time Instructor in Technical Institute, 1952.
B.S., Allegheny College, 1950; M.S., University of Delaware, 1952.
- GRAY E. MILLER (1950)
Part-time Instructor in Business Organization, 1950.
B.S., Pennsylvania State College, 1908.
- VELMA MAE MILLER (1940)
Head of Department, 1944, and Associate Professor of Secretarial Studies, 1947.
B.C.S., Ohio Northern University, 1930; M.Ed., University of Cincinnati, 1937.
- MARY MITCHELL (1952)
Instructor in Nursing Education, 1952.
B.S., University of Dayton, 1949; M.Ed., Xavier University (Cincinnati, Ohio), 1953; R.N.
- REV. LAWRENCE WILLIAM MONHEIM, S.M. (1937)
Associate Professor of Religion, 1941.
A.B., University of Dayton, 1925; M.A., The Catholic University of America, 1942.
- PATRICIA A. MONNETTE (1940)
Assistant Professor of Physical and Health Education, 1952.
B.S., The Ohio State University, 1949.
- RALPH VINCE MONTELLO (1953)
Part-time Instructor in Chemistry, 1953.
B.Ch.E., The Ohio State University, 1948.
- PAUL R. MONTVILLE (1953)
Part-time Instructor in Psychology, 1953.
A.B., Ohio University, 1952.
- ADRIAN J. MORGAN (1948)
Assistant Professor of Electrical Engineering, 1952.
B.S.E.E., Purdue University, 1948.
- EMIL MORGANA, S.M. (1953)
Instructor in Technical Institute, 1953.
B.S. in M.E., University of Michigan, 1927.
- HARRY C. MURPHY (1950)
Assistant Professor of Business Organization, 1950.
B.B.A., University of Minnesota, 1948; B.S., University of Minnesota, 1949; M.A., University of Minnesota, 1951.
- LORRAINE M. MURPHY (1953)
Part-time Instructor in English, 1953.
A.B., Augustana College, 1946.

- GEORGE WILLIAM NAGEL, S.M. (1941)
Associate Professor of History, 1947; Associate Dean, Head of the Division of Business Administration, 1949.
B.S., University of Dayton, 1922; M.A., Western Reserve University, 1941.
- GEORGE A. NEYHOUSE (1953)
Part-time Instructor in Technical Institute, 1953.
B.S. in E.E., Rose Polytechnic Institute, 1938.
- ROBERT LEE NOLAND (1953)
Counselor, Guidance Center, and Part-time Instructor in Psychology, 1953.
A.B., University of Detroit, 1952; M.A., University of Detroit, 1953.
- ROBERT J. O'BRIEN (1952)
Part-time Instructor in General Engineering, 1952.
B.E.E., University of Dayton, 1949.
- ROBERT B. O'DONNELL (1951)
Assistant Professor of History, 1951.
A.B., St. Mary's College (Halifax, N.S.), 1927; M.A., Fordham University, 1930.
- FREDERICK C. O'GRADY (1953)
Part-time Instructor in Business Organization, 1953.
LL.B., University of Cincinnati, 1950.
- FRANK R. OGLESBY (1951)
Part-time Instructor in Business Organization, 1951.
- GREGORY P. OLBERDING (1953)
Part-time Instructor in English, 1953.
A.B., The Athanaeum, 1945.
- EDMUND BERNARD O'LEARY (1924)
Head of Department of Business Organization, 1938, and of Department of Economics, 1941; Professor of Economics and Business Organization, 1924.
B.S., The Ohio State University, 1924; M. A., University of Chicago, 1928; Ph.D., The Ohio State University, 1939.
- JOHN C. ONDERCIN (1952)
Part-time Instructor in Business Organization, 1952.
B.S., University of Dayton, 1951; M.S., Western Reserve University, 1952.

JEROME HENRY PARR, S.M. (1947)

Associate Professor of Mechanical Engineering, 1951; Dean of the College of Engineering, 1953.

B.S., University of Dayton, 1932; B.M.E., The Catholic University of America, 1946; M.S. in M.E., Carnegie Institute of Technology, 1947.

JOHN R. PARKS (1953)

Part-time Instructor in Physics, 1953.

B.S., Case Institute of Technology, 1932; M.S., Case Institute of Technology, 1940.

HARRY B. PATTERSON (1953)

Part-time Instructor in Business Organization, 1953.

B.S., University of Dayton, 1936.

ELIZABETH PAYNE (1950)

Assistant Professor of Home Economics, 1953.

B.S., Mount St. Joseph-on-the-Ohio, 1942.

CYRIL GEORGE PECKHAM (1941)

Associate Professor of Mathematics, 1949.

A.B., University of Illinois, 1936; M.S., University of Illinois, 1939.

JOHN RAYMOND PERZ, S.M. (1926)

Professor of German and Spanish, 1931; Head of Department of Languages, 1936.

A.B., University of Dayton, 1921; M.A., The Catholic University of America, 1929; Ph.D., The Catholic University of America, 1934.

GEORGE RICHARD PHILLIPS (1953)

Part-time Instructor in Business Organization, 1953.

B.S., University of Pittsburgh, 1952; M.S., University of Pittsburgh, 1953.

THOMAS LEO POITRAS, S.M. (1905)

Professor of French, 1934.

B.S., University of Dayton, 1907; A.B., University of Dayton, 1911; B.S. Music, Extension Conservatory of Chicago, 1928; M.A., The Catholic University of America, 1934; Diplome de professeur de francais a l'Etranger, The Sorbonne (Paris), 1938; Diplome d'Etudes francaises superieures, University of Besancon, 1938; Diplome d'Etudes de Civilisation francaise, The Sorbonne, 1939.

ALBERTA GINSTIE PRATHER (1946)

Assistant Professor of Mathematics, 1949.

A.B., Miami University (Oxford, Ohio), 1925; B.S., Miami University, 1926; M.A., Miami University, 1937.

- REV. CHARLES VINCENT PREISINGER, S.M. (1926)
Head of Department of Speech, 1946; Professor of History and Speech, 1953.
A.B., University of Dayton, 1918; M.A., The Catholic University of America, 1934.
- THOMAS JOSEPH PRICE, S.M. (1926)
Professor of English, 1948.
A.B., University of Dayton, 1911; M.A., The Catholic University of America, 1935.
- DOROTHY E. PRYOR (1951)
Part-time Instructor in Secretarial Studies, 1952.
B.S., The Ohio State University, 1932.
- RICHARD E. PRYOR (1953)
Part-time Instructor in Business Organization, 1953.
B.S., Miami University (Oxford, Ohio), 1941; LL.B., Harvard University, 1948.
- STEPHEN RAYMOND QUINN (1948)
Part-time Instructor in Economics, 1948.
B.S., University of Notre Dame, 1942; LL.B., University of Notre Dame, 1947.
- MARY C. QUIRK (1946)
Part-time Instructor in Speech, 1946.
B.S., The Ohio State University, 1936; M.A., The Ohio State University, 1938.
- ELIZABETH D. REEL (1950)
Instructor in Physical and Health Education, 1950.
B.S., The Ohio State University, 1946; M.A. in Ed., The Ohio State University, 1947.
- JOHN A. REGER (1946)
Part-time Instructor in Music, 1946.
Musical Training: Trombone, Illmari Ronka; Composition and Piano, Dr. L. W. Sprague.
- MAURICE RICHARD REICHARD (1929)
Head of Department, 1938, and Associate Professor of Music, 1946.
A.B., University of Dayton, 1935; M.A., The Ohio State University, 1945.
- LLOYD ALOYSIUS RENSEL (1946)
Director of Guidance Center and Instructor in Psychology, 1946.
A.B., University of Dayton, 1943; Chief Examiner, Educational Testing Service, 1946.

KLARA REYST (1947)

Associate Professor of French and German, 1952.

A.B., University of Geneva (Switzerland), 1908; M.Ed., University of Pittsburgh, 1934; Ph.D., University of Pittsburgh, 1940.

REV. EDMUND LEO RHODES, S.M. (1947)

Head of Department, 1951, and Associate Professor of Philosophy, 1953; Acting Dean of the College of Arts and Sciences, 1953.

A.B., University of Dayton, 1934; S.T.L., The Catholic University of America, 1942.

L. VERNON ROBINSON (1953)

Part-time Instructor in Mathematics, 1953.

B.S., University of Texas, 1921; M.S., University of Texas, 1922; Ph.D., Harvard University, 1931.

WALTER ROEBUCK, M/SGT. (1952)

Assistant Instructor in Military Science and Tactics, 1952.

REV. RAYMOND AUGUST ROESCH, S.M. (1951)

Head of Department and Assistant Professor of Psychology, 1952.

A.B., University of Dayton, 1936; M.A., The Catholic University of America, 1946.

WALTER A. ROESCH, S.M. (1946)

Instructor in History and English, 1952.

A.B., University of Dayton, 1947; B.S. in L.S., Western Reserve University, 1948; M.A., Western Reserve University, 1952.

LLOYD W. ROOT (1949)

Associate Professor of Physics, 1953.

A.B., Lawrence College (Appleton, Wis.), 1929.

ALBERT H. ROSE, S.M. (1945)

Head of Department, 1950, and Associate Professor of Political Science, 1951.

B.S., University of Dayton, 1927; M.A., Western Reserve University, 1942.

EITHEL ROSE (1946)

Head of Department, 1949, and Associate Professor of Home Economics, 1950.

B.S., Indiana State Teachers College (Terre Haute, Ind.), 1928; M.S., Indiana State Teachers College, 1938.

LOUIS HERMAN ROSE, S.M. (1933)

Head of Department and Professor of Electrical Engineering, 1948.

B.S., University of Dayton, 1923; M.S., University of Fribourg (Fribourg, Switzerland), 1933; B.E.E., University of Dayton, 1935; Prof. Eng.

JUSTUS ROSENBERG (1946)

Associate Professor of French and German, 1952.

Graduate of the Gymnasium in Danzig, 1938; Diplome de Civilisation française, University of Paris, 1939; Diplome d'Etudes francaises superieures, University of Paris, 1940; Licence es Lettres, University of Paris, 1946; Ph.D., University of Cincinnati, 1950.

FRANCIS HERMAN RUHLMAN, S.M. (1920)

Librarian, 1920.

A. B., University of Dayton, 1924; B.S. in L.S., Our Lady of the Lake College (San Antonio, Tex.), 1936.

REV. GABRIEL J. RUS, S.M. (1947)

Assistant Professor of French, 1953.

A.B., University of Dayton, 1931; M.A. Western Reserve University, 1952.

JAMES W. RYAN (1953)

Part-time Instructor in Accounting, 1953.

B.S., Miami University (Oxford, Ohio), 1941.

JUDSON SANDERSON (1953)

Part-time Instructor in Mathematics, 1953.

B.S., University of Illinois, 1947; M.S., University of Illinois, 1948; Ph.D., University of Illinois, 1950.

MICHAEL J. SAVITSKI (1950)

Assistant Professor of Mechanical Engineering, 1950.

B.E.E., Rensselaer Polytechnic Institute, 1933; M.Met.E., Brooklyn Polytechnic Institute, 1950.

CHARLES HENRY SCHEIDLER (1953)

Instructor in Psychology, 1953.

A.B., Washington University, 1949; Ph.D., Washington University, 1953.

BERNHARD M. SCHMIDT (1948)

Assistant Professor of Electrical Engineering, 1951.

B.E.E., University of Dayton, 1942.

FRANCIS W. SCHNEIDER, S.M. (1953)

Assistant Librarian, 1953.

A.B., University of Dayton, 1926; M.A., The Ohio State University, 1948.

KENNETH CHARLES SCHRAUT (1940).

Professor of Mathematics, 1948.

A.B., University of Illinois, 1936; M.A., University of Cincinnati, 1938; Ph.D., University of Cincinnati, 1940.

REEVES RICHARD SCHWARTZ (1946)

Head of Department, 1948, and Associate Professor of Physical and Health Education, 1951.

B.Ed., St. Cloud State Teachers College, 1934; M Ed., University of Minnesota, 1940.

BLAZ Y. SCOTT (1946)

Part-time Instructor in Mechanical Engineering, 1946.
B.M.E., University of Dayton, 1942.

VERY REV. ANDREW LEO SEEBOLD, S.M. (1953)

Professor of Sociology and President of the University, 1953.
A.B., University of Dayton, 1924; M.A., The Catholic University of America, 1943; Ph.D., The Catholic University of America, 1947.

HOPE PEARSON SELF (1949)

Assistant Professor of Home Economics, 1952.
B.S., East Tennessee State College, 1944; M.S., University of Tennessee, 1948.

ROBERT SHAIN (1950)

Part-time Instructor in Business Organization, 1950.
A.B., The Ohio State University, 1940.

MARY M. SHAY (1945)

Alumni Secretary, 1945.
B.S., University of Dayton, 1944.

THOMAS L. SHILLITO (1953)

Part-time Instructor in Physical and Health Education, 1953.
B.S., University of Dayton, 1949; M.S., Miami University (Oxford, Ohio), 1952.

NICHOLAS T. SIMOPOULOS (1953)

Part-time Instructor in Mathematics, 1953.
B.S. in E.E., The Ohio State University, 1949.

MARCELLA SMOOT (1953)

Part-time Instructor in Music, 1953.
B.S., The Ohio State University, 1934.

BARTH J. SNYDER (1935)

Associate Professor of Economics and Business Organization, 1946.
A.B., University of Dayton, 1931; J.D., University of Dayton, 1934; M.A., The Ohio State University, 1942.

ATHANASE JOHN SOFIANOPOULOS (1949)

Professor of Chemical Engineering, 1949.
Ph.D., National University of Athens (Greece), 1909.

DEE B. SPRINGER (1946)

Acting Head of Department, 1949, and Associate Professor of Accounting, 1951.
A.B., Miami University (Oxford, Ohio), 1921; M.A., Columbia University, 1922; C.P.A.

GEORGE HENRY SPRINGER (1946)

Associate Professor, 1950, and Acting Head of Department of Geology, 1953.

A.B., Brown University, 1938; M.S. in Geology, Brown University, 1940.

MILTON L. SPROWL (1952)

Part-time Instructor in General Engineering, 1952.

LL.B., University of Cincinnati, 1950.

REV. THOMAS A. STANLEY, S.M. (1952)

Instructor in Religion, 1952.

A.B., University of Dayton, 1943; S.T.B., University of Fribourg (Fribourg, Switzerland), 1949; S.T.L., University of Fribourg, 1951; S.T.D., University of Fribourg, 1952.

WILFRED J. STEINER (1946). Absent on leave.

Acting Head of Department, 1949, and Associate Professor of History, 1951.

A.B., Loras College, 1936; M.A., Harvard University, 1938.

CYRIL D. STERNER, LT. COLONEL (1953)

Assistant Professor of Military Science and Tactics, 1953.

JOSEPH D. STOECKLEIN (1953)

Part-time Instructor in Biology, 1953.

B.S., University of Dayton, 1952.

LEO STRAUS (1952)

Part-time Instructor in Civil Engineering, 1952.

B.S. in C.E., Purdue University, 1949.

KATHERINE E. STRUCK (1951)

Part-time Instructor in Education, 1951.

B.S., University of Dayton, 1939; M.A., University of Dayton, 1943.

LAWRENCE ELDON TAGG (1953)

Instructor in Music, 1953.

B.Mus., University of Nebraska, 1947; M.Mus., University of Nebraska, 1948.

BETTY JEAN THOMAS (1944)

Assistant Professor of Music, 1952.

B.Mus., University of Dayton, 1944; M.Mus., Eastman School of Music (University of Rochester), 1950.

ROBERT A. THOMSON, S.M. (1952)

Instructor in Civil Engineering, 1952.

B.S., University of Dayton, 1950.

MICHAEL TIKSON (1953)

Part-time Instructor in Business Organization, 1953.

B. S., Youngstown College, 1948; M.A., Lehigh University, 1949.

HEWITT TONY (1950)

Part-time Instructor in Mathematics, 1950.

B.S., The Ohio State University, 1937; M.A., The Ohio State University, 1938.

LOUIS E. TRACY (1952)

Part-time Instructor in Business Organization, 1952.

Ph.B., University of Notre Dame, 1949; LL.B., University of Notre Dame, 1951.

JOSEPH FRANCIS UPDYKE (1947)

Assistant Professor of Accounting, 1951.

B.S., University of Dayton, 1947.

ROBERT VANASSELT (1953)

Part-time Instructor in Technical Institute, 1953.

B.S., Birmingham-Southern College, 1947; M.S., The Ohio State University, 1949.

B. BERNARR VANCE (1940)

Assistant Professor of Biology, 1945.

B.S., Miami University (Oxford, Ohio), 1930; M.A., Miami University, 1936.

JOHN F. VERDER, S.M. (1946)

Assistant Librarian, 1948.

A.B., University of Dayton, 1929; B.S. in L.S., Western Reserve University, 1946.

LESTER LOUIS VLAHOS (1953)

Part-time Instructor in English, 1953.

B.S., University of Southern California, 1948; M.S., University of Southern California, 1950.

GEORGE E. WATERHOUSE (1953)

Part-time Instructor in Business Organization, 1953.

B.S., The Ohio State University, 1949.

KENNETH E. WEBBER, JR., CAPTAIN (1952)

Assistant Professor of Military Science and Tactics, 1952.

B.S., United States Military Academy, 1948.

ANDREW RAYMOND WEBER, S.M. (1927)

Professor of Mechanical Engineering, 1942.

B.S., University of Dayton, 1919; B.M.E., University of Dayton, 1927; M.M.E., The Catholic University of America, 1936; Prof. Eng.

ROY WILLIAM WEHMANEN (1946)

Associate Professor of Engineering Drawing, 1953.

B.S., Northern Michigan College of Education, 1939; M.Ed., Wayne University, 1952.

- J. ALBERT WEHRLE, S.M. (1920)
Professor of Electrical Engineering, 1943.
B.S., University of Dayton, 1912; M.E.E., University of Pittsburgh, 1927;
Ph.D., University of Pittsburgh, 1930; Prof. Eng.
- WILLIAM OTTO WEHRLE, S.M. (1933)
Professor of English, 1933, and Head of Department, 1936.
A.B., University of Dayton, 1918; M.A., The Catholic University of America, 1931; Ph.D., The Catholic University of America, 1933.
- JOHN WEIBEL (1952)
Part-time Instructor in Mechanical Engineering, 1952.
B.M.E., Louisiana State University, 1948; M.M.E., Purdue University, 1951.
- GEORGE H. WELDON (1952)
Part-time Instructor in English and Philosophy, 1952.
A.B., Mount St. Mary's College (Emmitsburg, Md.), 1942; M. Letters, Register College of Journalism (Denver, Colo.), 1948; M.A., University of Denver, 1949.
- ADRIAN JOSEPH WESTBROCK (1946)
Associate Professor, 1952, and Acting Head of Department of Mechanical Engineering, 1953.
B.S. in M.E., Indiana Technical College, 1943; M.S. of Automotive Engineering, Chrysler Institute of Engineering, 1945; M.M.E., University of Delaware, 1951.
- JEROME WESTENDORF (1951)
Part-time Instructor in Accounting, 1951.
B.S., University of Dayton, 1943; C.P.A.
- CHARLES W. WHALEN, JR. (1951)
Assistant Professor of Business Organization, 1952.
B.S., University of Dayton, 1942; M.B.A., Harvard University, 1946.
- REGINA KATHLEEN WHETRO (1947)
Assistant Professor of English and Dean of Women, 1951.
A.B., University of Dayton, 1943; M.A., University of Michigan, 1950.
- PHILIP M. WHITNEY, JR., CAPTAIN (1952)
Assistant Professor of Military Science and Tactics, 1952.
B.S., United States Military Academy, 1948.
- ROBERT CHARLES WIECHMAN (1946)
Associate Professor of Biology and Assistant to Associate Dean, Science, 1953.
B.S., Indiana University, 1943; M.T., St. Joseph's Hospital (Phoenix, Ariz.), 1944; M.S., Miami University (Oxford, Ohio), 1951.
- JESSE HOLLAND WILDER (1953)
Instructor in Mechanical Engineering, 1953.
B.S. in M.E., Duke University, 1947; M.S., State University of Iowa, 1949.

H. H. WILLIAMS (1940)

Lecturer in Biology, 1940.

M.D., The Ohio State University, 1917.

JAMES F. WILSON (1949)

Director of Athletic Publicity, 1949.

EDITH WOESTE (1948)

Instructor in Nursing Education, 1948.

B.S., University of Dayton, 1948; R.N.

WILLIAM JOSEPH WOHLLEBEN, S.M. (1909)

Head of Department and Professor of Chemical Engineering, 1909.

B.S., University of Dayton, 1904; M.S., University of Fribourg (Fribourg, Switzerland), 1906; Ph.D., University of Fribourg, 1908.

VINCENT JOHN WOTTLE, S.M. (1938)

Associate Professor, 1944, and Head of Department of Chemistry, 1950.

B.S., University of Dayton, 1936; M.S., The Catholic University of America, 1939; Ph.D., The Ohio State University, 1951.

HAROLD E. WRIGHT (1949)

Part-time Instructor in Mechanical Engineering, 1951.

B.M.E., University of Dayton, 1949.

VERYL L. ZECH (1940)

Assistant Professor of Music, 1951.

B.Mus., University of Dayton, 1948; M.Mus., Cincinnati Conservatory of Music, 1951.

CLAYTON MELVIN ZIEMAN (1953)

Part-time Instructor in Electrical Engineering, 1953.

B.S., University of Wisconsin, 1927; M.S., University of Hawaii, 1939; Ph.D., California Institute of Technology, 1949.

MARIANNA ZIMMERMAN (1945)

Assistant Professor of Nursing Education, 1949.

B.S., Indiana University, 1930; R.N.

DIVISION OF ARTS AT CARTHAGENA

- VERY REV. HERBERT L. LINENBERGER, C.PP.S., *Rector*
Associate Professor of Canon Law
J.C.L., The Catholic University of America, 1945; J.C.D., The Catholic University of America, 1949.
- REV. AMBROSE J. HEIMAN, C.PP.S., *Vice-Rector*
Associate Professor of Philosophy.
M.A., University of Toronto, 1942; L.M.S., Pontifical Institute of Medieval Studies, 1947; Ph.D., University of Toronto, 1949; S.T.L., The Catholic University of America, 1953.
- REV. EDMUND J. RYAN, C.PP.S., *Dean of the Seminary*
Associate Professor of Philosophy.
M.A., The Catholic University of America, 1945; Ph.D., University of St. Louis, 1951.
- REV. EDMUND L. BINSFELD, C.PP.S., *Librarian*
M.A. in L.S., Rosary College, 1951.
- REV. ALOYS H. DIRKSEN, C.PP.S.
Professor of Sacred Scripture.
S.T.L., The Catholic University of America, 1928; S.T.D., The Catholic University of America, 1932.
- REV. MARK L. DORENKEMPER, C.PP.S.
Assistant Professor of Theology.
S.T.L., University of Fribourg (Fribourg, Switzerland), 1949; S.T.D., University of Fribourg, 1951; M.A., University of Montreal, 1954.
- REV. LEO J. GAULRAPP, C.PP.S.
Assistant Professor of Speech.
M.A., University of Michigan, 1950.
- REV. FREDERICK J. HUNNEFELD, C.PP.S. Absent on leave.
S.T.L., Gregorian University (Rome), 1953.
- REV. PAUL J. KNAPKE, C.PP.S.
Professor of History
S.T.L., The Catholic University of America, 1936; S.T.D., The Catholic University of America, 1939.
- REV. GEORGE J. LUBELEY, C.PP.S.
Assistant Professor of Theology.
S.T.L., University of Fribourg (Fribourg, Switzerland), 1947.
- REV. HENRY A. LUCKS, C.PP.S.
Professor of Philosophy.
M.A., The Catholic University of America, 1934; Ph.D., The Catholic University of America, 1936.

REV. ROBERT T. SIEBENECK, C.P.P.S.

Assistant Professor of Sacred Scripture.

S.T.L., University of Fribourg (Fribourg, Switzerland), 1949; S.S.L., Pontifical Biblical Institute, 1951.

DAYTON ART INSTITUTE

ESTHER I. SEAVER, *Director*

EDWARD R. BURROUGHS, *Dean*

HELEN PINKNEY, *Librarian*

ANN DEETER, *Registrar*

EDWARD R. BURROUGHS

JOHN M. KING

ROLAND CROOKES

ROBERT KOEPNICK

GEORGE FROST

ALVIN RAFFEL

MARGARET HOWLAND

PAUL SAMUELSON

FLORENCE WAGNER

GOOD SAMARITAN HOSPITAL

Diagnostic Laboratories

HENRY CAES, B.S., M.D., F.A.S.C.P., *Head*

SISTER AMBROSE, B.S., M.T.

SISTER MAURICE CLET, B.S., M.T.

IRENE GEORGE, B.S., M.T.

ANNE MICKA, B.S., M.T.

RUBY S. HIROSE, PH.D.

KENNETH MINNICK, B.S., M.T.

MYRA HOOVER WRIGHT, B.S., M.T.

MIAMI VALLEY HOSPITAL

Diagnostic Laboratories

MELVIN OOSTING, A.B., M.D., F.A.S.C.P., *Head*

ROBERT ZIPP, M.D., *Associate Head*

SEREPTA ANDERSON, B.S.

JOHN JOHNSON, B.S.

LINDA MAY CAMPBELL, A.B., M.T.

ROGER LADOUCEUR, B.S.

PHYLLIS DINKEL, M.T.

CAROL MACRAY, M.T.

EUNICE FRAZIER, M.A., M.T.

JAMES P. MURPHY, B.S.

SUZANNE HAENZI, B.S., M.T.

MARIAN PELKING, M.T.

KATHLEEN PRATT, M.T.

Department of Radiology

GEORGE A. NICOLL, M.D., *Head*
GEORGE BURKE, M.D., *Associate Radiologist*
JOHN COTTER, R.T.

ST. ELIZABETH HOSPITAL

Diagnostic Laboratories

WILLIAM ABRAMSON, A.B., M.D., F.A.S.C.P., *Head*
ERIK ESELISU, PH.D. JAMES MARION, B.S., M.T.
PATRICIA HUSSEY, B.S., M.T. MARY MARION, M.T.
JOAN LOGEL, B.S., M.T. LIESEL MEHRFORT, B.S., M.T.
SR. M. ELIZABETH, S.P.S.F., MARY ANN RICHARDS, B.S., M.T.
R.N., B.S., M.T. MARY STRAHLER, M.T.

Department of Radiology

RICHARD LAND, M.D., *Head*
SR. LAMBERTINA, S.P.S.F., R.T. RETHA MINNICK, R.T.
ROBERT LYKINS, R.T. DOLORES ORDING, R.T.

VETERANS ADMINISTRATION HOSPITAL

Diagnostic Laboratories

ALDEN S. THOMPSON, B.S., M.D., F.A.S.C.P., *Head*
ERNEST CLARK, B.S., M.T. ESTHER D. JACKSON, A.B., M.M.T.
CAROLYN A. FRUEH, A.B., M.T. ELSPETH F. MCCALLUM, A.B., M.T.
CLARA B. GARD, M.T. WILLIE L. ROWE, M.T.
ELIZABETH S. GRIFFITS, B.S. SUE CASSELL STEVENS, PH.D.
RUBY S. HIROSE, PH.D. EDWIN M. STONE, B.S.
MARJORIE M. HOUSER, B.S. WALDON B. WACKER, M.S.

General Information

HISTORICAL NOTE

IN 1849 THERE came from their native France a group of educators belonging to the religious organization founded by Reverend William Joseph Chaminade and known as the Society of Mary. At Dayton, Ohio, this pioneer band found the present suitable site for establishment of an institution of learning. At that time they purchased from Mr. John Stuart the section known as the Dewberry Farm, comprising one hundred and twenty acres, and at once opened a school in the farm house located on the property. From these humble beginnings the school grew rapidly under the guidance of Brother Maximin Zehler. Urgent needs made necessary the sale of part of this extensive property, leaving a campus of fifty-six acres.

In 1878 this institution was incorporated, and in 1882, by an act of the general assembly of the State of Ohio, it was empowered to confer degrees under the title of St. Mary Institute. After 1912 it was called St. Mary College and continued to be so designated till 1920, when it was raised to the rank of University. Realizing the demands for higher education, the University established night classes in 1920 and summer sessions in 1923. These two projects were opened to men and women and from the beginning were well received. In 1935 the day school, formerly restricted to men, offered to women also the facilities of full-time students.

The University offers courses in Arts, Science, Engineering, Business Administration, Education, Pre-Medicine, and Pre-Law. Journalistic, forensic, musical, and athletic programs are also sponsored by the University under the supervision of the faculty.

EDUCATIONAL AIMS

THE UNIVERSITY OF DAYTON proposes as general objective the complete and harmonious development of all the capacities of man's nature—religious, moral, intellectual, aesthetic, social, and physical. Participation in the widely-varied college activities induces the student to exercise all these powers of soul and body. Moral instruction and adequate campus discipline emphasize the importance of personality development and character formation, while a comprehensive academic program furnishes ample fields of study. Thus college becomes not only a preparation for life, but an integral part of life itself.

The particular objectives are threefold: to give the student a liberal education by training in the natural and social sciences, language, and literature; to prepare for prospective careers in business, art, music—for the professions of teaching and engineering and for professional schools of law, medicine, and dentistry; to establish, in all divisions, a strong sense of social responsibility—to foster leadership both by the theory and the practice of sound principles of religion, philosophy, sociology, economics, and political science.

ACCREDITATION

THE UNIVERSITY OF DAYTON is officially recognized by the following accrediting agencies:

1. The North Central Association of Colleges.
2. The National Catholic Educational Association.
3. The Ohio Association of Colleges.
4. The Pre-Medical course is accredited by the American Medical Association.
5. The Departments of Civil, Electrical, and Mechanical Engineering are accredited by the Engineers' Council for Professional Development.

CAMPUS AND BUILDINGS

THE UNIVERSITY OF DAYTON is situated within the corporate limits of the city of Dayton. It is located in the southern section of the city, approximately three miles from the center of town.

The quiet of the surroundings is conducive to serious study, while at the same time the location affords easy access to the social, business, and industrial interests of the city.

The University campus has for its center the beautiful Chapel of the Immaculate Conception.

The buildings devoted to academic work are: St. Mary Hall, including Administration, Business and Science; Chaminade Hall, including Arts, Education, and Science; St. Joseph Hall, including Civil, Electrical, and Mechanical Engineering; Chemistry Buildings, including Chemical Engineering; Business Administration Building; Field House; Mechanical Engineering Building; Music Building; ROTC Building.

The Albert Emanuel Library, the general library of the campus, was erected in 1928 through the generosity of Victor C. Emanuel, an alumnus of the University, who dedicated this building as a monument to the honor of his father. This library of 55,000 volumes of books and 21,000 volumes of periodicals is equipped with all modern facilities to supplement the regular class work of the student. Special collections are housed in seven departmental libraries to facilitate service to faculty and students.

Adequately equipped laboratories are available for experimental work in the different departments: Biology, Botany, Zoology, Physics, Mineralogy and Geology laboratories in St. Mary Hall; Electrical Engineering laboratories in St. Joseph Hall; Civil and Mechanical Engineering laboratories in the Mechanical Engineering laboratory building; the Chemical and Chemical Engineering laboratories in the Chemistry buildings; Psychological and Home Economics laboratories in Chaminade Hall.

EDUCATION OF VETERANS

ALL DEPARTMENTS OF THE UNIVERSITY have been approved by the Veterans Administration for training under the following G.I. Bills: Public Law 346,

Public Law 16, Korean Public Law 550, and Korean Public Law 894. Credits earned during military service are accepted after an evaluation in terms of the University's standards and the course of study for which the veteran applies. An adequate counseling service is available under the direction of the Veteran's Adviser, whose office is located in Room 118, St. Mary Hall.

HONORS AND AWARDS

AWARDS AND HONORS for scholarship are announced on Honors Day, or at the annual Commencement.

Degrees will be conferred "With Honors" if the student has been awarded the Alpha Sigma Tau Honor Key.

The *Alpha Sigma Tau Honor Key* is awarded to seniors who have a point average for seven semesters, at the University, of 3.5 based on 4.0. The Alpha Sigma Tau is the Honor Society of the University. These seniors are eligible for membership in the Lambda Chapter of the Delta Epsilon Sigma National Honor Society.

A cumulative point hour ratio of at least 3.0 is required for any award or honor.

The following Awards are given annually through the generosity of donors:

The Victor Emanuel, '15, in memory of Mrs. Albert Emanuel, Awards of Excellence in the Senior and Junior Chemical Engineering Classes.

The Harry F. Finke, '02, Award of Excellence in the Senior Civil Engineering Class.

The Mrs. J. Edward Sweetman, in memory of Mr. J. Edward Sweetman, Award of Excellence in the Junior Civil Engineering Class.

The Anthony Horvath and Elmer Steger Award of Excellence in the Senior Electrical Engineering Class.

The Mrs. Louise A. and Mrs. Lucille Hollenkamp, in memory of Bernard F. Hollenkamp, Award of Excellence in the Senior Mechanical Engineering Class.

The Martin C. Kuntz, '12, Award of Excellence in the Junior Mechanical Engineering Class.

The Charles Huston Brown, in memory of Brother William Haebe, Award of Excellence in the Senior Class of Business Organization.

The President's Award of Excellence in Debating.

The Mathematics Club Alumni Awards of Excellence in the Junior and in the Senior Classes.

The Rev. Charles Polichek Awards—first and second—of Excellence in Philosophy. Only Seniors are eligible.

The Miami Valley Alumnae (Sorosis) Award of General Excellence in both academic and extracurricular activities. Only Senior women are eligible.

The Phi Alpha Theta Scholarship Key, awarded on the basis of excellence in the study of History. Eligibility is restricted to Senior members of Delta Eta Chapter.

The Montgomery County Chapter of the University of Dayton Alumni Association Award, known as the Father Renneker Award, for outstanding achievement in teacher education, presented to a senior student for both academic standing and leadership standing.

SPECIALIZED EXAMINATIONS

THE UNIVERSITY OF DAYTON is a center for the administration of the national tests listed below. A large number of Graduate Schools in the United States and Canada recommend, and some require, that the results of these examinations be submitted as one of the credentials for admission. For information regarding these tests, the student should consult the indicated authority.

AMERICAN DENTAL EXAMINATION: University of Dayton Guidance Center or American Dental Association, 222 East Superior Street, Chicago 11, Illinois.

AMERICAN MEDICAL EXAMINATION: University of Dayton Guidance Center or Educational Testing Service, P. O. Box 592, Princeton, New Jersey.

GRADUATE RECORD EXAMINATION: University of Dayton Guidance Center or Educational Testing Service, P. O. Box 592, Princeton, New Jersey.

NATIONAL TEACHERS' EXAMINATION: University of Dayton Guidance Center or Educational Testing Service, P. O. Box 592, Princeton, New Jersey.

SELECTIVE SERVICE QUALIFYING EXAMINATION: Any Selective Service Local Board.

EXTRACURRICULAR ACTIVITIES

ADMINISTRATIVE: Student Council; Student Senate; Central Women's Organization.

RELIGIOUS: National Federation of Catholic College Students; Sodality of the Immaculate Conception; Catholic Students Mission Crusade; Chapel Choir.

ACADEMIC: Alpha Sigma Tau Honor Society; Business Organization and Economics Club; Society for Advancement of Management; Alpha Psi Omega; University Players; Education Club; Mechanical Engineering Society; Electrical Engineering Society; Student Chapter of the American Society of Civil Engineers; History Club; Exponent; Daytonian; University of Dayton News; The National Mathematics Honor Society of Secondary Schools; Mathematics Club; University Choir; Men's Glee Club; Junior Philharmonic Orchestra; Band; Philosophy Club; Psychology Club; Sigma Delta Pi; Geology Club; Chemistry Club; Home Economics Club; Nu Epsilon Delta Society; Sociology Club; Upsilon Delta Sigma Debaters; Tech In Club.

MILITARY: Pershing Rifle Club; Scabbard and Blade; Rifle Team.

ATHLETIC: The Monogram Club; Women's Athletic Association.

SOCIAL: Flyers Hangar; Spirit Committee; Blue Grass Club; Clevelanders' Club; Toledo Club; Hui o Hawaii.

GENERAL: Red Cross College Unit; Mother's Club.

Each of the organizations listed has been approved and placed under the direction of a faculty moderator.

CHILDREN'S THEATRE

A YEAR-ROUND children's theatre of training classes and productions is sponsored by the University Players. Children from age five through eighteen are enrolled. Classes and rehearsals are held in the Student Union Building.

ATHLETICS

ATHLETIC PARTICIPATION is an integral part of the educational development that the University of Dayton strives to achieve for all its students. This statement applies to intercollegiate athletics and the intramural athletic and recreational programs. All students are encouraged to engage in some form of athletic competition according to the level of their ability. This is to be particularly emphasized in the case of students majoring in Physical Education for whom the various athletic activities have special importance in view of the career for which they are preparing. It is felt that athletics, intercollegiate and others, cultivate a sense of unity which is one of the important factors in student morale.

Intercollegiate athletic policies are the responsibility of the President. He is assisted by an Advisory Committee, consisting of Faculty and Alumni. Budgetary control for all athletic and recreational programs is exercised by the Budget Committee of the University.

ADMISSION

ADMISSION OF STUDENTS

ANYONE DESIRING admission is required to file a written application. For admission to a freshman class the applicant must present a satisfactory high school record. This application for admission and high school record must be on forms supplied by the Director of Admissions. For advanced standing an applicant must see that the last institution attended sends an official transcript of credits together with a statement of honorable dismissal. A student is allowed to register only after all credentials have been received and evaluated and a registration permit has been issued.

All new students, both freshman and transfer students, are obligated to take a battery of psychological tests at the University of Dayton Guidance Center.

The University does not have dormitory accommodations for women. Women under twenty-one years of age are not accepted as students in the day classes unless they are residing with parents or close relatives in Dayton.

A thorough physical examination is part of the admission procedure of every student. Records are kept by the Registrar's office. When deemed advisable, students and parents or guardians are given copies. A follow-up is made at regular intervals. An infirmary is maintained with a registered nurse in attendance. The services of outstanding physicians as well as the facilities of three hospitals are available to students.

ADMISSION REQUIREMENTS

FOR ADMISSION TO a freshman class, an applicant must present sixteen units from a high school accredited by some regional accrediting association or by a State Department of Education, and have a total record indicating likelihood of success in college. Certain degrees require specific entrance units, as follows:

- a) *Business Administration Division* requires at least one unit in mathematics.
- b) *Science Division* requires:
 - 1 unit in algebra (to quadratics)
 - 1 unit in chemistry or physics
 - 1 unit in plane geometry (students wishing to major in chemistry, mathematics, or physics should present 1½ units in plane and solid geometry)
- c) *The College of Engineering* requires:
 - 1½ units of algebra
 - 1½ units in plane and solid geometry (students lacking solid geometry may be admitted but will be required to earn credit in it during the first semester)
 - 1 unit in physics or chemistry

- d) Students who have not been graduated from an accredited high school or secondary school may be considered for admission to the *Technical Institute*, provided they can submit evidence of an equivalent background of experience or training.

Students who are obliged or elect to follow courses in mathematics will be assigned to courses only after submitting to a qualifying test. Placement in mathematics is on the basis of this test. This applies to both freshman and transfer students.

GUIDANCE CENTER

THE GUIDANCE CENTER, located in the basement of the Albert Emanuel Library, is staffed by experienced counselors and psychometrists. The Center offers psychological testing services and vocational counseling to the following groups:

- a) Veterans
- b) Students of the University enrolled in either Day or Evening Classes
- c) High school students seeking guidance, especially in view of preparing for some particular college course
- d) Individuals directed to the Center by various industrial organizations
- e) High schools and elementary schools that request the administration of a battery of psychological tests
- f) Individuals seeking vocational advisement

The Center is open from 8:30 a.m. to 5:00 p.m. every day, excepting Saturday and Sunday. Appointments may be made by telephone.

CURRICULUM

THE UNIVERSITY comprises the undergraduate College of Arts and Sciences and the College of Engineering.

COLLEGE OF ARTS AND SCIENCES

THE COLLEGE OF ARTS AND SCIENCES is made up of the Divisions of Arts, Business Administration, Education, and Science.

In the Division of Arts are the Departments of Art, English, History, Languages, Music, Philosophy, Political Science, Psychology, Religion, Sociology, and Speech. This Division includes pre-professional courses in law, social service, foreign service, and journalism. Affiliation of the Dayton Art Institute with the University makes it possible for students to work for the Fine Arts degree. Affiliation of the Dayton Junior Philharmonic Orchestra with the University provides music students with the opportunity for valuable musical practice and experience.

The Division of Arts at Carthagen, Ohio, was established in September, 1949. Enrollment in this Division is limited to members of the Congregation of the Most Precious Blood. The names and degrees of faculty members are included in this catalogue.

The Division of Business Administration includes the Departments of Accounting, Business Organization, Economics, Retailing, and Secretarial Studies.

The Division of Education prepares teachers for both elementary and secondary levels. There are two Departments in the Division: Education, and Physical and Health Education.

The Division of Science has pre-professional courses in medicine, dentistry, veterinary medicine, pharmacy and optometry. In cooperation with St. Elizabeth Hospital, Good Samaritan Hospital, Miami Valley Hospital, and The Veterans Administration Hospital, courses are given in Medical Technology; in cooperation with St. Elizabeth Hospital and Miami Valley Hospital, courses are given in Radiological Technique. The Division of Science includes the following Departments: Biology, Chemistry, Geology, Home Economics, Mathematics, Medical Technology, Nursing Education, Physics, and Radiological Technique.

COLLEGE OF ENGINEERING

THE COLLEGE OF ENGINEERING includes Departments in Chemical, Civil, Electrical, Industrial, and Mechanical Engineering.

TECHNICAL INSTITUTE

THE TECHNICAL INSTITUTE offers programs of study in Electrical, Industrial, and Mechanical Technology.

ACADEMIC REQUIREMENTS

REQUIREMENTS FOR DEGREES

ALL BACHELOR DEGREES granted by the University of Dayton require a minimum of one hundred and twenty-eight credit hours. These credits must be distributed over eight semesters in point of time.

A credit hour denotes a semester course taken one hour a week as a class period or two or three hours a week as a laboratory period.

Requirements for the different degrees are listed under the various Divisions.

One year of residence or thirty semester hours—ordinarily the senior year—is a requirement for any bachelor degree.

RELIGION AND PHILOSOPHY

FOUR CREDIT HOURS in religion are required of Catholic students for each of the freshman and sophomore years. In the junior and senior years, there are elective courses in religion which are open to all students.

Non-Catholic students are required to gain the equivalent number of hours in prescribed courses in logic and philosophical psychology to replace freshman and sophomore courses in religion.

RESERVE OFFICERS TRAINING CORPS

THE DEPARTMENT OF Military Science and Tactics conducts instruction in those general military subjects which are applicable to all components of the Army. The general objective of the course is to produce junior officers who by their education, training, and inherent qualities are suitable for continued development as officers in the United States Army. Students enrolled are organized into a Cadet Regiment which is commanded and staffed by selected Cadet Officers and non-commissioned officers. Instruction is presented by the military staff under the supervision of the Professor of Military Science and Tactics.

The curriculum is divided into a Basic and an Advanced Course. All male non-veterans (except students in the Technical Institute) who are physically qualified and who have not already completed the Basic Course or its equivalent are required to enroll in the Basic Course during their freshman and sophomore years. Satisfactory completion of the Basic Course is a prerequisite for graduation from the University. Transfer students who enter the University with less than full junior status are also required to fulfill the Basic Course requirement. Prior service in the Armed Forces of the United States may be substituted for all or part of the Basic Course. Admission to the Advanced Course is on an optional-selective basis, requiring the approval of the President of the University and the Professor of Military Science and Tactics. The Advanced Course, once begun, automatically becomes a prerequisite for graduation from the University.

Satisfactory completion of the Advanced Course qualifies the student for consideration for commission as Second Lieutenant, United States Army Reserve. In addition, certain selected students may become eligible to apply for a commission in the Regular Army under the Distinguished Military Student program.

Subject to deferment quota limitations which are prescribed by the United States Government, selected ROTC students may be deferred from induction into the Armed Forces as long as they remain in good standing in their academic and military courses and provided they sign the prescribed ROTC Deferment Agreement. The acceptance of the Deferment Agreement obligates the student to the following: (1) to complete the Basic Course; (2) to enroll in and complete the Advanced Course at the proper time, if accepted therefor; (3) upon completion or termination of the course of instruction therein, to accept a commission, if such commission is tendered; (4) to serve on active duty for a period of not less than two years after receipt of said commission, if called upon to do so by the Secretary of the Army; (5) to remain a member of a Regular or Reserve component of the Army until the eighth anniversary of receipt of such commission, unless the commission is sooner terminated by the United States Government.

All ROTC students are issued officer-type uniforms and appropriate insignia. Students accepted for enrollment in the Advanced Course receive commutation of subsistence in cash amounting to approximately \$27.00 per month. Each Advanced Course student must attend one Summer Camp of approximately six weeks duration. During this Camp he receives pay at the rate of approximately \$75.00 per month plus travel expenses to and from Camp.

GRADES AND SCHOLARSHIP

AT MID-SEMESTER and at the end of a semester, a report of every student in each of his classes is given to the Registrar by the instructor. Copies of these reports are given to the students and deans and are sent to the parents or guardians; the final grades of freshman students are also sent to their high school principals. At mid-semester, these marks are merely tentative and represent the progress made by the student. The final academic standing is determined only at the end of the semester.

Grades are based on daily work, tests and quizzes, and semester examinations. Class periods are of fifty minutes' duration; laboratory periods, from two to three hours.

The official marks with their meanings and quality point values are as follows:

A—Excellent	4 quality points*
B—Good	3 quality points*
C—Fair	2 quality points*
D—Passing	1 quality point *
WP—Withdrew, Passing	0 quality point
WF—Withdrew, Failing	0 quality point

F—Failed	0 quality point
I—Incomplete	0 quality point

**For each credit hour allowed for the course.*

The credit hours of each course denote the number of class periods and laboratory periods devoted to the course each week during one semester. The grades of A, B, C, and D entitle the student to four, three, two, and one quality points respectively, for each credit hour. The quality point average is found by dividing the total number of quality points by the number of credit hours carried by the student; a course for which a WP is received is not included, but a course for which a WF is received is included in the same manner as one for which an F is received.

D, although passing, indicates work in some respects below standard grade. In many cases, it will be necessary to repeat the course in question. The decision rests with the Dean and the department in which the course was taken.

An F indicates failure in a course due to poor scholastic work, or to absence without justification, or to failure to report withdrawal from a course. In such cases required courses must be repeated at the next opportunity.

During the first three weeks of a semester, a student may withdraw from a class Without Record; beginning with the fourth week, all withdrawals are recorded as WP or WF.

A grade of I may be given at the discretion of the instructor to any student who, for reasons beyond his control, has not completed some portion of the work of the term, provided that the rest of the work has been of satisfactory grade. An I is not to be marked if the student has been delinquent in his work, that is, when work has not been completed through his own fault. A grade of I is not to be marked at mid-term.

An I must be removed within the following semester (within four weeks from the close of the semester for students in Science and Engineering) or it will be changed to F.

ACADEMIC STANDING

THE FOLLOWING RULES will be observed regarding academic standing:

1. To be in good academic standing, a student must have a semester's point average of 2.00. A cumulative point average of 2.00 is required for graduation.
2. Any student who has a semesters point average of 1.00 or less will be required to withdraw from the University. The Registrar's Office will indicate on the permanent record that the withdrawal was due to poor academic work.
3. A semester point average between 1.00 and 2.00 will AUTOMATICALLY place the student on probation for the next semester. The Registrar's Office will indicate such probation on the student's permanent record. In

Engineering, a quality point average of less than 1.5 requires permission from the Dean for continuance. If permission is granted, the student must repeat all courses for which the semester grade was below C.

4. A minimum point average of 2.20 will be required to remove the probationary status.

5. No student will be put on probation more than twice.

In general, if it appears from the record that a student is not meeting the requirements, either scholastically or otherwise, he may be placed on probation or he may be requested to withdraw from the University.

CHANGES AND WITHDRAWALS

WHEN A STUDENT finds it necessary to change from one class to another or to withdraw from a class for any reason whatsoever, it is important that he notify his Dean immediately. Financial adjustments, if allowed, will be made **ONLY FROM THE DATE OF NOTIFICATION**. Veterans especially should report any such changes or withdrawals promptly, since the amount of time to which they are entitled under Public Laws 346, 16, 550, and 894 is affected by their entrance and withdrawal dates.

EXPENSES

POLICY AND REGULATIONS

THE TRUSTEES of the University of Dayton reserve the right, at any time, to change the regulations of the University, including those concerning fees and the manner of payment, and to make such changes in the curriculum as they deem advisable.

It is a policy of the University that all students who would be classified as campus-students, particularly freshmen, should establish residence on campus in one of the student dormitories, unless these dormitories are fully occupied.

All students having residence on campus shall patronize the dining facilities provided for their service, during the academic week. These dining facilities are available to off-campus students as well as to the campus students. The cafeteria is closed on Sunday evenings.

The University dining hall and dormitories are closed during the Christmas Holidays. With the permission of the Dean of Students, these facilities may be used. The charge for meals during this time will be based on the charge per day during the regular sessions. Room and Board during summer sessions will be at rates determined and published in summer session bulletins.

Tuition is payable in full at the time of registration. Students who arrange to pay in installments are required to pay a moderate carrying charge.

All drafts should be made payable to the University of Dayton.

The University is not responsible for any money or valuables which are not deposited with the Treasurer.

A student may not register for a new term, a transcript of credits will not be issued, the honors of graduation will not be conferred, unless accounts with the University have been satisfactorily settled.

Those in charge of organizations and activities approved by the University are required to deposit all funds with the Treasurer of the University.

The expenses indicated below are for each term of the 1953-54 scholastic year, unless otherwise stated. During the refund period of four weeks from first day of registration, tuition charges will be made according to the following scale:

During registration week and first week of classes.....	20%
During second week of classes.....	40%
During third week of classes.....	60%
During fourth week of classes.....	80%
During or after fifth week of classes.....	100%

FULL TIME STUDENTS

A STUDENT WITH AN academic schedule of twelve semester hours is considered a full-time student. With this status, he is entitled to the benefits of the various activities.

Matriculation fee, payable once, at entrance.....	\$10.00
Late Registration, beginning with the first day of classes.....	5.00
Orientation and placement services, payable once, at entrance.....	10.00
Proficiency and other special examinations, average fee.....	5.00
Tuition, per credit hour.....	12.00
Deposit on uniform for fall and winter terms, for students taking Basic Military Training, returnable	20.00
Laboratory fee, for each laboratory (variations depending upon the course). Average fee	7.50
Laboratory breakage deposit for Chemistry laboratory (variations de- pending upon the course).....	5.00-10.00
Books and stationery, at University Book Store, depending upon courses, minimum expense approximately.....	25.00
For campus students:	
Room and laundry.....	135.00-160.00
Deposit to cover possible damage (refundable).....	10.00
Meals:	
Five-day meal ticket, per semester.....	170.00
Seven-day meal ticket, per semester.....	230.00
<i>Meal tickets are issued for forty-day periods.</i>	
Teacher training fee (Student Teachers) per credit hour. (Maximum fee \$36.00)	6.00

PART-TIME STUDENTS

Matriculation fee, payable at first registration each year.....	5.00
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SPECIAL STUDENTS

The term "special" or "non-matriculated" is applied to those students who are not following a degree program. Part-time students, including those working toward a degree, are, at the discretion of the respective Deans, assimilated to this category. The status of the student may exempt him from the requirement of attendance at some convocations, but has no bearing on the expenses outlined above.

College of Arts and Sciences

FATHER RHODES, *Acting Dean*

Division of Arts

THE DIVISION OF ARTS has as a function to provide the fundamentals of a liberal education. Among the broad objectives to be served by such a type of education are the following: to enrich the student's cultural background; to stimulate intellectual activity; to educate for satisfactory social adjustment; to develop capacities for leadership. The University regards as a special feature of its educational program the training given to all of its students in the field of philosophy in order to achieve the objectives of life integration, character formation and responsible citizenship. In particular, students registered in the Division of Arts are required to take at least a minor in philosophy in view of the role philosophical principles play in effective thinking, speaking, writing, and living.

In its curriculum, the Division of Arts aims to furnish special preparation for various professions such as education, art, music, law, journalism, social service, personnel administration, foreign service, as well as the more comprehensive forms of business and industrial activity. It also seeks to prepare students for study on the graduate level.

DEGREE REQUIREMENTS

FOR THE A.B. DEGREE, the University of Dayton sets down the following requirements: (Lower Division) religion or philosophy 8 credit hours, English 9 credit hours, speech 3 credit hours, history 12 credit hours, foreign language 12 credit hours, natural science or mathematics 6-8 credit hours, psychology 3 credit hours, sociology 3 credit hours, military 6 credit hours (for men), physical education 1 credit hour (for men), 2 credit hours (for women), health 1 credit hour (for men), 2 credit hours (for women); (Upper Division) a major 24 credit hours, two minors 12 credit hours each, electives 16 credit hours. When philosophy is not elected as the major, it must be taken as one of the minors. Because non-Catholic students have followed courses in logic and philosophical psychology during their freshman and sophomore years, they will take epistemology in the first semester and ethics in the second semester of their junior year.

The junior and senior years are generally devoted to study in the major and minor fields. Subjects which may count towards the major or minor are listed in the catalogue as 300 and 400 courses and designated as upper division courses. Normally 64 of the 128 credit hours required for graduation must be on the upper level. Possible majors are: art, economics, English, history, languages, mathematical statistics, music, philosophy, political science, psychology, religion, sociology, and speech.

PRE-PROFESSIONAL COURSES

THE SCHEDULE should be drawn up with a view to preparation for a particular profession which the student may have in mind. Hence it is imperative that the student consult the dean so as to receive the proper educational guidance.

Students contemplating the legal profession can generally satisfy the requirements of Schools of Law by following the curriculum prescribed for the Division of Arts or the Division of Business Administration. Information as to specific requirements should be secured from the particular School of Law which the student desires to enter. Ordinarily ninety credit hours will admit to law school; in particular instances, a bachelor's degree is required.

For foreign service, a curriculum, similar to that of pre-legal students, should be followed with special emphasis on foreign languages and political science.

Two years of college study are required for admission to the first year of Philosophy in diocesan seminaries. During these years stress should be placed upon English, the classical and the modern foreign languages.

In the fields of social service and public administration, there is a great demand for trained personnel. The bachelor's degree is required for admission to a recognized School of Social Work. The undergraduate curriculum should include courses in biology, economics, philosophy, political science, psychology, religion, sociology, and statistics.

GENERAL REQUIREMENTS FOR THE A. B. DEGREE

Freshman Year

FIRST SEMESTER			SECOND SEMESTER		
<i>Subjects</i>	<i>Cr. Hours</i>		<i>Subjects</i>	<i>Cr. Hours</i>	
Religion or Philosophy	2		Religion or Philosophy	2	
Mil. 101 First Yr. Basic Course....	1½		Mil. 102 First Yr. Basic Course....	1½	
Phe. 101 Physical Education	½		Phe. 102 Physical Education	½	
Phe. 103 Health	1		Phe. 104 Health (Women)	1	
Spe. 101 Fund. of Eff. Speaking....	3		Eng. 101 English Composition	3	
Hist. 111 Hist. of Mod. Europe....	3		Hist. 112 Hist. of Mod. Europe....	3	
	Language			Language	
	(1) Mathematics or Science	3-4		(1) Mathematics or Science	3-4
Or. 101 Orientation	0				

Sophomore Year

FIRST SEMESTER			SECOND SEMESTER		
<i>Subjects</i>	<i>Cr. Hours</i>		<i>Subjects</i>	<i>Cr. Hours</i>	
Religion or Philosophy	2		Religion or Philosophy	2	
Mil. 201 Second Yr. Basic Course 1½			Mil. 202 Second Yr. Basic Course 1½		
Phe. 201 Phys. Educ. (Women)	½		Phe. 202 Phys. Educ. (Women)	½	
Eng. 221 English Literature	3		Eng. 222 American Literature	3	
Psych. 201 Introd. Psychology	3		Soc. 201 General Sociology	3	
Hist. 251 Amer. Hist. to 1865....	3		Hist. 252 Amer. Hist. since 1865..	3	
	Language			Language	
	Elective	2-3		Elective	2-3

Junior Year

FIRST SEMESTER			SECOND SEMESTER		
<i>Subjects</i>	<i>Cr. Hours</i>		<i>Subjects</i>	<i>Cr. Hours</i>	
Major Field	6		Major Field	6	
(2) Philosophy	3		(2) Philosophy	3	
Second Minor	3		Second Minor	3	
(3) Electives	3-6		(3) Electives	3-6	

Senior Year

FIRST SEMESTER			SECOND SEMESTER		
<i>Subjects</i>	<i>Cr. Hours</i>		<i>Subjects</i>	<i>Cr. Hours</i>	
Major Field	6		Major Field	6	
(2) Philosophy	3		(2) Philosophy	3	
Second Minor	3		Second Minor	3	
(3) Electives	3-6		(3) Electives	3-6	

(1) If Psychology is chosen as the major field, the freshman science must be Bio. 101-102, followed by Bio. 203-204 in the sophomore year.

(2) If Philosophy is chosen as the major field, it is replaced by another field as the first minor.

(3) Electives must be selected from 300-400 courses.

Special Programs in the Division of Arts

PROGRAM I

BACHELOR OF FINE ARTS

Freshman Year

FIRST SEMESTER			SECOND SEMESTER		
<i>Subjects</i>	<i>Cr. Hours</i>		<i>Subjects</i>	<i>Cr. Hours</i>	
Religion or Philosophy.....	2		Religion or Philosophy.....	2	
Eng. 101 English Composition	3		Spe. 101 Fund. of Eff. Speaking.....	3	
Art At Art Institute.....	10		Art At Art Institute.....	10	
<i>Summer Session</i>					
		Art	At Art Institute.....	6	

Sophomore Year

FIRST SEMESTER			SECOND SEMESTER		
<i>Subjects</i>	<i>Cr. Hours</i>		<i>Subjects</i>	<i>Cr. Hours</i>	
Religion or Philosophy.....	2		Religion or Philosophy.....	2	
Eng. 221 English Literature, or			Hist. 112 Hist. of Mod. Europe, or		
Eng. 222 American Literature	3		Hist. 252 Amer. Hist. since 1865.....	3	
Art At Art Institute.....	10		Art At Art Institute.....	10	
<i>Summer Session</i>					
		Art	At Art Institute.....	6	

Junior Year

FIRST SEMESTER			SECOND SEMESTER		
<i>Subjects</i>	<i>Cr. Hours</i>		<i>Subjects</i>	<i>Cr. Hours</i>	
Phil. 300-400 Philosophy.....	3		Phil. 300-400 Philosophy.....	3	
Psych. 201 Introductory Psych.	3		Soc. 201 General Sociology	3	
Art At Art Institute.....	9		Art At Art Institute.....	9	
<i>Summer Session</i>					
		Art	At Art Institute.....	5	

Senior Year

FIRST SEMESTER			SECOND SEMESTER		
<i>Subjects</i>	<i>Cr. Hours</i>		<i>Subjects</i>	<i>Cr. Hours</i>	
Art At Art Institute.....	15		Art At Art Institute.....	15	

1. For the degree of Bachelor of Fine Arts, a minimum of 137 hours is required. Of these, 105 hours must be in Art and related courses. Thirty-two hours must be in academic subjects according to the curriculum suggested.
2. To complete the required course of studies, it will be necessary to distribute the program over four years and three summer sessions or five years with no summer sessions.

PROGRAM II
BACHELOR OF ARTS WITH A MAJOR IN ART

Freshman Year

FIRST SEMESTER		SECOND SEMESTER	
<i>Subjects</i>	<i>Cr. Hours</i>	<i>Subjects</i>	<i>Cr. Hours</i>
Religion or Philosophy.....	2	Religion or Philosophy.....	2
Mil. 101 First Yr. Basic Course.....	1½	Mil. 102 First Yr. Basic Course.....	1½
Phe. 101 Physical Education.....	½	Phe. 102 Physical Education.....	½
Phe. 103 Health.....	1	Phe. 104 Health (Women).....	1
Spe. 101 Fund. of Eff. Speaking.....	3	Eng. 101 English Composition.....	3
Hist. 111 Hist. of Mod. Europe.....	3	Hist. 112 Hist. of Mod. Europe.....	3
	Language.....		Language.....
Art	Basic Courses.....	Art	Basic Courses.....
	3		3

Sophomore Year

FIRST SEMESTER		SECOND SEMESTER	
<i>Subjects</i>	<i>Cr. Hours</i>	<i>Subjects</i>	<i>Cr. Hours</i>
Religion or Philosophy.....	2	Religion or Philosophy.....	2
Mil. 201 Second Yr. Basic Course.....	1½	Mil. 202 Second Yr. Basic Course.....	1½
Phe. 201 Phys. Educ. (Women).....	½	Phe. 202 Phys. Educ. (Women).....	½
Eng. 221 English Literature.....	3	Eng. 222 American Literature.....	3
Hist. 251 Amer. Hist. to 1865.....	3	Hist. 252 Amer. Hist. since 1865.....	3
Psych. 201 Introd. Psychology.....	3	Soc. 201 General Sociology.....	3
	Language.....		Language.....
Art	Basic Courses.....	Art	Basic Courses.....
	3		3

Junior Year

FIRST SEMESTER		SECOND SEMESTER	
<i>Subjects</i>	<i>Cr. Hours</i>	<i>Subjects</i>	<i>Cr. Hours</i>
Art	Advanced Art.....	Art	Advanced Art.....
	6		6
Phil. 300-400 Philosophy.....	3	Phil. 300-400 Philosophy.....	3
	(1) Second Minor.....		(1) Second Minor.....
	3		3
	(2) Electives.....		(2) Electives.....
	3-6		3-6

Senior Year

FIRST SEMESTER		SECOND SEMESTER	
<i>Subjects</i>	<i>Cr. Hours</i>	<i>Subjects</i>	<i>Cr. Hours</i>
Art	Advanced Art.....	Art	Advanced Art.....
	6		6
Phil. 300-400 Philosophy.....	3	Phil. 300-400 Philosophy.....	3
	(1) Second Minor.....		(1) Second Minor.....
	3		3
	(2) Electives.....		(2) Electives.....
	3-6		3-6

(1) The second minor may be chosen from the following fields: psychology, sociology, economics, political science, history, English, or one of the languages.

(2) Electives must be selected from 300-400 courses.

Basic courses in art to be selected for lower division work are: design 6 credit hours, perspective 3 credit hours, cast drawing 3 credit hours.

Advanced courses for the field of concentration are: life drawing 4½ credit hours, commercial art 6 credit hours, crafts 4½ credit hours, sculpture 3 credit hours, painting 3 credit hours, electives 3 credit hours.

PROGRAM III
BACHELOR OF ARTS WITH A MAJOR IN
MATHEMATICAL STATISTICS

Freshman Year

FIRST SEMESTER

<i>Subjects</i>	<i>Cr. Hours</i>
Religion or Philosophy.....	2
Mil. 101 First Yr. Basic Course.....	1½
Phe. 101 Physical Education	½
Phe. 103 Health	1
Eng. 101 English Composition	3
Hist. 111 Hist. of Mod. Europe.....	3
Language	3
Math. 115 Math. Analysis I.....	5
Or. 101 Orientation	0

SECOND SEMESTER

<i>Subjects</i>	<i>Cr. Hours</i>
Religion or Philosophy.....	2
Mil. 102 First Yr. Basic Course.....	1½
Phe. 102 Physical Education	½
Phe. 104 Health (Women)	1
Spe. 101 Fund. of Eff. Speaking.....	3
Hist. 112 Hist. of Mod. Europe.....	3
Language	3
Math. 116 Math. Analysis II.....	5

Sophomore Year

FIRST SEMESTER

<i>Subjects</i>	<i>Cr. Hours</i>
Religion or Philosophy.....	2
Mil. 201 Second Yr. Basic Course.....	1½
Phe. 201 Phys. Educ. (Women)	½
Eng. 316 Advanced Composition.....	3
Language	3
Math. 201 Differential and Integral Calculus	4
Eco. 201 Prin. of Economics.....	3

SECOND SEMESTER

<i>Subjects</i>	<i>Cr. Hours</i>
Religion or Philosophy.....	2
Mil. 202 Second Yr. Basic Course 1½	1½
Phe. 202 Phys. Educ. (Women)	½
Eng. 222 American Literature	3
Language	3
Math. 202 Differential and Integral Calculus	4
Eco. 202 Prin. of Economics	3

Junior Year

FIRST SEMESTER

<i>Subjects</i>	<i>Cr. Hours</i>
Phil. 300-400 Philosophy	3
Math. 301 Differential Equations	3
Math. 311 Math. Statistics	3
Eco. 404 Business Cycles	3
Psych. 201 Introd. Psychology	3

SECOND SEMESTER

<i>Subjects</i>	<i>Cr. Hours</i>
Phil. 300-400 Philosophy	3
Math. 302 Theory of Equations	3
Math. 312 Math. Statistics	3
Eco. 413 Economic Analysis	3
Soc. 201 General Sociology	3

Senior Year

FIRST SEMESTER

<i>Subjects</i>	<i>Cr. Hours</i>
Phil. 300-400 Philosophy	3
Math. 421 Advanced Calculus	3
Math. 441 Intro. to Higher Algebra, or	3
Math. 411 Theory of Probability	3
Eco. 408 Contemporary Economics 3	3
Hist. 251 Amer. Hist. to 1865	3

SECOND SEMESTER

<i>Subjects</i>	<i>Cr. Hours</i>
Phil. 300-400 Philosophy	3
Math. 422 Advanced Calculus	3
Math. 451 Intro. to Higher Geometry, or	3
Math. 416 Intro. to Calculus of Finite Differences	3
Eco. 300-400 Economics	3
Hist. 252 Amer. Hist. since 1865	3

PROGRAM IV
BACHELOR OF MUSIC

Requirements for the Degree of Bachelor of Music:

ACADEMIC

English	9 Credit Hours
Speech	3 Credit Hours
History, Social Science	6 Credit Hours
Psychology	3 Credit Hours
Philosophy (300 or 400 courses)	6 Credit Hours
Electives (to include required basic Religion or Philosophy and Military Science courses)	14 Credit Hours
	41 Credit Hours

MUSICAL

Major (Piano, Organ, Violin, Voice, Theory, Composition)	20-24 Credit Hours
Minor (Voice, Instrument, Theory)	12 Credit Hours
Theory	20 Credit Hours
History, Literature, Appreciation	10 Credit Hours
Conducting, Instrumentation, Orchestration	5 Credit Hours
Ensemble (Choir, Glee Club, Orchestra, Band)	2 Credit Hours
	69-73 Credit Hours

ELECTIVES (Academic or Musical)14-18 Credit Hours

1. Voice majors will be required to take modern languages as a part of the academic electives.

2. Students majoring in voice, violin, theory, or composition will be required to use piano as a minor, or demonstrate ability to play the piano at a level satisfactory to the Department.

3. For ELECTIVES (Academic or Musical), additional courses in theory and applied music are strongly recommended.

PROGRAM V

BACHELOR OF ARTS WITH A MAJOR IN MUSIC

Freshman Year

FIRST SEMESTER

<i>Subjects</i>	<i>Cr. Hours</i>
Religion or Philosophy	2
Mil. 101 First Yr. Basic Course	1½
Phe. 101 Physical Education	½
Phe. 103 Health	1
Spe. 101 Fund. of Eff. Speaking.....	3
Language	3
Mathematics or Science	3-4
Mus. 151 First Year Theory	5

SECOND SEMESTER

<i>Subjects</i>	<i>Cr. Hours</i>
Religion or Philosophy	2
Mil. 102 First Yr. Basic Course	1½
Phe. 102 Physical Education	½
Phe. 104 Health (Women)	1
Eng. 101 English Composition	3
Language	3
Mathematics or Science	3-4
Mus. 152 First Year Theory	5

Sophomore Year

FIRST SEMESTER

<i>Subjects</i>	<i>Cr. Hours</i>
Religion or Philosophy	2
Mil. 201 Second Yr. Basic Course	1½
Phe. 201 Phys. Educ. (Women)	½
Eng. 221 English Literature	3
Language	3
Hist. 111 Hist. of Mod. Europe.....	3
Mus. 251 Second Year Theory	5
Mus. 102 Music Lit. and Apprec.....	2

SECOND SEMESTER

<i>Subjects</i>	<i>Cr. Hours</i>
Religion or Philosophy	2
Mil. 202 Second Yr. Basic Course	1½
Phe. 202 Phys. Educ. (Women)	½
Language	3
Eng. 222 American Literature	3
Hist. 112 Hist. of Mod. Europe.....	3
Mus. 252 Second Year Theory	5
Mus. Applied Music	2

Junior Year

FIRST SEMESTER

<i>Subjects</i>	<i>Cr. Hours</i>
Mus. 301 History of Music I.....	3
Mus. Applied Music	2
Phil. 300-400 Philosophy	3
Hist. 251 Amer. Hist. to 1865.....	3
Psych. 201 Introductory Psychology	3
Second Minor	3

SECOND SEMESTER

<i>Subjects</i>	<i>Cr. Hours</i>
Mus. 302 History of Music II.....	3
Mus. Applied Music	2
Phil. 300-400 Philosophy	3
Hist. 252 Amer. Hist. since 1865....	3
Soc. 201 General Sociology	3
Second Minor	3

Senior Year

FIRST SEMESTER

<i>Subjects</i>	<i>Cr. Hours</i>
Mus. Advanced Music	3
Phil. 300-400 Philosophy	3
Second Minor	3
(1) Electives	3-6

SECOND SEMESTER

<i>Subjects</i>	<i>Cr. Hours</i>
Mus. Advanced Music	3
Phil. 300-400 Philosophy	3
Second Minor	3
(1) Electives	3-6

(1) Electives must be selected from 300-400 courses.

PROGRAM VI

DIVISION OF ARTS AT CARTHAGENA

The freshman and sophomore curriculum corresponds to the Liberal Arts program followed at St. Joseph's College, Collegeville, Indiana.

Junior Year

FIRST SEMESTER			SECOND SEMESTER				
<i>Subjects</i>		<i>Cr. Hours</i>	<i>Subjects</i>		<i>Cr. Hours</i>		
Phil.	307	Philosophy of Nature	5	Phil.	304	Philosophy of Man	4
Phil.	416	Hist. of Ancient Phil.....	2	Phil.	417	History of Medieval Philosophy	4
Hist.	313	History of Christian Antiquity	3	Hist.	301	Medieval Europe	3
Psych.	201	Introductory Psychology	3	Psych.	305	Mental Hygiene	3
Educ.	202	Educational Psychology ..	3	Educ.	307	Principles of Teaching	2
Rel.	341	Introductory Ascetical Theology	2	Spe.	303	Advanced Interpretative Reading	2

Senior Year

FIRST SEMESTER			SECOND SEMESTER				
<i>Subjects</i>		<i>Cr. Hours</i>	<i>Subjects</i>		<i>Cr. Hours</i>		
Phil.	421	Metaphysics I	3	Phil.	423	Metaph. of Knowledge	3
Phil.	422	Metaphysics II	3	Phil.	424	Problems of Metaphysics	3
Phil.	324	Ethics	3	Phil.	419	History of Contemporary Philosophy	2
Phil.	418	History of Modern Philosophy	4	Phil.	434	St. Thomas Aquinas	2
Hist.	302	Renaissance and Reformation	3	Hist.	431	Modern Church History ..	3
Spe.	401	Advanced Public Speak.	2	Soc.	404	Social Institutions	3
				Rel.	441	Ascetical Theology	2

Division of Business Administration

BROTHER NAGEL, *Associate Dean*

THE DIVISION OF BUSINESS ADMINISTRATION prepares students for activity in business, community leadership, and service. Because intelligent business and community leadership requires a well-rounded character and mind development, this Division feels that its students must not only be well-versed in commerce and its related fields, but also in those of philosophy and the social sciences. It is believed that broad training in the various fields within the Division will equip the student with a more diversified training than if too narrow specialization is followed. Also, by wise guidance in his choice of elective courses outside this Division, the student's general knowledge is widened and in this same manner his interests are fostered and developed.

DEGREE REQUIREMENTS

THE DIVISION OF BUSINESS ADMINISTRATION confers the degree of Bachelor of Science in Business Administration upon the satisfactory completion of the prescribed requirements. These requirements consist of one hundred and thirty semester hours as a minimum, and twice that number of quality points, which generally cover a program of eight semesters.

Each candidate for the degree must satisfy the prescribed requirements of the Freshman-Sophomore Business Administration program, which has been planned to give the student a broad and liberal training in preparation for business and economics. It is desirable in the freshman and sophomore years that the sequence of courses be followed as nearly as possible, but it may be varied to suit the needs of individual students. There is a more specialized curriculum for students in Secretarial Studies.

LOWER DIVISION

Freshman Year

FIRST SEMESTER			SECOND SEMESTER		
<i>Subjects</i>		<i>Cr. Hours</i>	<i>Subjects</i>		<i>Cr. Hours</i>
Religion or	Philosophy	2	Religion or	Philosophy	2
Mil.	101 First Yr. Basic Course.....	1½	Mil.	102 First Yr. Basic Course.....	1½
Phe.	101 Physical Education	½	Phe.	102 Physical Education	½
Phe.	103 Health (Women)	1	Phe.	103 Health (Men)	1
Eng.	101 English Composition	3	Phe.	104 Health (Women)	1
Acct.	101 Elementary Accounting	3	Spe.	101 Fund. of Eff. Speaking.....	3
Bus.	101 Intro. to Business	3	Acct.	102 Elementary Accounting.....	3
Bus.	103 Math. of Finance I	3	Bus.	102 Industrial Resources	3
Or.	101 Orientation	0	Eco.	104 Economic Geography	3

Sophomore Year

FIRST SEMESTER		SECOND SEMESTER	
<i>Subjects</i>	<i>Cr. Hours</i>	<i>Subjects</i>	<i>Cr. Hours</i>
Religion or Philosophy	2	Religion or Philosophy	2
Mil. 201 Second Yr. Basic Course	1½	Mil. 202 Second Yr. Basic Course	1½
Phe. 201 Phys. Educ. (Women)	½	Phe. 202 Phys. Educ. (Women)....	½
(1) Acct. 201 Intermediate Acctg.	3	(1) Acct. 201 Intermediate Acctg.	3
Eco. 201 Principles of Economics	3	Eco. 202 Principles of Economics...	3
Bus. 201 Business Machines	3	Eco. 205 American Eco. History	3
Bus. 203 Math. of Finance II	3	Psych. 201 Introductory Psychology	3
Eng. 222 American Literature	3		

(1) Students majoring in business organization and economics and who do not wish to elect Acct. 201-2 should consult their adviser for substitution. Usually, English literature, sociology, or political science are satisfactory substitutes (6 credit hours).

UPPER DIVISION

Specialization in one or more fields in this Division occurs in the Junior and Senior years. A particular curriculum in each field is recommended and it is advisable that students adhere as nearly as possible to this sequence of courses. It is possible to major in any one of the three departments of accounting, business organization or economics. A student may choose to major in two, or major in one and have minors in the other two. A minimum of forty-five hours must be completed in Junior and Senior courses in the Division of Business Administration. A specific requirement of the University is six credits in philosophy and one course in psychology.

REQUIRED COURSES

The following courses must be completed by all students who are candidates for a degree in Business Administration.

	<i>Cr. Hours</i>
Bus. 301 Corporation Finance	3
Bus. 303 Business Law	3
Bus. 305 Principles of Marketing	3
Bus. 313 Business Statistics	3
Bus. 316 Industrial Management	3
Bus. 317 Labor Management	3
Eco. 405 Money, Credit, and Banking.....	3
Eco. 404 Business Cycles and/or	3
Eco. 408 Contemporary Economics	3
Bus. 425 Seminar	2

ACCOUNTING

THE FOLLOWING COURSES are prescribed for a minor in accounting:

	<i>Cr. Hours</i>
Acct. 301-302 Advanced Accounting	6
Acct. 303-304 Cost Accounting	6
Acct. 401-402 Auditing	6

These constitute the core courses. For a major in accounting, a further sequence of four or five courses is required. A student who majors in accounting and who chooses to have a minor in both business organization and economics must earn credits for at least two courses in either business organization or economics in addition to those listed above as required courses.

BUSINESS ORGANIZATION AND ECONOMICS

THE WORK in business organization provides training for students planning to engage in commercial, industrial, and financial activities. The program is developed to emphasize basic principles in the broad fields of finance, management, and marketing. Current economic developments as well as economic and social implications of past and present business developments are stressed. For students desiring some degree of specialization, special courses are provided in the fields of banking, finance, management, retailing, salesmanship, statistics, business law and applied economics. Provisions are made for a well-rounded business training to aid students to adjust themselves intelligently and successfully to the commercial and industrial world.

The work in economics has been planned for two groups of students. The first group includes those students who desire a general background and understanding of economics, its order, development, and operation. The second group consists of those students who desire technical training in preparation for advanced specialized study in business and for professional service with government or enterprise requiring trained economists. A balanced program of study is available to the student in this field. Candidates for the Bachelor of Arts degree who desire to major in economics will follow the program of the Division of Arts. Students in the Division of Business Administration will follow the curriculum provided.

The student who chooses to major in business organization and economics is required to follow a program which includes in addition to the required basic courses (a) a sequence of three or four courses as a minimum in a specialized field, namely marketing, management, banking and finance, and economics, (b) one or two advanced courses in each of the following: marketing, management, banking and finance, business law, and economics. The student, with the adviser, will decide which of the above plans best meets his needs and interests and will govern his courses accordingly.

**PROGRAM I
BACHELOR OF SCIENCE WITH A MAJOR IN ACCOUNTING
BUSINESS ORGANIZATION AND ECONOMICS MINORS**

Junior Year

FIRST SEMESTER			SECOND SEMESTER		
<i>Subjects</i>	<i>Cr. Hours</i>		<i>Subjects</i>	<i>Cr. Hours</i>	
Acct. 301	Advanced Account.	.....3	Acct. 302	Advanced Account.	.....3
Acct. 303	Cost Accounting	.....3	Acct. 304	Cost Accounting	.....3
Bus. 305	Prin. of Marketing	.....3	Bus. 301	Corporation Finance	.....3
Bus. 313	Statistics	.....3	Bus. 303	Business Law	.....3
Bus. 316	Industrial Management	..3	Bus. 317	Labor Management	.....3
Phil. 306	Epistemology or		Phil. 324	Ethics or	
Phil. 311	Logic	.....3	Phil. 306	Epistemology	.....3

Senior Year

FIRST SEMESTER			SECOND SEMESTER		
<i>Subjects</i>	<i>Cr. Hours</i>		<i>Subjects</i>	<i>Cr. Hours</i>	
Acct. 401	Auditing I	.....3	Acct. 402	Auditing II	.....3
Acct. 403	Federal Income Tax	.....3	Acct. 404	C. P. A. Problems	.....3
Acct. 406	Pay Roll Accounting	.....3	Bus. 404	Business Cycles or	
Eng. 408	Business English	.....3	Bus. 408	Contemporary Economics 3	
Bus. 405	Money, Credit, Banking..3			Electives	.....6
Phil. 300-400	Philosophy, or		Bus. 425	Business Seminar	.....2
	Elective	.....3			

**PROGRAM II
BACHELOR OF SCIENCE WITH A MAJOR IN
BUSINESS ORGANIZATION
ACCOUNTING AND ECONOMICS MINORS**

Junior Year

FIRST SEMESTER			SECOND SEMESTER		
<i>Subjects</i>	<i>Cr. Hours</i>		<i>Subjects</i>	<i>Cr. Hours</i>	
Acct. 301	Advanced Account.	.....3	Acct. 302	Advanced Account.	.....3
Acct. 303	Cost Accounting	.....3	Acct. 304	Cost Accounting	.....3
Bus. 301	Corporation Finance	.....3	Bus. 304	Business Law	.....3
Bus. 303	Business Law	.....3	Bus. 305	Prin. of Marketing	.....3
Bus. 316	Industrial Management	..3	Bus. 317	Labor Management	.....3
Phil. 306	Epistemology or		Phil. 324	Ethics or	
Phil. 311	Logic	.....3	Phil. 306	Epistemology	.....3

Senior Year

FIRST SEMESTER			SECOND SEMESTER		
<i>Subjects</i>	<i>Cr. Hours</i>		<i>Subjects</i>	<i>Cr. Hours</i>	
Acct. 401	Auditing I	.....3	Acct. 402	Auditing II	.....3
Bus. 313	Statistics	.....3	Bus. 307	Advertising	.....3
Bus. 404	Business Cycles or		Bus. 310	Salesmanship	.....3
Bus. 408	Contemporary Economics 3		Bus. 405	Money, Credit, Banking 3	
	Business Electives	.....6	Eng. 408	Business English	.....3
Phil. 300-400	Philosophy, or		Bus. 425	Business Seminar	.....2
	Elective	.....3			

PROGRAM III
BACHELOR OF SCIENCE WITH MAJORS IN BUSINESS
ORGANIZATION AND ECONOMICS

Junior Year

FIRST SEMESTER

SECOND SEMESTER

<i>Subjects</i>	<i>Cr. Hours</i>	<i>Subjects</i>	<i>Cr. Hours</i>
Bus. 301 Corporation Finance	3	Bus. 304 Business Law	3
Bus. 303 Business Law	3	Bus. 305 Prin. of Marketing	3
Bus. 313 Statistics	3	Bus. 310 Salesmanship	3
Bus. 317 Labor Management	3	Bus. 316 Industrial Management ..	3
Bus. 307 Advertising	3	Business Electives	3
Phil. 306 Epistemology or		Phil. 324 Ethics or	
Phil. 311 Logic	3	Phil. 306 Epistemology	3

Senior Year

FIRST SEMESTER

SECOND SEMESTER

<i>Subjects</i>	<i>Cr. Hours</i>	<i>Subjects</i>	<i>Cr. Hours</i>
Bus. 405 Money, Credit, Banking 3		Bus. 404 Business Cycles or	
Eco. 308 Insurance	3	Bus. 408 Contemporary Economics 3	
Business Electives	6	Eco. 401 Investments	3
Bus. 425 Business Seminar	2	Economics Electives	6
Phil. 300-400 Philosophy, or		Eco. 425 Economics Seminar	2
Elective	3	Eng. 408 Business English	3

PROGRAM IV

BACHELOR OF SCIENCE WITH A MAJOR IN
BUSINESS ORGANIZATION
ECONOMICS AND UNRELATED MINORS

Junior Year

FIRST SEMESTER

SECOND SEMESTER

<i>Subjects</i>	<i>Cr. Hours</i>	<i>Subjects</i>	<i>Cr. Hours</i>
Bus. 301 Corporation Finance	3	Bus. 305 Prin. of Marketing	3
Bus. 303 Business Law	3	Bus. 310 Salesmanship	3
Bus. 307 Advertising	3	Bus. 313 Statistics	3
Bus. 316 Industrial Management ..	3	Bus. 317 Labor Management	3
Elective (Unrel. minor)..3		Elective (Unrel. minor)..3	
Phil. 306 Epistemology or		Phil. 324 Ethics or	
Phil. 311 Logic	3	Phil. 306 Epistemology	3

Senior Year

FIRST SEMESTER

SECOND SEMESTER

<i>Subjects</i>	<i>Cr. Hours</i>	<i>Subjects</i>	<i>Cr. Hours</i>
Bus. 405 Money, Credit, Banking 3		Bus. 404 Business Cycles or	
Business Elective	3	Bus. 408 Contemporary Economics 3	
Economics Elective	3	Eco. 401 Investments	3
Bus. 425 Business Seminar	2	Elective (Unrel. minor)..3	
Elective (Unrel. minor)..3		Electives	9
Phil. 300-400 Philosophy			
or Elective	3		

PROGRAM V
BACHELOR OF SCIENCE WITH A MAJOR IN ECONOMICS
BUSINESS ORGANIZATION AND UNRELATED MINORS

Junior Year

FIRST SEMESTER			SECOND SEMESTER		
<i>Subjects</i>		<i>Cr. Hours</i>	<i>Subjects</i>		<i>Cr. Hours</i>
Bus. 301	Corporation Finance	.....3	Bus. 305	Prin. of Marketing	.....3
Bus. 303	Business Law	.....3	Bus. 313	Statistics	.....3
Bus. 316	Industrial Management	.....3	Bus. 317	Labor Management	.....3
Eco. 325	Labor Economics	.....3	Eco. 308	Insurance	.....3
	Elective (Unrel. minor)	..3		Elective (Unrel. minor)	..3
Phil. 306	Epistemology or		Phil. 324	Ethics or	
Phil. 311	Logic	.....3	Phil. 306	Epistemology	.....3

Senior Year

FIRST SEMESTER			SECOND SEMESTER		
<i>Subjects</i>		<i>Cr. Hours</i>	<i>Subjects</i>		<i>Cr. Hours</i>
Bus. 405	Money, Credit, Banking	3	Bus. 406	Money, Credit, Banking	3
Eco. 401	Investments	.....3	Bus. 404	Business Cycles or	
Eco. 413	Economic Analysis	.....2	Bus. 408	Contemporary Economics	3
Eco. 402	Public Finance	.....3		Elective (Unrel. minor)	..3
	Elective (Unrel. minor)	..3		Economics or Business	
Phil. 300-400	Philosophy, or			Electives	.....6
	Elective	.....3	Eco. 425	Economics Seminar	.....2

PROGRAM VI
BACHELOR OF SCIENCE WITH A MAJOR IN
PERSONNEL ADMINISTRATION

Junior Year

FIRST SEMESTER			SECOND SEMESTER		
<i>Subjects</i>		<i>Cr. Hours</i>	<i>Subjects</i>		<i>Cr. Hours</i>
Bus. 303	Business Law	.....3	Bus. 301	Corporation Finance	.....3
Bus. 305	Prin. of Marketing	.....3	Bus. 313	Statistics	.....3
Bus. 316	Industrial Management	.....3	Bus. 317	Labor Management	.....3
Psych. 305	Mental Hygiene	.....3	Phil. 324	Ethics or	
Phil. 306	Epistemology or		Phil. 306	Epistemology	.....3
Phil. 311	Logic	.....3	Psych. 408	Social Psychology or	
Psych. 308	Experimental Psych.	.....3	Psych. 402	Measurement of Human	
				Behavior	.....3
			Eng. 408	Business English	.....3

Senior Year

FIRST SEMESTER			SECOND SEMESTER		
<i>Subjects</i>		<i>Cr. Hours</i>	<i>Subjects</i>		<i>Cr. Hours</i>
Bus. 327	Elem. of Supervision	.....3	Bus. 405	Money, Credit, Banking	3
Bus. 404	Business Cycles or		Bus. 419	Collective Bargaining,	
Bus. 408	Contemporary Economics	3		Mediation, Arbitration	..3
Bus. 319	Job Evaluation and		Bus. 422	Counseling Techniques	..3
	Wage Determination	.....3	Bus. 421	Theory of Organization	..3
Phil. 300-400	Philosophy, or			Business Electives	.....6
	Elective	.....3			
Bus. 324	Labor Legislation	.....3			
Psych. 420	Industrial Psychology	.....3			

**PROGRAM VII
BACHELOR OF SCIENCE WITH A MAJOR IN
INDUSTRIAL MANAGEMENT**

Junior Year

FIRST SEMESTER			SECOND SEMESTER		
<i>Subjects</i>	<i>Cr. Hours</i>		<i>Subjects</i>	<i>Cr. Hours</i>	
Bus. 303	Business Law	3	Bus. 301	Corporation Finance	3
Bus. 305	Prin. of Marketing	3	Bus. 313	Statistics	3
Bus. 316	Industrial Management	3	Bus. 327	Elements of Supervision	3
Eco. 325	Labor Economics	3	Bus. 317	Labor Management	3
Phil. 306	Epistemology or		Eng. 408	Business English	3
Phil. 311	Logic	3	Phil. 324	Ethics or	
Acct. 310	Cost Analysis	3	Phil. 306	Epistemology	3

Senior Year

FIRST SEMESTER			SECOND SEMESTER		
<i>Subjects</i>	<i>Cr. Hours</i>		<i>Subjects</i>	<i>Cr. Hours</i>	
Bus. 320	Time and Motion Study	3	Bus. 321	Time and Motion Study	3
Bus. 319	Job Evaluation and Wage Determination	3	Bus. 405	Money, Credit, Banking	3
Bus. 404	Business Cycles or		Bus. 415	Production Methods and Control	3
Eco. 408	Contemporary Economics	3	Bus. 419	Collective Bargaining, Mediation, Arbitration	3
Bus. 324	Labor Legislation	3	Bus. 421	Theory of Organization	3
Phil. 300-400	Philosophy, or Elective	3		Elective	3
Psych. 420	Industrial Psychology	3			

**PROGRAM VIII
BACHELOR OF SCIENCE WITH A MAJOR IN RETAILING**

Junior Year

FIRST SEMESTER			SECOND SEMESTER		
<i>Subjects</i>	<i>Cr. Hours</i>		<i>Subjects</i>	<i>Cr. Hours</i>	
Bus. 301	Corporation Finance	3	Bus. 313	Statistics	3
Bus. 303	Business Law	3	Eng. 408	Business English	3
Ret. 305	Introd. to Retailing	3	Ret. 318	Retail Personnel Relations	3
Ret. 310	Retail Salesmanship	3	Ret. 409	Retail Organization and Operation	3
Ret. 316	Textiles	3	Ret. 414	Buying for Retail Stores	3
Phil. 306	Epistemology, or		Phil. 324	Ethics or	
Phil. 311	Logic	3	Phil. 306	Epistemology	3

Senior Year

FIRST SEMESTER			SECOND SEMESTER		
<i>Subjects</i>	<i>Cr. Hours</i>		<i>Subjects</i>	<i>Cr. Hours</i>	
Bus. 405	Money, Credit, Banking	3	Bus. 402	Credits and Collections	3
Bus. 307	Advertising	3	Bus. 404	Business Cycles or	
Ret. 319	Color Design & Interior Decorating	3	Eco. 408	Contemporary Economics	3
Ret. 405	Retail Merchandising Mathematics	3	Ret. 311	Retail Sales Promotion	3
Ret. 420	Store Laboratory	2	Ret. 320	Fashions or Elective	3
Phil. 300-400	Philosophy, or Elective	3	Ret. 421	Store Laboratory	2
			Ret. 425	Retail Seminar	2

**PROGRAM IX
CERTIFICATE PROGRAM IN SECRETARIAL STUDIES**

THE TWO-YEAR Secretarial Studies Certificate Program has been designed especially for those who plan to attend college only two years. It is a complete certificate program in itself, and may also be used as the first two years for a four-year degree program in business administration or in education.

University-trained private secretaries are urgently needed in hospitals, clinics, and other medical service organizations. They are needed in research organizations, personnel, and foreign trade offices, in social service and governmental agencies, in commercial and industrial offices.

In order to qualify for the higher-bracket secretarial positions, expert skill should be achieved in stenography and office procedure. A knowledge of accountancy, finance, and business machines is important. But as important as these studies are, the future worker needs the reinforcement of broad educational training in economics, history, and other social studies. He needs to enrich his personality with higher training in English or other cultural studies.

Freshman Year

FIRST SEMESTER		SECOND SEMESTER	
<i>Subjects</i>	<i>Cr. Hours</i>	<i>Subjects</i>	<i>Cr. Hours</i>
Religion or Philosophy	2	Religion or Philosophy	2
Phe. 101 Physical Education	1/2	Phe. 102 Physical Education	1/2
Phe. 103 Health	1	Phe. 104 Health	1
Eng. 101 English Composition	3	Spe. 101 Fund. of Eff. Speaking	3
Sec. 101 Elementary Shorthand	3	Sec. 102 Elementary Shorthand	3
Sec. 103 Elementary Typing	3	Sec. 104 Elementary Typing	3
Sec. 110 Secretarial Math.	3	Bus. 101 Introd. to Business	3

Sophomore Year

FIRST SEMESTER		SECOND SEMESTER	
<i>Subjects</i>	<i>Cr. Hours</i>	<i>Subjects</i>	<i>Cr. Hours</i>
Religion or Philosophy	2	Religion or Philosophy	2
Phe. 201 Physical Education	1/2	Phe. 202 Physical Education	1/2
Eco. 204 Survey of Economics	3	Bus. 201 Business Machines	3
Sec. 201 Advanced Shorthand	3	Sec. 202 Advanced Shorthand	3
Sec. 203 Advanced Typing	3	Sec. 204 Advanced Typing	3
Sec. 105 Secretarial Accounting	3	Sec. 106 Secretarial Accounting	3
Sec. 205 Secretarial Theory	3	Sec. 206 Secretarial Theory	3

Division of Education

BROTHER FAERBER, *Associate Dean*

THE DIVISION OF EDUCATION is primarily concerned with the professional preparation of future teachers. It is recognized that teaching is an art, that it requires painstaking professional preparation against the backdrop of desirable personality qualities. In this respect, the Division seeks quality rather than quantity in its students.

The four-year program of teacher-education is designed to provide the future teacher with opportunities for: (1) personal, social, and ethical development; (2) a broad general education; (3) comprehensive subject matter specialization; and (4) professional competence.

In this wise, the largest part of the curriculum is directed toward gaining the elements of a broad and sound education. In addition, the teacher should have a feeling of power in his field, which requires that his specialization be comprehensive. Finally, provisions for professional competence are made (1) through adequate study of the various phases in the growth and development of the human individual, (2) through thorough study of the professional foundations which are common to all teaching, and (3) through specialized study of the principles underlying a particular type and level of teaching.

The Division's concept of professional teaching involves not only the furthering of a pupil's knowledge but also the development of proper attitudes, appreciations, skills, and abilities together with the nurturing of the student's personality in every phase: physical, intellectual, moral, social, aesthetic, spiritual, cultural—so that the whole student evolves into a well-educated, integrated, balanced personality.

DEGREE REQUIREMENTS

SPECIFIC FOUR-YEAR course requirements for kindergarten-primary, elementary, secondary, and special (music, art, physical education, home economics, business, speech) certification are outlined in the following pages.

The work of each teacher candidate is reviewed at the end of his first year by a faculty committee which will decide whether his personal traits, academic work, and participation in college activities point toward a successful teaching career.

The Division of Education will not recommend students for graduation unless these students can also qualify and be recommended for teacher certification.

To satisfy University requirements for graduation and State requirements for certification, the student shall fulfill the following requirements:

1. Show evidence of such general scholarship, personal and moral qualities, as give promise of professional success.

2. Earn 128 semester hours credit in approved courses.
3. Meet the following letter-grade requirements:
 - A. Earn a grade-point average of 2.00 or better. This minimum point average is necessary in order to be in good standing each semester.
 - B. Show work of no less than "C" caliber in one's specialized teaching field or fields. (No grade of "D" is acceptable in the student's teaching field.)
4. Complete a *minimum* of 24 semester hours in professional courses distributed over the following areas:

	<i>Cr. Hours</i>
A. <i>Introduction To Education</i>	3
B. <i>Growth and Development</i>	3
Educational Psychology I, Child Psychology, Adolescent Psychology.	
C. <i>The Learning and Teaching Processes</i>	3-6
Educational Psychology II, Group Leadership, Classroom Management, Provisions for Individual Differences, Diagnosis and Remedial Instruction.	
⁽¹⁾ D. <i>The Purposes and Practices of Education</i>	5-6
Purposes and Practices of the Elementary School, Principles of Secondary Education, Principles of Education, Philosophy of Education, Modern Theories of Education, History of Educational Thought.	
E. <i>The Integrated Personality</i>	3
Mental Hygiene, Principles of Guidance, Interviewing and Counseling Procedures.	
⁽²⁾ F. <i>Special Methods</i> (in area of main teaching field)	2-3
G. <i>Student Teaching</i>	6-12

⁽¹⁾Not applicable to students following courses leading to a Bachelor of Science Degree in Music Education, Art Education, or Business Education.

⁽²⁾Students in Elementary Education follow special courses in methods covering (a) Reading, (b) Skills, (c) Content. Students in Kindergarten-Primary Education follow special courses in theory, methods, and materials on kindergarten-primary level.

The responsibility for meeting the University and State requirements rests with the student and not the University officials. The student is cautioned to study the course requirements, especially specific prerequisite course requirements, as noted in the catalogue.

TEACHING CERTIFICATES

THE DIVISION OF EDUCATION is on the approved list of the Ohio State Department of Education for the education and preparation of teachers. In addition to preparing regular kindergarten-primary, elementary, and high school teachers, the Division also enables students to qualify for special certificates in Art, Physical Education, Home Economics, Business Education, Music, and Speech. Provisional certificates will be issued only to those who complete the above mentioned requirements.

PROGRAM I
FOR STUDENTS MAJORING IN ELEMENTARY EDUCATION

Degree: Bachelor of Science in Education

Freshman Year

FIRST SEMESTER		SECOND SEMESTER	
<i>Subjects</i>	<i>Cr. Hours</i>	<i>Subjects</i>	<i>Cr. Hours</i>
Religion or Philosophy	2	Religion or Philosophy	2
Art 101 Drawing, or		Art 201 Principles of Design I....	2
Sec. 107 Personal Typing	2	Educ. 103 Science for the Elem.	
Educ. 101 Intro. to Education	3	School Teacher II	4
Educ. 102 Science for the Elem.		Hist. 112 Hist. of Modern Europe	3
School Teacher I	4	Mil. 102 First Yr. Basic Course	1½
Eng. 101 English Composition	3	Phe. 102 Physical Education	½
Hist. 111 Hist. of Modern Europe	3	Phe. 104 Health (Women)	1
Mil. 101 First Yr. Basic Course	1½	Psych. 201 Introductory Psychology	3
Phe. 101 Physical Education	½	Spe. 101 Fund. of Eff. Speaking....	3
Phe. 103 Health	1		

Sophomore Year

FIRST SEMESTER		SECOND SEMESTER	
<i>Subjects</i>	<i>Cr. Hours</i>	<i>Subjects</i>	<i>Cr. Hours</i>
Religion or Philosophy	2	Religion or Philosophy	2
Educ. 200 Purposes and Practices		Art 221 or 222 Practical Arts....	2
of the Elem. School.....	3	Educ. 203 Educ. Psychology II	3
Educ. 202 Educ. Psychology I, or		Eng. 222 American Literature	3
Educ. 306 Child Psychology	3	Hist. 252 Amer. Hist. since 1865..	3
Eng. 221 English Literature	3	Mil. 202 Second Yr. Basic Course..	1½
Hist. 251 Amer. Hist. to 1865.....	3	Mus. 102 Music Lit. and Apprec.	2
Mil. 201 Second Yr. Basic Course..	1½	Phe. 202 Physical Education	½
Mus. 141 Intro. to Music	2		
Phe. 201 Physical Education	½		

Junior Year

FIRST SEMESTER		SECOND SEMESTER	
<i>Subjects</i>	<i>Cr. Hours</i>	<i>Subjects</i>	<i>Cr. Hours</i>
Educ. 301 Classroom Mgmt., or		Educ. 303 Reading in Elem. School..	3
Elective	3	Educ. 318 Mental Hygiene	3
Educ. 322 Lit. in Elem. School.....	3	Educ. 241 Arithmetic and Methods	3
Educ. 324 Lang. in Elem. School....	3	Phil. 324 Ethics	3
Geo. 103 Prin. of Geography	3	Phe. 130 Fundamental Rhythms, or	
Mus. 231 or 232 Teaching Music....	2	Phe. 131 Games of Low. Organ.	2
Phil. 311 Logic or		Electives in the Social Studies	
Phil. 306 Epistemology	3		

Senior Year

FIRST SEMESTER		SECOND SEMESTER	
<i>Subjects</i>	<i>Cr. Hours</i>	<i>Subjects</i>	<i>Cr. Hours</i>
Educ. 325 Soc. Stud. in Elem. Sch....	3	Art 407 Art in the Elem. School..	2
Educ. 419 Phil. of Education	3	Educ. 414 Student Teaching	6-12
Educ. Elective	3		
Phe. 132 Hygiene and Sanitation	2		
Elective in the Social Studies.....	3		
Elective	3		

PROGRAM II
FOR STUDENTS MAJORING IN SECONDARY EDUCATION

Degree: Bachelor of Science in Education

Freshman Year

FIRST SEMESTER		SECOND SEMESTER	
<i>Subjects</i>	<i>Cr. Hours</i>	<i>Subjects</i>	<i>Cr. Hours</i>
Religion or Philosophy	2	Religion or Philosophy	2
Bio. 101 General Biology	4	Bio. 102 General Biology	4
Educ. 101 Intro. to Education	3	Mil. 102 First Yr. Basic Course	1½
Eng. 101 English Composition	3	Phe. 102 Physical Education	½
Mil. 101 First Yr. Basic Course	1½	Phe. 104 Health (Women)	1
Phe. 101 Physical Education	½	Psych. 201 Introductory Psychology	3
Phe. 103 Health	1	Spe. 101 Fund. of Eff. Speaking.....	3
Sec. 107 Personal Typing	2	Elective in field of concentration.....	3
Elective in field of concentration.....	3		

Sophomore Year

FIRST SEMESTER		SECOND SEMESTER	
<i>Subjects</i>	<i>Cr. Hours</i>	<i>Subjects</i>	<i>Cr. Hours</i>
Religion or Philosophy	2	Religion or Philosophy	2
Educ. 202 Educ. Psychology I, or		Educ. 203 Educ. Psychology II	3
Educ. 304 Adolescent Psychology	3	Eng. 222 American Literature	3
Eng. 221 English Literature	3	Mil. 202 Second Yr. Basic Course.....	1½
Mil. 201 Second Yr. Basic Course.....	1½	Phe. 202 Physical Education	
Phe. 201 Physical Education		(Women)	½
(Women)	½	An approved course in Social Studies	3
An approved course in Social Studies	3	Elective in field of concentration	3
Electives in fields of concentration.....	6		

Junior Year

FIRST SEMESTER		SECOND SEMESTER	
<i>Subjects</i>	<i>Cr. Hours</i>	<i>Subjects</i>	<i>Cr. Hours</i>
Educ. 302 Prin. of Sec. Educ., or		Educ. 318 Mental Hygiene, or	
Educ. 340 Prin. of Education	2-3	Educ. 415 Principles of Guidance.....	3
Phil. 311 Logic, or		Phil. 324 Ethics	3
Phil. 306 Epistemology	3	Spec. meth. in main teaching field.....	3
Electives in fields of concentration	9	Electives in fields of concentration	3

Senior Year

FIRST SEMESTER		SECOND SEMESTER	
<i>Subjects</i>	<i>Cr. Hours</i>	<i>Subjects</i>	<i>Cr. Hours</i>
Educ. 301 Classroom Mgmt., or		Educ. 414 Student Teaching	6-12
Educ. Elective	3	Electives in fields of concentration	6
Educ. 419 Phil. of Educ., or			
Educ. 420 Mod. Theor. of Educ.....	3		
Electives in fields of concentration	9		

PROGRAM III
FOR STUDENTS MAJORING IN PHYSICAL EDUCATION

Degree: Bachelor of Science in Education

Freshman Year

FIRST SEMESTER		SECOND SEMESTER	
<i>Subjects</i>	<i>Cr. Hours</i>	<i>Subjects</i>	<i>Cr. Hours</i>
Religion or Philosophy	2	Religion or Philosophy	2
Bio. 101 General Biology	4	Bio. 102 General Biology	4
Educ. 101 Intro. to Education	3	Mil. 102 First Yr. Basic Course.....	1½
Eng. 101 English Composition	3	Phe. 118 Rec. Sports for Women.....	2
Mil. 101 First Yr. Basic Course.....	1½	Phe. 120 Officiating (Men)	1
Phe. 116 Methods in Minor Sports	2	Phe. 130 Fundamental Rhythms	2
Phe. 117 Teams Sports (Women).....	2	Phe. 131 Games of Low. Organ.....	2
Phe. 119 Officiating (Men)	1	Phe. 133 Physical Educ. Activities	3
Phe. 132 Hygiene and Sanitation.....	2	Spe. 101 Fund. of Eff. Speaking.....	3
		Psych. 201 Introductory Psychology	3

Sophomore Year

FIRST SEMESTER		SECOND SEMESTER	
<i>Subjects</i>	<i>Cr. Hours</i>	<i>Subjects</i>	<i>Cr. Hours</i>
Religion or Philosophy	2	Religion or Philosophy	2
Educ. 202 Educ. Psychology I, or		Educ. 203 Educ. Psychology II	3
Educ. 304 Adolescent Psychology, or		Eng. 222 American Literature	3
Educ. 306 Child Psychology	3	Hist. 112 Hist. of Modern Europe.....	3
Eng. 221 English Literature	3	Mil. 202 Second Yr. Basic Course	1½
Hist. 111 Hist. of Modern Europe.....	3	Phe. 202 Physical Educ. (Women)	1½
Mil. 201 Second Yr. Basic Course.....	1½	Phe. 204 Human Anatomy	2
Phe. 201 Physical Educ. (Women)	1½	Phe. 212 Coaching Baseball and	
Phe. 203 Human Anatomy	2	Track	2
Phe. 210 Coach. Foot. and Basket.....	2	Phe. 221 Theory of Play and Rec.....	2
Phe. 235 Camp. and Playgrounds.....	3	Phe. 234 Indiv. Sports for Women	2
Phe. 245 Modern Dance			
(Women)	2		

Junior Year

FIRST SEMESTER		SECOND SEMESTER	
<i>Subjects</i>	<i>Cr. Hours</i>	<i>Subjects</i>	<i>Cr. Hours</i>
Educ. 302 Prin. of Sec. Educ., or		Hist. 252 American Hist. since	
Educ. 340 Principles of Education 2-3		1865	3
Educ. 318 Mental Hygiene	3	Phil. 324 Ethics	3
Hist. 251 American Hist. to 1865.....	3	Phe. 309 Methods in Physical	
Phil. 311 Logic, or		Education	2
Phil. 306 Epistemology	3	Phe. 329 Recreational Activities	1
Phe. 303 Human Physiology	3	Phe. 330 Instructor's First Aid	2
Phe. 323 Program Building	2	Phe. 411 Teaching of Health	2
Phe. 328 Recreational Activities	1	Pol. 201 Am. Govt.-Natl.	3
Phe. 346 Problems in Phe. for			
Women	2		

Senior Year

FIRST SEMESTER		SECOND SEMESTER	
<i>Subjects</i>	<i>Cr. Hours</i>	<i>Subjects</i>	<i>Cr. Hours</i>
Educ. 419 Phil. of Educ., or		Educ. 414 Student Teaching	6-12
Educ. 420 Mod. Theories of Educ.....	3	Phe. 409 Corrective Phys. Educ.....	2
Phe. 401 Prin. of Physical Educ.....	2	Elective	3
Phe. 402 Org. & Adm. of Phys. Education	2		
Phe. 403 Prin. & Adm. of Health Education	2		
Phe. 405 Tests and Measurements	2		
Phe. 407 Modern Problems in Public Health	2		
Phe. 412 Teaching of Health	2		

PROGRAM IV

FOR STUDENTS MAJORING IN MUSIC EDUCATION

Degree: Bachelor of Science in Music Education

Freshman Year

FIRST SEMESTER		SECOND SEMESTER	
<i>Subjects</i>	<i>Cr. Hours</i>	<i>Subjects</i>	<i>Cr. Hours</i>
Religion or Philosophy	2	Religion or Philosophy	2
Educ. 101 Intro. to Education	3	Mil. 102 First Yr. Basic Course	1½
Eng. 101 English Composition	3	Mus. 152 First Year Theory	5
Mil. 101 First Yr. Basic Course	1½	Mus. Applied Music	2
Mus. 151 First Year Theory	5	Mus. 102 Music Lit. and Apprec. 2	
Mus. Applied Music	2	Phe. 102 Physical Education	1½
Phe. 101 Physical Education	½	Phe. 104 Health (Women)	1
Phe. 103 Health	1	Psych 201 Introductory Psychology	3
		Spe. 101 Fund. of Eff. Speaking	3

Sophomore Year

FIRST SEMESTER		SECOND SEMESTER	
<i>Subjects</i>	<i>Cr. Hours</i>	<i>Subjects</i>	<i>Cr. Hours</i>
Religion or Philosophy	2	Religion or Philosophy	2
Educ. 202 Educational Psych. I	3	Educ. 203 Educational Psych. II, or	
Eng. 221 English Literature	3	Educ. 301 Classroom Management	3
Hist. 251 Hist. of Mod. Europe, or		Eng. 222 American Literature	3
Mil. 201 American Hist. to 1865	3	Hist. 112 Hist. of Mod. Europe, or	
Mus. 251 Second Yr. Basic Course	1½	Hist. 252 Amer. Hist. since 1865....	3
Hist. 111 Second Year Theory	5	Mil. 202 Second Yr. Basic Course	1½
Mus. Applied Music	2	Mus. 252 Second Year Theory	5
		Mus. Applied Music	2

Junior Year

FIRST SEMESTER

<i>Subjects</i>	<i>Cr. Hours</i>
Mus. 231 Teaching Music in the Primary Grades	2
Mus. 235 Voice Class, or	
Mus. 325 Instrumental Class	2
Mus. 301 History of Music I	3
Mus. 321 Instrumental Conducting 2	
Mus. 331 Vocal Music in H.S.	2
Mus. Applied Music	2
Mus. Music Theory Elective	2
Phil. 300-400 Philosophy	3

SECOND SEMESTER

<i>Subjects</i>	<i>Cr. Hours</i>
Educ. 318 Mental Hygiene	3
Mus. 236 Voice Class, or	
Mus. 326 Instrumental Class	2
Mus. 302 History of Music II	3
Mus. 321 Orchestration and Instrumentation	3
Mus. 351 Choral Conducting	2
Mus. Applied Music	2
Mus. Music Theory Elective	2

Senior Year

FIRST SEMESTER

<i>Subjects</i>	<i>Cr. Hours</i>
(1) Mus. 235 Voice Class, or	
Mus. 327 Instrumental Class	2
Mus. 425 Prob. in Inst. Mus., or	
Mus. 431 Prob. in Vocal Music....	2-3
Mus. Music Theory Elective 2-4	
Mus. Music Elective	2-4
Phil. 300-400 Philosophy	3

SECOND SEMESTER

<i>Subjects</i>	<i>Cr. Hours</i>
Educ. 414 Student Teaching	6-12
Mus. 332 The School Band and Orchestra	2
Mus. Music Elective	2
Mus. Applied Music	2

(1) Voice Class may be repeated to a total of eight credit hours.

N.B. Ensemble credits (band, choir, glee club) totaling at least four credit hours are required.

PROGRAM V

FOR STUDENTS MAJORING IN ART EDUCATION

Degree: Bachelor of Science in Art Education

Freshman Year

FIRST SEMESTER

<i>Subjects</i>	<i>Cr. Hours</i>
Religion or Philosophy	2
Art Design	3
Art Perspective	1½
Art Cast Drawing	3
Educ. 101 Intro. to Education....	3
Eng. 101 English Composition	3
Mil. 101 First Yr. Basic Course	1½
Phe. 101 Physical Education	½
Phe. 103 Health	1

SECOND SEMESTER

<i>Subjects</i>	<i>Cr. Hours</i>
Religion or Philosophy	2
Art Design	3
Art Perspective	1½
Art Cast Drawing	3
Mil. 102 First Yr. Basic Course....	1½
Phe. 102 Physical Education	½
Phe. 104 Health (Women)	1
Psych. 201 Introductory Psychology 3	
Spe. 101 Fundamentals of Effective Speaking	3

Sophomore Year

FIRST SEMESTER		SECOND SEMESTER	
<i>Subjects</i>	<i>Cr. Hours</i>	<i>Subjects</i>	<i>Cr. Hours</i>
Religion or Philosophy	2	Religion or Philosophy	2
Art An Apprec. of the Arts.....	3	Art An Apprec. of the Arts.....	3
Art Lettering	1½	Art Lettering	1½
Art Modeling	3	Art Painting	3
Art Form and Color	3	Art Life Drawing	4½
Educ. 202 Educ. Psychology I, or		Educ. 203 Educ. Psychology II	3
Educ. 304 Adolescent Psych., or		Mil. 202 Second Yr. Basic Course	1½
Educ. 306 Child Psychology	3		
Mil. 201 Second Yr. Basic Course.....	1½		

Junior Year

FIRST SEMESTER		SECOND SEMESTER	
<i>Subjects</i>	<i>Cr. Hours</i>	<i>Subjects</i>	<i>Cr. Hours</i>
Art Introd. Art History	2	Art Introd. Art History	2
Art Life Drawing	1½	Art An Apprec. of the Arts.....	3
Art Advertising Design	3	Art Methods and Materials.....	2
Educ. 301 Classroom Management ..	3	Educ. 318 Mental Hygiene	3
Educ. 419 Philosophy of Education ..	3	Eng. 222 American Literature	3
Eng. 221 English Literature	3	Phil 324 Ethics	3
Phil. 311 Logic, or			
Phil. 306 Epistemology	3		

Senior Year

FIRST SEMESTER		SECOND SEMESTER	
<i>Subjects</i>	<i>Cr. Hours</i>	<i>Subjects</i>	<i>Cr. Hours</i>
Art Commercial Illustration	4½	Art Commercial Illustration	4½
Art Crafts	4½	Art Crafts	4½
Educ. 414 Student Teaching	3-6	Educ. 414 Student Teaching	3-6

PROGRAM VI

FOR STUDENTS MAJORING IN BUSINESS EDUCATION

Degree: Bachelor of Science in Education

Freshman Year

FIRST SEMESTER		SECOND SEMESTER	
<i>Subjects</i>	<i>Cr. Hours</i>	<i>Subjects</i>	<i>Cr. Hours</i>
Religion or Philosophy	2	Religion or Philosophy	2
Mil. 101 First Yr. Basic Course.....	1½	Mil. 102 First Yr. Basic Course.....	1½
Phe. 101 Physical Education	1½	Phe. 102 Physical Education	1½
Phe. 103 Health	1	Phe. 104 Health (Women)	1
Eng. 101 English Composition	3	Eng. 221 English Literature	3
Spe. 101 Fund. of Eff. Speaking	3	Bus. 101 Intro. to Business	3
Eco. 104 Economic Geography	3	Bus. 201 Business Machines	3
Educ. 101 Intro. to Education.....	3	Hist. 252 Amer. Hist. since 1865.....	3
Psych. 201 Introductory Psychology ..	3	Sec. 110 Secretarial Mathematics ..	3

Sophomore Year

FIRST SEMESTER			SECOND SEMESTER		
<i>Subjects</i>		<i>Cr. Hours</i>	<i>Subjects</i>		<i>Cr. Hours</i>
Religion or	Philosophy	2	Religion or	Philosophy	2
Mil. 201	Second Yr. Basic Course..	1½	Mil. 202	Second Yr. Basic Course..	1½
Phe. 201	Phys. Educ. (Women)	½	Phe. 202	Phys. Educ. (Women)	½
Acct. 101	Elementary Accounting ..	3	Acct. 102	Elementary Accounting ..	3
Eco. 201	Principles of Economics ..	3	Eco. 202	Principles of Economics ..	3
Educ. 202	Educ. Psychology I	3	Educ. 203	Educ. Psychology II	3
Sec. 101	Elementary Shorthand	3	Sec. 102	Elementary Shorthand	3
Sec. 103	Elementary Typewriting ..	3	Sec. 104	Elementary Typewriting ..	3

Junior Year

FIRST SEMESTER			SECOND SEMESTER		
<i>Subjects</i>		<i>Cr. Hours</i>	<i>Subjects</i>		<i>Cr. Hours</i>
Acct. 406	Pay Roll Accounting	3	Bus. 305	Principles of Marketing ..	3
Bus. 301	Corporation Finance	3	Eco. 205	American Eco. History.....	3
Phil. 311	Logic, or		Educ. 318	Mental Hygiene	3
Phil. 306	Epistemology	3	Eng. 222	American Literature	3
Sec. 201	Advanced Shorthand	3	Phil. 324	Ethics	3
Sec. 203	Advanced Typewriting	3	Sec. 206	Secretarial Theory	3
Sec. 205	Secretarial Theory	3			

Senior Year

FIRST SEMESTER			SECOND SEMESTER		
<i>Subjects</i>		<i>Cr. Hours</i>	<i>Subjects</i>		<i>Cr. Hours</i>
Bus. 303	Business Law	3	Eng. 408	Business English	3
Bus. 307	Advertising	3	Educ. 414	Student Teaching	6-12
Bus. 309	Retail Merchandising	3	Hist. 357	Latin-America, or	3
Bus. 310	Salesmanship	3	Hist.	Elective	3
Educ.	Special Methods	3-4			

PROGRAM VII
FOR STUDENTS MAJORING IN HOME ECONOMICS
EDUCATION

Degree: Bachelor of Science in Education

Freshman Year

FIRST SEMESTER			SECOND SEMESTER		
<i>Subjects</i>		<i>Cr. Hours</i>	<i>Subjects</i>		<i>Cr. Hours</i>
Religion or	Philosophy	2	Religion or	Philosophy	2
Bio. 101	General Biology	4	Bio. 102	General Biology	4
Educ. 101	Intro. to Education	3	Hec. 101	Beginning Clothing	3
Eng. 101	English Composition	3	Hec. 214	Textiles I	3
Hec. 102	Foods I	3	Phe. 102	Physical Education	½
Hec. 105	Intro. to Related Art	3	Psych. 204	General Psychology	3
Phe. 101	Physical Education	½	Spe. 101	Fund. of Eff. Speaking	3

Sophomore Year

FIRST SEMESTER		SECOND SEMESTER	
<i>Subjects</i>	<i>Cr. Hours</i>	<i>Subjects</i>	<i>Cr. Hours</i>
Religion or Philosophy	2	Religion or Philosophy	2
Educ. 202 Educational Psych. I	3	Eco. 204 Survey of Economics	3
Eng. 221 English Literature	3	Educ. 203 Educational Psych. II	3
Hec. 221 Home Management I	3	Hec. 201 Foods II	3
Hec. 311 Advanced Clothing	3	Hec. 203 Health and Home Nursing	3
Hec. 318 Family Relationships	3	Phe. 202 Physical Education	1/2
Phe. 201 Physical Education	1/2	Soc. 202 Social Problems	3

Junior Year

FIRST SEMESTER		SECOND SEMESTER	
<i>Subjects</i>	<i>Cr. Hours</i>	<i>Subjects</i>	<i>Cr. Hours</i>
Educ. 318 Mental Hygiene, or		Educ. 301 Classroom Management	3
Educ. 415 Principles of Guidance	3	Hec. 304 Quantity Cookery	3
Hec. 302 Meal Planning and Table Service	3	Hec. 315 Consumer Buying	3
Hec. 303 Nutrition and Health	3	Hec. 323 Demonstration Methods	3
Hec. 309 Household Equipment	3	Hec. 423 Home Furnishings	3
Hec. 425 Child Development I	3	Hec. 426 Child Development II	3
Phil. 306 Epistemology, or			
Phil. 311 Logic	3		

Senior Year

FIRST SEMESTER		SECOND SEMESTER	
<i>Subjects</i>	<i>Cr. Hours</i>	<i>Subjects</i>	<i>Cr. Hours</i>
Bio. 413 Bacteriology	3	Hec. 406 Home Management II	3
Hec. 405 Teaching of Home Eco.	4	Hec. 414 Student Teaching	6-12
Hec. 409 Advanced Foods	3		
Hec. 415 Tailoring	3		
Phil. 324 Ethics, or			
Educ. 419 Philosophy of Education	3		

PROGRAM VIII

FOR STUDENTS WHO DESIRE TO QUALIFY FOR A
PROVISIONAL CADET ELEMENTARY CERTIFICATE

A. PROFESSIONAL REQUIREMENTS	<i>Cr. Hrs.</i> 21
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The student shall complete a minimum of 18 semester hours
in professional courses distributed among the following areas:

	<i>Cr. Hrs.</i>
1. <i>Growth and Development</i>	3
Child Psychology, Educational Psychology I.	
2. <i>The Learning and Teaching Processes</i>	6-9
Educational Psychology II, Classroom Management, Special Methods, Provisions for Individual Differences, Diagnosis and Remedial Instruction, etc.	

3. <i>Purposes and Practices of Education</i>	3
Purposes and Practices of the Elementary School.	
4. <i>Personality Adjustment</i>	3
Mental Hygiene for Teachers	
5. <i>Student Teaching</i>	6-9
Actual classroom teaching under supervision, preferably in large blocks of time per day.	
B. GENERAL REQUIREMENTS	42
The student shall complete not less than 38 semester hours of credit distributed among the following areas:	
1. <i>Language Arts</i>	9-12
Literature in the Elementary School, English Composition, English Literature, Speech.	
2. <i>Social Studies</i>	9-15
American History since 1865, Principles of Geography, American Government, European History, Sociology. (A basic course in American History or American Govern- ment must be included.)	
3. <i>Science</i>	6-8
Science for the Elementary Teacher.	
4. <i>Health and Physical Education</i>	3-6
Hygiene and Sanitation, Fundamental Rhythms, Games of Low Organization, Theory of Play and Recreation.	
5. <i>Art and Crafts</i>	2-4
Drawing, Principles of Design, Practical Arts, Art in the Elementary School. (Practical Arts must be included.)	
6. <i>Music</i>	2-4
Introduction to Music, Music Literature and Appreciation, Music in the Elementary School.	
7. <i>Arithmetic</i>	3
Arithmetic for the Elementary School Teacher.	
8. <i>Philosophy or Religion</i>	4

C. A Provisional Cadet Elementary Certificate issued to one who entered upon preparation for such certificate after May 9, 1952, may be renewed only upon evidence of the completion of 24 semester hours (equivalent to at least 6 semester hours per year) of additional training applicable to the degree in elementary education.

A second renewal may be granted under the same requirements.

PROGRAM IX
FOR STUDENTS WHO DESIRE DUAL CERTIFICATION
(QUALIFYING FOR BOTH THE PROVISIONAL ELEMENTARY
CERTIFICATE AND THE HIGH SCHOOL
OR SPECIAL CERTIFICATE)

Degree: Bachelor of Science in Education

	<i>Cr. Hrs.</i>
A. PROFESSIONAL REQUIREMENTS	37
The student shall complete a minimum of 34 semester hours in professional courses distributed among the following areas:	
	<i>Cr. Hrs.</i>
1. <i>Introduction To Education</i>	3
2. <i>Growth and Development</i>	3
Educational Psychology I.	
3. <i>Personality Adjustment</i>	3
Mental Hygiene for Teachers	
4. <i>The Learning and Teaching Processes</i>	3-6
Educational Psychology II, Classroom Management, Diagnostic and Remedial Instruction, Provisions for Individual Differences.	
5. <i>Purposes and Practices of Education</i>	5-6
Principles of Education and Philosophy of Education or Modern Theories of Education.	
6. <i>Methods</i>	12
Reading in the Elementary School, Language in the Elem. School, Arithmetic in the Elementary School, Special Methods in Secondary Teaching field.	
7. <i>Student Teaching</i>	8-12
Actual Classroom teaching under supervision in both elementary and secondary grades.	
B. GENERAL REQUIREMENTS	64
The student shall complete not less than 64 semester hours of credit distributed over the following areas:	
	<i>Cr Hrs.</i>
1. <i>Philosophy or Religion</i>	14
2. <i>Language Arts</i>	15-18
English Composition, Literature in the Elementary School, English Literature, American Literature, Speech.	

3. <i>Social Studies</i>	18-24
American History, European History, American Government, Geography, Sociology, Economic Problems.	
4. <i>Science</i>	8-12
Science for the Elementary School Teacher (or any other combination of biological and physical sciences.)	
5. <i>Health and Physical Education</i>	3-6
Hygiene and Sanitation, Fundamental Rhythms, Games of Low Organization, Theory of Play and Recreation.	
6. <i>Music, Art, and Crafts</i>	6-9
Music Literature and Appreciation, Introduction to Music, Drawing, Principles of Design, Practical Arts, Cultural History of Europe.	
7. <i>Arithmetic</i>	3
Arithmetic for the Elementary School Teacher.	
C. ELECTIVES	30
Elective credits should include service courses in physical education, Military, and fields of teaching at the secondary level.	

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PROGRAM X

FOR STUDENTS WHO HAVE COMPLETED REQUIREMENTS
FOR THE PROVISIONAL HIGH SCHOOL CERTIFICATE OR
FOR THE PROVISIONAL SPECIAL CERTIFICATE AND
WHO DESIRE CERTIFICATION VALID
FOR ELEMENTARY TEACHING

A. The holder of a Provisional High School or Special Certificate may obtain a certificate valid for elementary teaching by completing the following 12 semester hours of credit:

	<i>Cr. Hrs.</i>
1. Purposes and Practices of the Elementary School.....	3
2. Reading in the Elementary School	3
3. Arithmetic in the Elementary School	3
4. Child Psychology	3

B. Such a certificate shall be designated as a "RETRAINING" certificate. It may be renewed upon evidence of the completion of 12 semester hours of additional credit in elementary education. Subsequent renewals may be gained without additional training.

Division of Science

BROTHER BELLMER, *Associate Dean*

CANDIDATES for the degree of Bachelor of Science may major in biology, chemistry, geology, mathematics, home economics, medical technology, medical radiological technique, nursing, nursing education, and physics.

DEGREE REQUIREMENTS

IN ADDITION TO basic requirements outlined in the various programs, the Bachelor of Science degree requires that the student have one major of twenty-four credit hours and one minor of twelve credit hours, six hours of advanced courses in philosophy, six hours of particular advanced courses in English, and six-twelve hours of a modern language according to the major selected. Ordinarily, the prerequisites for any major or minor must be satisfied in the first two years. In some cases, however, sophomore courses may be counted toward a major or minor.

PRE-MEDICAL COURSE

THE PROGRAM offered the students of this course meets the requirements for admission to approved medical schools as determined by the Council of Medical Education of the American Medical Association.

For those pre-medical students for whom it is possible, the four-year course leading to the degree of Bachelor of Science with a major in biology is recommended.

A reading knowledge of one language, either German or French, is generally required by the medical schools. One year of college work, in addition to the high school units in the same language, may be sufficient.

Recommendation of a student by his pre-medical school is usually an important item for admission to medical or dental school. Recommendation is based on more than academic standing; character and personality qualities are also weighed. The board on pre-medical recommendations is made up of the following:

WILLIAM J. BELLMER, S.M., *Chairman*

ROBERT C. WIECHMAN, *Vice-Chairman*

CLETUS C. CHUDD, S.M.

NICHOLAS A. ENGLER

SYLVESTER EVESLAGE

PETER J. FASO

GERTRUDE D. HECKMAN

RUSSELL A. JOLY, S.M.

WILLIAM O. WEHRLE, S.M.

VINCENT J. WOTTLE, S.M.

PROGRAM I
BACHELOR OF SCIENCE WITH A MAJOR IN BIOLOGY

Freshman Year

FIRST SEMESTER		SECOND SEMESTER	
<i>Subjects</i>	<i>Cr. Hours</i>	<i>Subjects</i>	<i>Cr. Hours</i>
Religion or Philosophy	2	Religion or Philosophy	2
Chem. 115 General Chemistry	2	Chem. 116 General Chemistry	4
Bio. 105 Zoology	4	Bio. 106 Zoology	4
Math. 101 College Algebra	3	Math. 102 Trigonometry	3
Eng. 101 English Composition	3	Eng. 221 English Literature	3
Phe. 101 Physical Education	1/2	Phe. 102 Physical Education	1/2
Mil. 101 First Year Basic Course	1 1/2	Mil. 102 First Year Basic Course	1 1/2
Or. 101 Orientation	0		

Sophomore Year

FIRST SEMESTER		SECOND SEMESTER	
<i>Subjects</i>	<i>Cr. Hours</i>	<i>Subjects</i>	<i>Cr. Hours</i>
Religion or Philosophy	2	Religion or Philosophy	2
Chem. 207 Qualitative	4	Chem. 301 Quantitative	4
Bio. 201 Comparative Anatomy	4	Bio. 202 Comparative Anatomy	4
Phys. 201 General Physics	4	Phys. 202 General Physics	4
Ger. 101 (or Fr. 101)	3	Ger. 102 (or Fr. 102)	3
Mil. 201 Second Yr. Basic Course	1 1/2	Mil. 202 Second Yr. Basic Course	1 1/2

Junior Year

FIRST SEMESTER		SECOND SEMESTER	
<i>Subjects</i>	<i>Cr. Hours</i>	<i>Subjects</i>	<i>Cr. Hours</i>
Bio. 303 Physiology	3	Bio. 314 Botany	4
Eng. 305 Medical Terminology	3	Eng. 304 Theme Writing	3
Bio. 305 Microtechnique	4	Bio. 306 Microtechnique	4
Chem. 309 Organic Chemistry	5	Chem. 310 Organic Chemistry	5
Ger. 305 Scientific German, or Elective	3	Ger. 306 Scientific German, or Elective	3

Senior Year

FIRST SEMESTER		SECOND SEMESTER	
<i>Subjects</i>	<i>Cr. Hours</i>	<i>Subjects</i>	<i>Cr. Hours</i>
Chem. 302 Physical Chemistry	4	Chem. 401 Biochemistry	5
Bio. 403 Embryology	3	Bio. 404 Embryology	3
Bio. 413 Bacteriology	4	Phil. 482 Medical Ethics	3
Phil. 324 Ethics	3	(1) Electives	6
(1) Elective	3		

(1) Systematic botany, government, psychology, speech, genetics, sociology, history or biophysics are courses helpful to students who plan medicine or dentistry as a career.

PROGRAM II
BACHELOR OF SCIENCE WITH A MAJOR IN CHEMISTRY

Freshman Year

FIRST SEMESTER		SECOND SEMESTER	
<i>Subjects</i>	<i>Cr. Hours</i>	<i>Subjects</i>	<i>Cr. Hours</i>
Religion or Philosophy	2	Religion or Philosophy	2
Chem. 117 General Chemistry	4	Chem. 118 General Chemistry	4
Eng. 101 English Composition	3	Eng. 221 English Literature	3
Math. 115 Analysis	5	Math. 116 Analysis	5
Mil. 101 First Year Basic Course ..1½		Mil. 102 First Year Basic Course ..1½	
Phe. 101 Physical Education	½	Phe. 102 Physical Education	½
Or. 101 Orientation	0	Phe. 103 Health	1
		Phys. 206 Mechanics & Sound	4

Sophomore Year

FIRST SEMESTER		SECOND SEMESTER	
<i>Subjects</i>	<i>Cr. Hours</i>	<i>Subjects</i>	<i>Cr. Hours</i>
Religion or Philosophy	2	Religion or Philosophy	2
Chem. 205 Analytic	6	Chem. 206 Analytic	6
Ger. 101 Elementary German	3	Ger. 102 Elementary German	3
Math. 201 Calculus	4	Math. 202 Calculus	4
Mil. 201 Second Yr. Basic Course 1½		Mil. 202 Second Yr. Basic Course 1½	
Phys. 207 Electricity & Magnetism 4		Phys. 208 Heat & Light	4

Junior Year

FIRST SEMESTER		SECOND SEMESTER	
<i>Subjects</i>	<i>Cr. Hours</i>	<i>Subjects</i>	<i>Cr. Hours</i>
Chem. 303 Physical	4	Chem. 304 Physical	4
Chem. 305 Organic	6	Chem. 306 Organic	6
(1) Math. 301 Differential Equations 3		(1) Math. 302 Theory of Equations..3	
Ger. 307 Chemical German	3	Chem. 307 Chemical Literature	1
		Eng. 304 Theme Writing	3

Senior Year

FIRST SEMESTER		SECOND SEMESTER	
<i>Subjects</i>	<i>Cr. Hours</i>	<i>Subjects</i>	<i>Cr. Hours</i>
Phil. 311 Logic, or		Phil. 324 Ethics	3
Phil. 306 Epistemology	3	Chem. 412 Advanced Organic	3
Chem. 403 Technical Analysis	3	Chem. 416 Advanced Inorganic	2
Chem. 415 Advanced Inorganic	2	Chem. 410 Seminar	1
Chem. 410 Seminar	0	(1) Math. 422 Advanced Calculus	3
(1) Math 421 Advanced Calculus	3	Ch.E. 402 Industrial Chemistry	3
Ch.E. 401 Industrial Chemistry	3	Rel. 420 Religion & Science	3
Eng. 316 Advanced Composition 3			

(1) Biology, geology or physics may replace mathematics as a minor.

PROGRAM III
BACHELOR OF SCIENCE WITH A MAJOR IN GEOLOGY

Freshman Year

FIRST SEMESTER		SECOND SEMESTER	
<i>Subjects</i>	<i>Cr. Hours</i>	<i>Subjects</i>	<i>Cr. Hours</i>
Religion or Philosophy	2	Religion or Philosophy	2
Eng. 101 English Composition	3	Eng. 221 English Literature	3
Chem. 115 General Chemistry	4	Chem. 116 General Chemistry	4
Geo. 101 Physical Geology	4	Geo. 102 Historical Geology	4
Math. 101 College Algebra (3), or		Math. 102 Trigonometry (3), or	
Math. 115 Math. Analysis (5)	3-5	Math. 116 Math. Analysis (5)	3-5
Mil. 101 First Year Basic Course.....	1½	Mil. 102 First Year Basic Course.....	1½
Phe. 101 Physical Education	½	Phe. 102 Physical Education	½
Or. 101 Orientation	0	Phe. 103 Health	1

Sophomore Year

FIRST SEMESTER		SECOND SEMESTER	
<i>Subjects</i>	<i>Cr. Hours</i>	<i>Subjects</i>	<i>Cr. Hours</i>
Religion or Philosophy	2	Religion or Philosophy	2
(1) Bio. 105 General Zoology	4	(2) Bio. 106 Zoology	4
Geo. 201 Mineralogy	4	Geo. 202 Optical Mineralogy and	
Phys. 201 General Physics	4	Petrography	4
Mil. 201 Second Yr. Basic Course 1½		Phys. 202 General Physics	4
Modern Language	3	Mil. 202 Second Yr. Basic Course 1½	
		Modern Language	3

Junior Year

FIRST SEMESTER		SECOND SEMESTER	
<i>Subjects</i>	<i>Cr. Hours</i>	<i>Subjects</i>	<i>Cr. Hours</i>
(3) Bio. 201 Comparative		Bio. 202 (3) Comparative	
Anatomy	4	Anatomy	4
Geo. 301 Structural Geology	4	Geo. 302 Glacial Geology	3
Eng. 316 Advanced Composition	3	Eng. 302 Advanced Course	3
Modern Language	3	Modern Language	3
Elective	3	Elective	3

Senior Year

FIRST SEMESTER		SECOND SEMESTER	
<i>Subjects</i>	<i>Cr. Hours</i>	<i>Subjects</i>	<i>Cr. Hours</i>
Phil. 311 Logic, or		Phil. 324 Ethics	3
Phil. 306 Epistemology	3	Geo. 307 Geomorphology	3
Geo. 305 Petrology	4	Geo. 403 Sedimentation, or	
Geo. 401 Paleontology (4), or		Geo. 406 Economic Geology	3
Geo. 405 Economic Geology (3) 3-4		(4) Bio. 314 Botany	4
Electives	6	(5) Geo. 303 Field Course	6

(1) May be replaced by Chem. 207 if chemistry is a minor, or by Math. 201 if mathematics is a minor.

(2) May be replaced by Chem. 301 if chemistry is a minor, or by Math. 202 if mathematics is a minor.

(3) Bio. 201-202 may be replaced by Chem. 309-310 or Chem. 303-304 if chemistry is a minor, or by Math. 301-302 if mathematics is a minor.

(4) May be replaced by Math. 321-322 if mathematics is a minor.

(5) Field Course is taken during summer following the sophomore or junior year.

PROGRAM IV
BACHELOR OF SCIENCE WITH A MAJOR IN MATHEMATICS
OR MATHEMATICAL STATISTICS

Freshman Year

FIRST SEMESTER		SECOND SEMESTER	
<i>Subjects</i>	<i>Cr. Hours</i>	<i>Subjects</i>	<i>Cr. Hours</i>
Religion or Philosophy	2	Religion or Philosophy	2
Chem. 117 General Chemistry	4	Chem. 118 General Chemistry	4
Math. 115 Math. Analysis	5	Math. 116 Math. Analysis	5
Mil. 101 First Year Basic Course.....	1½	Mil. 102 First Year Basic Course.....	1½
Phe. 101 Physical Education	½	Phe. 102 Physical Education	½
Eng. 101 English Composition	3	Phe. 103 Health	1
Or. 101 Orientation	0	Phys. 206 Mechanics and Sound	4

Sophomore Year

FIRST SEMESTER		SECOND SEMESTER	
<i>Subjects</i>	<i>Cr. Hours</i>	<i>Subjects</i>	<i>Cr. Hours</i>
Religion or Philosophy	2	Religion or Philosophy	2
Math. 201 Calculus	4	Math. 202 Calculus	4
Mil. 201 Second Yr. Basic Course 1½	1½	Mil. 202 Second Yr. Basic Course 1½	1½
Phys. 207 Elect. & Magnetism	4	Phys. 208 Heat and Light	4
Ger. 101 Elementary German	3	Ger. 102 Elementary German	3
Elective	3	Eng. 221 English Literature	3

Junior Year

FIRST SEMESTER		SECOND SEMESTER	
<i>Subjects</i>	<i>Cr. Hours</i>	<i>Subjects</i>	<i>Cr. Hours</i>
(1) Math. 301 Differential Equations	3	(1) Math. 302 Theory of Equations 3	3
(1) Math. 451 Intro. to Higher Geometry	3	(1) Math. 432 Fourier Series	3
Phil. 311 Logic, or		Phil. 324 Ethics	3
Phil. 306 Epistemology	3	Phys. Advanced Course, or	
Phys. Advanced Course, or		Chem. Advanced Course	3-5
Chem. Advanced Course	3-5	Ger. 306 Scientific German	3
Ger. 305 Scientific German	3	Elective	3
Elective	3		

Senior Year

FIRST SEMESTER

<i>Subjects</i>	<i>Cr. Hours</i>
Eng. 316 Advanced Composition	3
(2) Math. 421 Advanced Calculus	3
(2) Math. 431 Vector Analysis	3
Phys. Advanced Course, or	
Chem. Advanced Course	3-5
Electives	6

SECOND SEMESTER

<i>Subjects</i>	<i>Cr. Hours</i>
Eng. 304 Theme Writing	3
(2) Math. 422 Advanced Calculus	3
(2) Math. 461 Complex Variable	3
Phys. Advanced Course, or	
Chem. Advanced Course	3-5
Rel. 420 Religion and Science	3
Elective	3

- (1) Alternative courses are: Math. 311-312, Math. 441.
 (2) Alternative courses are: Math. 411, Math. 416.

PROGRAM V

BACHELOR OF SCIENCE WITH A MAJOR IN PHYSICS

Freshman Year

FIRST SEMESTER

<i>Subjects</i>	<i>Cr. Hours</i>
Religion or Philosophy	2
Chem. 117 General Chemistry	4
Math. 115 Math. Analysis	5
Mil. 101 First Yr. Basic Course	1½
Phe. 101 Physical Education	½
Eng. 101 English Composition	3
Or. 101 Orientation	0

SECOND SEMESTER

<i>Subjects</i>	<i>Cr. Hours</i>
Religion or Philosophy	2
Chem. 118 General Chemistry	4
Math. 116 Math. Analysis	5
Mil. 102 First Yr. Basic Course	1½
Phe. 102 Physical Education	½
Phys. 206 Mechanics and Sound	4
Phe. 103 Health	1

Sophomore Year

FIRST SEMESTER

<i>Subjects</i>	<i>Cr. Hours</i>
Religion or Philosophy	2
Math. 201 Calculus	4
Mil. 201 Second Yr. Basic Course	1½
Phys. 207 Elect. & Magnetism	4
Ger. 101 Elementary German	3
Elective	3

SECOND SEMESTER

<i>Subjects</i>	<i>Cr. Hours</i>
Religion or Philosophy	2
Math. 202 Calculus	4
Mil. 202 Second Yr. Basic Course	1½
Phys. 208 Heat and Light	4
Ger. 102 Elementary German	3
Eng. 221 English Literature	3

Junior Year

FIRST SEMESTER

<i>Subjects</i>	<i>Cr. Hours</i>
Eng. 316 Advanced Composition	3
Ger. 305 Scientific German	3
Math. Advanced Course	3
Phys. 301 Thermodynamics	3
Phys. 321 Nuclear Physics	3
Phys. 307 Elements of E. E., or	
Elective	3-4

SECOND SEMESTER

<i>Subjects</i>	<i>Cr. Hours</i>
Eng. 304 Theme Writing	3
Ger. 306 Scientific German	3
Math. Advanced Course	3
Phys. 303 Mechanics	3
Phys. 411 Theoretical Physics	3
Phys. 308 Alternating Current	
Circuits, or	
Elective	3

Senior Year

FIRST SEMESTER			SECOND SEMESTER		
<i>Subjects</i>		<i>Cr. Hours</i>	<i>Subjects</i>		<i>Cr. Hours</i>
Phil. 311	Logic, or		Phil. 324	Ethics	3
Phil. 306	Epistemology	3	Math.	Advanced Course	3
Math.	Advanced Course	3	Phys. 401	Vibration and Sound	3
Phys. 404	Optics	3	Phys. 311	Atomic Physics	3
Phys. 408	Elect. & Magnetism	3		(1) Electives	6
	(1) Electives	6			

(1) Suggested Electives: Phys. 305-306, 309, 405.

PROGRAM VI

BACHELOR OF SCIENCE IN HOME ECONOMICS

THE DEPARTMENT provides four special curricula:

1. Clothing and Textiles.
2. Dietetics and Institutional Management.
3. Home Economics in Business: Foods.
4. Interior Decoration.

Students following these curricula may be employed in homemaking, interior decorating, the designing of clothes and costumes, the management of cafeterias, dormitories, and tearooms, demonstrating for commercial manufacturing concerns, dietetics in hospitals and other institutions, graduate work, and research projects.

The curriculum for dietetics and institutional management meets the requirements of the American Dietetics Association.

1. MAJOR: CLOTHING AND TEXTILES

(1) *Minor In Retailing**Freshman Year*

FIRST SEMESTER			SECOND SEMESTER		
<i>Subjects</i>		<i>Cr. Hours</i>	<i>Subjects</i>		<i>Cr. Hours</i>
Religion or	Philosophy	2	Religion or	Philosophy	2
Chem. 110	General Chemistry	5	Chem. 200	Organic	5
Hec. 100	Intro. to Home Economics	1	Hec. 101	Beginning Clothing	3
Hec. 102	Food I	3	Hec. 214	Textiles I	3
Phe. 101	Physical Education	1/2	Phe. 102	Physical Education	1/2
Eng. 101	English Composition	3	Spe. 101	Fundamentals of Effective Speaking	3
Hec. 105	Introduction to Related Arts	3			
Or. 101	Orientation	0			

Sophomore Year

FIRST SEMESTER		SECOND SEMESTER	
<i>Subjects</i>	<i>Cr. Hours</i>	<i>Subjects</i>	<i>Cr. Hours</i>
Religion or Philosophy	2	Religion or Philosophy	2
Hec. 221 Home Management I	3	Hec. 222 Historic Textiles	3
Hec. 318 Family Relationship	3	Hec. 316 Textiles II	3
Phe. 201 Physical Education	1/2	Phe. 202 Physical Education	1/2
Ret. 305 Introduction to Retail	3	Hec. 314 Costume Art, Design	3
Soc. 202 Social Problems	3	Hec. 203 Health & Home Nursing 3	
Psych. 201 Introductory Psychology..3		Eco. 204 Survey of Economics	3

Junior Year

FIRST SEMESTER		SECOND SEMESTER	
<i>Subjects</i>	<i>Cr. Hours</i>	<i>Subjects</i>	<i>Cr. Hours</i>
Hec. 303 Nutrition & Health	3	Hec. 323 Demonstration Methods 1	
Hec. 312 Children's Clothing	3	Hec. 315 Consumer Buying	3
Hec. 311 Advanced Clothing	3	Hec. 314 Costume Art, Design	3
Hec. 412 Historic Costume	3	Hec. 423 Home Furnishings I	3
Bio. 303 Physiology	3	Hec. 431a Field Work	3
Phil. 324 Ethics	3	Ret. 310 Retail Salesmanship	3
		Ret. 409 Retail Organization & Operation	3

Senior Year

FIRST SEMESTER		SECOND SEMESTER	
<i>Subjects</i>	<i>Cr. Hours</i>	<i>Subjects</i>	<i>Cr. Hours</i>
Eng. Advanced Course	3	Eng. Advanced Course	3
Hec. 425 Child Development I	3	Hec. 424 Home Architecture	3
Hec. 427 Textile Economics	3	Hec. 431b Field Work	3
Ret. 414 Retail Buying	3	Hec. 406 Home Management II	3
(2) Elective	3	Elective	6
Ret. 307 Retail Advertising or			
Ret. 405 Retail Mathematics	3		

(1) Alternative minors may be selected in English, psychology, history and sociology.

(2) Phil. 311 Logic recommended.

2. MAJOR: DIETETICS AND INSTITUTIONAL MANAGEMENT

Freshman Year

FIRST SEMESTER		SECOND SEMESTER	
<i>Subjects</i>	<i>Cr. Hours</i>	<i>Subjects</i>	<i>Cr. Hours</i>
Religion or Philosophy	2	Religion or Philosophy	2
Chem. 110 General Chemistry	5	Chem. 200 Organic	5
Hec. 100 Introd. to Home Economics	1	Hec. 101 Beginning Clothing	3
Hec. 102 Foods I	3	Hec. 214 Textiles I	3
Phe. 101 Physical Education	1/2	Phe. 102 Physical Education	1/2
Hec. 105 Introduction to Related Art	3	Spe. 101 Fundamentals of Effective Speaking	3
Eng. 101 English Composition	3		
Or. 101 Orientation	0		

Sophomore Year

FIRST SEMESTER		SECOND SEMESTER	
<i>Subjects</i>	<i>Cr. Hours</i>	<i>Subjects</i>	<i>Cr. Hours</i>
Religion or Philosophy	2	Religion or Philosophy	2
Hec. 205 Elementary Accounting ..	3	Hec. 201 Foods II	3
Hec. 221 Home Management I	3	Hec. 203 Health, Home Nursing ..	3
Hec. 318 Family Relationships	3	Hec. 305 Institutional Accounting ..	3
Phe. 201 Physical Education	1/2	Phe. 202 Physical Education	1/2
Bio. 103 General Zoology	4	Eco. 204 Survey of Economics	3
Psych. 201 Introductory Psychology ..	3	Soc. 202 Social Problems	3

Junior Year

FIRST SEMESTER		SECOND SEMESTER	
<i>Subjects</i>	<i>Cr. Hours</i>	<i>Subjects</i>	<i>Cr. Hours</i>
Hec. 302 Meal Planning & Table Service	3	Hec. 304 Quantity Cookery	3
Hec. 303 Nutrition & Health	3	Hec. 307 Household Physics	3
Chem. 400 Biochemistry	5	Bio. 303 Physiology	3
Educ. 202 Educational Psychology ..	3	Hec. 308 Institutional Buying	3
(1) Elective	3	Hec. 323 Demonstration Methods ..	1
		Hec. 401 Advanced Nutrition	3
		Eng. Advanced Course	3

Senior Year

FIRST SEMESTER		SECOND SEMESTER	
<i>Subjects</i>	<i>Cr. Hours</i>	<i>Subjects</i>	<i>Cr. Hours</i>
Hec. 309 Household Equipment	3	Hec. 402 Diet in Disease	3
Hec. 405 Teaching of Home Economics in Schools	3	Hec. 406 Home Management II	3
Hec. 409 Advanced Foods	3	Hec. 407 Institutional Organization & Management	3
Hec. 425 Child Development I	3	Eng. Advanced Course	3
Bio. 401 Bacteriology	4	Elective	3
		Phil. 324 Ethics	3

(1) Phil 311 Logic recommended.

3. MAJOR: BUSINESS: FOODS

*(1) Minor In Retailing**Freshman Year*

FIRST SEMESTER		SECOND SEMESTER	
<i>Subjects</i>	<i>Cr. Hours</i>	<i>Subjects</i>	<i>Cr. Hours</i>
Religion or Philosophy	2	Religion or Philosophy	2
Chem. 110 General Chemistry	5	Chem. 200 Organic	5
Hec. 100 Intro. to Home Eco.	1	Hec. 101 Beginning Clothing	3
Hec. 102 Foods I	3	Hec. 214 Textiles I	3
Phe. 101 Physical Education	1/2	Phe. 102 Physical Education	1/2
Eng. 101 English Composition	3	Spe. 101 Fundamentals of Effective Speaking	3
Hec. 105 Introduction to Related Art	3		
Or. 101 Orientation	0		

Sophomore Year

FIRST SEMESTER		SECOND SEMESTER	
<i>Subjects</i>	<i>Cr. Hours</i>	<i>Subjects</i>	<i>Cr. Hours</i>
Religion or Philosophy	2	Religion or Philosophy	2
Hec. 318 Family Relationships	3	Hec. 201 Foods II	3
Hec. 221 Home Management I	3	Hec. 203 Health, Home Nursing	3
Phe. 201 Physical Education	1/2	Phe. 202 Physical Education	1/2
Psych. 201 Introductory Psychology	3	Eco. 204 Survey of Economics	3
Educ. 202 Educational Psychology	3	Soc. 202 Social Problems	3
Elective	3	Elective	3

Junior Year

FIRST SEMESTER		SECOND SEMESTER	
<i>Subjects</i>	<i>Cr. Hours</i>	<i>Subjects</i>	<i>Cr. Hours</i>
Hec. 302 Meal Planning & Table Service	3	Hec. 323 Demonstration Methods	1
Hec. 303 Nutrition & Health	3	Hec. 304 Quantity Cookery	3
Hec. 309 Household Equipment	3	Hec. 423 Home Furnishings I	3
Ret. 305 Introduction to Retailing	3	Ret. 409 Retailing Organization & Operation	3
Ret. 310 Retail Salesmanship	3	Ret. 414 Retail Buying	3
(2) Elective	3	Bio. 303 Physiology	3
		Hec. 401 Advanced Nutrition or	
		Hec. 402 Diet in Disease	3

Senior Year

FIRST SEMESTER		SECOND SEMESTER	
<i>Subjects</i>	<i>Cr. Hours</i>	<i>Subjects</i>	<i>Cr. Hours</i>
Hec. 409 Advanced Foods	3	Hec. 406 Home Management II	3
Hec. 425 Child Development I	3	Hec. 431 Field Work	6
Eng. Advanced Course	3	Eng. Advanced Course	3
Bio. 401 Bacteriology	4	Phil. 324 Ethics	3
Ret. 405 Retail Mathematics or			
Ret. 307 Retail Advertising	3		

(1) Alternative minors may be selected in English, psychology, history and sociology.

(2) Phil. 311 recommended.

4. MAJOR: INTERIOR DECORATION

(1) *Minor In Retailing*

Freshman Year

FIRST SEMESTER		SECOND SEMESTER	
<i>Subjects</i>	<i>Cr. Hours</i>	<i>Subjects</i>	<i>Cr. Hours</i>
Religion or Philosophy	2	Religion or Philosophy	2
Chem. 110 General Chemistry	5	Chem. 200 Organic	5
Hec. 100 Introd. to Home Eco.	1	Hec. 101 Beginning Clothing	3
Hec. 102 Foods I	3	Hec. 214 Textiles I	3
Phe. 101 Physical Education	1/2	Phe. 102 Physical Education	1/2
Eng. 101 English Composition	3	Spe. 101 Fundamentals of	
Hec. 105 Introd. to Related Art	3	Effective Speaking	3
Or. 101 Orientation	0		

Sophomore Year

FIRST SEMESTER		SECOND SEMESTER	
<i>Subjects</i>	<i>Cr. Hours</i>	<i>Subjects</i>	<i>Cr. Hours</i>
Religion or Philosophy	2	Religion or Philosophy	2
Art. 107 Cultural History of Europe to 1830	3	Art. 108 Cultural History of Europe since 1830	3
Art. 103 Introductory Painting I	2	Art. 201 Principles of Design	2
Hec. 221 Home Management I	3	Hec. 203 Health & Home Nursing	3
Phe. 201 Physical Education	1/2	Phe. 202 Physical Education	1/2
Eco. 204 Survey of Economics	3	Soc. 202 Social Problems	3
Ret. 305 Introduction to Retailing	3		
Psych. 201 Introduction to Psychology	3		

Junior Year

FIRST SEMESTER		SECOND SEMESTER	
<i>Subjects</i>	<i>Cr. Hours</i>	<i>Subjects</i>	<i>Cr. Hours</i>
Art. 104 Introductory Painting II	2	Art. 202 Principles of Design II	2
Hec. 318 Family Relationships	3	Hec. 315 Consumer Buying	3
Hec. 431a Field Work	3	Hec. 435 Advanced Home Plan.	3
Ret. 310 Retail Salesmanship	3	Ret. 409 Retail Organization & Operation	3
(2) Elective	3	Hec. 423 Home Furnishings I	3
Ret. 307 Retail Advertising or		Hec. 311 Advanced Clothing or	
Ret. 405 Retail Mathematics	3	Hec. 324 Bishop Clothing or	
		Hec. 415 Tailoring	3
		Hec. 323 Demonstration Methods	1

Senior Year

FIRST SEMESTER		SECOND SEMESTER	
<i>Subjects</i>	<i>Cr. Hours</i>	<i>Subjects</i>	<i>Cr. Hours</i>
Eng. Advanced Course	3	Eng. Advanced Course	3
Hec. 427 Textiles Economics	3	Hec. 424 Home Architecture	3
Hec. 430 Home Furnishings	3	Hec. 431b Field Work	3
Ret. 414 Retail Buying	3	Hec. 406 Home Management II	3
Electives	6	Phil. 324 Ethics	3
		Electives	3

(1) Alternative minors may be selected in English, psychology, history and sociology.

(2) Phil 311 recommended.

PROGRAM VII
BACHELOR OF SCIENCE WITH A MAJOR IN
MEDICAL TECHNOLOGY

A TWELVE or thirteen month course in Medical Technology is offered by the Diagnostic Laboratories of St. Elizabeth Hospital, Good Samaritan Hospital, Miami Valley Hospital, and Veterans Administration Hospital. Affiliation with the University of Dayton permits a student to obtain the degree of Bachelor of Science in Medical Technology if the University's requirements are fulfilled. These schools are accredited by the Registry of Medical Technologists of the American Society of Clinical Pathologists through the Council on Medical Education and Hospitals of the American Medical Association, and qualify a student to take the examination given by the Registry of Medical Technologists.

The student receives practical and theoretical experience in the various branches of the clinical laboratory, after which he is qualified for positions in physicians' offices, clinics, and hospitals.

METHODS OF INSTRUCTION

AFTER A PRELIMINARY concentrated introduction to medical technology, the student participates in the activities of the Diagnostic Laboratories, spending a specific time in each department. Instruction is largely by supervised practice and demonstration, given by members of the laboratory staff. Regular assignments in recognized textbooks and laboratory periodicals are given. Conferences and examinations are held throughout the year. Following a review period at the end of the prescribed course, a final examination is given patterned after that of the Registry of Medical Technologists.

ADMISSION REQUIREMENTS

APPLICATION may be made in person or by letter. A personal interview is highly desirable. For students who are not interested in receiving a degree but desire to earn a certificate only, a two-year program will be arranged by the Head of the Division which will satisfy the minimum requirements for admission to the hospital training period.

Applicants must present the following qualifications:

A. FOR CERTIFICATE ONLY.

1. Two years (60 credit hours) of college work in a college or university accredited by a recognized standardizing association.
2. The minimum credits as required by the Registry of Medical Technologists, Muncie, Indiana, with minor additions listed below. The student must submit an official transcript of college credits approved by the Registry. The following credits are required:

Biology: 12 semester hours which may include general biology, bacteriology, parasitology, physiology, anatomy, histology, embryology, zoology. Biology and physiology are preferred.

Chemistry: One year of General Inorganic Chemistry to include both lectures and laboratory.

3 semester hours of Quantitative Chemistry, Organic Chemistry, or Biochemistry including lectures and laboratory. Quantitative Chemistry is preferred.

Electives: It is recommended that subjects such as Zoology, Anatomy, English, Mathematics, Physics, Organic Chemistry, advanced Bacteriology, while not required, may be taken to fulfill the requirements for the total credit hours.

B. FOR B. S. IN MEDICAL TECHNOLOGY.

1. Three years of college work of which a minimum of 30 semester hours must be taken at the University of Dayton. The subjects listed above should be included.
2. 52-56 weeks' work at the Hospital Laboratory for which the student receives 33 semester hours of credit. Some students may be required to follow subjects given on the University campus, concurrently with training at the Hospital Laboratory.
3. A total of 128 semester hours, including the Major in Medical Technology, a minor either in Chemistry or Biology (12 semester hours above basic courses). Students are accepted for classes beginning in July. Completion of hospital training in August should not, in most cases, interfere with graduation in June.

HOSPITAL EXPENSES

1. *Tuition*—No tuition is paid to the University by the students while completing the practical year. However, students working for the B.S. degree from the University of Dayton are required to register with the University.

2. *Maintenance*—Complete maintenance will be provided if desired. It is somewhat difficult for us to supply rooms for male students at the present time.

3. *Uniforms*—The student shall provide herself with at least six approved white uniforms, which will be laundered by the hospital, and a pair of comfortable white shoes.

4. One good textbook on clinical laboratory procedures approved by the Director of the School.

LENGTH OF CLINICAL COURSE

THE COURSE of instruction covers a period of 52-56 consecutive weeks. Vacation periods or leaves of absence are not provided because not desirable, but can be arranged upon necessity. The hours of duty are from 8:00 a.m. to 5:00 p.m., five and one-half days a week. Special assignments for Sunday and holiday work are given with time off during the week. There is no night call for students.

Textbook assignments and extracurricular reading and study shall be done

outside the regular hours. Written and oral examinations are held at regular intervals throughout the course.

GRADUATION AND REGISTRATION

AFTER DEMONSTRATING a theoretical and practical proficiency in clinical laboratory procedures, the student is given a certificate by the Hospital, and becomes eligible for the national examination for certification by the Registry of Medical Technology.

Students who are registered at the University of Dayton are eligible for the degree of Bachelor of Science in Medical Technology.

Examinations for Registration and the Certificate of M.T. (Medical Technologist) are given in April and October by the Registry of Medical Technologists in various cities. These are comprehensive written examinations.

Freshman Year

FIRST SEMESTER		SECOND SEMESTER	
<i>Subjects</i>	<i>Cr. Hours</i>	<i>Subjects</i>	<i>Cr. Hours</i>
Religion or Philosophy	2	Religion or Philosophy	2
Chem. 115 General Chemistry	4	Chem. 116 General Chemistry	4
Bio. 105 Zoology	4	Bio. 106 Zoology	4
Eng. 101 English Composition	3	Eng. 221 English Literature	3
Phe. 101 Physical Education	1/2	Phe. 102 Physical Education	1/2
Mil. 101 First Year Basic	1 1/2	Mil. 102 First Year Basic	1 1/2
Math. 101 College Algebra	3	Elective	3
Or. 101 Orientation	0		

Sophomore Year

FIRST SEMESTER		SECOND SEMESTER	
<i>Subjects</i>	<i>Cr. Hours</i>	<i>Subjects</i>	<i>Cr. Hours</i>
Religion or Philosophy	2	Religion or Philosophy	2
Chem. 207 Qualitative Analysis	4	Chem. 301 Quantitative Analysis	4
Bio. 201 Compar. Anatomy Lab	2	Bio. 202 Compar. Anatomy Lab	1
Bio. 203 Human Anatomy	2	Bio. 204 Human Anatomy	2
Eng. 305 Medical Terminology	3	Eng. Advanced Course	3
Phe. 201 Physical Education (W)	1/2	Phe. 202 Physical Education (W)	1/2
Mil. 201 Second Year Basic	1 1/2	Mil. 202 Second Year Basic	1 1/2
Elective	3	Elective	3

Junior Year

FIRST SEMESTER		SECOND SEMESTER	
<i>Subjects</i>	<i>Cr. Hours</i>	<i>Subjects</i>	<i>Cr. Hours</i>
Chem. 309 Organic Chemistry	5	Chem. 310 Organic Chemistry	5
Bio. 305 Microtechnique	4	Bio. 306 Microtechnique	4
Phil. 324 Ethics	3	Phil. 482 Medical Ethics	3
Bio. 413 Bacteriology	4	Bio. 303 Physiology	3
		Elective	3

Senior Year

FIRST SEMESTER		SECOND SEMESTER	
<i>Subjects</i>	<i>Cr. Hours</i>	<i>Subjects</i>	<i>Cr. Hours</i>
Met. 450	Introduction to Medical Technology	Met. 454	Chemistry & Gastric Analysis
	6		6
Met. 451	Urinalysis & Renal Functions	Met. 455	Histology & Cytology
	3	Met. 456	Serology, Spinal Fluids
Met. 452	Hematology	Met. 457	Electrocardiography, B.M. R.
Met. 453	Bacteriology, Sputum, Parasitology, Feces & Special Fluids		3
	4		

PROGRAM VIII

BACHELOR OF SCIENCE WITH A MAJOR IN
RADIOLOGICAL TECHNIQUE

A TWELVE-MONTHS' course in Radiological Technique is offered by the Radiology Departments of Miami Valley and St. Elizabeth Hospitals. Affiliation with the University of Dayton permits a student to obtain a degree of Bachelor of Science in Radiological Technique, if the University's requirements are met. The school is approved by the Council on Medical Education and Hospitals of the American Medical Association and qualifies a student to take the examination given by the American Registry of X-ray Technicians.

The student receives practical and theoretical experience in diagnostic and therapeutic technique which qualifies the graduate for positions in hospitals, clinics, physicians' offices, and industrial medical departments. There are excellent opportunities for both men and women in this field.

METHODS OF INSTRUCTION

INSTRUCTION CONSISTS of a series of lectures in the theoretical principles of X-ray technique and in their practical applications. Assignments are given in appropriate textbooks and periodicals. Extensive supervised, practical applications of the principles are made. Regular monthly examinations are given, with a final examination upon completion of the course.

ADMISSION REQUIREMENTS

APPLICATIONS MAY BE made in person or by letter. A personal interview is advisable. Applicants should present the following qualifications for admission to the courses given at the Hospitals:

A. FOR A CERTIFICATE:

Two years of college work are required, followed by one year at Miami Valley or St. Elizabeth Hospital. The college work, preferably, includes the following courses:

		<i>Cr. Hours</i>
Mathematics:	College Algebra	3
	Plane Trigonometry	3
Chemistry:	General Inorganic	6
Physics:	General Physics	10

English:	Composition	3
	Theme Writing	3
Biology:	General Biology	8
	Human Anatomy	4
	Human Physiology	3

B. FOR A BACHELOR OF SCIENCE DEGREE IN RADIOLOGICAL TECHNIQUE:
 Three years of college work are required, followed by one year at Miami Valley or St. Elizabeth Hospital.

Preference will be given to those students who are interested in the degree program. Classes begin in January and July. The year of practical training at the Hospital covers a period of twelve consecutive months. Vacations and leaves of absence are not scheduled but may be arranged. The hours of duty are from 8 a.m. to 5 p.m., five and one-half days per week. There is no Sunday duty. One meal is provided by the Hospitals daily. Complete maintenance is available in a hospital residence at the cost of \$50.00 per month.

CURRICULUM

Freshman Year

FIRST SEMESTER		SECOND SEMESTER	
<i>Subjects</i>	<i>Cr. Hours</i>	<i>Subjects</i>	<i>Cr. Hours</i>
Religion or Philosophy	2	Religion or Philosophy	2
Eng. 101 English Composition	3	Eng. 221 English Literature	3
Math. 115 Math. Analysis	5	Math. 116 Math. Analysis	5
Bio. 101 General Biology	4	Bio. 102 General Biology	4
Mil. 101 First Basic Military	1½	Mil. 102 First Basic Military	1½
Phe. 101 Physical Education	½	Phe. 102 Physical Education	½
		Phys. 206 Mechanics and Sound	4

Sophomore Year

FIRST SEMESTER		SECOND SEMESTER	
<i>Subjects</i>	<i>Cr. Hours</i>	<i>Subjects</i>	<i>Cr. Hours</i>
Religion or Philosophy	2	Religion or Philosophy	2
Bio. 203 Human Anatomy	2	Bio. 204 Human Anatomy	2
Bio. 201 Comp. Anatomy Lab.	1	Bio. 202 Comp. Anatomy Lab.	1
Math. 201 Calculus	4	Math. 202 Calculus	4
Phys. 207 Electricity & Magnetism ..	4	Phys. 208 Heat and Light	4
Mil. 201 Second Basic Military	1½	Mil. 202 Second Basic Military	1½
E.E. 201 Elem. of Elect. Engr.	4	Eng. Advanced Course	3

Junior Year

FIRST SEMESTER		SECOND SEMESTER	
<i>Subjects</i>	<i>Cr. Hours</i>	<i>Subjects</i>	<i>Cr. Hours</i>
E.E. 305 Altern. Current Circuits ..	4	E.E. 312 Engineering Electronics ..	4
Bio. Advanced Course	3	Bio. Advanced Course	3
Phil. 324 Ethics	3	Phil. 482 Medical Ethics	3
Electives	6	Electives	6

Senior Year

At Miami Valley or St. Elizabeth Hospital

<i>Subjects</i>	<i>Weeks</i>	<i>Cr. Hours</i>
Rad. 451 Radiological Physics	6	3
Rad. 452 The X-ray Machine	6	3
Rad. 453 Processing Technique	2	2
Rad. 454 Routine Standard Positioning ..	12	8

Rad. 455 Special Examinations (Opaque Material)	10	6
Rad. 456 Fluoroscopic Procedure	4	2
Rad. 457 Radiation Therapy	12	8

PROGRAM IX

NURSING AND NURSING EDUCATION

THE UNIVERSITY OF DAYTON offers two plans to nurses and prospective nurses who wish to secure a degree.

PLAN I. FIVE-YEAR COMBINED PROGRAM

THIS PROGRAM leads to one of the following degrees: Bachelor of Science, Bachelor of Science in Nursing, or Bachelor of Science in Nursing Education (1). The program is offered to nurses who complete two years at the University of Dayton after the three-year professional course in nursing at a properly accredited institution.

All students must take the Graduate Nurse Qualifying Examination. This examination must be taken before the applicant is officially accepted as a candidate for the baccalaureate degree—preferably within the first full-time semester or before completion of 12 credit hours, whichever occurs first. An evaluation of the results of this examination will entitle the applicant to a maximum of 60 hours credit for the basic professional course in nursing or a minimum of 45 hours credit. Those deficient in the 60 hours credit maximum will be expected to additional clinical work in the area of the deficiency as demonstrated by the examination. This work will be directed by the Head of the Department of Nursing through facilities of the St. Elizabeth's hospital.

Application for the examination should be made to the Division of Nursing Education, Evaluation and Guidance Service, 2 Park Avenue, New York 16, New York. The examination will be administered by the Guidance Center on the campus on dates to be announced. Fee of \$5.00 should accompany the application for the examination.

A minimum of 128 credit hours is required for the degree. They must include:

1. Basic professional course in nursing 60 credit hours
2. A minimum of 42 academic or non-professional credits in the following subjects:

English	12 credit hours
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(1) Notice is given of the closing of the program leading to the Bachelor of Science in Nursing Education. No degree in Nursing Education will be conferred after August, 1956. Students presently enrolled in this degree program should complete all the requirements by that date; new students may not enroll in this degree program. Students not completing the degree requirements by the closing date will be considered as having transferred to the program leading to the Bachelor of Science degree in Nursing.

Philosophy	6 credit hours
Psychology	6 credit hours
History and Social Sciences	12 credit hours
Natural Science	6-8 credit hours
Electives	24-26 credit hours

The electives, including Education and Nursing Education, should be chosen according to the special requirements of the degree desired:

- a. For the degree of Bachelor of Science, 10-12 additional hours in Biology or Chemistry are required.
- b. For the degree of Bachelor of Science in Nursing, 12 additional hours in Nursing Education are required. Courses in Ned. 317, Current Trends in Nursing, Ned. 332, Principles and Techniques of Teaching in Schools of Nursing, and Ned. 471, Ward Administration, are required. Survey courses and those giving a broad knowledge of nursing and its various fields are recommended.
- c. For the degree of Bachelor of Science in Nursing Education, 9 hours in Education and 18 hours in Nursing Education are required. Courses in supervision, administration, and the major fields of interest are recommended. Courses in Ned. 317, Current Trends in Nursing, Ned. 332, Principles and Techniques of Teaching in Schools of Nursing, and Ned. 471, Ward Administration, are required.

PLAN II. FOUR-YEAR ACADEMIC-BASIC

PROFESSIONAL CURRICULUM

THIS INTEGRATED BASIC CURRICULUM leads to the degree of Bachelor of Science in Nursing and the diploma in Nursing. It is designed to give the student a cultural background in higher education and the basic course in the theory and practice of nursing. Through the integration of academic and professional courses, the University provides the opportunity for students to further their cultural development and to attain professional competence. This curriculum prepares the graduates for positions in the various health and hospital fields and for advanced work in the area of specialization. Clinical experience is provided at St. Elizabeth Hospital and affiliating institutions. Students are graduates of the St. Elizabeth's Hospital School of Nursing, receiving the school's diploma and pin and thus permitting them to sit for the Ohio State Nurses Board examination. Institutional affiliation exists with the University of Dayton since November 1938.

The curriculum requires a minimum of 128 hours of credit. Students who have had college work in other institutions may enroll in the Academic Basic Professional Curriculum with advanced standing upon the approval of the Office of Admissions and the Department of Nursing.

ADMISSION REQUIREMENTS

PREFERENCE WILL BE GIVEN to students who rank in the upper third of their class. A transcript of the applicant's credits, personality report and a letter of recommendation from the high school principal are to be mailed to the Department of Nursing.

PRE-NURSING TEST

APPLICANTS ARE EXPECTED to take the examination given by the Pre-Nursing and Guidance Testing Service of the National League for Nursing. Directions for this Pre-Nursing Test will be sent with application blanks. The fee for this examination is \$5.00.

PRELIMINARY CERTIFICATE OF EDUCATION

A PRELIMINARY CERTIFICATE of education issued by the Ohio State Nurses Board Entrance Examiner is required for each applicant to the Department of Nursing. Information for securing this certificate will be included in the letter of formal acceptance by the Department of Nursing. A fee of \$3.00, payable to the Ohio State Nurses Board, is charged for this certificate.

CURRICULUM

Freshman Year

FIRST SEMESTER		SECOND SEMESTER	
<i>Subjects</i>	<i>Cr. Hours</i>	<i>Subjects</i>	<i>Cr. Hours</i>
Religion or Philosophy	2	Religion or Philosophy	2
Eng. 101 English Composition	3	Eng.	3
Chem. 110 General Chemistry	5	Chem. 200 Organic Chemistry	5
Bio. 103 General Zoology	4	Bio. 123 Microbiology	4
Phe. 101 Physical Education	1/2	Phe. 102 Physical Education	1/2
Ned. 120 Professional Adjustments	1	Ned. 142 Introduction to General Nursing	1
Ned. 141 Introduction to General Nursing	1	Bio. 120 Anatomy & Physiology	3

Summer Session

<i>Subjects</i>	<i>Cr. Hours</i>
Bio. 122 Anatomy & Physiology	3
Ned. 121 History of Nursing	2
Ned. 143 General Nursing	2

Sophomore Year

FIRST SEMESTER		SECOND SEMESTER	
<i>Subjects</i>	<i>Cr. Hours</i>	<i>Subjects</i>	<i>Cr. Hours</i>
Religion or Philosophy	2	Religion or Philosophy	2
Ned. 201 Nutrition, Foods & Cookery	2	Ned. 230 Pharmacology & Therapeutics	3
Ned. 127 Introduction to Medical Science (Unit I)	1 1/2	Ned. 128 Introduction to Medical Science II	1
Ned. 144 Nursing Arts	3	Ned. 145 General Nursing	2
Ned. 203 Elem. Pharmacology	1	Ned. 221 Operative Aseptic Tech. 1	
Phe. 201 Physical Education	1/2	Phe. 202 Physical Education	1/2
Soc. 201 General Sociology	3	Eng.	3
Psych. 204 General Psychology	3	Ned. 220 Introduction to Medical Surgical Nursing	1/2
		Ned. 222 Respiratory System	1 1/2
		Ned. 223 Circulatory System	1 1/2

Summer Session

<i>Subjects</i>	<i>Cr. Hours</i>
Ned. 202 Diet Therapy	2
Ned. 224 Gastro-Intestinal System 1½	
Ned. 225 Integumentary System	1
Ned. 226 Allergic Conditions	½
Ned. 227 First Aid	2

Junior Year

FIRST SEMESTER

<i>Subjects</i>	<i>Cr. Hours</i>
Ned. 228 Endocrines & Metabolism ½	
Ned. 229 Nervous System	1
Hist. 251 American History	3
Eng. Advanced	3
Phil. 324 General Ethics	3
Ned. 318 Urological Nursing	1
Ned. 319 Gynecological Nursing	1
Ned. 320 Orthopedic Nursing	1½
Ned. 321 Eye Nursing	½
Ned. 322 Ear, Nose, Throat Nursing	½

SECOND SEMESTER

<i>Subjects</i>	<i>Cr. Hours</i>
Ned. 402 Pediatric Nursing	4
Ned. 420 Obstetric Nursing	4
Hist	3
Psych. 306 Child Psychology	3

Summer Session

<i>Subjects</i>	<i>Cr. Hours</i>
Ned. 339 Communicable Disease Nursing	2½
Ned. 340 Tuberculosis Nursing	1

Senior Year

FIRST SEMESTER

<i>Subjects</i>	<i>Cr. Hours</i>
Ned. 311 Psychological & Sociological Aspects in Nursing	2
Ned. 342 Professional Adjustments (II)	2
Ned. 343 Team, Ward Relationships	1
Ned. 423 Psychiatric Nursing	4
Ned. 425 Community Nursing & Health Service	2

SECOND SEMESTER

<i>Subjects</i>	<i>Cr. Hours</i>
Psych. 203 Educational Psychology	3
Phil. 482 Medical Ethics	3
Soc.	3

College of Engineering

BROTHER PARR, *Dean*

GENERAL STATEMENT

THE ENGINEERING CURRICULA in each of the fields of Chemical, Civil, Electrical, Industrial, and Mechanical Engineering are drawn up for a four year period. No effort is spared to acquaint the student thoroughly with fundamental principles and to give him a clear insight into the analysis of engineering problems. While emphasis is laid on fundamental theory, continued attention is paid to the solution of practical problems for the purpose of illustrating scientific principles and pointing out their industrial applications.

The broader responsibilities of the Engineering profession demand that the professional training of an Engineer include at least an acquaintance with the humanities, in order that scientific discoveries and developments by Engineers may result in the real advancement of man. To help the young Engineer achieve his purpose in life, the University offers in addition to the prescribed Engineering subjects a wide selection of courses in the Arts and Sciences and Business Administration.

DEGREE REQUIREMENTS

THE DEGREES—Bachelor of Chemical, Civil, Electrical, Industrial, and Mechanical Engineering—are conferred at commencement if the following requirements have been fulfilled:

- 1) All prescribed courses outlined in the respective curricula must have been passed with a grade D or better;
- 2) The cumulative quality point average must be at least 2.0;
- 3) The student must have attended the College of Engineering at the University of Dayton during his senior year, and have carried at least thirty credit hours;
- 4) The student must not be obliged to the University financially.

Degrees "With Honors" are awarded to students who have earned a cumulative point average of 3.5 for the first seven semesters.

FRESHMAN CURRICULUM FOR ENGINEERING

		1st Semester		2nd Semester	
		Lect.	Lab.	Lect.	Lab.
Rel. or Phil.	Religion or Philosophy	2	0	2	0
Mil.	101-102 First Basic Military	1½	0	1½	0

Math.	115-116	Mathematical Analysis	5	0	5	0
Chem.	117-118	General Chemistry	3	1	3	1
G.E.	101	Engineering Drawing	0	3	—	—
G.E.	102	Descriptive Geometry	—	—	0	3
Eng.	101	English Composition	3	0	—	—
Phys.	206	Physics	—	—	3	1
Phe.	101-102	Physical Education	0	½	0	½
Phe.	103	Health	1	0	—	—
G.E.	105	Engineering Survey	0	0	—	—

CHEMICAL ENGINEERING

THE COURSE of Chemical Engineering has for its main objective the training of men for technical and executive positions in the chemical industries.

The various phases of general and analytical chemistry are studied coordinately with mathematics, physics and mechanics; these studies constitute a basis for the topics of the last two years which are devoted more specifically to problems of chemical engineering equipment, control, and design. The flow of fluids, thermodynamics, theory of unit operations, and analytical control are studied in the third and fourth years. Cooperatively with the Departments of Civil, Mechanical, and Electrical Engineering, the subjects of heat-power, metallurgy, materials testing, and the principles of electrical engineering are pursued.

Freshman Year

(See Page 107)

Sophomore Year

		1st Semester		2nd Semester	
		Lect.	Lab.	Lect.	Lab.
Rel. or Phil.	Religion or Philosophy	2	0	2	0
Mil.	201-202 Second Basic Military	1½	0	1½	0
Math.	201-202 Calculus	4	0	4	0
Phys.	207-208 Physics	3	1	3	1
Chem.	205-206 Analytic Chemistry	3	3	3	3
Ger.	101-102 Elementary German or				
Ger.	201-202 Intermediate German	3	0	3	0

Junior Year

		1st Semester		2nd Semester	
		Lect.	Lab.	Lect.	Lab.
M.E.	301a Thermodynamics	3	0	—	—
G.E.	202 Statics	3	0	—	—
G.E.	303 Strength of Materials	—	—	3	0
G.E.	305 Materials Testing	—	—	0	1
Chem.	303-304 Physical Chemistry	3	1	3	1

Chem.	305-306	Organic Chemistry	3	3	3	3
Ch.E.	302	Chemical Eng. Calculation	—	—	2	0
M.E.	304a	Heat Power	—	—	3	1
Ger.	307	Chemical German	3	0	—	—

Senior Year

			1st Semester		2nd Semester	
			Lect.	Lab.	Lect.	Lab.
Ch.E.	401-402	Industrial Chemistry	3	0	3	0
Ch.E.	403	Technical Analysis	0	3	—	—
E.E.	301-302	Electrical Engineering	2	1	2	1
Ch.E.	405-406	Unit Operations	3	0	3	0
Ch.E.	412	Advanced Organic Laboratory	—	—	0	3
Ch.E.	408	Plant Design	—	—	0	1
Ch.E.	410	Seminar	—	—	1	0
G.E.	402	Contracts and Specifications..	—	—	2	0
Spe.	101	Fund. of Effective Speaking..	3	0	—	—
		Electives	3	0	3	0

The choice of Electives is subject to the approval of the Head of the Department and the Dean.

CIVIL ENGINEERING

THE CURRICULUM is designed to give a thorough education in the principles fundamental to the civil engineering profession, so that the student is prepared to pursue to advantage any field of civil engineering practice.

During the first two years, emphasis is placed on those subjects underlying all engineering—English, mathematics, chemistry, physics, drawing, surveying. The third and fourth years are devoted principally to technical subjects relative to hydraulic, sanitary, structural and highway engineering.

Engineering projects, completed or under construction, are visited under the guidance of the instructors. Close association is maintained with the Dayton Section of the American Society of Civil Engineers and the Dayton Chapter of the National Society of Professional Engineers.

Freshman Year

(See Page 107)

Sophomore Year

		1st Semester		2nd Semester	
		Lect.	Lab.	Lect.	Lab.
Rel. or Phil.	Religion or Philosophy	2	0	2	0
Mil.	201-202 Second Basic Military	1½	0	1½	0
Math.	201-202 Calculus	4	0	4	0
Phys.	207-208 Physics	3	1	3	1
Eng.	222 American Literature	3	0	—	—
Spe.	101 Fund. of Effective Speaking..	3	0	—	—
C.E.	201-202 Elementary Surveying	2	1	2	1
G.E.	202 Statics	—	—	3	0

Junior Year

		1st Semester		2nd Semester	
		Lect.	Lab.	Lect.	Lab.
G.E.	301 Dynamics	3	0	—	—
G.E.	303 Strength of Materials	3	0	—	—
G.E.	307 Hydraulics	4	0	—	—
M.E.	301a Thermodynamics	3	0	—	—
C.E.	301 Route Surveying	3	1	—	—
C.E.	302 Advanced Surveying	—	—	2	1
C.E.	304 Adv. Strength of Materials....	—	—	3	0
C.E.	306 Theory of Structure	—	—	5	0
G.E.	305 Materials Testing	—	—	0	1
M.E.	304a Heat Power	—	—	3	1
	Electives	3	0	3	0

Senior Year

			1st Semester		2nd Semester	
			Lect.	Lab.	Lect.	Lab.
C.E.	401-402	Structural Design	2	2	2	2
C.E.	405	Highway Engineering	3	0	—	—
C.E.	407	Reinforced Concrete	4	0	—	—
C.E.	411	Water Supply	3	0	—	—
E.E.	301-302	Electrical Engineering	2	1	2	1
C.E.	406	Indeterminate Structures	—	—	3	0
C.E.	408	Seminar	—	—	1	0
C.E.	412	Sanitary Engineering	—	—	3	0
C.E.	414	Soil Mechanics	—	—	1	1
G.E.	402	Contracts and Specifications..	—	—	2	0
		Electives	3	0	3	0

The choice of electives is subject to the approval of the Head of the Department and the Dean.

ELECTRICAL ENGINEERING

THE CURRICULUM of Electrical Engineering is planned with the primary objective of providing a thorough knowledge of the fundamental laws of electricity and the application of these laws in Electrical Engineering.

Courses are arranged to give students of Electrical Engineering an understanding of the basic principles and practices in the fields of Electrical Power and Electrical Communications. Some degree of specialization in these fields is provided according to the abilities and interests of the individual students.

Proper attention is directed to an appreciation of the practical economic factors in the electrical world, and to the cultural and social qualities necessary for a successful career in the Engineering Profession.

Freshman Year
(See Page 107)

Sophomore Year

			1st Semester		2nd Semester	
			Lect.	Lab.	Lect.	Lab.
Rel. or Phil.		Religion or Philosophy	2	0	2	0
Mil.	201-202	Second Basic Military	1½	0	1½	0
Math.	201-202	Calculus	4	0	4	0
Phys.	207-208	Physics	3	1	3	1
G.E.	202	Statics	—	—	3	0
E.E.	201	Elements of Electrical Eng.....	3	1	—	—
Spe.	101	Fundamentals of Effective Speaking	3	0	—	—
E.E.	305	A. C. Circuits	—	—	4	0

Junior Year

			1st Semester		2nd Semester	
			Lect.	Lab.	Lect.	Lab.
G.E.	301	Dynamics	3	0	—	—
G.E.	303	Strength of Materials	3	0	—	—
G.E.	305	Materials Testing	—	—	0	1
E.E.	303-304	Electrical Measurements	2	1	2	1
E.E.	318	Machinery I	—	—	3	1
E. E.	308	Communciation Engineering I	—	—	3	1
Math	341-342	Engineering Mathematics	3	0	3	0
E. E.	312	Engineering Electronics	3	1	—	—
		E.E. Electives	—	—	3	0
		Electives	3	0	—	—

Senior Year

			1st Semester		2nd Semester	
			Lect.	Lab.	Lect.	Lab.
G.E.	402	Contracts and Specifications	—	—	2	0
M.E.	301a	Thermodynamics	3	0	—	—
M.E.	304a	Heat Power	—	—	3	1
Eng.	222	American Literature	3	0	—	—
E.E.	403	Machinery II	3	1	—	—
E.E.	404	Electrical Design	—	—	3	0
E.E.	413	Communication Engineering II	3	1	—	—
E.E.	410	Seminar	—	—	1	0
		E.E. Electives	3	0	6	0
		Electives	3	0	3	0

E.E. ELECTIVES

		Lect.	Lab.
E.E.	407	Illuminating Engineering	3 0
E.E.	408	Electrical Transients	3 0
E.E.	409	Industrial Electronics	3 0
E.E.	412	Power Transmissions, Distribution	3 0
E.E.	415	Ultra-High Frequencies I	3 0
E.E.	416	Ultra-High Frequencies II	2 1
E.E.	417	Thesis	3 0
E.E.	418	Control of Power Machinery	3 0
E.E.	419	Servomechanisms	3 0
E.E.	420	Symmetrical Components	3 0
E.E.	421	Magnetic Amplifiers	3 0

The choice of electives is subject to the approval of the Head of the Department and the Dean.

INDUSTRIAL ENGINEERING

THE DEMAND FROM INDUSTRY is ever increasing for individuals thoroughly trained in the fundamentals of engineering and also trained in the fields of accounting, human relations, organization and the related management functions.

The objective of the Industrial Engineering curriculum is to provide a sound foundation in mechanical engineering, supplemented with a basic foundation in accounting, statistics, economics, personnel administration, production practices and the other related management activities.

The first two years follow the basic Mechanical Engineering curriculum. The course arrangement in the last two years is such that the combination of Mechanical and Industrial Engineering subjects will equip the student to enter industries that are of a technical nature, and perform the complex functions of management.

The graduate will be prepared to serve effectively in many areas in both technical and supervisory capacities.

Industrial organizations depend on strong technical efficiency. However, that is not enough. The organization also must have able and qualified men to direct the control of the enterprise. The curriculum in Industrial Engineering is designed to meet these needs.

Freshman Year

(See Page 107)

Sophomore Year

			1st Semester		2nd Semester	
			Lect.	Lab.	Lect.	Lab.
Rel. or Phil.		Religion or Philosophy	2	0	2	0
Mil.	201-202	Second Year Basic Course	1½	0	1½	0
Math.	201-202	Differential and Integral				
		Calculus	4	0	4	0
Phys.	207-208	General Physics	3	1	3	1
M.E.	205a	Machine Shop Practice	2	1	—	—
Eco.	203	Survey of Economics	3	0	—	—
Spe.	101	Fundamentals of Eff. Speaking.	3	0	—	—
G.E.	202	Statics	—	—	3	0
Psych.	204	General Psychology	—	—	3	0
Eng.	222	American Literature	—	—	3	0

Junior Year

			1st Semester		2nd Semester	
			Lect.	Lab.	Lect.	Lab.
Acct.	203	Survey of Accounting	3	0	—	—
G.E.	301	Dynamics	3	0	—	—

I.E.	301	Personnel Administration	3	0	—	—
Math.	331	Statistics for Engineers	3	0	—	—
M.E.	303	Metallurgy	2	1	—	—
M.E.	309	Mechanics of Machinery	1	1	—	—
		Elective	3	0	—	—
Acct.	310	Cost Analysis	—	—	3	0
G.E.	303	Strength of Materials	—	—	3	0
G.E.	305	Materials Testing Lab	—	—	0	1
I.E.	302	Technical and Managerial Reports	—	—	3	0
Math.	332	Industrial and Engineering Application of Statistics	—	—	3	0
M.E.	301a	Thermodynamics	—	—	3	0
M.E.	305	Mechanical Engineering Lab	—	—	0	2
		Elective	—	—	3	0

Senior Year

			1st Semester		2nd Semester	
			Lect.	Lab.	Lect.	Lab.
E.E.	301	Electrical Engineering	2	1	—	—
I.E.	401	Engineering Economy	2	0	—	—
I.E.	403	Time and Motion Study I	2	1	—	—
I.E.	405	Production Planning	3	0	—	—
M.E.	304a	Heat Power	3	1	—	—
M.E.	407a	Elements of Machine Design	2	1	—	—
		Elective	3	0	—	—
E.E.	302	Electrical Engineering	—	—	2	1
G.E.	402	Contracts and Specifications	—	—	2	0
I.E.	404	Time and Motion Study II	—	—	2	1
I.E.	406	Plant Layout and Materials Handling	—	—	2	1
I.E.	408	Administration and Organization	—	—	3	0
I.E.	410	Industrial Engineering Seminar	—	—	1	0
M.E.	308	Fluid Mechanics	—	—	3	0
		Elective	—	—	3	0

MECHANICAL ENGINEERING

THE CURRICULUM of mechanical engineering is designed to give the student knowledge of the fundamental principles of science and the application of these principles to pertinent problems.

Basic studies in mathematics and the sciences are pursued in the first two years and departmental subjects are taken up in the last two years. The course

of studies comprises lectures, recitations and discussions, laboratory practice, and inspection visits.

Every attempt is made to impress the student with the responsibilities that rest upon the Mechanical Engineer in the active field, whether engaged as designer, builder, operator, organizer, manager or executive.

Freshman Year
(See Page 107)

Sophomore Year

			1st Semester		2nd Semester	
			Lect.	Lab.	Lect.	Lab.
Rel. or Phil.		Religion or Philosophy	2	0	2	0
Mil.	201-202	Second Basic Military	1½	0	1½	0
Math.	201-202	Calculus	4	0	4	0
Phys.	207-208	Physics	3	1	3	1
C.E.	201	Surveying	2	1	—	—
Eng.	222	American Literature	—	—	3	0
Spe.	101	Fundamentals of Effec. Speak.	3	0	—	—
G.E.	202	Statics	—	—	3	0
M.E.	205-206	Production Methods and Shop Practices	2	1	2	1

Junior Year

			1st Semester		2nd Semester	
			Lect.	Lab.	Lect.	Lab.
G.E.	301	Dynamics	3	0	—	—
G.E.	303	Strength of Materials	3	0	—	—
G.E.	305	Materials Testing	0	1	—	—
E.E.	301-302	Electrical Engineering	2	1	2	1
M.E.	301-302	Thermodynamics	3	0	3	0
M.E.	304	Heat Power	—	—	3	2
M.E.	305	M. E Laboratory	0	2	—	—
M.E.	308	Fluid Mechanics	—	—	3	0
M.E.	309-310	Mechanics of Machinery	1	1	2	0
M.E.	303	Metallurgy	2	1	—	—
C.E.	304	Adv. Strength of Materials	—	—	3	0

Senior Year

			1st Semester		2nd Semester	
			Lect.	Lab.	Lect.	Lab.
G.E.	402	Contracts and Specifications..	—	—	2	0
M.E.	401-402	Internal Combustion Engines	3	0	3	0
M.E.	403	Heating, Air Conditioning	3	2	—	—

M.E.	404	Refrigeration	—	—	3	0
M.E.	406	M. E. Laboratory	—	—	0	2
M.E.	407-408	Machine Design	2	1	2	1
M.E.	409	Heat Transmission	3	0	—	—
M.E.	414	Seminar	—	—	1	0
		Electives	6	0	6	0

M. E. ELECTIVES

			1st Semester		2nd Semester	
			Lect.	Lab.	Lect.	Lab.
M.E.	303	Metallurgy (elective for non-Mechanicals)	—	—	2	1
M.E.	416	Mechanical Vibrations	—	—	2	1
M.E.	411	Pumps and Compressors	3	0	—	—
M.E.	413	Non-Ferrous Metallurgy	3	0	—	—

Technical Institute

MR. METZ, *Director*

The Technical Institute is a two-year college program of technical training for individuals preparing for positions in production, operations, and supervision. Also included is training for such supporting engineering positions as laboratory assistant, experimental technician, and draftsman. All curricula as developed by the University of Dayton are practical in nature and are designed to meet the needs of individuals and industry. Each course is carefully organized, using suggestions of persons actually working in the industrial situation. In addition, the following definition of Technical Institute curricula as used by the Engineers' Council for Professional Development (ECPD) in accrediting such curricula, has been the basic guide for the University of Dayton Technical Institute.

"Curricula to be considered are technological in nature and lie in the post-high school area. They differ in content and purpose from those of the vocational school on one hand and from those of the engineering college on the other. Curricula in this field are offered by a variety of institutions and cover a considerable range as to duration and content of subject matter, but have in common the following purposes and characteristics:

1. The purpose is to prepare individuals for various technical positions or lines of activity encompassed within the field of engineering, but the scope of the programs is more limited than that required to prepare a person for a career as a professional engineer.

2. Programs of instruction are essentially technological in nature, based upon principles of science and include sufficient post-secondary school mathematics to provide the tools to accomplish the technical objectives of the curricula.

3. Emphasis is placed upon the use of rational processes in the principal fundamental portions of the curricula that fulfill the stated objectives and purposes.

4. Programs of instruction are briefer, and usually more completely technical in content than professional curricula, though they are concerned with the same general fields of industry and engineering. Such designations as Engineering Aide, Technical Aide, Associate in Engineering, and Engineering Associate are appropriate designations to be conferred upon the graduates of programs of Technical Institute type.

5. Training for artisanship is not included within the scope of education of Technical Institute type."

PROGRAMS OF STUDY

Programs of study are offered in Electrical, Industrial and Mechanical Technology on both a day and evening basis. Courses required and descriptions

are included in the following pages. Each program is composed of certain basic courses covering fundamental and non-technical subjects and courses in the major field. The fundamental subjects are mathematics, physics, chemistry, English, drawing and industrial management. Non-technical subjects include psychology, economics, speech and government. Upon satisfactory completion of the prescribed courses in a program of study, a diploma granting an Associate in Engineering Degree is awarded.

GUIDANCE AND COUNSELING

The facilities of the Guidance Center are available for Technical Institute students. Staff members experienced in this type of program will be on hand before and during registration. Prospective students are encouraged to visit the campus or telephone for information regarding any of the programs offered. Part-time evening students are particularly advised to consult with the Director of the Technical Institute before attempting to register for any semester.

VETERANS

Veterans must secure approval in advance from the Veterans Administration for attendance at Technical Institute classes. This approval is apart and separate from admission to the University. All programs of study are approved by the Veterans Administration.

CREDITS

All courses in the Technical Institute are evaluated on a semester hour basis. Recitation and similar classroom work generally require outside preparation, while laboratory or practice periods are usually self-contained.

ELECTRICAL TECHNOLOGY

The program in Electrical Technology, with options in Industrial Electricity and Radio and Television, follows a common plan of study during the first year and provides specialization in the second year.

Industrial Electricity, Option A, is designed to prepare students primarily for technological services with electrical utilities, with manufacturers of electrical equipment, in electrical maintenance and instrument departments of industrial plants, and in related positions. This major field of specialization stresses the application of direct- and alternating-current theory to electrical machinery and instruments. Emphasis is placed upon courses in circuits theory, machinery, electrical measurements, electronic control, and related courses in mathematics, physics, and chemistry.

Radio and Television, Option B, is designed to prepare students primarily for technological services with equipment manufacturers and for the installation and maintenance of receivers. Emphasis is placed upon courses in circuit theory,

receiver circuits and fundamentals, electrical measurements, and related courses in mathematics, physics, and chemistry.

First Year

FIRST SEMESTER		SECOND SEMESTER	
<i>Subjects</i>	<i>Cr. Hours</i>	<i>Subjects</i>	<i>Cr. Hours</i>
Religion or Philosophy	2	Religion or Philosophy	2
DM 1 Technical Drawing	3	ET 1 Electrical Circuits	6
GS 4 Business English	1½	ET 5 Electrical Shop Practices 1	
IT 1 Industrial Org. & Prod.....	3	ET 6 Electrical Code	1½
PS 1 Industrial Math. I	3	GS 1 Effective Speaking	1½
PS 11 Physics: Mechanics	3½	GS 11 Applied Psychology	3
PS 21 Industrial Chemistry	2½	PS 2 Industrial Math. II	3

Second Year

FIRST SEMESTER

<i>Subjects</i>	<i>Cr. Hours</i>
Religion or Philosophy	2
ET 2 Electronics	4
ET 3 Electrical Measurements 4	
GS 3 Report Writing	3
GS 22 Economics of Industry	3
PS 12 Physics: Heat, Light, Sound	3½

SECOND SEMESTER

<i>Option A: Industrial Electricity</i>		<i>Option B: Radio and Television</i>	
<i>Subjects</i>	<i>Cr. Hours</i>	<i>Subjects</i>	<i>Cr. Hours</i>
Religion or Philosophy	2	Religion or Philosophy	2
ET 10 Electrical Machinery	4	ET 20 Radio Fundamentals	4
ET 11 Motor Control	4	ET 21 Television Fundamentals 4	
ET 12 Electrical Blue Prints and Diagrams	1	ET 22 Electronic Circuit Diagrams	1
GS 21 American Political Ideas and Practices	3	GS 21 American Political Ideas and Practices	3
IT 2 Elements of Supervision 3		IT 2 Elements of Supervision ..3	

INDUSTRIAL TECHNOLOGY

This major field of specialization is designed to prepare students primarily for technological services in the industrial engineering areas of production planning and control, plant layout, quality control, job evaluation, and cost control. It also covers the essentials of management with which foremen, supervisors, and administrative personnel in general are concerned.

Typical jobs are time-study man, methods planner, production control clerk, stock supervisor, cost analyst, job analyst, and personnel interviewers.

Emphasis is placed upon courses in motion and time study, job evaluation, wage incentive, production and operation planning, plant layout, industrial safety, and courses in mathematics, physics, and chemistry.

First Year

FIRST SEMESTER			SECOND SEMESTER		
<i>Subjects</i>	<i>Cr. Hours</i>		<i>Subjects</i>	<i>Cr. Hours</i>	
Religion or Philosophy	2		Religion or Philosophy	2	
DM 1 Technical Drawing	3		GS 1 Effective Speaking	1½	
GS 4 Business English	1½		GS 11 Applied Psychology	3	
IT 1 Industrial Org. & Prod. ...	3		IT 3 Industrial Materials and		
PS 1 Industrial Math. I	3		Methods of Manufacture 2½		
PS 11 Physics: Mechanics	3½		IT 8 Production Methods		
PS 21 Industrial Chemistry	2½		and Control	3	
			PS 2 Industrial Mathematics II	3	
			PS 13 Physics: Electricity	3½	

Second Year

FIRST SEMESTER			SECOND SEMESTER		
<i>Subjects</i>	<i>Cr. Hours</i>		<i>Subjects</i>	<i>Cr. Hours</i>	
Religion or Philosophy	2		Religion or Philosophy	2	
GS 2 Conference Leadership	1½		GS 21 American Political		
GS 3 Report Writing	3		Ideas and Practices	3	
GS 22 Economics of Industry ...	3		IT 2 Elements of Supervision	3	
IT 4 Motion and Time Study ...	3		IT 6 Job Evaluation	3	
IT 10 Plant Layout	2½		IT 7 Elements of Cost Control	3	
PS 12 Physics: Electricity	3½		IT 9 Industrial Safety	1½	
			IT 13 Quality Control	1½	

MECHANICAL TECHNOLOGY

Mechanical Technology has been developed with two options, Product Design, Option A, and Tool Design, Option B. The first year is common to both options and the student need not select his option until the start of his second year.

Emphasis is placed upon courses in drafting and design, industrial materials and methods of manufacture and related courses in mathematics, physics, and chemistry.

Product Design, Option A, is designed to prepare students primarily for technological services in drafting and design departments, mechanical maintenance divisions, testing and inspection laboratories, and related industrial production units. This field of specialization stresses the fundamentals of mechanics and mechanisms as applied to industrial problems.

Tool Design, Option B, is designed to prepare students primarily for technological services in tool engineering involving the selection of methods, tools, and machines for economical production.

First Year

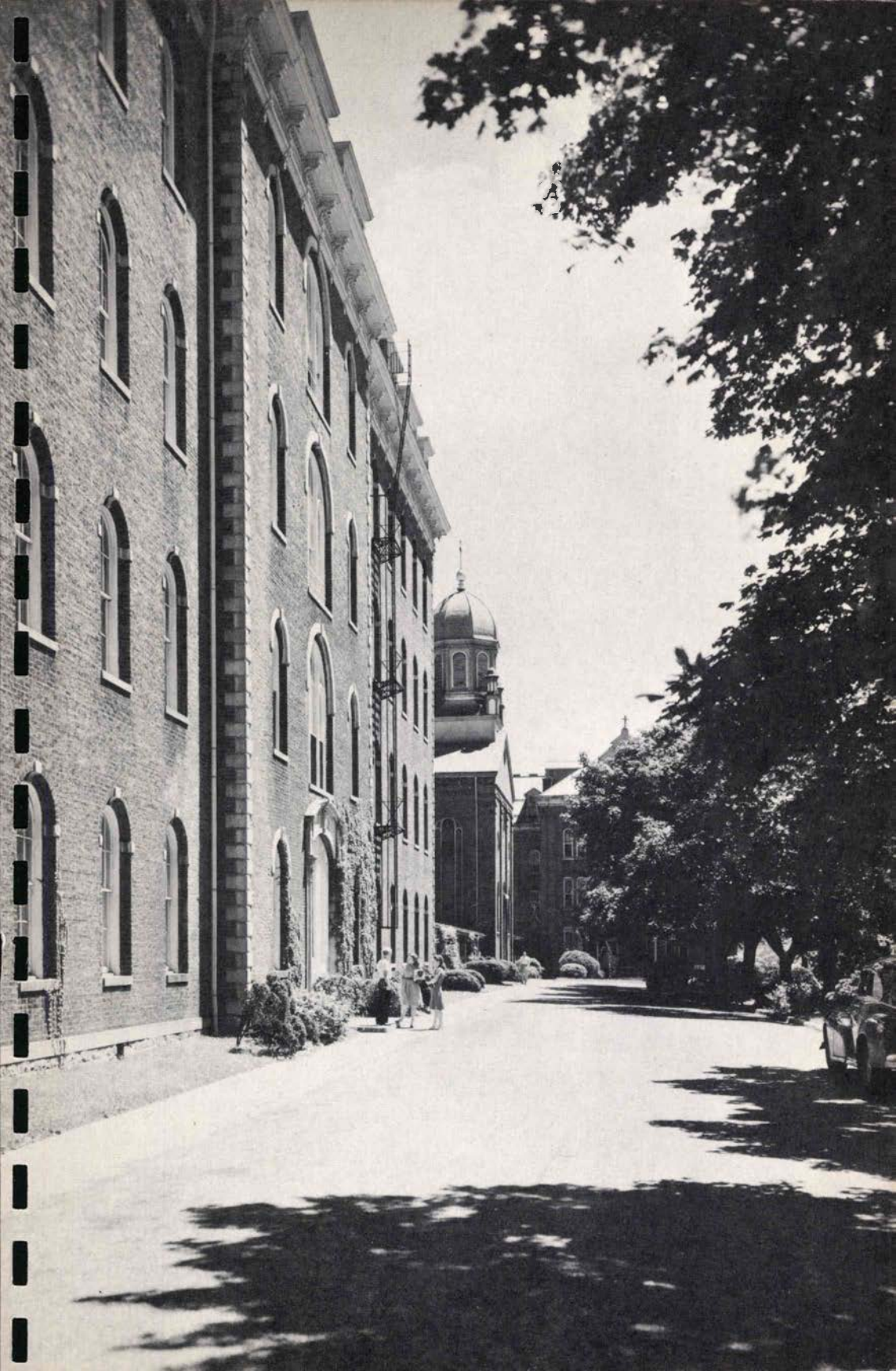
FIRST SEMESTER			SECOND SEMESTER		
<i>Subjects</i>	<i>Cr. Hours</i>		<i>Subjects</i>	<i>Cr. Hours</i>	
Religion or Philosophy	2		Religion or Philosophy	2	
DM 1 Technical Drawing	3		DM 2 Graphical Computations	3	
GS 4 Business English	1½		GS 1 Effective Speaking	1½	
IT 1 Industrial Org. & Prod. ...	3		GS 11 Applied Psychology	3	
PS 1 Industrial Math. I	3		IT 3 Industrial Materials and		
PS 11 Physics: Mechanics	3½		Methods of Manufacture 2½		
PS 21 Industrial Chemistry	2½		PS 2 Industrial Math. II	3	
			PS 13 Physics: Electricity	3½	

Second Year
Option A: Product Design

FIRST SEMESTER		SECOND SEMESTER	
<i>Subjects</i>	<i>Cr. Hours</i>	<i>Subjects</i>	<i>Cr. Hours</i>
Religion or Philosophy	2	Religion or Philosophy	2
DM 3 Machine Drawing	2½	DM 10 Machine Shop Practices ..	3
DM 20 Mechanics: Statics and Dynamics	3	DM 21 Strength of Materials	3
GS 3 Report Writing	3	DM 22 Machine Design	2½
GS 22 Economics of Industry	3	DM 23 Mechanism	3
PS 12 Physics: Heat, Light, and Sound	3½	GS 21 American Political Ideas and Practices	3
		IT 2 Elements of Supervision	3

Option B: Tool Design

FIRST SEMESTER		SECOND SEMESTER	
<i>Subjects</i>	<i>Cr. Hours</i>	<i>Subjects</i>	<i>Cr. Hours</i>
Religion or Philosophy	2	Religion or Philosophy	2
DM 4 Tool Drawing	2½	DM 6 Jig and Fixture Design, or	
DM 5 Die Design	3	DM 7 Gage Design	2½
GS 3 Report Writing	3	DM 10 Machine Shop Practices ..	3
GS 22 Economics of Industry	3	GS 21 American Political Ideas and Practices	3
IT 11 Operation Planning	1½	IT 2 Elements of Supervision ..	3
PS 12 Physics: Heat, Light, and Sound	3½	IT 7 Elements of Cost Control	3
		IT 12 Production Procedures ..	1½



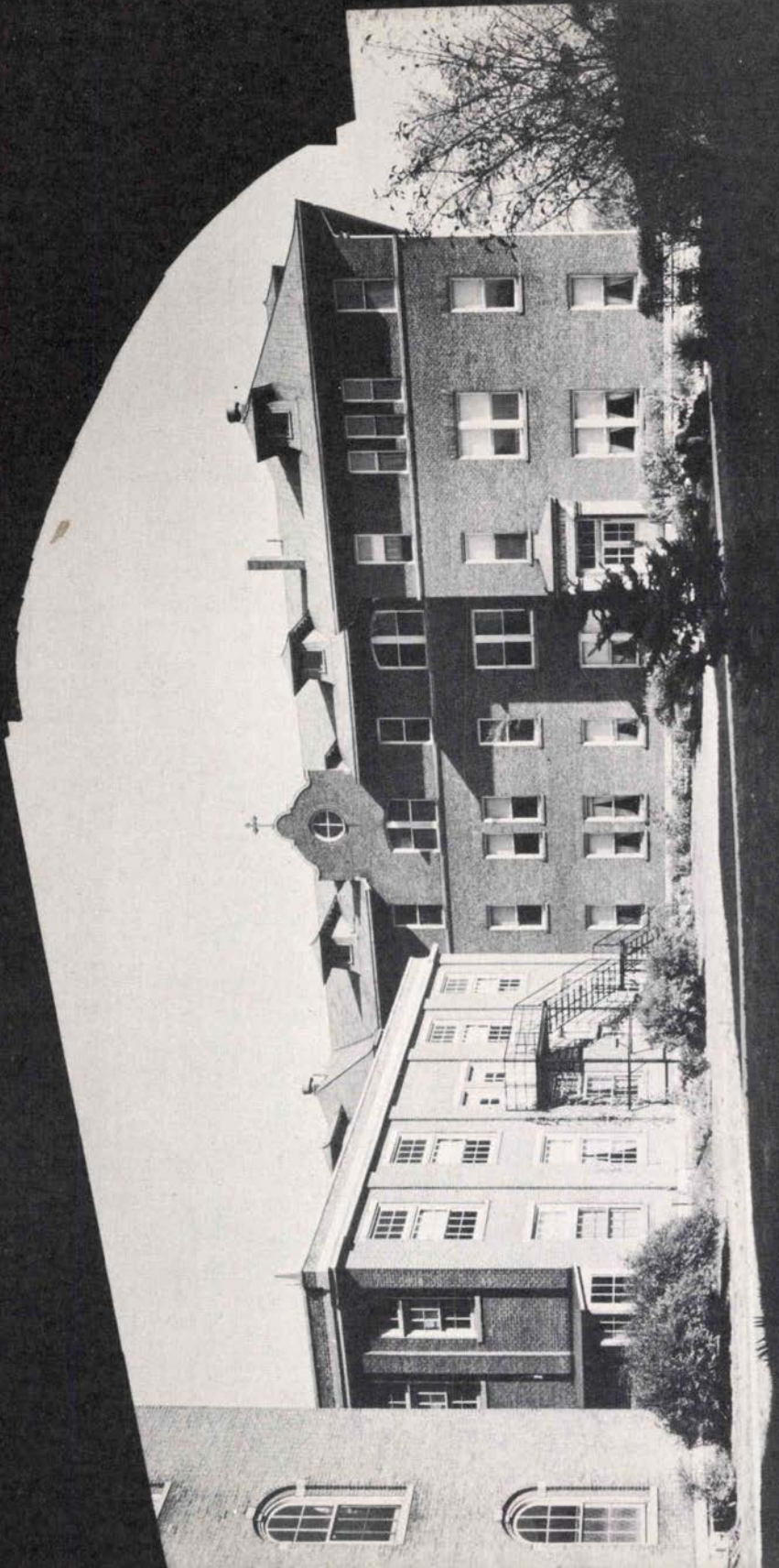


















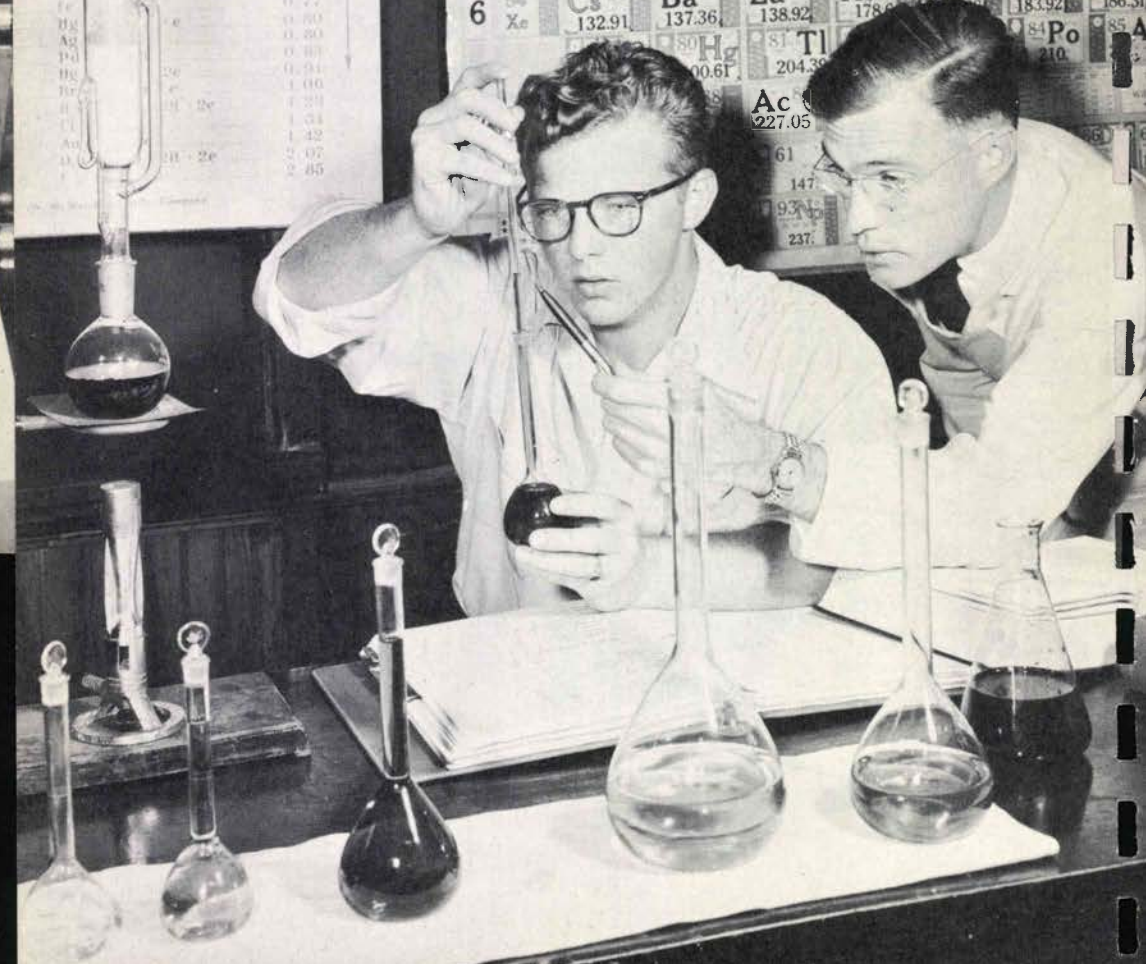
PROMOTII SERIES TABLE
 in Oxidation Potentials by W. M. Latimer
 (All in volts)

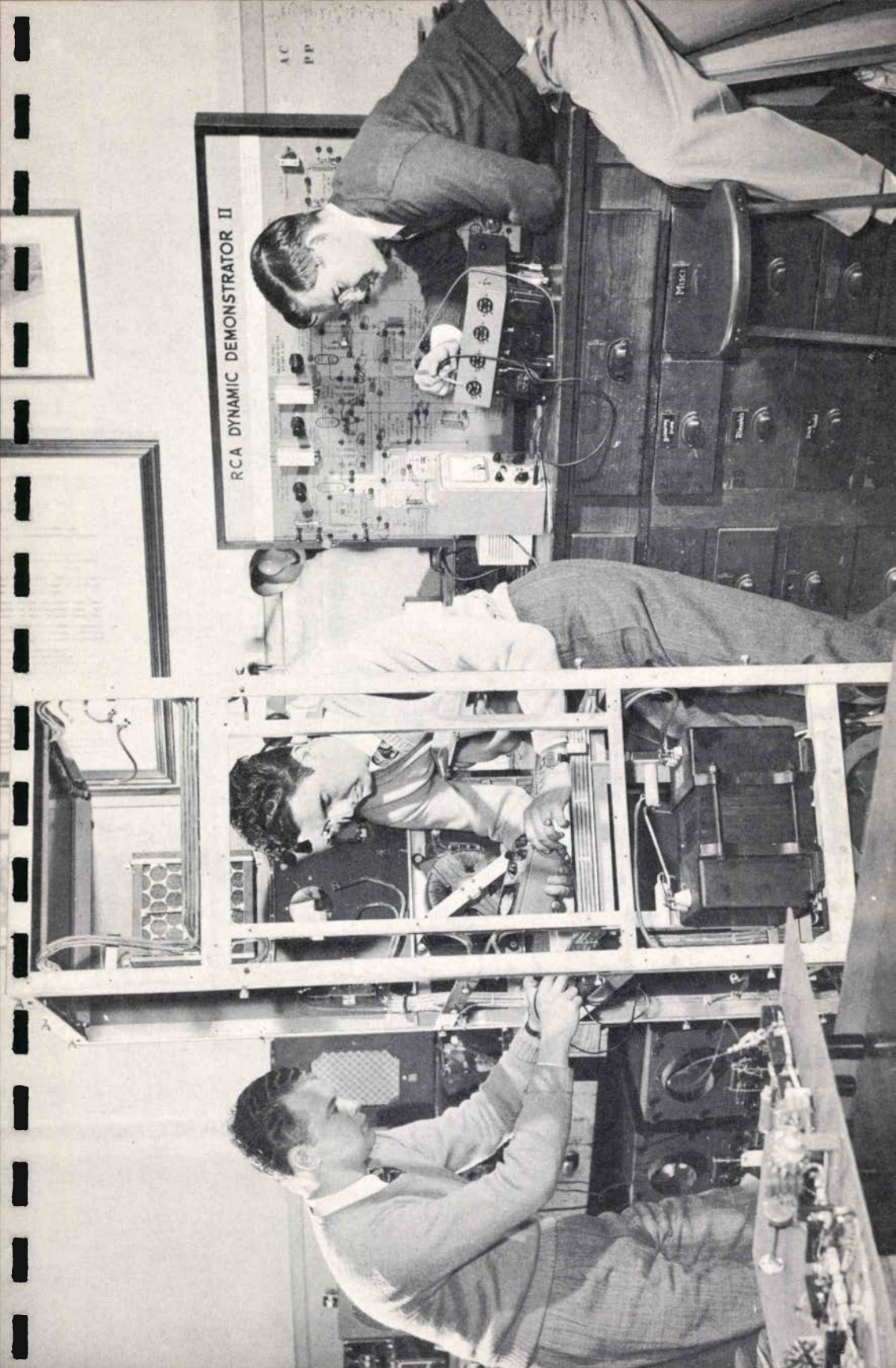
Half-Cell Reaction	Potential (V)
$\text{H}^+ + \text{e}^- \rightarrow \text{H}_2$	0.00
$\text{Fe}^{3+} + \text{e}^- \rightarrow \text{Fe}^{2+}$	0.77
$\text{Ce}^{4+} + \text{e}^- \rightarrow \text{Ce}^{3+}$	1.61
$\text{MnO}_4^- + 8\text{H}^+ + 5\text{e}^- \rightarrow \text{Mn}^{2+} + 4\text{H}_2\text{O}$	1.51
$\text{Cr}_2\text{O}_7^{2-} + 14\text{H}^+ + 6\text{e}^- \rightarrow 2\text{Cr}^{3+} + 7\text{H}_2\text{O}$	1.33
$\text{Br}_2 + 2\text{e}^- \rightarrow 2\text{Br}^-$	1.07
$\text{I}_2 + 2\text{e}^- \rightarrow 2\text{I}^-$	0.54
$\text{O}_2 + 4\text{H}^+ + 4\text{e}^- \rightarrow 2\text{H}_2\text{O}$	1.23
$\text{O}_2 + 2\text{H}_2\text{O} + 4\text{e}^- \rightarrow 4\text{OH}^-$	0.40
$\text{H}_2\text{O}_2 + 2\text{H}^+ + 2\text{e}^- \rightarrow 2\text{H}_2\text{O}$	1.78
$\text{H}_2\text{O}_2 + \text{e}^- \rightarrow \text{HO}_2^- + \text{H}^+$	0.88
$\text{Cl}_2 + 2\text{e}^- \rightarrow 2\text{Cl}^-$	1.36
$\text{Au}^{3+} + 3\text{e}^- \rightarrow \text{Au}$	1.42
$\text{Ag}^+ + \text{e}^- \rightarrow \text{Ag}$	0.80
$\text{Pd}^{2+} + 2\text{e}^- \rightarrow \text{Pd}$	0.91
$\text{Hg}^{2+} + 2\text{e}^- \rightarrow \text{Hg}$	0.85
$\text{Pt}^{2+} + 2\text{e}^- \rightarrow \text{Pt}$	1.18
$\text{Fe}^{2+} + 2\text{e}^- \rightarrow \text{Fe}$	0.44
$\text{Zn}^{2+} + 2\text{e}^- \rightarrow \text{Zn}$	0.76
$\text{Ni}^{2+} + 2\text{e}^- \rightarrow \text{Ni}$	0.25
$\text{Co}^{2+} + 2\text{e}^- \rightarrow \text{Co}$	0.28
$\text{Mn}^{2+} + 2\text{e}^- \rightarrow \text{Mn}$	1.18
$\text{Al}^{3+} + 3\text{e}^- \rightarrow \text{Al}$	1.66
$\text{Mg}^{2+} + 2\text{e}^- \rightarrow \text{Mg}$	2.37
$\text{Na}^+ + \text{e}^- \rightarrow \text{Na}$	2.71
$\text{K}^+ + \text{e}^- \rightarrow \text{K}$	2.93
$\text{Li}^+ + \text{e}^- \rightarrow \text{Li}$	3.04

Increasing Strength of Oxidizing Agents

PERIODIC CHART OF THE ELEMENTS
 Revised Edition 1942
 The Atoms Grouped According to the Number of Outer (Valence) Electrons

Atomic No.	Symbol	Name	Atomic Weight
1	H	Hydrogen	1.0080
2	He	Helium	4.0026
3	Li	Lithium	6.941
4	Be	Beryllium	9.0122
5	B	Boron	10.811
6	C	Carbon	12.011
7	N	Nitrogen	14.0067
8	O	Oxygen	16.0000
9	F	Fluorine	18.9984
10	Ne	Neon	20.1797
11	Na	Sodium	22.98977
12	Mg	Magnesium	24.304
13	Al	Aluminum	26.981538
14	Si	Silicon	28.0855
15	P	Phosphorus	30.973762
16	S	Sulfur	32.06
17	Cl	Chlorine	35.453
18	Ar	Argon	39.948
19	K	Potassium	39.0983
20	Ca	Calcium	40.078
21	Sc	Scandium	44.955912
22	Ti	Titanium	47.88
23	V	Vanadium	50.9415
24	Cr	Chromium	51.9961
25	Mn	Manganese	54.938045
26	Fe	Iron	55.845
27	Co	Cobalt	58.933195
28	Ni	Nickel	58.6934
29	Cu	Copper	63.546
30	Zn	Zinc	65.38
31	Ga	Gallium	69.723
32	Ge	Germanium	72.64
33	As	Arsenic	74.9216
34	Se	Selenium	78.96
35	Br	Bromine	79.904
36	Kr	Krypton	83.80
37	Rb	Rubidium	85.468
38	Sr	Strontium	87.62
39	Y	Yttrium	88.90585
40	Zr	Zirconium	91.224
41	Nb	Niobium	92.90638
42	Mo	Molybdenum	95.94
43	Tc	Technetium	98.9062
44	Ru	Ruthenium	101.07
45	Rh	Rhodium	102.9055
46	Pd	Palladium	106.42
47	Ag	Silver	107.8682
48	Cd	Cadmium	112.411
49	In	Indium	114.718
50	Sn	Stannum	118.710
51	Sb	Antimony	121.757
52	Te	Tellurium	127.60
53	I	Iodine	126.9054
54	Xe	Xenon	131.29
55	Cs	Cesium	132.90545
56	Ba	Barium	137.327
57	La	Lanthanum	138.90547
58	Ce	Cerium	140.12
59	Pr	Praseodymium	140.90766
60	Nd	Neodymium	144.242
61	Pm	Promethium	144.91288
62	Sm	Samarium	150.36
63	Eu	Europium	151.964
64	Gd	Gadolinium	157.25
65	Tb	Terbium	158.92535
66	Dy	Dysprosium	162.50
67	Ho	Holmium	164.93033
68	Er	Erbium	167.259
69	Tm	Thulium	168.93032
70	Yb	Ytterbium	173.054
71	Lu	Lutetium	174.967
72	Hf	Hafnium	178.49
73	Ta	Tantalum	180.94788
74	W	Tungsten	183.84
75	Re	Rhenium	186.207
76	Os	Osmium	190.23
77	Ir	Iridium	192.222
78	Pt	Platinum	195.084
79	Au	Gold	196.96657
80	Hg	Mercury	200.59
81	Tl	Thallium	204.3833
82	Pb	Lead	207.2
83	Bi	Bismuth	208.9804
84	Po	Polonium	209
85	At	Astatine	210
86	Rn	Radon	222
87	Fr	Francium	223
88	Ra	Radium	226
89	Ac	Actinium	227.0278
90	Th	Thorium	232.0377
91	Pa	Protactinium	231.03688
92	U	Uranium	238.02891
93	Np	Neptunium	237.04817
94	Pu	Plutonium	244.06422
95	Am	Americium	243.06138
96	Cm	Curium	247.07035
97	Bk	Berkelium	247.07035
98	Cf	Californium	251.0832
99	Es	Einsteinium	252.0832
100	Fm	Fermium	257.103
101	Mendelevium	258.103	
102	Nobelium	259.103	
103	Lr	Lutetium	262.103

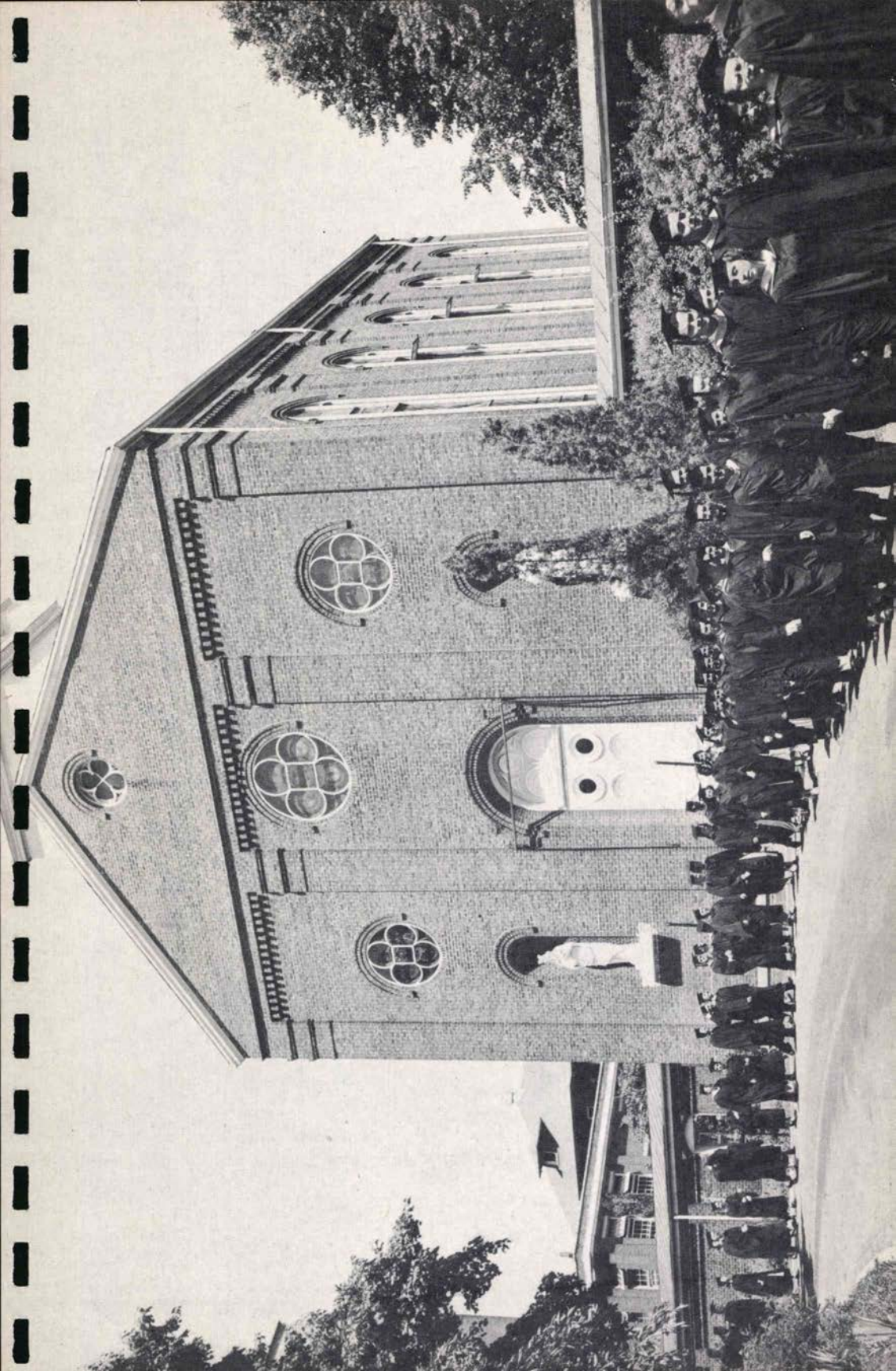


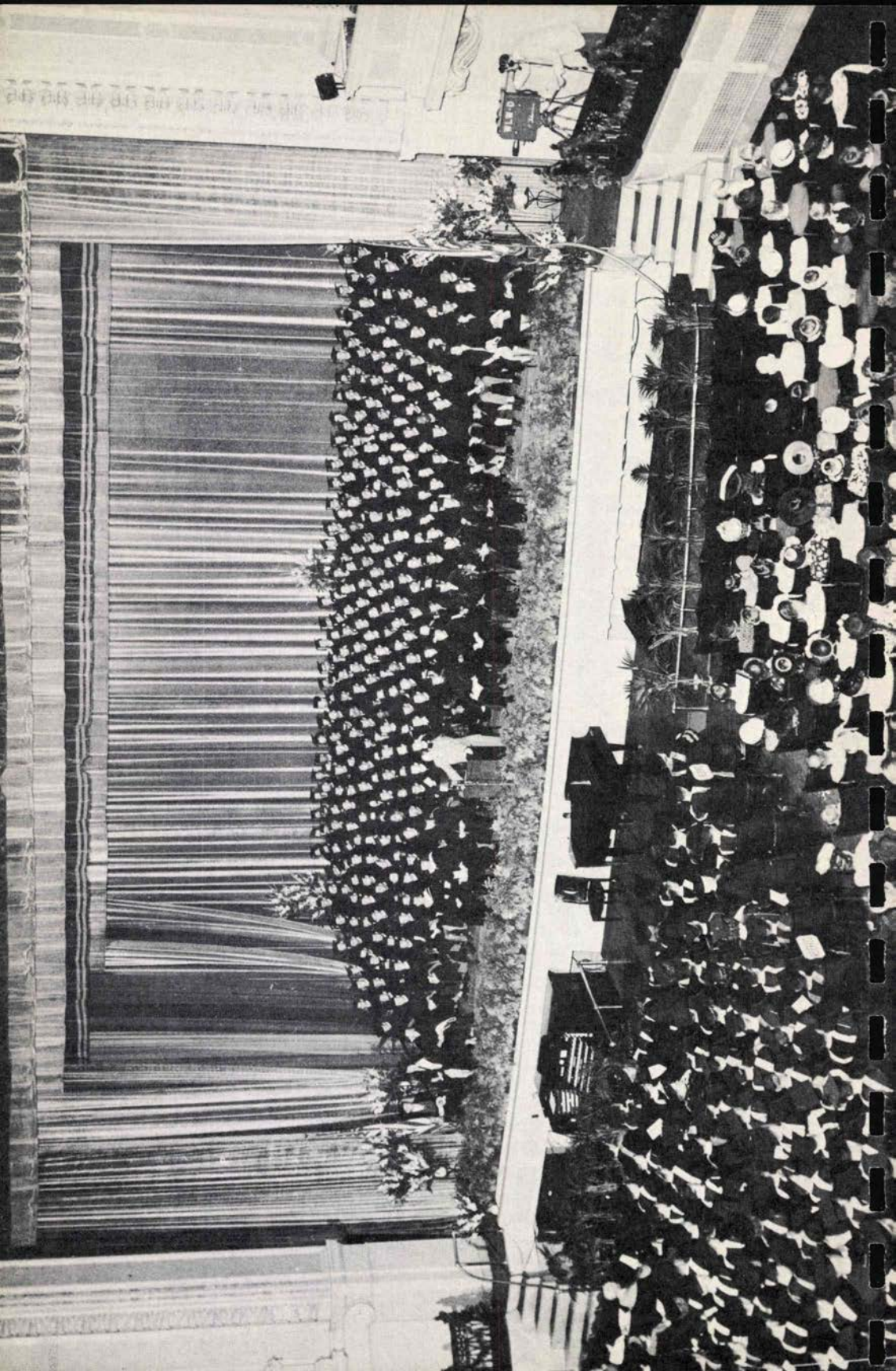


RCA DYNAMIC DEMONSTRATOR II

AC
PP







Courses of Instruction

ACCOUNTING (Acct.)

MR. D. B. SPRINGER, ACTING HEAD

MR. CHANG, MR. UPDYKE

ACCT. 101-102. ELEMENTARY ACCOUNTING SIX CREDIT HOURS

The purpose of the course is to acquaint the student with the primary function of accounting and to introduce him to the entire cycle of bookkeeping procedure. Under supervision the student is required to demonstrate his ability to work out several practice sets. This is a prerequisite to all other courses in Accounting. Two class periods and two laboratory periods a week.

Both 101 and 102 Each Semester, Each Year

ACCT. 201-202. INTERMEDIATE ACCOUNTING SIX CREDIT HOURS

The accounting work of the sophomore year is a logical continuation and development of the theory and practice introduced in the freshman year. The course includes in part: accounting for corporations; voucher systems; general principles of valuation; depreciation; surplus reserves; and liquidation of corporations. Two class periods and two laboratory periods a week.

Full Year Course, Each Year

ACCT. 203. SURVEY OF ACCOUNTING THREE CREDIT HOURS

A consideration of the basic principles of accounting, including debits and credits, the balance sheet, the statement of profit and loss, the statement of surplus and elements of cost accounting from an interpretative viewpoint. Three class periods a week.

Each Semester, Each Year

ACCT. 301-302. ADVANCED ACCOUNTING SIX CREDIT HOURS

Additional training in the preparation, analysis, and interpretation of statements; accounting procedure in connection with special types of business and with corporate reorganizations and dissolutions including the accounts and reports of receivers and trustees. Three class periods a week.

Full Year Course, Each Year

ACCT. 303-304. COST ACCOUNTING SIX CREDIT HOURS

Theory and practice of industrial cost accounting as a means of control of business enterprises applicable to job order, process, and standard cost systems. Three class periods a week.

Full Year Course, Each Year

ACCT. 310. COST ACCOUNTING ANALYSIS THREE CREDIT HOURS

Elements of cost accounting; methods of analyzing and interpreting cost data for management's use. Cost accounting and cost data are emphasized as an aid to management and not a mechanical substitute for management. Three class periods a week.

First Semester, Each Year

ACCT. 401-402. AUDITING SIX CREDIT HOURS

A review of accounting with particular attention given to the theory and prac-

tice of auditing as applied to cash, receivables, inventories, etc. Practice in the auditing of special business types, and the preparation of auditor's reports. Three class periods a week. *Full Year Course, Each Year*

ACCT. 403. FEDERAL INCOME TAX ACCOUNTING THREE CREDIT HOURS
An interpretation of the current Revenue Act, including income, estates and trust, gift and excise taxes. The preparation of the individual, partnership and corporation income tax returns. Three class periods a week.
First Semester, Each Year

ACCT. 404. C. P. A. PROBLEMS THREE CREDIT HOURS
The application of the principles of accounting to specific problems as set forth in the examination of the Ohio State Board of Accountancy. Three class periods a week.
Second Semester, Each Year

ACCT. 406. PAY ROLL ACCOUNTING THREE CREDIT HOURS
An interpretation of the Federal Social Security Act and the Unemployment Insurance Acts of the various states (particularly Ohio). A study of the accounting procedure pertaining thereto. Three class periods a week.
Each Semester, Each Year

ART (Art)

MR. BURROUGHS, FR. PREISINGER

ART 101. DRAWING TWO CREDIT HOURS
A study of the elements of drawing, including perspective, drawing from still life, light and shade and sketching. Two class periods a week.
First Semester, Each Year

ART 103. INTRODUCTORY PAINTING I TWO CREDIT HOURS
Painting in oil and water color from still life, landscape and floral subjects. Emphasis is placed on composition and application of art theories.
First Semester, Each Year

ART 104. INTRODUCTORY PAINTING II TWO CREDIT HOURS
A further study of painting problems with reference to technique and methods of procedure in building a painting. Prerequisite: Art. 103 or its equivalent.
First Semester, Each Year

ART. 107. CULTURAL HISTORY OF EUROPE TO 1830 THREE CREDIT HOURS
A brief review of pre-historic and Oriental art to prepare the ground for a study of modern art. Then a more intensive survey of the basic arts of architecture, painting, sculpture and music through the various movements in Europe and America: the Greek and Roman; the Byzantine and Saracenic; the Romanesque and Gothic; the Renaissance; the Baroque, the Rococo and the

Neo-Classic. Accredited in History. *First Semester, Each Year*

ART 108. CULTURAL HISTORY OF EUROPE SINCE 1830 THREE CREDIT HOURS
After a brief survey of the basic principles underlying all the arts, and their application to daily life, an intensive study of the Romantic, Realistic and Impressionistic movements, together with a study of the various Modern movements since 1900. Accredited in History. *Second Semester, Each Year*

ART 201. PRINCIPLES OF DESIGN I TWO CREDIT HOURS
A study of the underlying elements and principles of design as they are applied to surface pattern. Color theories and their use in creative design are a part of this course. *Second Semester, Each Year*

ART 202. PRINCIPLES OF DESIGN II TWO CREDIT HOURS
Advanced studies in creative design and their application to modern materials and to industry. Prerequisite: Art 201 or its equivalent. *Second Semester, Each Year*

ART 203. GENERAL CRAFTS TWO CREDIT HOURS
The application of original designs to such materials as paper, textiles, ceramics and plastics through weaving, silk screen printing and modeling. A study of handwork as an integral part of an activity in the schools. *To be announced*

ART 221. PRACTICAL ARTS IN THE KINDERGARTEN AND PRIMARY GRADES TWO CREDIT HOURS
Creative expression in the use of such materials as papers, textiles, ceramics, and plastics. A study of handwork as an integral part of activities in the schools. Accredited in Education. *Second Semester, Each Year*

ART 222. PRACTICAL ARTS IN THE INTERMEDIATE GRADES TWO CREDIT HOURS
Same as Art 221, adjusted to the maturity of children in the intermediate grades. Accredited in Education. *Second Semester, Each Year*

ART 406. THE GREAT MASTERS TWO CREDIT HOURS
This study, by contrast, tries to combine the historical and the aesthetic approaches through comparison of the various ways in which certain similar themes have been approached by the masters of different epochs. The intent is to present the common visual experience of various periods and areas in art, tracing the shifts in visual patterns from generation to generation of the most important of the artists, stating what is constant in Western art and what is changing. *To be announced*

ART 407. ART IN THE ELEMENTARY SCHOOL TWO CREDIT HOURS
Present methods of teaching art in the elementary school; experience in art expression and the use of art elements and principles as the basis for creative-approach; organization of units of work, including drawing, painting, design, color, modeling, block printing, lettering, and the mural, as they relate to the integrated school program. Accredited in Education. *Second Semester, Each Year*

BIOLOGY (Bio.)

BRO. JOLY, HEAD

BRO. BECK, MR. BROWNE, MR. FASO, MISS HECKMAN, DR. WILLIAMS
MR. WIECHMAN

- BIO. 101-102. GENERAL BIOLOGY EIGHT CREDIT HOURS
A study of the more important plant and animal forms, designed to fit the facts and theories of biology into the broader picture of human life and human affairs. Three class periods and one laboratory period a week.
Full Year Course, Each Year
- BIO. 103. GENERAL ZOOLOGY FOUR CREDIT HOURS
Lectures on structure, physiology, and life histories of invertebrates and vertebrates. Three class periods and one laboratory period a week.
First Semester, Each Year
- BIO. 105-106. GENERAL ZOOLOGY EIGHT CREDIT HOURS
A course insisting on general principles. Lectures are given on the classification, structure, physiology, development, and life histories of the invertebrates and vertebrates. Two class periods and two laboratory periods a week.
Full Year Course, Each Year
- BIO. 113. INTRODUCTION TO BIOLOGY FOUR CREDIT HOURS
A general survey course dealing with protoplasm, cell and its development, morphology, physiology of plants and animals, enabling the student to become acquainted with the organic world.
To be announced
- BIO. 201-202. COMPARATIVE ANATOMY EIGHT CREDIT HOURS
A study of the similarities and the differences in the anatomy of the different organ systems of the various vertebrate groups. Embryology, histology, and morphology play an important role in this comparative study. Physiology is introduced where it is deemed advisable. Three class periods and one laboratory period a week.
Full Year Course, Each Year
- BIO. 203-204. HUMAN ANATOMY FOUR CREDIT HOURS
Lectures and demonstrations on the bones, muscles, vessels, and nerves of the human body. This course is primarily for students in Physical Education. Two class periods a week.
Full Year Course, Each Year
- BIO. 213. COMPARATIVE ANATOMY FOUR CREDIT HOURS
A short course patterned after Bio. 201-202. *First Semester, 1954-1955—Evening*
- BIO. 303. PHYSIOLOGY THREE CREDIT HOURS
A course showing that the human body is a living mechanism. Sufficient anatomy and histology are introduced to give at least an elementary knowledge of the structures of the organs and the organ systems. Three class periods a week.
Each Semester, Each Year

- BIO. 304. HISTOLOGY TWO CREDIT HOURS
 Fundamentals of cell structure, tissue organization and the microscopic anatomy of organs of the vertebrate animal, with special stress on the mammals. Kodachromes will take the place of microscopic laboratory work.
To be announced
- BIO. 305-306. MICROTECHNIQUE EIGHT CREDIT HOURS
 This course is essentially for medical technology and biology majors. It includes fixing, washing, dehydrating, clearing, infiltrating, imbedding, sectioning, affixing of normal tissues. It also aims at recognition of the fundamental tissues and gives the histological picture of all the organs and organ systems of the vertebrate body. Two class periods and two laboratory periods a week.
Full Year Course, Each Year
- BIO. 311. GENERAL GENETICS THREE CREDIT HOURS
 A study of the principles of variation and heredity in plants and animals, with stress on the inheritance of human characteristics. Three lecture periods a week.
First Semester, Each Year
- BIO. 314. GENERAL BOTANY FOUR CREDIT HOURS
 An introductory course stressing classification, morphology, physiology, reproduction, ecology, and distribution of plants. Typical specimens are studied microscopically and macroscopically. Three class periods and one laboratory period a week.
Second Semester, Each Year
First Semester, Each Year—Evening
- BIO. 315. SYSTEMATIC BOTANY THREE CREDIT HOURS
 Illustrative plant types are discussed, assigned forms are studied, and assigned readings are required, so that the student will have a grasp of the fundamental principles of phylogenetic taxonomy. The use of herbaria, indexes, and keys will be taught. The families of the spermatophyta are given special attention. Field trips necessary. Three lectures a week.
To be announced
- BIO. 350. PREVENTIVE MEDICINE TWO CREDIT HOURS
 The development of the science of public health, and the prevention of disease from the standpoint of the individual and the community.
First Semester, 1954-1955—Evening
- BIO. 351. EPIDEMIOLOGY TWO CREDIT HOURS
 The occurrence of the more common communicable diseases, their methods of transmission, and the control of reservoirs between periods of activity.
Second Semester, 1954-1955—Evening
- BIO. 403-404. EMBRYOLOGY SIX CREDIT HOURS
 The course gives the student a clear understanding of the early stages of development of the invertebrates and the vertebrates. It pays special attention to the study of the development of the chick and of the pig. Two class periods and one laboratory period a week.
Full Year Course, Each Year

BIO. 405-406. BIOPHYSICS

FOUR CREDIT HOURS

The course applies physical and chemical principles to the following biological problems: stress and strain in biologic systems, surface tension, osmosis, membranes, colloids, cells, dynamics of cell division and growth, bio-hydraulics, heat production, calorimetry, sound production and reception, electric phenomena in cells and tissues, diatherms, artificial fevers, effects of radiant energy on biological materials, spectrographic methods of investigation, treatment of tumors with X-rays, and the production of vitamins. Two class periods a week.

Full Year Course, Each Year

BIO. 407. EMBRYOLOGY

FIVE CREDIT HOURS

The course gives the student a clear understanding of the early stages of development of the invertebrates and the vertebrates. It pays special attention to the study of the development of the chick and of the pig. Three class periods and two two-hour laboratory periods a week.

To be announced—Evening

BIO. 413. GENERAL BACTERIOLOGY

FOUR CREDIT HOURS

A brief course covering the physiology, classification, and cultivation of bacteria. Their relation to medicine and agriculture is stressed. Isolation and microscopic observations of pathogenic germs; theories of immunity and immunization; training in clinical serological methods. Two class periods and two laboratory periods a week.

Each Semester, Each Year

BIO. 415. PATHOGENIC BACTERIOLOGY

FOUR CREDIT HOURS

A brief survey of pathogenic organisms, including their classification, cultural characteristics, biochemical and physiological reactions. Isolation and identification of unknowns; demonstration of and limited training in clinical serological methods as related to pathogens included in course. Two class periods and one laboratory period a week.

To be announced

BIO. 420. SEMINAR

ONE CREDIT HOUR

Practice in development, presentation, and discussion of papers dealing with biological problems.

To be announced

BUSINESS ORGANIZATION (Bus.)

MR. O'LEARY, HEAD

MR. CHANG, MR. COMER, MR. HODGETTS, MR. MURPHY

MR. SNYDER, MR. WHALEN

Concentration Recommendations

MAJOR: Minimum of thirty hours of upper division courses are required of students majoring in business organization. These courses should include 301, 303, 305, 313, 316, 317, 404, 405, 425. A minimum of two additional closely related courses is also required. These courses are to be selected in consultation

with the Department Head. A related minor is to be selected in the fields of economics, philosophy, political science, psychology or sociology.

Accounting 101-102 and Economics 201-202 are prerequisite to all advanced courses except by permission of the instructor.

Students preparing for teaching positions in secondary schools should consult their adviser in the selection of required courses.

BUS. 101. INTRODUCTION TO BUSINESS **THREE CREDIT HOURS**

A survey of the fields of business and their inter-relationships. The uses and functions of production and distributive systems, capital, labor, finance, accounting, statistics, marketing, etc., are studied. The objectives are to emphasize business concepts and to prepare the students for specialized courses. Three class periods a week. *Each Semester, Each Year*

BUS. 102. INDUSTRIAL RESOURCES AND PRODUCTS **THREE CREDIT HOURS**

A survey of major industries, their raw materials, processing, distribution, and marketing factors. Three class periods a week. *Each Semester, Each Year*

BUS. 103. MATHEMATICS OF FINANCE I **THREE CREDIT HOURS**

This course covers the fundamentals of second year of high school algebra and continues into topics of college algebra. Logarithms, ratio and proportion, with application to problems in business and finance, are stressed. Three class periods a week. *Each Semester, Each Year*

BUS. 201. BUSINESS MACHINES **THREE CREDIT HOURS**

Proposes to give students the opportunity to become acquainted with and to use correctly the machines commonly found in offices today. Such machines include the two principal types of adding machines, two principal types of calculators, and a variety of accounting mechanisms. Recommended prerequisite: Acct. 101. Three class periods a week. Laboratory fee, \$5.00. *Each Semester, Each Year*

BUS. 203. MATHEMATICS OF FINANCE II **THREE CREDIT HOURS**

A study of the essential mathematical problems helpful to business men; interest, logarithms, ordinary annuities, time payment plans, amortization and sinking funds, valuation of bonds, and mathematics of life insurance. Three class periods a week. *Each Semester, Each Year*

BUS. 301. CORPORATION FINANCE **THREE CREDIT HOURS**

Principles of financial organization and management. A study of business organizations, corporate securities, financial structures; financing of new and established corporations; management of corporate funds; corporate expansion; mergers, failures and reorganizations; security exchanges, financial markets and government regulation of financial institutions and practices. Three class periods a week. *Each Semester, Each Year*

BUS. 303. BUSINESS LAW CONTRACTS **THREE CREDIT HOURS**

The basic course in business law treating the nature and the classification of law, the courts and court procedure, and considering in some detail the law of con-

tracts, sales, agency, and personal property. Three class periods a week.

Each Semester, Each Year

BUS. 304. BUSINESS LAW REAL PROPERTY AND NEGOTIABLE INSTRUMENTS
THREE CREDIT HOURS

A consideration of the law of real property, real estate mortgages, landlord and tenant, mechanics' lien, deed and conveyances and the law of negotiable instruments. Three class periods a week.

Second Semester, Each Year

BUS. 305. PRINCIPLES OF MARKETING THREE CREDIT HOURS

The general principles and practices underlying the processes of marketing. An analysis of the problems of the manufacturer, wholesaler, retailer and other marketing agencies. Principles, trends, methods and policies with relation to marketing efficiency. Three class periods a week.

Each Semester, Each Year

BUS. 306. ADVANCED MARKETING TWO-THREE CREDIT HOURS

The marketing policies of manufacturers and wholesalers; the technique of marketing research; and analysis of current problems and literature relating to marketing efficiency. Three class periods a week.

Each Semester, Each Year

BUS. 307. ADVERTISING THREE CREDIT HOURS

Nature and functions of advertising; the preparation of layouts, the writing of copy; selection and evaluation of media. The coordination of advertising with other marketing efforts. Social implications of advertising are discussed. Three class periods a week.

Each Semester, Each Year

BUS. 308. ADVERTISING PROBLEMS THREE CREDIT HOURS

An intensive study of special problems in advertising. Emphasis is placed on such topics as preparation of copy, methods of printing and engraving, layout of advertisements, effectiveness of position, use of media, current trends of advertising. Three class periods a week.

Second Semester, Each Year

BUS. 309. RETAIL MERCHANDISING THREE CREDIT HOURS

Surveys basic merchandising principles and problems of large and small retail stores. Includes organizations, location, buying and selling, cost reductions, current practices and trends.

Each Semester, Each Year

BUS. 310. SALESMANSHIP THREE CREDIT HOURS

A study of the basic principles underlying all selling and their practical application to specific cases. Topics include: types of selling jobs; fundamentals of selling, sales personality, buying motives, methods and sources of acquiring product knowledge; planning the sale; selling techniques, securing prospects, the approach, arousing interest, overcoming objections, closing the sale.

Each Semester, Each Year

BUS. 311. SALES MANAGEMENT THREE CREDIT HOURS

The structure of the sales organization, determination of sales policies, the selection, training, and motivation of salesmen, the establishing of sales territories and quotas. Specific problems are used to illustrate and apply principles.

Second Semester, Each Year

BUS. 331-332. OFFICE MANAGEMENT AND OFFICE METHODS AND IMPROVEMENT **SIX CREDIT HOURS**

The organization and management of an office and the functions of those in supervisory work. Planning, organizing and control of office work and personnel; problems of office standards, business forms and designs; analysis of office methods and procedures in relation to purchase, production and distribution. Three class periods a week.

Full Year Course, Each Year

BUS. 401. INVESTMENTS **THREE CREDIT HOURS**

A study of the basic features and principles underlying sound investments. The discussions include an analysis and evaluation of government, municipal, railroad, public utility, industrial, financial, and real estate securities. Problems and trends are emphasized. This course is a continuation of Bus. 301 but may be elected by qualified students with consent of the instructor. Three class periods a week.

Second Semester, Each Year

BUS. 402. CREDITS AND COLLECTIONS **TWO-THREE CREDIT HOURS**

Nature and functions of credit. Principles and practices in retail and mercantile credit administration. Sources and analysis of credit information. Two or three class periods a week.

Second Semester, Each Year

BUS. 403. LAW OF BUSINESS ORGANIZATION AND SECURITY RELATIONS **THREE CREDIT HOURS**

A treatment of the characteristics of partnerships and corporations and of the law of chattel mortgages, conditional sales, suretyship and insurance. Three class periods a week.

Second Semester, Each Year

BUS. 404. BUSINESS CYCLES **THREE CREDIT HOURS**

Characteristics and economic consequences of business cycles. Analysis of causes and theories of business cycles. Examination of the proposals for eliminating or for controlling the business cycle. Some attention is given to the barometers and measurements of business cycles. Three class periods a week.

First Semester, Each Year

BUS. 405. MONEY, CREDIT AND BANKING **THREE CREDIT HOURS**

A survey of concepts, principles and practices in the field of money, credit and banking. Considerations of monetary systems, foreign exchange, credit instruments and the principal types of modern financial institutions. Special attention to the commercial bank and its relation to the federal reserve system. Emphasis upon the social and management viewpoint. Three class periods a week.

Each Semester, Each Year

BUS. 406. MONEY, CREDIT AND BANKING **THREE CREDIT HOURS**

A study of the problems and policies of commercial banks. The policies and operation of central banks particularly the federal reserve banks, in relation to commercial banks, business, the Treasury and financial markets. Problems of credit control, monetary stabilization, and banking regulations and reform.

Current banking practices and trends are emphasized and discussed. This course follows Bus. 405. Three class periods a week. *Second Semester, Each Year*

BUS. 414. INDUSTRIAL PURCHASING THREE CREDIT HOURS
Principles, policies, and practices of industrial procurement. Organization and functions; purchasing procedure; quality and quantity control; supply sources; price policies; forward buying; legal aspects of purchasing procedure. Three class periods a week. *First Semester, Each Year*

BUS. 415. PRODUCTION METHODS AND CONTROL THREE CREDIT HOURS
Principles and techniques used in production; current practices in production planning, routing, scheduling and dispatching; study of production standards, labor efficiency and costs; quantity and quality control. Three class periods a week. *Second Semester, Each Year*

BUS. 416. WORK SIMPLIFICATION THREE CREDIT HOURS
A study of the methods of eliminating useless effort; developing short cuts; reducing costs; increasing production with less effort; job efficiency. Three class periods a week. *Second Semester, Each Year*

BUS. 419. COLLECTIVE BARGAINING, MEDIATION AND ARBITRATION THREE CREDIT HOURS
Meaning, practices, principles and organization of collective bargaining; techniques of mediation and agencies for effecting mediation; major economic problems involved in the adjustment of labor disputes. Three class periods a week. *Second Semester, Each Year*

BUS. 421. THEORY OF ORGANIZATION THREE CREDIT HOURS
A review of the development of improved administrative methods in industry and commerce and their contribution to the field of higher wages and lower costs. Works of Taylor, Fayol, Emerson, Davis, Urwick, Mooney and others are examined; stress is placed upon the development of effective organization and operation through the application of the principles of scientific management. Three class periods a week. *Second Semester, Each Year*

BUS. 422. COUNSELING TECHNIQUES TWO-THREE CREDIT HOURS
Functions of counselors in employee adjustment in personnel and in industrial relations; establishing counseling services, organizing and administering a program; evaluation and remedial action. Two-three class periods a week. *First Semester, Each Year*

BUS. 425. BUSINESS ORGANIZATION SEMINAR TWO CREDIT HOURS
A study of special problems of current importance and of interest to the group. The class meetings consist of individual reports and discussions. Two class hours a week. *Each Semester, Each Year*

RETAILING (Ret.)

The programs in this field are designed to

- (a) prepare students for merchandising and sales departments of manufacturing and wholesale establishments,
- (b) train students for executive positions in Retailing,

(c) offer specialized courses in Retailing to those who can benefit from them.

Retailing is becoming a more complicated business each year. If a person is to make the most of the opportunities offered, he must possess adequate knowledge and training in various functions of Retailing, such as, merchandising, operations and sales promotion.

The co-operative program leading to a Major in Retailing is designed to train students properly for an executive career in Retailing. It offers classroom theory and emphasizes its practical applications. In conjunction with the Dayton Retail Merchants Association, the student obtains experience through a supervised work program in downtown stores.

Thus with the aid of those who have both studied and practiced sound principles of Retailing, the student avoids the trial and error method of jobs and learning, and can make rapid progress towards an executive career.

The University of Dayton offers either a Major or a Minor in Retailing.

RET. 305. INTRODUCTION TO RETAILING THREE CREDIT HOURS
Presents the opportunities in retailing, the marketing institutions, functions, and costs, the background and development of retailing, retail institutions of today, retail store policies, the development of the consumer, governmental regulations of marketing. Open to Retailing students in lieu of Bus. 305.

First Semester, Each Year

RET. 310. RETAIL SALESMANSHIP THREE CREDIT HOURS
Responsibilities of the sales-person; retail selling techniques, meeting the customer, developing the sales presentation, obtaining conviction, how to make the merchandise speak for itself, increasing the average sale. Students have the opportunity to analyze practical selling situations and to participate in demonstration sales.

First Semester, Each Year

RET. 311. RETAIL SALES PROMOTION THREE CREDIT HOURS
An analysis of the scope and activities of sales promotion; where, when and what to promote; budgeting and planning of sales promotion, events and activities; emphasis upon the coordination of sales promotion activities. Prerequisite: Ret. 307 or consent of instructor.

Second Semester, Each Year

RET. 316. TEXTILES THREE CREDIT HOURS
Recognition of fabrics with emphasis on appropriate use, care, and serviceability factors. Intended to enable those concerned with buying and selling to identify fabrics and to help them in the selection of ready-to-wear and household textiles. Three class periods a week. Laboratory fee, \$3.00

First Semester, Each Year

RET. 318. RETAIL PERSONNEL RELATIONS THREE CREDIT HOURS
Evaluation of personnel problems and policies; planning manpower needs, job analysis and evaluation, sources of labor supply, selection and placement, training plans and procedures, personnel ratings and reviews, wages and wage stabilization, employee activities, labor relations, current legislation, supervisory techniques.

Second Semester, Each Year

RET. 319. COLOR, DESIGN AND INTERIOR DECORATION THREE CREDIT HOURS
The course is designed to develop judgment in selection and arrangement of well-designed furnishings in the home. Three class periods a week. Laboratory fee, \$3.00.
First Semester, Each Year

RET. 320. FASHIONS TWO-THREE CREDIT HOURS
A course dealing with the principles of planning, buying, promoting, and selling fashions. Includes the fashion cycle and trends, designer influence, coordination and promotion. Two or three class periods a week.
First Semester, Each Year

RET. 405. RETAIL MERCHANDISING MATHEMATICS THREE CREDIT HOURS
Study of mathematical principles involved in buying and selling. Includes purchase planning, open to buy, markup, inventories-cost, retail and LIFO methods—stock turnover, and initial markup formula. Drill is provided in solving mathematical problems.
First Semester, Each Year

RET. 409. RETAILING ORGANIZATION AND OPERATION THREE CREDIT HOURS
Devoted to principles of store management and their application by successful stores. Such factors as store location, buildings and equipment, store organization, receiving and marking, store protection, and coordination of retail store activities are studied.
Second Semester, Each Year

RET. 414. BUYING FOR RETAIL STORES THREE CREDIT HOURS
Covers the work of the store buyer. Considers types of buyers, organization for buying in independents and chains, determining what to buy, selection of brands, how much to buy, model stocks, market resources, resident buying, terms and dating, and buyer's order.
First Semester, Each Year

RET. 420-421. RETAILING LABORATORY TWO CREDIT HOURS
One class hour plus a minimum of sixteen hours a week of approved work experience. Student will participate in a variety of both selling and non-selling work as provided in the training program worked out with the cooperating store. Success in the store will be evaluated by the store's supervisory personnel as well as periodic reports and assignments at the weekly class meeting. Prerequisite: consent of instructor.
Each Semester, Each Year

RET. 425. RETAILING SEMINAR TWO CREDIT HOURS
A thorough analysis of special problems of current importance in retailing. Class meetings consist of individual reports, student panel presentations, open class discussions and original student research projects.
Second Semester, Each Year

CHEMICAL ENGINEERING (Ch.E.)

BRO. WOHLLEBEN, HEAD

MR. SOFIANOPOULOS

CH.E. 302. CHEMICAL ENGINEERING CALCULATIONS TWO CREDIT HOURS
This course includes stoichiometry, gas and vapor behavior, thermophysics,

thermochemistry and the application of these principles to industrial problems. Two class periods a week. Prerequisites: Chem. 205, 206; Phys. 206, 207, 208.

Second Semester, Each Year

CH.E. 401-402. INDUSTRIAL CHEMISTRY SIX CREDIT HOURS

The important chemical and allied manufacturing processes are studied. Utilization of waste products and the economic phases of the chemical industry are also stressed. Three class periods a week. Prerequisite: Chem. 305.

Full Year Course, Each Year

CH.E. 403. TECHNICAL ANALYSIS THREE CREDIT HOURS

This course provides training in the analytical methods needed for plant control and treats of examination of solid, liquid, and gaseous fuels, lubricants, ferrous and non-ferrous alloys, saponifiable oils, etc. Three laboratory periods a week. Prerequisites: Chem. 303-304, 305-306.

First Semester, Each Year

CH.E. 405-406. UNIT OPERATIONS SIX CREDIT HOURS

This course, which deals with the unit operations of chemical processes, includes in lectures and discussions the theory and application of fluid flow, heat flow, and methods of separation of mixtures. The solution of problems forms an important part of the course. Three class periods a week. Prerequisites: Chem. 303-304, 305-306, M.E. 301a.

Full Year Course, Each Year

CH.E. 407. PLANT INSPECTION VISITS

Under faculty guidance, the students make occasional plant inspection visits so as to become acquainted with the unit processes and plant equipment in actual operations.

CH.E. 408. PLANT DESIGN ONE CREDIT HOUR

The needed information on equipment and its correlation, initial costs, materials of construction, and maintenances, are presented as a preliminary to the solution of individually assigned problems in plant design. Periodic progress reports and discussions gradually lead to the blue-print stage. One class period a week.

Second Semester, Each Year

CH.E. 410. SEMINAR ONE CREDIT HOUR

Students are assigned a variety of topics which are individually developed and orally presented in weekly seminar meetings. The papers are informally discussed. Students become familiar with the current trends and journal literature. One class period a week for Junior and Senior years.

CH.E. 412. ADVANCED ORGANIC LABORATORY THREE CREDIT HOURS

In this course, a study is made of the solubilities, functional groups, and derivatives of organic compounds in view of their identification and separation. Experimental problems include organic combustions, hydrogenations, and estimation of functional groups. This work affords opportunities for originality and literature research. Three laboratory periods a week. Prerequisites: Chem. 305-306.

Second Semester, Each Year

CHEMISTRY (Chem.)

BRO. WOTTLE, HEAD

BRO. CHUDD, MR. EVESLAGE, BRO. LUCIER, BRO. WOHLLEBEN

CHEM. 12. ELEMENTARY CHEMISTRY NO COLLEGE CREDIT

This is a refresher course equivalent to high school chemistry. Four class periods a week.
First Semester, Each Year

CHEM. 110. GENERAL CHEMISTRY FIVE CREDIT HOURS

Fundamental principles of general chemistry, including a brief study of metals, non-metals, and their compounds. The course is designed to meet the needs of students in Home Economics and Nursing. Four class periods and one two-hour laboratory period a week.
First Semester, Each Year

CHEM. 115-116. GENERAL CHEMISTRY EIGHT CREDIT HOURS

A comprehensive treatment of the fundamentals of general chemistry covering non-metals and metals, with an introduction to chemical calculations. This course is designed for students in Arts, Premedical, Pre dental, and Medical Technology courses. Three class periods and one three-hour laboratory period a week.
Full Year Course, Each Year

CHEM. 117. GENERAL CHEMISTRY FOUR CREDIT HOURS

This course is similar to Chem. 115-116, but designed to meet the needs of Engineering students and Science majors. Emphasis is placed on engineering and industrial applications. Three class periods and one three-hour laboratory period a week.
Each Semester, Each Year

CHEM. 118. GENERAL CHEMISTRY FOUR CREDIT HOURS

A continuation of Chem. 117. Three class periods and one three-hour laboratory period a week.
Each Semester, Each Year

CHEM. 200. ORGANIC CHEMISTRY FIVE CREDIT HOURS

A brief course covering the essential aliphatic and aromatic compounds. This course is designed to meet the needs of the Home Economics and Nursing students. Four class periods and one two-hour laboratory period a week.
Second Semester, Each Year

CHEM. 205-206. ANALYTIC CHEMISTRY TWELVE CREDIT HOURS

A theoretical and mathematical study of the laws that apply in qualitative analysis, including the separation and identification of some common anions and cations; theory and technique of modern gravimetric and volumetric methods, with stoichiometrical calculations and the applications of the mass action law and solubility product to quantitative analysis. Three class periods and three three-hour laboratory periods a week. Prerequisite: Chem. 117-118. Required of Chemistry majors and Chemical Engineers.

Full Year Course, Each Year

- CHEM. 207. QUALITATIVE ANALYSIS** **FOUR CREDIT HOURS**
A theoretical discussion of ionization constant, solubility product, and equilibrium constants as influencing qualitative analysis. The laboratory work includes the semimicro method for the separation and identification of common anions and cations. This is a one-semester course intended for Premedical, Pre-dental and Medical Technology students. Two class periods and one four-hour laboratory period a week.
First Semester, Each Year
- CHEM. 211-212. QUANTITATIVE ANALYSIS** **EIGHT CREDIT HOURS**
Theory and technique of modern gravimetric and volumetric methods, with stoichiometrical calculations and the applications of the mass action law and solubility product to quantitative analysis. The course will provide an introduction to instrumental methods of analysis. Two class periods and two three-hour laboratory periods a week. Prerequisite: Chem. 117-118.
To be announced—Evening
- CHEM. 301. QUANTITATIVE ANALYSIS** **FOUR CREDIT HOURS**
Short course intended for Premedical, Pre-dental, and Medical Technology students. Two class periods and one four-hour laboratory period a week. Prerequisite: Chem. 207.
Second Semester, Each Year
- CHEM. 302. PHYSICAL CHEMISTRY** **FOUR CREDIT HOURS**
A short course for Premedical and Pre-dental students. Discussion of the properties of laws of matter in its different states and in solution; chemical equilibrium; thermo-chemistry; electro-chemistry; reaction kinetics; phase rule. The laboratory work includes physicochemical methods and their applications. Three class periods and one three-hour laboratory period a week. Prerequisite: Chem. 301.
First Semester, Each Year
- CHEM. 303-304. PHYSICAL CHEMISTRY** **EIGHT CREDIT HOURS**
Long course for students who wish to follow a scientific or engineering career. More comprehensive than Chem. 302, with emphasis on industrial applications. Three class periods and one three-hour laboratory period a week. Prerequisite: Chem. 205-206, Math. 201-202. Required of Chemistry majors and Chemical Engineers.
Full Year Course, Each Year
- CHEM. 305-306. ORGANIC CHEMISTRY** **TWELVE CREDIT HOURS**
A more intensive course than Chem. 309-310 for Chemistry majors and Chemical Engineers. Three class periods and three laboratory periods a week. Prerequisite: Chem. 205, 206.
Full Year Course, Each Year
- CHEM. 307. CHEMICAL LITERATURE** **ONE CREDIT HOUR**
The use of chemical literature, indexing methods, and patent procedure. Prerequisite: Ger. 307.
Second Semester, Each Year
- CHEM. 309-310. ORGANIC CHEMISTRY** **TEN CREDIT HOURS**
This is a two-semester course designed for Medical Technicians, Premedical, and Pre-dental students. A study of the aliphatic, aromatic, and heterocyclic

compounds, including laboratory preparations of typical compounds and the methods of identifying simple organic groups and radicals. Three class periods and one four-hour laboratory period a week. Prerequisite: One full year of college chemistry; recommended in addition to the prerequisite—Chem. 207, 301.
Full Year Course, Each Year

CHEM. 400. BIOCHEMISTRY **FIVE CREDIT HOURS**

A one-semester course intended to meet the needs of students in Home Economics. A study of the chemistry of the essential food constituents, their digestion, absorption, and intermediary metabolism. Four class periods and one three-hour laboratory period a week.
First Semester, 1954-1955

CHEM. 401. BIOCHEMISTRY **FIVE CREDIT HOURS**

A course intended for Premedical, Predental, and Medical Technology students. It treats the chemistry and metabolism of carbohydrates, lipids, and proteins, foods and digestion, intermediary metabolism, enzymes, acid base balance, vitamins, and hormones. Three class periods and one four-hour laboratory period a week. Prerequisite: Chem. 301-302, 309-310.
Second Semester, Each Year

CHEM. 403. TECHNICAL ANALYSIS **THREE CREDIT HOURS**

This course provides training in the analytical methods needed for plant control and treats of examination of solid, liquid, and gaseous fuels, lubricants, ferrous and non-ferrous alloys, saponifiable oils, etc. Three laboratory periods a week.
First Semester, Each Year

CHEM. 412. ADVANCED ORGANIC LABORATORY **THREE CREDIT HOURS**

In this course, a study is made of the solubilities, functional groups, and derivatives of organic compounds in view of their identification and the separation of mixtures. In addition, a series of experimental problems is carried out involving organic combustions, hydrogenations, and estimations of functional groups. This work affords opportunity for originality and literature research. Three laboratory periods a week. Prerequisite: Senior standing.
Second Semester, Each Year

CHEM. 415-416. ADVANCED INORGANIC CHEMISTRY **FOUR CREDIT HOURS**

This course comprises topics such as electronic distribution in atoms and ions, the Bohr Atom, types of forces resulting in compound stability, nature of the chemical bond, electron affinity and the periodic arrangement, the nucleus and its reactions, coordination compounds, systematization of the inorganic family. Two class periods a week.
Full Year Course, Each Year

CIVIL ENGINEERING (C.E.)

MR. BALDINGER, ACTING HEAD

MR. CHAMBERLAIN, MR. GABRYS, BRO. THOMSON

- C.E. 201. ELEMENTARY SURVEYING THREE CREDIT HOURS
 Elements of plane surveying, including care and use of instruments, measuring distances and angles, differential levelling. Application to topographic and construction surveys. Two class periods and one field period a week. Prerequisite: Math 115. *First Semester, Each Year*
- C.E. 202. ELEMENTARY SURVEYING THREE CREDIT HOURS
 Theory of stadia surveying, plane table, simple horizontal and vertical curves, and U. S. Public Land surveys. Application to maps, plans and profiles. Two class periods and one field period a week. Prerequisite: C.E. 201. *Second Semester, Each Year*
- C.E. 301. ROUTE SURVEYING FOUR CREDIT HOURS
 Field and office work necessary for the location and layout of railroads and highways; other route surveys; transition curves; earthwork. Three class periods and one field period a week. Prerequisite: C.E. 202 *First Semester, Each Year*
- C.E. 302. ADVANCED SURVEYING THREE CREDIT HOURS
 Triangulation, plane table and hydrographic surveys; astronomical observations for latitude, longitude, time and azimuth. Two class periods and one field period a week. Prerequisite: C.E. 202. *Second Semester, Each Year*
- C.E. 304. ADVANCED STRENGTH OF MATERIALS THREE CREDIT HOURS
 The determination of deflection and the solution of statically indeterminate problems by the moment area method; the stress determination in beams of sharp curvature; the study of thick-walled cylinders, unsymmetrical bending, combined stresses; a review of stresses on different planes at a point; a study and comparison of the theories of failure. Three class periods a week. Prerequisite: G.E. 303. *Second Semester, Each Year*
- C.E. 306. THEORY OF STRUCTURES FIVE CREDIT HOURS
 The analytical and graphical methods of stress determination in statically determinate structures, together with a study of influence lines. Five class periods a week. Prerequisite: G.E. 303. *Second Semester, Each Year*
- C.E. 401. STRUCTURAL DESIGN FOUR CREDIT HOURS
 Structural steel design including a railroad plate girder, a highway bridge and miscellaneous building details. Two class periods and two drawing periods a week. Prerequisite: C.E. 306. *First Semester, Each Year*

- C.E. 402. STRUCTURAL DESIGN FOUR CREDIT HOURS
Reinforced concrete design including arch and rigid frame analysis and the design of typical panels of buildings. Two class periods and two drawing periods a week. Prerequisites: C.E. 306, 407. *Second Semester, Each Year*
- C.E. 405. HIGHWAY ENGINEERING THREE CREDIT HOURS
The fundamentals of highway economics and design; construction and maintenance; alignments; plans and specifications; highway materials; traffic control. Three class periods a week. Prerequisites: C.E. 202, G.E. 303. *First Semester, Each Year*
- C.E. 406. INDETERMINATE STRUCTURES THREE CREDIT HOURS
The determination of stresses and deflections of statically indeterminate frames and trusses by the classic and modern methods, including Castigliano's Theorem, least work, moment and shear distribution. Three class periods a week. Prerequisite: C.E. 306. *Second Semester, Each Year*
- C.E. 407. REINFORCED CONCRETE FOUR CREDIT HOURS
The first course in the theory and design of reinforced concrete structures; the study of earth pressure; design of retaining walls and footings. Four class periods a week. Prerequisite: G.E. 303. *First Semester, Each Year*
- C.E. 408. SEMINAR ONE CREDIT HOUR
Practice in the presentation and discussion of papers dealing with civil engineering subjects; occasional lectures by prominent engineers. Periodically, meetings of the Student Chapter of the American Society of Civil Engineers are substituted for seminar sessions. The Chapter sponsors engineering inspection trips and attendance at the monthly meetings of the Dayton Section of the American Society of Civil Engineers. One class period a week for Junior and Senior years.
- C.E. 411. WATER SUPPLY THREE CREDIT HOURS
The theory, development and improvement of water supplies for domestic, manufacturing, and fire service; population prediction; quality and quantity of surface and underground waters; demand and consumption; hydraulics of reservoirs, pipe lines, distribution systems and pumping machinery. Three class periods a week. Prerequisite: G.E. 307. *First Semester, Each Year*
- C.E. 412. SANITARY ENGINEERING THREE CREDIT HOURS
Sewage, sewerage and sewage disposal. Design of a small sewerage system for sanitary and storm flow. Three class periods a week. Prerequisite: G.E. 307. *Second Semester, Each Year*
- C.E. 414. SOIL MECHANICS TWO CREDIT HOURS
Correlated lectures and experiments on the fundamental properties of soils and soil mechanics; elementary soil tests. One class period and one laboratory period a week. Prerequisites: G.E. 303, 307. *Second Semester, Each Year*

ECONOMICS (Eco.)

MR. O'LEARY, HEAD

MR. FECHER, MR. LIN, MR. MCGOVERN, BRO. NAGEL, MR. SNYDER

Concentration Recommendation

Prerequisite: Economics 201-202.

MAJOR: Minimum of thirty hours of upper division courses are required of students majoring in Economics. These courses should include 301, 313, 402, 404, 405, 406, 408, 413, 425. A minimum of two additional closely related courses is also required. These courses to be selected in consultation with the adviser. A related minor is to be selected in the fields of business organization, philosophy, political science, psychology, or sociology.

Economics 201-202 is prerequisite to all advanced courses except by permission of the instructor.

The following courses in business organization are credited in an economics major or minor toward the B.S. or A.B. degree:

301 Corporation Finance	313 Statistics
305 Marketing	316 Industrial Management

ECO. 104. ECONOMIC GEOGRAPHY THREE CREDIT HOURS

This course shows the influence exerted by topography, climate, geographical position, soil, and other natural resources upon the various types of activity by means of which man gains his living. It further shows the influence of geographical factors on the forms of agricultural industry, on the extractive and manufacturing industries and on the problems involved in transportation and commerce. Three class periods a week.

*Each Semester, Each Year*ECO. 201-202. PRINCIPLES OF ECONOMICS SIX CREDIT HOURS

A general survey of the economic institutions, forces, and factors which affect the production, exchange, distribution, and consumption of wealth. Fundamental principles and concepts are emphasized. Designed for students who desire a general knowledge of economics as well as for those planning to concentrate on economics, business organization, and the social sciences. Required of all students selecting economics for a major or minor and for business administration students.

*Both 201 and 202 Each Semester, Each Year*ECO. 203. SURVEY OF ECONOMICS THREE CREDIT HOURS

A general treatment of the principles, objectives and applications of economics. Specifically a consideration of the relationship of a capitalistic economy to political democracy. Designed especially for Engineers.

*Each Semester, Each Year*ECO. 204. SURVEY OF ECONOMICS THREE CREDIT HOURS

A general treatment of economics, as indicated in Eco. 203, but designed especially for students in Home Economics and in Secretarial Studies.

First Semester, Each Year

ECO. 205. AMERICAN ECONOMIC HISTORY **THREE CREDIT HOURS**

An intensive study of the development of agriculture, industry, transportation, commerce, and finance against the general background of American political history and social history. Three class periods a week. Accredited in History.

Each Semester, Each Year

ECO. 303. LABOR PROBLEMS **THREE CREDIT HOURS**

The causes, extent, effects and methods of dealing with labor disturbances, past and present. Wages, hours, and conditions of work; standards of living; distribution of incomes; unemployment; old age; industrial accidents and diseases; substandard workers; organized and unorganized labor; state and federal legislation affecting labor and industry. Three class periods a week.

ECO. 305. COMPARATIVE ECONOMIC SYSTEMS **THREE CREDIT HOURS**

A study of economic systems from early times to the present. The emphasis is upon the theories of socialism, fascism, communism and capitalism. Three class periods a week.

Second Semester, Each Year

ECO. 308. PRINCIPLES OF INSURANCE **THREE CREDIT HOURS**

A general course in underlying principles of property, marine, casualty, and life insurance. The use and functions of insurance in the life of a business and in the life of individuals. The theory and practices of insurance carriers are discussed. Three class periods a week.

Each Semester, Each Year

ECO. 309. PRINCIPLES OF LIFE INSURANCE **THREE CREDIT HOURS**

An intensive study of the principles and practices of life insurance; types of policies; premiums; reserves; insurance programs and government regulations. Three class periods a week.

Second Semester, Each Year

ECO. 310. SOCIAL INSURANCE **THREE CREDIT HOURS**

Application of social insurance to old age, accident, disability and unemployment. Private and cooperative programs for worker security. Current pension and retirement programs are analyzed and discussed.

Second Semester, Each Year

ECO. 312. TRANSPORTATION **THREE CREDIT HOURS**

A survey of inland transportation agencies and facilities and a discussion of current transportation problems and regulations. Three class periods a week.

Each Semester, Each Year

ECO. 313. PUBLIC UTILITIES **THREE CREDIT HOURS**

Development of public utilities in the United States. Legal basis of public utilities. Special problems of valuation, depreciation, pricing, financing and management control of utilities. Policies and problems in public administration of utilities. Three class periods a week.

First Semester, Each Year

- ECO. 325. LABOR ECONOMICS THREE CREDIT HOURS
 The background and development of the American labor movement. Attention is given to the nature of the labor market, including problems of workers, insecurity, wages, collective bargaining, labor legislation, social insurance, and government intervention. Three class periods a week. *Each Semester, Each Year*
- ECO. 402. PUBLIC FINANCE AND TAXATION THREE CREDIT HOURS
 A survey of government expenditures, borrowing, indebtedness, and revenue. The theory of taxation; constitutional distributive and administrative effects of taxation; American fiscal system. Three class periods a week.
Each Semester, Each Year
- ECO. 403. HISTORY OF ECONOMIC THOUGHT TWO-THREE CREDIT HOURS
 The development of economic concepts and theories from the mercantilists to recent economists. Emphasis upon the modern period. Two or three class periods a week.
Second Semester, Each Year
- ECO. 404. BUSINESS CYCLES THREE CREDIT HOURS
 Characteristics and economic consequences of business cycles. Analysis of causes and theories of business cycles. Examination of the proposals for eliminating or controlling the business cycle. Some attention is given to the barometers and measurements of business cycles. Three class periods a week.
First Semester, Each Year
- ECO. 405. MONEY, CREDIT AND BANKING THREE CREDIT HOURS
 A survey of the concepts, principles and practices in the fields of money, credit, and banking. Consideration of monetary systems, foreign exchange, credit instruments, and the principal types of modern financial institutions. Special attention to the commercial bank and its relation to the Federal Reserve System. Three class periods a week.
Each Semester, Each Year
- ECO. 406. ADVANCED BANKING AND MONETARY PROBLEMS THREE CREDIT HOURS
 Policies and operation of central banks, particularly the Federal Reserve System, and the financial markets. Problems of credit control, monetary stabilization and banking regulations and reform. Current banking problems and trends are emphasized. Three class periods a week.
Second Semester, Each Year
- ECO. 408. CONTEMPORARY ECONOMICS THREE CREDIT HOURS
 Analysis and discussion of current economic issues. Among the problems considered are labor, prices, government and economic maladjustments. Important current economic problems will be emphasized and discussed as they arise. Three class periods a week.
Second Semester, Each Year
- ECO. 413. ECONOMIC ANALYSIS AND POLICY TWO-THREE CREDIT HOURS
 Analysis of basic economic principles with special attention to the theories of value and distribution. Two or three class periods a week.
First Semester, Each Year
- ECO. 425. ECONOMICS SEMINAR TWO CREDIT HOURS
 A study and discussion of special economic problems currently important and of interest to the group. Two class periods a week. *Each Semester, Each Year*

EDUCATION (Educ.)

BRO. FAERBER, HEAD

FR. BARRETT, MR. BURROUGHS, MR. DALY, MR. DOUGLASS,

SR. GENEVIEVE MARIE, MISS KOOGLE, MR. KREIDER, MR. LEARY,

MR. LUBBERS, SR. M. PELAGIA, MISS MONNETTE,

MRS. REEL, MR. REICHARD, MR. SCHWARTZ, BRO. SIBBING

EDUC. 101. INTRODUCTION TO EDUCATION TWO-THREE CREDIT HOURS

A consideration of the field of Education, its problems and possibilities, with a view of orienting the beginning student with the profession of teaching and of enabling him to select a field of education for major emphasis during his pre-service program. Required of all freshman students in Education.

Each Semester, Each Year

EDUC. 102. SCIENCE FOR THE ELEMENTARY SCHOOL TEACHER I

FOUR CREDIT HOURS

Gives the student a functional and broad understanding of those phases and aspects of man's environment that are of everyday interest and usefulness. The contents include such items as the place of the earth in the universe, changes in the earth's surface, conditions necessary to life, living things. Educ. 102-3 or any other approved science courses to equal eight credit hours required of all freshman students in Elementary Education.

First Semester, Each Year

EDUC. 103. SCIENCE FOR THE ELEMENTARY SCHOOL TEACHER II

FOUR CREDIT HOURS

A continuation of Educ. 102. The content items include energy in the universe, man's attempts to control his environment, a study of the objectives of elementary science and of the selection and grade placement of subject matter. Educ. 102-3 or any other approved science courses to equal eight credit hours required of all freshman students in Elementary Education.

Second Semester, Each Year

EDUC. 200. PURPOSES AND PRACTICES OF THE ELEMENTARY SCHOOL

THREE CREDIT HOURS

The objectives, organization, curricula, and community relationships of the elementary school in the United States.

First Semester, Each Year

EDUC. 202. EDUCATIONAL PSYCHOLOGY I

THREE CREDIT HOURS

Human growth and development through the first twenty years, with special emphasis on the elementary and secondary school years. Prerequisite: Psych. 201.

First Semester, Each Year

EDUC. 203. EDUCATIONAL PSYCHOLOGY II

THREE CREDIT HOURS

The psychology of learning. Studies the guidance and fostering of learning activities. Considers the nature, the conditions, and the principles of learning and the principles of teaching.

Second Semester, Each Year

EDUC. 304. ADOLESCENT PSYCHOLOGY THREE CREDIT HOURS

A study of the inter-related physical, physiological and mental changes associated with adolescence; interests and ideals; social tendencies and adjustments; causal factors in maladjustment and delinquency among adolescents. May be substituted for Educ. 202 by students in Secondary Education.

First Semester, Each Year

EDUC. 306. CHILD PSYCHOLOGY THREE CREDIT HOURS

A general study of the child's mind, its nature and original endowment; characteristics dominant at different ages and their significance for the teacher; the development of mental traits and abilities, of moral life and character, and the creative activities of a child. Required of all students in Kindergarten and Primary Education. May be substituted for Educ. 202 by students in Elementary Education.

First Semester, Each Year

EDUC. 307. PRINCIPLES OF TEACHING THREE CREDIT HOURS

Meaning of education; function of school; meaning and types of learning and of teaching; organization of subject matter; various types of class procedure; recitation, assignment, questioning, drill, etc.; standards for the evaluation of teaching and learning.

To be announced

EDUC. 313. PRINCIPLES AND PRACTICES OF EFFECTIVE GROUP LEADERSHIP THREE CREDIT HOURS

A comprehensive study of the concept of democratic group leadership as an integral part of the teaching-learning situation at all grade levels. Stress is placed upon the fundamental ways of fostering and creating an environment in which learning can be achieved effectively in a group setting. The inter-personal relations of students, teachers, and parents are studied as they play upon the formation and function of the learning group. Prerequisite: Educ. 203.

Second Semester, Each Year

EDUC. 318. MENTAL HYGIENE FOR TEACHERS THREE CREDIT HOURS

This course explains the contribution which the classroom teacher can make in guiding the development of the normal, integrated personalities of his pupils. Provides basis for evaluating questionable school practices, especially through a constructive view of discipline. Deals primarily with the normal child. Mental health practices for the teacher are also stressed. Required of all Education students.

Each Semester, Each Year

EDUC. 320. READING AND LANGUAGE ARTS IN ELEMENTARY SCHOOL FOUR CREDIT HOURS

An integrated language arts course with reading as its core subject. A study of the following problems: modern concept of the nature of reading; methods and materials of instruction at the various reading levels; consideration of individual differences; diagnosis and remedial instruction; the development of oral and written communication, spelling, and handwriting skills. Acquisition of a certificate in handwriting is required.

Second Semester, Each Year

EDUC. 322. LITERATURE IN THE ELEMENTARY SCHOOL

THREE CREDIT HOURS

Acquaints students with the various fields of children's literature and with adequate evaluative criteria. The contents include the following: history of children's literature, poetry for different age levels, verse choirs, use of poetry, modern stories in folk-tale style, folk tales, story telling. Required of all students in Elementary Education.
First Semester, Each Year

EDUC. 324. LANGUAGE IN THE ELEMENTARY SCHOOL THREE CREDIT HOURS

Stresses the expressional phase of elementary school language, including oral and written expression, spelling and handwriting. Also treats instructional methods, measurement of accomplishments, and correction of pupil difficulties.
Second Semester, Each Year

EDUC. 325. SOCIAL STUDIES IN THE ELEMENTARY SCHOOL

THREE CREDIT HOURS

Function of the social studies in the elementary school; appraisal of teaching procedures in the field; formulation of definite principles to use in the selection of suitable contents and methods; testing the results of instruction.
Second Semester, 1954-1955

EDUC. 326. MUSIC IN THE ELEMENTARY SCHOOL

TWO CREDIT HOURS

Materials to be used in elementary grade school music and their presentation; problems and possibilities of the elementary school music program. Prerequisite: Mus. 141.
Second Semester, Each Year

EDUC. 327. TEACHING OF HOME ECONOMICS IN SCHOOL

THREE CREDIT HOURS

The philosophy of home economics education, curriculum, methods, devices, and materials used in teaching. Preparation and presentation of units and lessons. Observation of teaching in cooperating schools of city.
Second Semester, 1955-1956

EDUC. 328. SECONDARY SCHOOL METHODS IN COMMERCIAL SUBJECTS

THREE CREDIT HOURS

Invokes the principles of teaching in connection with high school commercial subjects. Includes a survey of commercial textbooks, curricula construction, testing programs, professional periodicals, commercial teacher organizations. Observation of teaching in cooperating schools of city.

First Semester, Each Year

EDUC. 340. PRINCIPLES OF EDUCATION

TWO-THREE CREDIT HOURS

Studies the fundamental concepts underlying the whole of education. Discusses current educational issues, the evolution of educational aims, educational agencies, the question of religious education and character training.

First Semester, Each Year

EDUC. 400. METHODS IN ARITHMETIC TWO CREDIT HOURS
 Distribution of content according to grade levels; methods of presentation; diagnosis of number difficulties; remedial instruction; testing. Prerequisite: Educ. 104. *Second Semester, Each Year*

EDUC. 403. ARITHMETIC IN THE ELEMENTARY SCHOOL THREE CREDIT HOURS
 History of number; distribution of content according to grade levels; methods of presentation; diagnosis of number difficulties; remedial instruction; testing. *First Semester, Each Year*

EDUC. 404. SECONDARY SCHOOL METHODS IN LATIN TWO CREDIT HOURS
 Discusses the place and purpose of Latin in the secondary school curriculum; evaluates objectives, methods, and teaching materials.

To be announced

EDUC. 405. SECONDARY SCHOOL METHODS IN ENGLISH AND LITERATURE THREE CREDIT HOURS
 Considers ways and means whereby the teacher of English can make his teaching more functional in the lives of students, more modern, more vigorous, and more inspiring. Observation of teaching by prearrangement with cooperating schools. Required for high school certification in English. *First Semester, Each Year*

EDUC. 406. SECONDARY SCHOOL METHODS IN SOCIAL STUDIES THREE CREDIT HOURS
 Aims and values of social studies in high school. General method and special techniques in the field of social studies in relation to basic principles of learning. Attention is given to practical teaching materials and devices. Observation of teaching in local cooperating schools. Required for secondary certification in social studies. *First Semester, Each Year*

EDUC. 407. ART IN THE ELEMENTARY SCHOOL TWO CREDIT HOURS
 Deals with newer methods of teaching art in the elementary school; creative art expression and the use of art elements and principles as the basis for creative approach; organization of units of work, including drawing, painting, design, color, modeling, block printing, lettering, and the mural, as they relate to the integrated school program. Accredited in Art. *Second Semester, Each Year*

EDUC. 408. SECONDARY SCHOOL METHODS IN MODERN LANGUAGES THREE CREDIT HOURS
 Considers the functions and values of language study; courses of study; organization of materials; conventional and progressive methods; illustrative materials; selection of texts; tests. Observation of teaching on high school level. Required for secondary school certification in modern languages. *First Semester, 1955-1956*

EDUC. 409. SECONDARY SCHOOL METHODS IN MATHEMATICS THREE CREDIT HOURS
 The objectives of high school mathematics; sequence and correlation of subject matter; methods of teaching; analysis of courses of study and text books; mate-

rials and equipment; current trends. Observation of teaching on high school level. Required for secondary certification in mathematics.

First Semester, Each Year

EDUC. 410. SECONDARY SCHOOL METHODS IN RELIGION

TWO CREDIT HOURS

Presents the teacher of religion with modern methods of instruction; evaluates the relative merits of religion texts; teaches the employment of the principles of correlation and adaptation with view to the practical needs of adolescents; treats the function of Catholic literature and the problem of pupil participation.

To be announced

EDUC. 411. SECONDARY SCHOOL METHODS IN SCIENCE

THREE CREDIT HOURS

Discusses the social basis for instruction in science; development of a philosophy for the teaching of science; selection of objectives on the basis of reliable criteria; determination of technique for developing an integrated science curriculum and a review of pertinent research on science teaching. Observation of teaching on high school level. Required for secondary school certification in science.

Second Semester, Each Year

EDUC. 412. MEASUREMENT IN EDUCATION

THREE CREDIT HOURS

The measurement of student achievement is approached as one important aspect of the broad field of evaluation confronting the future teacher. Attention is directed toward the place of measuring student achievement in the overall evaluative school program. Major emphasis is placed upon the construction of teacher-made achievement tests and the analysis of test results. The fundamentals or basic statistics as they relate to classroom use will be studied. Prerequisite: Completion of required 300 courses in Education.

First Semester, Each Year

EDUC. 414. STUDENT TEACHING

SIX-TWELVE CREDIT HOURS

Content includes: weekly conference with Director of Student Teaching; guidance in planning definite teaching units; teaching in actual classroom situations for extended periods under close supervision; evaluating pupil progress; conferences with supervising teachers on teaching procedures employed; participation in general school activities.

The minimum amount of student teaching required for every candidate for graduation is six semester credit hours of supervised teaching consisting of a total of 180 clock hours of which no less than 90 clock hours are devoted to responsible classroom teaching. One semester of credit for student teaching is defined as equal to 30 hours of supervised teaching.

Each Semester, Each Year

EDUC. 415. PRINCIPLES OF GUIDANCE

THREE CREDIT HOURS

An exploration of the guidance role of the classroom teacher in the fields of educational, vocational, and social-civic-ethical guidance. The application of basic principles of guidance in the daily contact of teacher and student is

emphasized. Prerequisite: Completion of required 300 courses in Education.
Second Semester, Each Year

EDUC. 416. HISTORY OF EDUCATIONAL THOUGHT THREE CREDIT HOURS
A series of concise interpretations of leading thinkers from Plato to John Dewey; deals with the world's leading educational ideas. The course endeavors to give reliable direction to the future in education through knowledge of the past. May be applied toward Philosophy requirement for students in the Division of Education.
First Semester, Each Year

EDUC. 417. LIBRARY GUIDANCE FOR TEACHERS THREE CREDIT HOURS
Trains the teacher to make use of the available services and resources of the standard school library in behalf of a well-rounded education for pupils. Acquaints the class with library organization, reference material, indexes, and bibliography. Not designed for teacher-librarians.
To be announced

EDUC. 418. INTERCULTURAL EDUCATION THREE CREDIT HOURS
Deals with the ways in which intergroup relations can be promoted on every level of the educative process. Discusses what an effective program of intercultural education should be. Stresses the problems of racial democracy and of racial integration in the schools. May be applied toward the Philosophy of Education requirement.
Second Semester, Each Year

EDUC. 419. PHILOSOPHY OF EDUCATION THREE CREDIT HOURS
The application of the fundamental principles of a philosophy of life to the work of education. The course draws up criteria for the intelligent evaluation of educational theory and practice. May be applied toward Philosophy requirement for students in the Division of Education.
First Semester, Each Year

EDUC. 420. MODERN THEORIES OF EDUCATION THREE CREDIT HOURS
An evaluation of the modern philosophies of education. Attention is directed to the main tenets of each philosophy and the effects on educational theory and practice. May be applied toward Philosophy requirement for students in the Division of Education.
Second Semester, Each Year

EDUC. 422. THE ROLE OF THE SCHOOL IN THE SOCIAL ORDER
THREE CREDIT HOURS
Studies the sociological facts and principles essential to the background of every teacher; an analysis of the sociological objectives of education; surveys and appraises the implications of outside-of-school agencies, such as associational influence, customs, social control, parental education, youth problems, libraries, motion pictures, the press, radio, and the like.
First Semester, 1954-1955

EDUC. 431. VISUAL AND OTHER SENSORY AIDS IN EDUCATION
THREE CREDIT HOURS
Studies the aims and psychological bases of the use of visual and other sensory

aids in the classroom; the techniques of the various types, including slides, motion pictures, television, maps, charts, radio, field trips, etc.; demonstration lessons applying sensory methods to the subjects of the curriculum.

Second Semester, Each Year

EDUC. 439. SCHOOL PROVISIONS FOR INDIVIDUAL DIFFERENCES

THREE CREDIT HOURS

Studies the different traits and abilities of pupils and ways whereby teaching might be adjusted to these differences. Special attention focused on the slow learner, the gifted student, and the educationally retarded child.

Second Semester, 1954-1955—Evening

EDUC. 441. DIAGNOSIS AND REMEDIAL INSTRUCTION THREE CREDIT HOURS

A study of the major factors associated with learning difficulties, techniques that might be used to diagnose the nature and causes of pupil difficulty, and the methods by which remedial adjustments can be made. *To be announced*

EDUC. 442. SPEECH CORRECTION AND HEARING THERAPY

THREE CREDIT HOURS

Treats the speech and hearing handicaps which frequently confront the teacher in the persons of elementary and secondary school pupils. The course endeavors to point out causes of these defects and ways of correcting them or surmounting them in furthering educational outcomes.

First Semester, 1954-1955

ELECTRICAL ENGINEERING (E.E.)

BRO. L. ROSE, HEAD

MR. DUNN, BRO. HOLIAN, MR. MORGAN, MR. SCHMIDT

E.E. 201. ELEMENTS OF ELECTRICAL ENGINEERING FOUR CREDIT HOURS

A general survey course presenting the basic theories of magnetic and electric circuits and their application to engineering. Three class periods and one laboratory period a week. Corequisite: Phys. 207.

First Semester, Each Year

E.E. 301-302. ELECTRICAL ENGINEERING

SIX CREDIT HOURS

For Chemical, Civil, and Mechanical Engineering students. A series of lectures and laboratory exercises designed to familiarize the student with the elements of circuit theory, machinery, electronics, and measurements. Two class periods and one laboratory period a week. Prerequisites: Phys. 207, Math. 202.

Full Year Course, Each Year

E.E. 303-304. ELECTRICAL MEASUREMENTS

SIX CREDIT HOURS

A lecture and laboratory course in the measurement of electrical quantities: resistance, inductance, capacitance, electromotive force, current and power. Study of galvanometers, bridges, and potentiometers. Calibration of instru-

ments. Two class periods and one laboratory period a week. Prerequisite: E.E. 201; Corequisite: E.E. 305. *Full Year Course, Each Year*

E.E. 305. ALTERNATING CURRENT CIRCUITS FOUR CREDIT HOURS
Vector and complex quantities applied to alternating currents. Single phase circuit analysis; non-sinusoidal waves; balanced and unbalanced polyphase systems. Three class periods and one problem period a week. Prerequisite: E.E. 201; Corequisite: Math. 202. *Each Semester, Each Year*

E.E. 308. COMMUNICATION ENGINEERING I FOUR CREDIT HOURS
Coupled circuits; network theorems; resonance; infinite line; reflection; filters. Three class periods and one laboratory period a week. Prerequisite: E.E. 312. *Each Semester, Each Year*

E.E. 312. ENGINEERING ELECTRONICS FOUR CREDIT HOURS
Theory, construction and characteristics of vacuum tubes, thyratrons, phototubes, and the technical application of these electronic devices and circuits. Three class periods and one laboratory period a week. Prerequisite: E.E. 305. *Each Semester, Each Year*

E.E. 318. MACHINERY I FOUR CREDIT HOURS
The theory, construction and characteristics of series, shunt and compound generators and motors; the theory of commutation and armature reaction; parallel operation of generators, methods of speed control, testing. The theory, construction and characteristics of transformers. Three class periods and one laboratory period a week. Prerequisite: E.E. 305. *Second Semester, Each Year*

E.E. 403. MACHINERY II FOUR CREDIT HOURS
Parallel and polyphase transformer connections; theory, construction and characteristics of polyphase induction motors, synchronous generators and motors, single phase motors and rotary converters. Three class periods and one laboratory period a week. Prerequisite: E.E. 318. *First Semester, Each Year*

E.E. 404. ELECTRICAL DESIGN THREE CREDIT HOURS
In this course, the student is required to complete an original design of a direct current generator and a transformer. Two class periods and one design period a week. Prerequisite: E.E. 318. *Second Semester, Each Year*

E.E. 407. ELECTRICAL ILLUMINATION THREE CREDIT HOURS
The nature of light and the mechanics of vision; illumination, brightness and distribution of light; proper utilization of lamps and luminaries for comfortable and efficient seeing; industrial and commercial lighting designs. Three class periods a week. *Second Semester, Each Year*

E.E. 408. ELECTRICAL TRANSIENTS THREE CREDIT HOURS
Transient response of simple circuits and networks to D. C. and A. C. voltages; oscillations and damping; transients in coupled and resonant circuits; transients in circuits with variable parameters. Three class periods a week. Prerequisite: E.E. 305. *Second Semester, Each Year*

E.E. 409. INDUSTRIAL ELECTRONICS THREE CREDIT HOURS
Purpose and function of electronic controls; arc welding; resistance welding; service instruments; rectifiers; recorders. Three class periods a week. Prerequisite: E.E. 312. *First Semester, Each Year*

E.E. 410. SEMINAR ONE CREDIT HOUR
Weekly meetings of students and members of the staff for presentation of papers by the students and lectures by engineers in active practice. One class period a week for Junior and Senior years.

E.E. 411. INSPECTION VISITS
Visits are made to various power and industrial plants in and about Dayton, Ohio. Occasionally, a more extended trip is made to other large industrial centers. Formal reports of such trips are required.

E.E. 412. POWER TRANSMISSION THREE CREDIT HOURS
Mechanical features of conductors and supports. Electrical characteristics of lines; system stability; distribution system. Three class periods a week. Prerequisite: E.E. 305. *Second Semester, Each Year*

E.E. 413. COMMUNICATION ENGINEERING II FOUR CREDIT HOURS
Impedance transformation; equalizers; communication systems. Three class periods and one laboratory period a week. Prerequisite: E.E. 308. *First Semester, Each Year*

E.E. 415-416. ULTRA-HIGH FREQUENCY THEORY AND PRACTICE SIX CREDIT HOURS
Electromagnetic waves; Maxwell's equations; transmission lines, wave guides, cavity resonators; radiation and reflection. Practical microwave generators and systems. Three class periods a week, first semester; two class periods and one laboratory period a week, second semester. Prerequisite: E.E. 308. *Full Year Course, Each Year*

E.E. 417. THESIS THREE CREDIT HOURS
Independent project in a field selected by the student and approved by the faculty. Open to seniors in the second semester as an elective. *Second Semester, Each Year*

E.E. 418. CONTROL OF POWER MACHINERY **THREE CREDIT HOURS**
 A study in the application of power machinery to industry and methods of control in each case. Emphasis is placed on automatic starters, speed control, and electronic applications. Three class periods a week. Prerequisite: E.E. 318.
Second Semester, Each Year

E.E. 419. SERVOMECHANISMS **THREE CREDIT HOURS**
 A study of the analysis of closed-loop control systems. This includes an investigation into the operating principles of the various types of controllers and follow-up links, transient and steady state stability and the Nyquist stability criterion. Operational calculus is developed and used throughout. Three class periods a week. Prerequisite: Math. 301, E.E. 302, or equivalent.
First Semester, Each Year

E.E. 420. SYMMETRICAL COMPONENTS **THREE CREDIT HOURS**
 A course dealing with the theory and applications of Symmetrical Components to unbalanced polyphase circuits. Two class periods and one problem period a week. Prerequisite: E.E. 401; Corequisite: E.E. 412. *Second Semester, Each Year*

E.E. 421. MAGNETIC AMPLIFIERS **THREE CREDIT HOURS**
 A study of the basic principles and applications of magnetic amplifiers. This includes a review of basic magnetic theory, simple saturable reactor circuits, circuits involving self-saturation and feedback, transient response, single core magnetic amplifiers, design methods and applications. Three class periods a week. Prerequisite: E.E. 318 and/or permission of instructor; Corequisite: E.E. 403 and/or permission of instructor.
First Semester, Each Year

ENGLISH (Eng.)

- BRO. WILLIAM WEHRLE, HEAD
- BRO. BOLL, MR. CONNER, FR. DONNELLY, SR. GENEVIEVE MARIE, BRO. KOHLES, MR. LAKE, FR. LEES, SR. MARIE EMILIE, BRO. MATHEWS, BRO. PRICE, BRO. ROESCH, MISS WHETRO

ENG. 100. ENGLISH COMPOSITION **THREE CREDIT HOURS**
 This course, consisting largely of the principles of grammar and the mechanics of composition, is obligatory for those who score below a determined norm on a standardized test. Upperclassmen, at the discretion of the respective deans, may also be required to take or to repeat this course. Five class periods a week.
Each Semester, Each Year

ENG. 101. ENGLISH COMPOSITION **THREE CREDIT HOURS**
 The regular freshman college composition course in which the principles of grammar, punctuation, usage, and rhetoric are presented. Application of these principles is made to exercises and regularly assigned themes.
Each Semester, Each Year

- ENG. 141. INTRODUCTION TO JOURNALISM I THREE CREDIT HOURS
An outline survey designed to acquaint the prospective journalist with the field of journalism. *First Semester, Each Year*
- ENG. 142. INTRODUCTION TO JOURNALISM II THREE CREDIT HOURS
This is a continuation of Eng. 141, which presents an outline survey designed to acquaint prospective journalists with the field of Journalism. *Second Semester, Each Year*
- ENG. 221. ENGLISH LITERATURE THREE CREDIT HOURS
A survey of English literature from its beginning to the present day; it includes a study of the background as well as the works of the authors of each period. *Each Semester, Each Year*
- ENG. 222. AMERICAN LITERATURE THREE CREDIT HOURS
A survey of American literature from the Colonial Period to the present day; it presents a study of the background as well as representative works of the different periods. *Each Semester, Each Year*
- ENG. 241. REPORTING THREE CREDIT HOURS
Instruction and practice in gathering and recording news, combining the basic principles of news writing with exercises as assignment materials. *First Semester, Each Year*
- ENG. 304. THEME WRITING THREE CREDIT HOURS
An intensive study of the construction and preparation of a documented paper. A documented paper is required to show that the principles taught have been assimilated. *Second Semester, Each Year*
- ENG. 305. MEDICAL TERMINOLOGY THREE CREDIT HOURS
A study of the Greek and Latin roots which form the foundation of medical terms. To this is added a study of prefixes, suffixes, and compounds. *First Semester, Each Year*
- ENG. 316. ADVANCED COMPOSITION THREE CREDIT HOURS
A study and application of the principles of composition to the various types of writing. Prerequisite: Eng. 101. *Each Semester, Each Year*
- ENG. 322. WORLD LITERATURE THREE CREDIT HOURS
A study of international literature, stressing the classics, beginning with the epic of Homer, and tracing some of the main lines in the development of the literature of the Western cultures. Lectures, discussions, and oral reports are included. *First Semester, Each Year*
- ENG. 324. HISTORY OF THE AMERICAN NOVEL THREE CREDIT HOURS
A study of the American novel from its beginnings to the present day. Outside readings and reports constitute an integral part of the course. *First Semester, 1954-1955*

- ENG. 325. TECHNIQUE OF VERSE THREE CREDIT HOURS
A study of the principles and mechanics of poetic forms, with the purpose of applying what has been learned to exercises in writing verse.
First Semester, Each Year
- ENG. 327. HISTORY OF THE NOVEL THREE CREDIT HOURS
A study of the English novel from its beginnings to the present day. Outside readings and reports constitute an integral part of the course.
Second Semester, 1955-1956
- ENG. 328. SURVEY OF THE ESSAY THREE CREDIT HOURS
The history, nature, structure, and style of the essay. The lives and works of the leading essayists are studied.
First Semester, 1955-1956
- ENG. 329. SHORT STORY THREE CREDIT HOURS
A study of the characteristics of the writers of the Victorian short story. Various models of the short story will be analyzed. The reading and reporting on specified stories form a part of the course.
First Semester, 1955-1956
- ENG. 330. VICTORIAN POETS THREE CREDIT HOURS
A study of the characteristics of the writers of the Victorian Age through direct contact with their works. The influence of these writers will also be pointed out.
Second Semester, 1954-1955
- ENG. 331. ROMANTIC POETS THREE CREDIT HOURS
A study of the characteristics of the writers of the Romantic Age through direct contact with their works. The influence of these writers will also be pointed out.
First Semester, 1954-1955
- ENG. 341. EDITING THREE CREDIT HOURS
A step-by-step treatment of the technique of publication production. Laboratory work in editing copy, headline building, page make-up, typography, and proof-reading are included.
First Semester, Each Year
- ENG. 342. FEATURE AND EDITORIAL WRITING THREE CREDIT HOURS
Instruction and practice in compiling and writing various types of special feature articles and editorials.
Second Semester, Each Year
- ENG. 351. AMERICAN DOCUMENTARY LITERATURE THREE CREDIT HOURS
A study of influential political documents from the Mayflower Compact to the present day, stressing literary aspects, composition, and rhetoric, as well as the principles of democracy.
First Semester, Each Year
- ENG. 408. BUSINESS ENGLISH THREE CREDIT HOURS
The principles of letter writing are studied and applied in conformity with the best current practices in business.
First Semester, Each Year
- ENG. 414. FRANCIS THOMPSON THREE CREDIT HOURS
A study of the life and times of Francis Thompson, together with a reading and analysis of his outstanding works.
First Semester, Each Year

- ENG. 415. MILTON THREE CREDIT HOURS
A study of *Paradise Lost* and *Paradise Regained* and a selected number of the minor poems of Milton. *Second Semester, 1954-1955*
- ENG. 416. BROWNING THREE CREDIT HOURS
An intensive study of the life and times of Robert Browning, together with a reading and analysis of his outstanding works. *Second Semester, 1955-1956*
- ENG. 417. EDGAR ALLAN POE THREE CREDIT HOURS
A study of the life and times of Edgar Allan Poe, together with a reading and analysis of his poetry, stories, and essays. *First Semester, 1954-1955*
- ENG. 419. NEWMAN THREE CREDIT HOURS
An analytical study of Newman's prose in *The Idea of a University*. The writing of essays modeled on the *Discourse*. *Second Semester, Each Year*
- ENG. 421. MODERN POETRY THREE CREDIT HOURS
A study of the British and American poets of the modern era. The poetic movements characteristic of this period will be studied and applied to the writings of the poets considered. *Second Semester, Each Year*
- ENG. 422. INTRODUCTION TO DRAMA THREE CREDIT HOURS
A survey of the development of the drama of all ages, and of the chief nations from the time of the Greeks to the present day. The reading of typical plays forms an integral part of the course. *First Semester, 1954-1955*
- ENG. 423. TRAGEDIES OF SHAKESPEARE THREE CREDIT HOURS
A comprehensive study of all the Tragedies of Shakespeare. All of the plays will be read. An intensive study of a selected few of the Tragedies will be made. *Second Semester, 1954-1955*
- ENG. 424. COMEDIES OF SHAKESPEARE THREE CREDIT HOURS
A comprehensive study of all the Comedies will be made with special emphasis upon a selected few. *First Semester, 1955-1956*
- ENG. 425. HISTORIES OF SHAKESPEARE THREE CREDIT HOURS
A comprehensive study of all the Historical plays of Shakespeare. All of the plays will be read. An intensive study of a selected few will be made. *Second Semester, 1955-1956*
- ENG. 426. MODERN DRAMA THREE CREDIT HOURS
In this course, a selected number of dramas from the modern period will be read and studied. *Second Semester, Each Year*
- ENG. 427. DANTÉ THREE CREDIT HOURS
The Divine Comedy in English: a comprehensive study of the poem from a literary point of view. *Second Semester, 1954-1955*

- ENG. 428. LITERARY CRITICISM THREE CREDIT HOURS
 A study of the beginnings and development of literary criticism. It includes a study of fundamental principles of literary structure and style, together with the various theories advanced. *First Semester, 1955-1956*
- ENG. 429. CHAUCER THREE CREDIT HOURS
 A study of the life and times of Chaucer. Emphasis is placed on the study of the *Canterbury Tales*. *Second Semester, 1955-1956*
- ENG. 430. HISTORY OF THE ENGLISH LANGUAGE THREE CREDIT HOURS
 The stages of the development of the language together with the influences shaping its development, will be studied to show what has happened to the English language from the beginning to the present day. This course is recommended to those majoring in English, as well as those who intend to teach English. *Second Semester, Each Year*

GENERAL ENGINEERING (G.E.)

MR. BALDINGER, MR. CHAMBERLAIN, MR. HAUENSTEIN, MR. WEHMANEN

- G.E. 101. ENGINEERING DRAWING THREE CREDIT HOURS
 Practice in lettering and the use of instruments; orthographic projection, working drawings, auxiliary views, sections and conventions, dimensioning, drawings; pictorial drawings, isometric and oblique; technical sketching. Two lecture periods and four laboratory hours a week. *First Semester, Each Year*
- G.E. 102. DESCRIPTIVE GEOMETRY THREE CREDIT HOURS
 Auxiliary and oblique views; line and plane problems; surfaces, intersections and developments, warped surfaces, applications to drawing and engineering problems. Two lecture periods and four laboratory hours a week. Prerequisite: G.E. 101. *Second Semester, Each Year*
- G.E. 105. ENGINEERING SURVEY NO CREDIT
 An orientation course designed to give the freshman students a general view of the engineering profession. It discusses engineering education, methods of study, and engineering curricula; historical background, achievements, and social and economic effects of engineering. One class period a week. *First Semester, Each Year*
- G.E. 202. STATICS THREE CREDIT HOURS
 A study of the fundamental principles of mechanics; force systems, resultants and equilibrium statics, friction, center of gravity, moments of inertia of areas. Three class periods a week. Prerequisites: Math. 201, Phys. 206. *Each Semester, Each Year*
- G.E. 301. DYNAMICS THREE CREDIT HOURS
 Kinematics of particles and rigid bodies, moments of inertia of masses, kinetics of rigid bodies, work, energy and power, impulse and momentum. Three class periods a week. Prerequisites: G.E. 202, Math. 202. *First Semester, Each Year*

G.E. 303. STRENGTH OF MATERIALS THREE CREDIT HOURS
The study of stresses and strains in tension, compression, shear and torsion; riveted and welded joints; shear and moment diagrams; stresses and deflections of beams and columns; stresses at a point, including Mohr's circle. Three class periods a week. Prerequisites: G.E. 202, Math. 202. *Each Semester, Each Year*

G.E. 305. MATERIALS TESTING ONE CREDIT HOUR
A laboratory course to acquaint the student with A. S. T. M. standards and procedures in the physical tests of steel, timber and concrete. Mechanical tests include those of tension, compression, flexure, torsion, hardness and impact. One laboratory period a week. Corequisite: G.E. 303. *Each Semester, Each Year*

G.E. 307. HYDRAULICS FOUR CREDIT HOURS
A basic course in the principles of hydrostatics and hydrodynamics: pressures exerted by water at rest or in motion; measurement of fluid flow; fundamentals of dimensional analysis and dynamic similarity; flow of water in pipes and open channels, with application of basic principles to the flow of other fluids; hydraulic turbines and centrifugal pumps. Four class periods a week. Prerequisite: G.E. 202. *First Semester, Each Year*

G.E. 402. CONTRACTS AND SPECIFICATIONS TWO CREDIT HOURS
Lectures and assigned readings covering the essential elements of contracts, specifications and professional ethics; legal relations, rights and responsibility of the engineer. Two class periods a week. *Second Semester, Each Year*

GEOLOGY (Geo.)

MR. G. SPRINGER, ACTING HEAD

MRS. GRAY

GEO. 101. PHYSICAL GEOLOGY FOUR CREDIT HOURS
An introductory course in the composition and structure of the earth; its land forms and the agencies active in their production. Three class periods and one laboratory period a week. *First Semester, Each Year*

GEO. 102. HISTORICAL GEOLOGY FOUR CREDIT HOURS
The geological history of the earth as interpreted from the rocks of its crust; its dynamic, geographic, and climatic changes; animals and plants of the past. Three class periods and one laboratory period a week. Also field work. Prerequisite: Geo. 101. *Second Semester, Each Year*

GEO. 103. PRINCIPLES OF GEOGRAPHY THREE CREDIT HOURS
An analysis and classification of the physical and cultural features of the earth; their pattern of distribution, and their associations. Three class periods a week. *First Semester, Each Year*

GEO. 104. ECONOMIC GEOGRAPHY THREE CREDIT HOURS
This course shows the influence of physiography factors on the agricultural, extractive and manufacturing industries, and the problems involved in transportation and commerce. Three class periods a week. *Each Semester, Each Year.*

GEO. 201. MINERALOGY FOUR CREDIT HOURS
A microscopic study of minerals, their chemical and physical properties and economic uses. The course includes a discussion of crystallography and the determination of the more common minerals by their physical properties and blow-pipe analysis. Two class periods and four hours of laboratory a week.
First Semester, Each Year

GEO. 202. OPTICAL MINERALOGY AND PETROGRAPHY FOUR CREDIT HOURS
A study of the optical properties of the rock forming minerals, and the determination of rock types through the use of thin sections and the polarizing microscope. Two class periods and four hours of laboratory a week.
Second Semester, Each Year

GEO. 205. GEOLOGY FOR ENGINEERS THREE CREDIT HOURS
The application of geological principles to engineering problems. A study of weathering, erosion, permafrost, faulting, landslides and similar phenomena. Laboratory work in dimension stones and geologic map interpretation. Two class periods and two hours of laboratory a week. *First Semester, Each Year*

GEO. 301. STRUCTURAL GEOLOGY FOUR CREDIT HOURS
The origin and development of structural features of the earth's crust; folding, faulting, volcanism, mountain building, and metamorphism. Three class periods and two hours of laboratory a week.
First Semester, 1955-1956

GEO. 302. GLACIAL GEOLOGY THREE CREDIT HOURS
The origin of mountain and continental glaciers; their depositional features and corrosive activity; history of glaciation in geologic past with special emphasis upon North American Pleistocene ice advances. Three class periods a week.
Second Semester, 1955-1956

GEO. 303. FIELD GEOLOGY SIX CREDIT HOURS
Six or eight weeks summer study of structural and age relationship problems in areas containing abundant crystalline and sedimentary exposures.
Summer, 1954

GEO. 305. INTERMEDIATE PETROLOGY FOUR CREDIT HOURS
Discussion of the processes of igneous intrusion and extrusion, and of the theories of magmatic differentiation; study of the principles and products of metamorphism. Two class periods and four hours of laboratory a week.
First Semester, 1955-1956

- GEO. 307. GEOMORPHOLOGY FOUR CREDIT HOURS
 A detailed study of landforms and the erosional processes that develop them. Three class periods and two hours of laboratory a week.
Second Semester, 1954-1955
- GEO. 401. PALEONTOLOGY FOUR CREDIT HOURS
 A study of animal life of the geologic past as shown by the fossil record. Three class periods and two hours of laboratory a week. *Second Semester, 1954-1955*
- GEO. 403. SEDIMENTATION THREE CREDIT HOURS
 The sequence and methods of correlation of the sedimentary rocks of North America, with special attention given to index fossils characteristic of various geologic horizons. Discussion of the processes of sedimentation; diagnosis; classification of sedimentary rocks; detailed study of common rock types. Three class periods a week.
Second Semester, 1955-1956
- GEO. 404. PROBLEMS IN GEOLOGY THREE CREDIT HOURS
 A consideration of special problems involving advanced work in the laboratory and library; arranged to meet the needs of individual students.
Each Semester, Each Year
- GEO. 405-406. ECONOMIC GEOLOGY SIX CREDIT HOURS
 Geology of fuels, the major ores, the raw materials used for structural and building purposes; their geographic distribution, geologic occurrence, recognition and production. Three class periods a week. Prerequisite: Geo. 101-102.
Full Year Course, 1954-1955
- GEO. 407. PHOTOGRAPHIC INTERPRETATION FOUR CREDIT HOURS
 The use of aerial photographs in the interpretation of landforms, and as base maps in geological surveying. Two class periods and four hours of laboratory a week.
First Semester, 1954-1955

HISTORY (Hist.)

MR. STEINER, HEAD

MR. BEAUREGARD, MR. KING, MR. O'DONNELL, FR. PREISINGER, BRO. ROESCH

- HIST. 103-104. ECCLESIASTICAL HISTORY SIX CREDIT HOURS
 This course is given at Mount St. John. Enrollment is restricted to members of the Society of Mary.
Full Year Course, Each Year
- HIST. 111. HISTORY OF MODERN EUROPE THREE CREDIT HOURS
 A survey of European History from 1500 to 1815. Beginning with a rapid summary of the Renaissance, this course discusses the Protestant Revolution, Catholic Reformation, absolute monarchies, French Revolution, Napoleonic Era, and the Congress of Vienna. Together with Hist. 112 this course serves as an introduction to European History.
Each Semester, Each Year

HIST. 112. HISTORY OF MODERN EUROPE **THREE CREDIT HOURS**
 A survey of European History from 1815 to the present. After discussing the Congress of Vienna, this course considers the growth of nationalism, liberalism, industrialism, and imperialism, as well as World War I, totalitarianism, World War II, and the United Nations Organization.

Each Semester, Each Year

HIST. 205. AMERICAN ECONOMIC HISTORY **THREE CREDIT HOURS**
 An intensive study of the development of agriculture, industry, transportation, commerce, and finance against the general background of American political and social history. Accredited in Economics.

Each Semester, Each Year

HIST. 251. AMERICAN HISTORY TO 1865 **THREE CREDIT HOURS**
 A general survey of the development of the American nation from colonial times to 1865. Due consideration is given to political trends, but the economic and social foundations of American institutions are also emphasized.

First Semester, Each Year

HIST. 252. AMERICAN HISTORY SINCE 1865 **THREE CREDIT HOURS**
 This course carries forward the story of the nation and its development after the Civil War. Stress is laid upon those social, economic, and political problems, a knowledge of which is essential to an understanding of contemporary America.

Second Semester, Each Year

HIST. 301. MEDIEVAL EUROPE **THREE CREDIT HOURS**
 The development of Europe from the fourth century to the fourteenth century. A resume of theories concerning the medieval epoch is followed by a treatment of the birth of the Middle Ages, Christianity, and the Byzantine, Islamic, and Carolingian Empires. There is also study of feudalism, manorialism, the Crusades, and the growth of national states. Prerequisite: Hist. 111-112.

Second Semester, 1955-1956

HIST. 302. RENAISSANCE AND REFORMATION **THREE CREDIT HOURS**
 The development of Europe from the fourteenth century to the middle of the seventeenth century. After summarizing theories about this era, the course stresses causes of the period. There follows the emphasis on the economic, political, social, and religious aspects of the Renaissance, Protestant Revolution, and Catholic Reformation. Prerequisite: Hist. 111-112.

First Semester, 1954-1955

HIST. 303. EXPANSION OF EUROPE **THREE CREDIT HOURS**
 A treatment of the spread of European power and institutions between 1450 and 1914. European influence in Canada and Africa will be emphasized, but it will be considered in Australasia and in countries regarded as gateways to India. Prerequisite: Hist. 111-112.

Second Semester, 1954-1955

HIST. 305. HISTORY OF RUSSIA **THREE CREDIT HOURS**
 The development of the Russian state from earliest times to the present. This course is concerned with the origins of the Russian state, political and economic

growth, and a consideration of the development of the Modern Russian state in the period following the Revolution of 1917. *First Semester, 1955-1956*

HIST. 307. CULTURAL HISTORY OF EUROPE TO 1830 THREE CREDIT HOURS

A brief review of pre-historic and Oriental art to prepare the ground for a study of modern art. Then a more intensive survey of the basic arts of architecture, painting, sculpture, and music through the various movements in Europe and America: the Greek and Roman; the Byzantine and Saracenic; the Romanesque and Gothic; the Renaissance; the Baroque, the Rococo and the Neo-Classic. Accredited in Art. *First Semester, Each Year*

HIST. 308. CULTURAL HISTORY OF EUROPE SINCE 1830

THREE CREDIT HOURS

After a brief survey of the basic principles underlying all the arts, and their application to daily life, an intensive study of the Romantic, Realistic and Impressionistic movements, together with a study of the various Modern movements since 1900. Accredited in Art. *Second Semester, Each Year*

HIST. 309. ANCIENT HISTORY

THREE CREDIT HOURS

A survey of ancient civilizations between 5000 B. C. and 313 A. D. The civilizations—Egyptian, Mesopotamian, Anatolian, Syro-Palestinian, Persian, Aegean, Hellenic, Hellenistic, and Roman—will be studied for political, economic, social, religious and cultural factors. Prerequisite: Hist. 111-112.

First Semester, 1955-1956

HIST. 313. CHRISTIAN ANTIQUITY

THREE CREDIT HOURS

This course investigates the origin and cultural setting of early Christianity, the conflict with the pagan Roman Empire and the subsequent emergence of Christianity under Constantine. Special emphasis is placed upon the doctrinal controversies and patristic writers of the fourth and fifth centuries. Conducted only in the Division of Arts at Carthage. *First Semester, Each Year*

HIST. 351. AMERICAN COLONIAL HISTORY

THREE CREDIT HOURS

A study of the foundations of American nationality. Beginning with a consideration of the European background of American colonization, the course continues with the development of the colonial system, with direct reference to the ideas and institutions that were transplanted from the Old World. Attention is then given to the growth of democratic tendencies and the rise of conflicting points of view leading to the American Revolution. Prerequisite: Hist. 251.

First Semester, 1954-1955

HIST. 356. LATIN AMERICA—THE COLONIAL PERIOD THREE CREDIT HOURS

The unity or near unity which characterized the Latin America story during the colonial centuries is discussed. Special consideration is given to the Spanish colonies and Brazil. Individuality of Spanish provinces is illustrated and the necessary emphasis is placed on the reason for racial mixture being greater in some areas and less marked in others. Reasons are stated for the same laws

governing all colonies—as well as for the same basic loyalties, the same institutions, political and social, economic and religious. *First Semester, 1955-1956*

HIST. 357. LATIN AMERICA—THE NATIONAL PERIOD THREE CREDIT HOURS

The following factors or common denominators in the National Period form the outline of the course: The Latin character—its individualism, its humanism, its emotionalism; political immaturity of early National Latin America; the "Caudillo"; major political parties; Church and State; anti-clericalism; "one-crop" economies; class and race. *Second Semester, 1955-1956*

HIST. 402. HISTORICAL RESEARCH THREE CREDIT HOURS

An introduction to the study of research and writing in History. Special emphasis is given to the mechanics of research and the problems encountered in preparing a manuscript for publication. Practical application of the principles of research and composition will be required in the form of a term paper required of all History majors. Prerequisite: 12 credit hours in History.

First Semester, Each Year

HIST. 408. THE DIPLOMATIC HISTORY OF THE UNITED STATES

THREE CREDIT HOURS

Foundations of American foreign policy; diplomacy of continental expansion; special emphasis on diplomatic problems since 1898. Accredited in Political Science. Prerequisite: Hist. 251-252. *First Semester, 1954-1955*

HIST. 409. EUROPE SINCE 1914 THREE CREDIT HOURS

An intensive treatment of Europe from 1914 to the present. Concentration is placed on these topics: causes and outcome of World War I; internal policies of nations between the two World Wars; diplomatic actions leading to World War II; and the impact of World War II. Prerequisite: Hist. 111-112.

Second Semester, 1954-1955

HIST. 411. HISTORY OF THE FAR EAST THREE CREDIT HOURS

A brief review of the early historical development of the main areas of the Far East, followed by a more intensive study of the development of China and Japan in the nineteenth and twentieth centuries. Emphasis is given to the political, religious, cultural, and economic growth of China and Japan. The lesser lands of the Far East are treated in a general way. Prerequisite: Hist. 111-112.

Second Semester, 1955-1956

HIST. 427. THE WESTWARD MOVEMENT THREE CREDIT HOURS

A history of the expansion of settlement in the United States since 1783. The movement of the frontier to the Pacific Coast will be followed in relation to the development of exploration, Indian relations, land policy, methods of transportation, and the influence of the West upon American ideals and institutions. Prerequisite: Hist. 251 and 252. *Second Semester, 1954-1955*

HIST. 431. MODERN CHURCH HISTORY THREE CREDIT HOURS

The French Revolution. Napoleon and Pius VII. Secularization in Germany.

The Catholic Romantic Movement. The Cologne conflict. The Oxford Movement. The Roman Question. Infallibility: the Vatican Council. *Kulturkampf*. Modernism. Conducted only in the Division of Arts at Carthage.

Second Semester, Each Year

HIST. 448. AMERICAN CONSTITUTIONAL DEVELOPMENT

THREE CREDIT HOURS

The development of American constitutional philosophy since 1787 under three general heads: the Agrarian Constitution; the Laissez-Faire Constitution; and the Welfare Constitution. Topics will include the Marshall and Taney eras; constitutional problems of slavery; the constitutional problems of federal and state regulation; the constitutional foundations of 19th century capitalism; civil liberties in the 20th century; the constitutional crises of 1935-1937 and current problems of constitutional interpretation. Prerequisite: Hist. 251-252.

First Semester, 1955-1956

HIST. 449. RECENT AMERICAN HISTORY

THREE CREDIT HOURS

Contemporary social, economic, and political aspects of the United States and its role as a world power from 1900 to the present, with a broad interpretation of the impact of mature capitalism on American behavior. Prerequisite: Hist. 251-252.

Second Semester, 1955-1956

HIST. 451. CIVIL WAR AND RECONSTRUCTION

THREE CREDIT HOURS

Remote and immediate causes of the Civil War, especially from 1850 to 1861; problems of the North and South during the war; the consequences of the war; the efforts to create a new Union, 1865 to 1877, and the new problems created by those efforts. Prerequisite: Hist. 251. *Second Semester, 1954-1955*

HIST. 461. THE HISTORY OF MEXICO

THREE CREDIT HOURS

A political, social, and cultural history of the Mexican Nation; the development and expansion of New Spain; the work of the Church as an agency of Christianity and civilization; problems affecting the growth and integrity of the republic of Mexico.

First Semester, 1954-1955

HOME ECONOMICS (Hec.)

MRS. ROSE, HEAD

MRS. PAYNE, MRS. SELF

HEC. 100. INTRODUCTION TO HOME ECONOMICS

ONE CREDIT HOUR

A course planned to acquaint freshmen with the home economics program and opportunities in the field; problems in personal adjustment. Required of all students majoring in home economics. One class period a week.

First Semester, Each Year

HEC. 101. BEGINNING CLOTHING

THREE CREDIT HOURS

Instructions on the use of the sewing machine and its attachments; the study of

commercial patterns and the construction of cotton garments. Three two-hour laboratory periods a week. Hec. 105 recommended as preceding or concurrent.

Second Semester, Each Year

HEC. 102. FOODS I THREE CREDIT HOURS

A study of the basic principles of food selection and preparation; application of these basic principles as they relate to commonly used foods in an adequately balanced diet. One class period and two two-hour laboratory periods a week.

First Semester, Each Year

HEC. 105. INTRODUCTION TO RELATED ART THREE CREDIT HOURS

A basic course in color and design. Two class periods and one laboratory period a week.

First Semester, Each Year

HEC. 201. FOODS II THREE CREDIT HOURS

A study of the problems that will be found in cooking meat, fish, poultry, and various flour mixtures. One class period and two two-hour laboratory periods a week.

Second Semester, Each Year

HEC. 203. HEALTH AND HOME NURSING THREE CREDIT HOURS

A study of personal health and prevention of disease in the family; relation to community health and disease control; important diseases and their prevention; accidents and emergencies in the home. Three class periods a week.

Second Semester, Each Year

HEC. 205. ELEMENTARY ACCOUNTING FOR HOME ECONOMICS STUDENTS THREE CREDIT HOURS

An introductory course in accounting, acquainting the student with the entire cycle of bookkeeping procedure. Three class periods a week.

First Semester, 1954-1955

HEC. 214. TEXTILES I THREE CREDIT HOURS

A study of the characteristics of textile fibres, yarns, and fabrics as they affect ultimate use and durability. Two class periods and one two-hour laboratory period a week.

Second Semester, Each Year

HEC. 221. HOME MANAGEMENT I THREE CREDIT HOURS

Study of management of various resources available to the family with a view to promoting family well-being and satisfaction. Three class periods a week.

First Semester, Each Year

HEC. 222. HISTORIC TEXTILES THREE CREDIT HOURS

A study of the development of the textile industry in all parts of the world, with emphasis on fibers used, design and color. Three class periods a week.

Prerequisite: Hec. 214.

Second Semester, 1954-1955

HEC. 302. MEAL PLANNING AND TABLE SERVICE THREE CREDIT HOURS

Principles of menu planning and table service for families in various income

levels and special occasions. A study of glassware, silverware, and china. Laboratory practice in preparation of meals. One class period and two two-hour laboratory periods a week. Prerequisite: Hec. 102 or 201.

First Semester, 1955-1956

HEC. 303. NUTRITION AND HEALTH **THREE CREDIT HOURS**

Fundamental principles of human nutrition, including requirements of the body for the nutritive essentials, the composition of foods and the planning of adequate diets for health. Three class periods and one two-hour laboratory period a week. Prerequisites or Corequisites: Chem. 100, 200, 400.

First Semester, 1954-1955

HEC. 304. QUANTITY COOKERY **THREE CREDIT HOURS**

The planning, preparing, and serving of foods in large quantities. Use and care of equipment for quantity cookery. One class period a week. Laboratory periods to be arranged.

Second Semester, 1954-1955

HEC. 305. INSTITUTIONAL ACCOUNTING **THREE CREDIT HOURS**

A study of bookkeeping methods used in various types of institutions; perpetual inventory in the field of foods; food stores and inventories. Three class periods a week. Prerequisite: Hec. 205.

Second Semester, 1954-1955

HEC. 307. HOUSEHOLD PHYSICS **THREE CREDIT HOURS**

The principles of physics as applied to household appliances. Three class periods a week.

Second Semester, 1954-1955

HEC. 308. INSTITUTIONAL BUYING **THREE CREDIT HOURS**

Selection and methods of purchasing food in large quantities. Selection and maintenance of institutional equipment.

Second Semester, 1955-1956

HEC. 309. HOUSEHOLD EQUIPMENT **THREE CREDIT HOURS**

A study of the principles involved in the selection, construction, operation, and care of household equipment and its relation to the well-being of the family. One class period and two two-hour laboratory periods a week. Prerequisite: Hec. 307.

First Semester, 1954-1955

HEC. 311. ADVANCED CLOTHING **THREE CREDIT HOURS**

Selection and construction of rayon or silk and woolen garments. Includes a remodeling problem and problems in renovation and repair. Three two-hour laboratory periods a week. Prerequisites: Hec. 101, 105.

First Semester, Each Year

HEC. 312. CHILDREN'S CLOTHING **THREE CREDIT HOURS**

A study of fabrics, design, and decoration of clothing suitable for infants and children. Construction is included. One class period and two two-hour laboratory periods a week. Prerequisites: Hec. 101, 105, 311.

First Semester, 1955-1956

HEC. 314. COSTUME, ART AND DESIGN **THREE CREDIT HOURS**

Creative work in selecting, designing, criticizing various types of garments and

their suitability for different types of people. Stress is placed upon the drawing and designing of costumes. One class period and two two-hour laboratory periods a week. Prerequisite: Hec. 105. *Second Semester, 1956-1957*

HEC. 315. CONSUMER BUYING THREE CREDIT HOURS
Labeling and principles of better buying of the family's clothing, food and household furnishings. For Juniors and Seniors. Three class periods a week. *Second Semester, 1954-1955*

HEC. 316. TEXTILES II THREE CREDIT HOURS
Microscopical, chemical and physical analysis of textile fibers and fabrics. Recent developments in the textile field. Two class periods and one two-hour laboratory period a week. Prerequisite: Hec. 214. *First Semester, 1954-1955*

HEC. 318. FAMILY RELATIONSHIPS THREE CREDIT HOURS
A consideration of the factors necessary for the establishment and maintenance of happy family relationships. Three class periods a week. *First Semester, Each Year*

HEC. 323. DEMONSTRATION METHODS ONE CREDIT HOUR
A study in the presentation of a series of demonstrations; study of publicity materials, articles, leaflets, and announcements as they would pertain to a demonstration or presentation. One class period a week. For Juniors and Seniors. *Second Semester, Each Year*

HEC. 324. BISHOP CLOTHING CONSTRUCTION METHODS THREE CREDIT HOURS
Trade practices and perfection details used in speeding simple dress construction, fitting, and tailoring. Blouses, simple dress and suit or coat to be constructed. Three two-hour laboratory periods a week. *To be announced—Evening*

HEC. 401. ADVANCED NUTRITION THREE CREDIT HOURS
Aims to extend the student's knowledge of the science of nutrition, stressing the metabolism of food constituents and the recent advances in the field of nutrition. Three class periods a week. Prerequisite: Hec. 303. *Second Semester, 1954-1955*

HEC. 402. DIET IN DISEASE THREE CREDIT HOURS
Adaptation of diet to disease. Three class periods a week. Prerequisite: Hec. 303. *Second Semester, 1955-1956*

HEC. 405. TEACHING OF HOME ECONOMICS IN SCHOOL THREE CREDIT HOURS
The philosophy of home economics education, curriculum, methods, devices, and materials used in teaching. Preparation and presentation of units and lessons. Three class periods a week. *First Semester, 1954-1955*

- HEC. 406. HOME MANAGEMENT II THREE CREDIT HOURS
A study of the goals in home making. Students have an opportunity to put into practice the subject matter previously learned by applying same. One class period a week, individual conferences and laboratory periods to be arranged. Open to non-Home Economics majors. *Second Semester, 1954-1955*
- HEC. 407. INSTITUTIONAL ORGANIZATION AND MANAGEMENT THREE CREDIT HOURS
A study of the principles of institutional organization and administration applied to the problems of feeding institution groups; problems in personnel management; cost control. Three class periods a week. *Second Semester, 1954-1955*
- HEC. 409. ADVANCED FOODS THREE CREDIT HOURS
A study of the recent developments in foods with special emphasis on food preservation. One class period and two two-hour laboratory periods a week. *First Semester, 1954-1955*
- HEC. 412. HISTORIC COSTUMES THREE CREDIT HOURS
A study of the development of costume from ancient times to the present day; the influences of social and economic conditions upon costume. Two class periods and one two-hour laboratory period a week. For Juniors and Seniors. *First Semester, 1954-1955*
- HEC. 415. TAILORING THREE CREDIT HOURS
Tailored construction applied in the making of coats and suits. Three two-hour laboratory periods a week. Prerequisites: Hec. 101, 105, 311. *Second Semester, 1954-1955*
- HEC. 423. HOME FURNISHINGS I THREE CREDIT HOURS
A study of the problems involved in furnishing a home artistically, including furniture and its arrangement, and the decorative details of room planning. Two class periods and one two-hour laboratory period a week. *Second Semester, 1954-1955*
- HEC. 424. HOME ARCHITECTURE THREE CREDIT HOURS
A study of the evolution of the house; the development of its function as a place of shelter and the center of family life; types of architecture. Two class periods and one two-hour laboratory period a week. Prerequisite: Hec. 105. *Second Semester, 1954-1955*
- HEC. 425. CHILD DEVELOPMENT I THREE CREDIT HOURS
A study of the various aspects of child development necessary for an understanding of behavior of children and the factors involved in their guidance. Two class periods a week; laboratory period to be arranged. *First Semester, 1954-1955*

HEC. 426. CHILD DEVELOPMENT II THREE CREDIT HOURS
 Continuation of Child Development I. Two class periods a week; laboratory periods to be determined. *First Semester, 1955-1956*

HEC. 427. TEXTILE ECONOMICS THREE CREDIT HOURS
 Problems of the textile and clothing industry as they affect the buyer; how industry is affected by present-day laws and trends. Factors affecting fashion, price and style. Three class periods a week. For Juniors or Seniors. *First Semester, 1954-1955*

HEC. 430. HOME FURNISHINGS II THREE CREDIT HOURS
 Problem of making slip covers, draperies and refinishing furniture, as it meets the needs of the individual. *Second Semester, 1955-1956*

HEC. 431. FIELD WORK THREE-SIX CREDIT HOURS
 On-the-job training with local firms and organizations in specialized fields, such as interior decoration and textiles. *Each Semester, Each Year*

HEC. 432. SPECIAL PROBLEMS IN CHILD DEVELOPMENT THREE CREDIT HOURS
 Investigation, discussion and formulation of theory and problems of pre-school children. One conference and four hours laboratory work minimum a week. Prerequisites: Hec. 425, 426. Required of all students taking Nursery School Work. *First Semester, 1954-1955*

HEC. 435. ADVANCED HOME PLANNING THREE CREDIT HOURS
 Detailed problems of room arrangement, remodeling, and redecorating at various cost levels. One class period and two two-hour laboratory periods a week. *First Semester, 1955-1956*

INDUSTRIAL ENGINEERING (I.E.)

MR. BRENBERGER

I.E. 301. PERSONNEL ADMINISTRATION THREE CREDIT HOURS
 A survey of methods of selection, testing, wage payment and policies, employee morale and relations. A study of promotions, layoffs and security and the influence exerted by labor unions on the above. Three class periods a week. *First Semester, Each Year*

I.E. 302. TECHNICAL AND MANAGERIAL REPORTS THREE CREDIT HOURS
 The planning, organizing, and writing of technical reports. The emphasis on collecting, evaluating and using factual information, and adapting the material to the writer's audience. Three class periods a week. *Second Semester, Each Year*

I.E. 303. JOB EVALUATION AND WAGE DETERMINATION THREE CREDIT HOURS
 Job evaluation methods and current evaluation plans and merit rating. An analysis of the various systems of wage payment, including an evaluation and

wage system design problem. Three class periods a week.

First Semester, Each Year

I.E. 304. GAGES AND MEASURING DEVICES TWO CREDIT HOURS

Current gaging practices and problems; gage design and related inspection techniques. One class period and three hours of laboratory a week. Prerequisite: G.E. 101.

Second Semester, Each Year

I.E. 306. FOUNDRY PRACTICES THREE CREDIT HOURS

A study of molding techniques and equipment; sand; flux; gating and risering. A survey of die casting; investment mold casting and plastic molding practices. Three class periods a week.

Second Semester, Each Year

I.E. 401. ENGINEERING ECONOMY TWO CREDIT HOURS

A brief introduction to methods of financing. A study of interest; depreciation, economics of tools and equipment; minimum cost point and economic lot sizes. Two class periods a week. Prerequisite: Math. 202.

First Semester, Each Year

I.E. 403. TIME AND MOTION STUDY I THREE CREDIT HOURS

An elementary course in Time and Motion Study. A study of the job analysis techniques including process charts, right and left hand charts, the laws of motion economy, man-machine charts and a survey of micromotion techniques.

A study of timing, equipment, and methods of establishing labor standards including a brief analysis of predetermined time systems. Two class periods and four hours of laboratory a week.

First Semester, Each Year

I.E. 404. TIME AND MOTION STUDY II THREE CREDIT HOURS

A study of advanced problems in establishing standard time date; progressive type operations; application of statistics; micromotion study with practical problems. Two class periods and five hours of laboratory a week. Prerequisite: I.E. 403.

Second Semester, Each Year

I.E. 405. PRODUCTION PLANNING THREE CREDIT HOURS

A study of the practices in production scheduling, routing, dispatching and inventory control; including an analysis of mechanized systems and current practices. Three class periods a week.

First Semester, Each Year

I.E. 406. PLANT LAYOUT AND MATERIAL HANDLING THREE CREDIT HOURS

The design of a plant for a specified product. The study to include: structure; power requirements; heat, light, sound and ventilation; transportation facilities and material handling requirements and equipment. Two class periods and three hours of laboratory a week. Prerequisites: G.E. 101, I.E. 405.

Second Semester, Each Year

I.E. 408. ADMINISTRATION AND ORGANIZATION THREE CREDIT HOURS

A thorough analysis of organizations both small and large; a detailed study of their functions; policy determination and administration. The study to in-

clude the organization and functioning of an enterprise under specific conditions. Three class periods a week. Prerequisite: I.E. 301.

Second Semester, Each Year

I.E. 410. I. E. SEMINAR ONE CREDIT HOUR
 Required of all senior industrial engineering students. The preparation and presentation of a paper on current industrial engineering practices and topics. One class period a week.
Second Semester, Each Year

I.E. 411. PROCESS ENGINEERING THREE CREDIT HOURS
 A study of equipment and material selection; existing manufacturing processes and methods of manufacture. Three class periods a week.
First Semester, Each Year

I.E. 412. ELEMENTS OF TOOL ENGINEERING THREE CREDIT HOURS
 Jig; fixture; tool design; sketching including the design of tools for a specific product.
Second Semester, Each Year

LANGUAGES

BRO. PERZ, HEAD

FR. BARTHOLOMEW, BRO. BECK, BRO. POITRAS, MISS REYST,

MR. ROSENBERG, FR. RUS

Note: Excepting Latin 101-102, 201-202, all the courses in Latin and Greek are conducted at Mt. St. John, and are restricted to student members of the Society of Mary.

FRENCH (Fr.)

FR. 101-102. ELEMENTARY FRENCH SIX CREDIT HOURS
 Elements of French, including pronunciation, reading, translation, grammar, dictation and conversation.
Full Year Course, Each Year

FR. 201-202. INTERMEDIATE FRENCH SIX CREDIT HOURS
 Grammar review, selected readings from modern authors, exercises in composition and conversation.
Full Year Course, Each Year

FR. 303-304. MODERN FRENCH LITERATURE SIX CREDIT HOURS
 A survey covering the chief literary movements, outstanding authors and works from the beginning of the eighteenth century to the present time. Lectures, discussions and reports on assigned readings.
Full Year Course, 1954-1955

FR. 307-308. ADVANCED FRENCH COMPOSITION AND CONVERSATION SIX CREDIT HOURS
 This course is intended for students who possess a general knowledge of French, but have not as yet mastered certain peculiarities of grammar and other diffi-

culties of the written and spoken language. The course includes translation of texts of increasing difficulty from English into French. The oral exercises are based chiefly on material connected with these translations.

Full Year Course, 1954-1955

FR. 401-402. FRENCH LITERATURE TO THE EIGHTEENTH CENTURY
SIX CREDIT HOURS

A survey covering the chief literary movements, outstanding authors and works of this period. Lectures, discussions and reports on assigned readings.

Full Year Course, 1955-1956

FR. 405-406. FRENCH LITERATURE OF THE TWENTIETH CENTURY
SIX CREDIT HOURS

A survey of the literary movements, outstanding authors and works of the present century. Lectures, discussions and reports on assigned readings.

Full Year Course, 1955-1956

GERMAN (Ger.)

GER. 101-102. ELEMENTARY GERMAN
SIX CREDIT HOURS
Elements of German, including pronunciation, reading, translation, grammar, dictation and conversation.
Full Year Course, Each Year

GER. 201-202. INTERMEDIATE GERMAN
SIX CREDIT HOURS
Grammar review, selected readings from modern authors, exercises in composition and conversation.
Full Year Course, Each Year

GER. 301-302. GERMAN LITERATURE TILL 1800
SIX CREDIT HOURS
A survey of German Literature from the earliest times to the period of Romanticism. A study of literary movements, outstanding authors and works: Lectures, discussions and reports on assigned readings.
Full Year Course, 1955-1956

GER. 303-304. GERMAN LITERATURE SINCE 1800
SIX CREDIT HOURS
A survey of German Literature since the Classical period. A study of literary movements, outstanding authors and works. Lectures, discussions and reports on assigned readings.
Full Year Course, 1955-1956

GER. 305-306. SCIENTIFIC GERMAN
SIX CREDIT HOURS
A reading course intended to familiarize students with the technical vocabulary used in scientific fields.
Full Year Course, Each Year

GER. 307. CHEMICAL GERMAN
THREE CREDIT HOURS
A course intended to train students to acquire a reading knowledge of German chemical literature. Required of students in Chemical Engineering and of those majoring in Chemistry.
First Semester, 1954-1955

GER. 401-402. CLASSICAL DRAMA SIX CREDIT HOURS
 A study of the dramatic works of Lessing, Goethe and Schiller. Lectures, discussions and reports on assigned readings. *Full Year Course, 1954-1955*

GER. 403-404. MODERN GERMAN PROSE WRITERS SIX CREDIT HOURS
 The Novelle and the novel. A study of the principal authors and works of the eighteenth and nineteenth centuries. Lectures, discussions and reports on assigned readings. *Full Year Course, 1954-1955*

GREEK (Gr.)

GR. 101-102. ELEMENTARY GREEK SIX CREDIT HOURS
 A study of the essentials of Greek grammar with exercises and readings. *Full Year Course, Each Year*

GR. 201. INTERMEDIATE GREEK THREE CREDIT HOURS
 Continuation of the study of grammar. Readings from New Testament. *First Semester, Each Year*

GR. 303. PLATO THREE CREDIT HOURS
 The *Apologia* is read and selections from the rest of Plato's works. Plato's contribution to the history of ideas as emphasized and illustrated through extensive supplementary reading in Jowett. *To be announced*

GR. 304. HOMER THREE CREDIT HOURS
 Readings from the *Iliad* and the *Odyssey*. *Second Semester, Each Year*

GR. 305. THE SEPTUAGINT THREE CREDIT HOURS
 Extensive readings. Comparison with the Vulgate. Excursions into the field of Biblical science. *To be announced*

GR. 306. THE NEW TESTAMENT THREE CREDIT HOURS
 Similar to Gr. 305. Comparison of the Greek and Latin texts with modern renditions. *To be announced*

GR. 403. GREEK DRAMA THREE CREDIT HOURS
 Reading of Sophocles' *Oepidus Rex* and *Antigone* with a study of the origin and development of Greek drama. *To be announced*

LATIN (Lat.)

LAT. 101-102. ELEMENTARY LATIN SIX CREDIT HOURS
 A college course in Latin fundamentals. *Full Year Course, Each Year*
At Mt. St. John, First Semester, Each Year

- LAT. 201-202. INTERMEDIATE LATIN SIX CREDIT HOURS
 Second year course in Latin. Readings from classical authors of the pre-Christian periods.
Full Year Course, Each Year
- LAT. 301. LATIN COMPOSITION AND CONVERSATION THREE CREDIT HOURS
 This course aims to give an intensive review of inflections and syntax with emphasis on original style and fluency of expression. *Each Semester, Each Year*
- LAT. 304. VERGIL THREE CREDIT HOURS
 A survey of the work of Vergil, with special attention to the literary art of the *Aeneid* and the nature and development of the Roman epic.
First Semester, Each Year
- LAT. 305. MEDIEVAL LATIN THREE CREDIT HOURS
 An outline of the main course of Latin literature from 400 A.D. to 1500 A.D., with special attention being given to the classical heritage of the Middle Ages.
To be announced
- LAT. 306. HORACE THREE CREDIT HOURS
 Readings of selected Odes and Epodes, and the *Ars Poetica* of Horace; a study of his lyric quality, workmanship, and meters.
Second Semester, Each Year
- LAT. 307. READINGS IN LATIN LITERATURE THREE CREDIT HOURS
 This course embraces the reading of excerpts from a wide range of Latin authors.
First Semester, Each Year
- LAT. 309. CICERO THREE CREDIT HOURS
 A study of *De Amicitia* and *De Senectute* or other works of Cicero.
Second Semester, Each Year
- LAT. 310. SELECTED LETTERS OF PLINY THREE CREDIT HOURS
 A study of the Latin letter as a literary form. The men and the world of the times of Pliny are revealed by his letters.
To be announced
- LAT. 313. OVID THREE CREDIT HOURS
 Intensive readings in the *Metamorphoses* with emphasis on the influence of the mythological epic on some of the modern literatures.
To be announced
- LAT. 314. LIVY THREE CREDIT HOURS
 This course comprises readings from Books I, XXI, and XXII of Livy's History and an examination of his historical method and literary form.
To be announced
- LAT. 401. ADVANCED LATIN COMPOSITION THREE CREDIT HOURS
 An intensive course in Latin composition, with special attention to the classical style of Cicero.
To be announced

- LAT. 403. SENECA THREE CREDIT HOURS
 A study of Seneca's philosophical style and the ethical teachings of Stoicism as revealed in his *Moral Epistles* and *Essays*. *To be announced*
- LAT. 405-406-407. PHILOSOPHICAL LATIN NINE CREDIT HOURS
 Translation of Latin philosophical works. Lat. 405: *Logica et Ontologia*; Lat. 406: *Cosmologia et Psychologia*; Lat. 407: *Theodicaea et Ethica*.
Summer Session
- LAT. 412. ECCLESIASTICAL LATIN THREE CREDIT HOURS
 The object of this course is to acquaint students for the priesthood with the Latin of theologians. *Summer Session*
- LAT. 413. THE CONFESSIONS OF ST. AUGUSTINE THREE CREDIT HOURS
 Excerpts are taken from the first Nine Books. *To be announced*
- LAT. 414. PATRISTIC LATIN THREE CREDIT HOURS
 Selections from St. Augustine, Tertullian, St. Cyprian, Lactantius, St. Ambrose, St. Jerome, and other Fathers. *Second Semester, Each Year*

RUSSIAN (Rus.)

- RUS. 101-102. ELEMENTARY RUSSIAN SIX CREDIT HOURS
 Designed to familiarize the beginner with the essentials of the spoken and written language. Vocabulary practice, simple sentence structure, conversational drills, and reading of modern text, with equal stress on each. *To be announced—Evening*
- RUS. 201-202. INTERMEDIATE RUSSIAN SIX CREDIT HOURS
 Review of the essentials of grammar, intensive conversational and comprehension exercises, reading of graded modern and contemporary prose and poetry. Prerequisite: Rus. 101-102, or equivalent. *To be announced—Evening*
- RUS. 203-204. SCIENTIFIC RUSSIAN SIX CREDIT HOURS
 This course is given only at Wright-Patterson Air Force Base. Prerequisite: Rus. 101-102, or equivalent. *To be announced*
- RUS. 301-302. RUSSIAN READING AND CONVERSATION SIX CREDIT HOURS
 Intended for students who possess a general knowledge of Russian, but lack the practical experience of the spoken language. The conversation is based principally on more advanced reading material. Prerequisite: Rus. 201-202, or equivalent. *To be announced—Evening*
- RUS. 401-402. TECHNICAL AND SCIENTIFIC RUSSIAN SIX CREDIT HOURS
 A course intended to train students to acquire a reading knowledge of Russian scientific literature. Special grammatical constructions will be explained, as well as general techniques of translation. Prerequisite: Rus. 301-302. *To be announced—Evening*

SPANISH (Span.)

- SPAN. 101-102. ELEMENTARY SPANISH SIX CREDIT HOURS
 Elements of Spanish, including pronunciation, reading, translation, grammar, dictation and conversation. *Full Year Course, Each Year*
- SPAN. 201-202. INTERMEDIATE SPANISH SIX CREDIT HOURS
 Grammar review, selected readings from modern authors, exercises in composition and conversation. *Full Year Course, Each Year*
- SPAN. 205-206. SPANISH READING AND CONVERSATION SIX CREDIT HOURS
 Intended for students who possess a general knowledge of Spanish, but lack the practical experience of the spoken language. *To be announced—Evening*
- SPAN. 301-302. SPANISH LITERATURE SIX CREDIT HOURS
 A survey of Spanish Literature, with special emphasis on the Golden Age and the modern period. Lectures, discussions and reports on assigned readings. *Full Year Course, 1954-1955*
- SPAN. 303-304. SPANISH-AMERICAN LITERATURE SIX CREDIT HOURS
 A study of the principal authors and works of the colonial, revolutionary and modern periods. Lectures, discussions and reports on assigned readings. *Full Year Course, 1955-1956,*
- SPAN. 401-402. MODERN SPANISH PROSE WRITERS SIX CREDIT HOURS
 A study of the more important works of the outstanding novelists and essayists of the period from 1830 to the present time. Lectures, discussions and reports on assigned readings. *Full Year Course, 1955-1956*
- SPAN. 403. MODERN SPANISH DRAMATISTS THREE CREDIT HOURS
 A survey of the literary activities of the important dramatists from 1830 to the present time. Lectures, discussions and reports on assigned readings. *First Semester, 1954-1955*
- SPAN. 404. DRAMA OF THE GOLDEN AGE SIX CREDIT HOURS
 A study of the significance and principal works of the great dramatists of the sixteenth and seventeenth centuries. Lectures, discussions and reports on assigned readings. *Second Semester, 1954-1955*

MATHEMATICS (Math.)

BRO. BELLMER, HEAD
 MR. BOSSHART, MRS. CAMPBELL, MR. JEHN, MR. KREIDER,
 MR. PECKHAM, MRS. PRATHER, MR. SCHRAUT

- MATH. 12. ELEMENTARY ALGEBRA I NO COLLEGE CREDIT
 This course is equivalent to the first year of high school algebra. Five periods a week. *Each Semester, Each Year*

MATH. 13. PLANE GEOMETRY **NO COLLEGE CREDIT**

This course is equivalent to one year of high school plane geometry. Three class periods a week. *First Semester, Each Year*

MATH. 14. ELEMENTARY ALGEBRA II **NO COLLEGE CREDIT**

This course is equivalent to the second year of high school algebra. Five class periods a week. *Each Semester, Each Year*

MATH. 15. SOLID GEOMETRY **NO COLLEGE CREDIT**

This course is equivalent to one semester of high school solid geometry. Three class periods a week. *Each Semester, Each Year*

MATH. 101. COLLEGE ALGEBRA **THREE CREDIT HOURS**

This course covers the fundamentals of second year of high school algebra and continues into topics of college algebra. Logarithms, ratio and proportion, with applications to chemistry, physics, and biology, are stressed. For Science students. Three class periods a week. *Each Semester, Each Year*

MATH. 102. PLANE TRIGONOMETRY **THREE CREDIT HOURS**

Continuation of Math. 101. The usual subjects of plane trigonometry will be covered, together with applications to physics and the use of the slide rule. Prerequisite: Math. 101, Math. 105, or the equivalent of Math. 14 and consent of the instructor. Three class periods a week. *Each Semester, Each Year*

MATH. 103. MATHEMATICS OF FINANCE I **THREE CREDIT HOURS**

This course is similar to Math. 101, but stresses applications to problems in business and finance. For Business students. Three class periods a week. *Each Semester, Each Year*

MATH. 105. ALGEBRA **THREE CREDIT HOURS**

This course is similar to Math. 101, but is given five times a week to permit more drill work for the less prepared student. For Arts and Science students. Five class periods a week. *Each Semester, Each Year*

MATH. 107. MATHEMATICS OF FINANCE I **THREE CREDIT HOURS**

This course is similar to Math. 103, but is given five times a week to permit the necessary drill work for the less prepared student. For Business students. Five class periods a week. *Each Semester, Each Year*

MATH. 115. MATHEMATICAL ANALYSIS **FIVE CREDIT HOURS**

Primarily for students in engineering and those majoring in one of the physical sciences or mathematics, this course covers the usual topics in plane trigonometry, together with linear and quadratic equations, inequalities, progressions, and the analytical treatment of loci. Prerequisite: Three years of high school mathematics or Math. 13 and 14. Five class periods a week.

Each Semester, Each Year

MATH. 116. MATHEMATICAL ANALYSIS **FIVE CREDIT HOURS**

Continuation of Math. 115. Polar coordinates, complex numbers, theory of

equations, conic sections, solid analytic geometry, and partial fractions. Prerequisite: Math. 115. Five class periods a week. *Each Semester, Each Year*

MATH. 121. COLLEGE ALGEBRA **THREE CREDIT HOURS**

Following a review of linear and quadratic equations, systems of equations and other topics of high school algebra, the topics covered are: progressions, logarithms, binomial theorem, complex numbers, determinants, partial fractions, theory of equations, and such additional topics in higher algebra as time permits. Prerequisite: Two years of high school algebra, or Math. 14. Three class periods a week. *Each Semester, Each Year—Evening*

MATH. 122. TRIGONOMETRY **THREE CREDIT HOURS**

The usual topics of plane trigonometry with applications; such additional pertinent topics as polar coordinates and complex numbers, if time permits. Open to students with two years of high school mathematics, although three years are advisable. Three class periods a week. *Each Semester, Each Year—Evening*

MATH. 123. ANALYTIC GEOMETRY **FOUR CREDIT HOURS**

The fundamental disciplines connected with plane and solid analytic geometry; the straight line, locus problems, transformation of coordinates, conic sections, the plane, line in space, quadric surfaces; applications to mechanics. Prerequisite: Math. 121 and 122 or equivalent. Four class periods a week. *Each Semester, Each Year—Evening*

MATH. 200. TEACHERS' ARITHMETIC **THREE CREDIT HOURS**

Endeavors to provide a wider and more generous margin of mastery of arithmetic for teachers in elementary schools. Seeks to develop both a facility in computation and an insight into the meaning and significance of numbers. *Second Semester, Each Year*

MATH. 201. DIFFERENTIAL AND INTEGRAL CALCULUS **FOUR CREDIT HOURS**

Differentiation of algebraic and transcendental functions with application to geometry and to physics. Integration of polynomials with applications to geometry and to physics. Fundamental theorem of integral calculus. Prerequisite: Math. 116 or Math. 123. Four class periods a week. *Each Semester, Each Year*

MATH. 202. DIFFERENTIAL AND INTEGRAL CALCULUS **FOUR CREDIT HOURS**

Continuation of Math. 201. Integration of algebraic and transcendental functions. Approximate integration; indeterminate forms; infinite series; multiple integrals; application to geometry and physics; partial differentiation. Prerequisite: Math. 201. Four class periods a week. *Each Semester, Each Year*

MATH. 203. MATHEMATICS OF FINANCE II **THREE CREDIT HOURS**

Simple and compound interest, annuities, amortization and sinking funds, valuation of bonds and the mathematics of life insurance. Prerequisite: Math. 103, or Math. 107. Three class periods a week. *Each Semester, Each Year*

MATH. 301. DIFFERENTIAL EQUATIONS **THREE CREDIT HOURS**

Equations of the first order and first degree; linear equations of higher order

with constant coefficients; the method of Frobenius; Euler's equations and other special equations; application to physics, chemistry, and engineering. Prerequisite: Math. 202. Three class periods a week. *Each Semester, Each Year*

MATH. 302. THEORY OF EQUATIONS **THREE CREDIT HOURS**
Complex numbers, integral and rational roots, general solution of the cubic and quartic equations, isolation of real roots, solution of numerical equations, determinants, system of linear equations, symmetric functions, elimination and resultants. Prerequisite: Math. 202 or registration therein. Three class periods a week. *Second Semester, 1955-1956*

MATH. 311. MATHEMATICAL STATISTICS **THREE CREDIT HOURS**
Frequency distributions, graphic representation, averages, moments, measures of dispersion, normal curve, curve fitting, correlation theory with the emphasis on the mathematical derivations of the formulas. Prerequisite: Math. 202 or consent of the instructor. Three class periods a week. *First Semester, 1955-1956*

MATH. 312. MATHEMATICAL STATISTICS **THREE CREDIT HOURS**
A continuation of Math. 311. Probability and its relation to statistics, normal distribution, beta and gamma functions, general concepts of a distribution function of a continuous variable, normal correlation, surface, multiple and partial correlation, fundamentals of sampling theory. Fisher's t-distribution and the chi square distribution. Prerequisite: Math. 202 and 311. Three class periods a week. *Second Semester, 1955-1956*

MATH. 331. STATISTICS FOR ENGINEERS **THREE CREDIT HOURS**
Measure of central tendency, frequency distributions, dispersions, skewness and kurtosis, sampling and the determination of significant differences, correlation. Includes normal, chi-square, student's t, binomial, and Poisson distributions. Prerequisite: Math. 202. *First Semester, 1955-1956*

MATH. 332. INDUSTRIAL AND ENGINEERING APPLICATIONS OF STATISTICS **THREE CREDIT HOURS**
A study of the application of statistics to quality control, job evaluation, merit rating and wage determination, personnel selection and testing, time study, design of experiments, and economic and market analysis. Prerequisite: Math. 331. *Second Semester, 1955-1956—Evening*

MATH. 341. ENGINEERING MATHEMATICS I **THREE CREDIT HOURS**
Differential equations of the first order and first degree, linear differential equations of higher order with constant coefficients, simultaneous differential equations, the Laplace transformation, and the solution of differential equations by the Laplace transformations, Bessel functions. Applications to problems in engineering. Three class periods a week. Prerequisite: Math. 202. *Each Semester, Each Year*

MATH. 342. ENGINEERING MATHEMATICS II **THREE CREDIT HOURS**
Linear partial differential equations with solutions by the classical and opera-

tional methods, systems of partial differential equations, introduction to vector analysis and introduction to complex variables. Applications to engineering. Three class periods a week. Prerequisite: Math. 341. *Each Semester, Each Year*

MATH. 401. COLLEGE GEOMETRY THREE CREDIT HOURS
 Synthetic treatment of metric Euclidean geometry. Properties of the triangle, quadrangle, quadrilateral, coaxal circles, inversion, notable points, circles connected with a triangle, ruler and compasses construction. Prerequisite: Math. 115 or Math. 122. Three class periods a week. *First Semester, 1954-1955*

MATH. 403. BUSINESS STATISTICS THREE CREDIT HOURS
 A survey course to familiarize the student with the methods of collecting, presenting, analyzing and interpreting statistical data. Graphic presentation, logarithmic, and semi-logarithmic charts, frequency distributions, time series, construction of index numbers, measures of dispersion, simple and multiple correlation. Prerequisite: Math. 103. Three class periods a week. *Each Semester, Each Year*

MATH. 411. THEORY OF PROBABILITY THREE CREDIT HOURS
 Permutation and combination, complementary, conditional and unconditional compound probabilities, Bernoulli's theorem, Bayes' theorem, probability integral, distribution functions and continuous variables, binomial law, Poisson law, Normal law. Prerequisite: Math. 202. (Math. 311 is recommended.) Three class periods a week. *First Semester, 1954-1955*

MATH. 416. INTRODUCTION TO THE CALCULUS OF FINITE DIFFERENCES THREE CREDIT HOURS
 Divided differences, Lagrange's interpolation formula, difference operators, Herschel's theorem, interpolation, Newton's interpolation formula, interpolation by iteration, inverse interpolation, reciprocal differences, Thiel's interpolation formula, polynomials of Bernoulli and Euler, numerical differentiation and integration. Prerequisite: Math. 202 and consent of the instructor. Three class periods a week. *Second Semester, 1954-1955*

MATH. 421. ADVANCED CALCULUS THREE CREDIT HOURS
 Limits and continuity, derivatives and differentials, functions of several variables, partial differentiation, Riemann integral, multiple integrals, line integrals, and surface integrals. Prerequisite: Math. 202. Three class periods a week. *First Semester, 1954-1955*

MATH. 422. ADVANCED CALCULUS THREE CREDIT HOURS
 Continuation of Math. 421. Infinite series, power series with applications, improper integrals, and implicit functions. Prerequisite: Math. 421. Three class periods a week. *Second Semester, 1954-1955*

MATH. 431. VECTOR ANALYSIS THREE CREDIT HOURS
 Vector algebra and calculus gradient, divergence and curl. Application to physics. Prerequisite: Math. 202. Three class periods a week. *First Semester, 1954-1955*

MATH. 432. FOURIER SERIES AND BOUNDARY VALUE PROBLEMS

THREE CREDIT HOURS

Fundamental definitions, partial differential equations of physics, orthogonal sets of functions, fundamental properties of Fourier series, uniqueness of expansions, Bessel functions, and Fourier-Bessel expansions. Prerequisite: Math. 321 or Math. 202 and the consent of the instructor. Three class periods a week.

*Second Semester, 1955-1956***MATH. 441. INTRODUCTION TO HIGHER ALGEBRA** THREE CREDIT HOURS

The real number concept, sets, polynomial forms, matrices and linear transformations, introduction to the basic concepts of groups, rings, and fields. Prerequisite: Math. 202 and the consent of the instructor. Three class periods a week.

*Second Semester, 1955-1956***MATH. 451. INTRODUCTION TO HIGHER GEOMETRY** THREE CREDIT HOURS

Projections and rigid motions, theorem of Desargues, the principles of duality, homogeneous coordinates, linear dependence, harmonic division, cross ratio, projective transformations, discussion of projective, affine and metric geometries, projective theory of conics. Prerequisite: Math. 202 and consent of the instructor. Three class periods a week.

*First Semester, 1955-1956***MATH. 461. INTRODUCTION TO THE THEORY OF FUNCTIONS**

OF A COMPLEX VARIABLE

THREE CREDIT HOURS

Fundamental concepts, Cauchy integral theorem, analytic functions, analytic continuation, conformal transformations, the calculus of residues, applications to physics and engineering. Prerequisite: Math. 421 or registration therein. Three class periods a week.

*Second Semester, 1954-1955***MATH. 465. MODERN OPERATIONAL MATHEMATICS** THREE CREDIT HOURS

The Laplace transformation and applications, partial differential equations, the inversion integral, applications to heat conduction, mechanical vibrations, and other problems. Prerequisite: Math. 202 and consent of the instructor. Three class periods a week.

*First Semester, 1953-1954—Evening***MECHANICAL ENGINEERING (M.E.)**

MR. WESTBROCK, ACTING HEAD

MR. ALBERTS, BRO. PARR, MR. SAVITSKI, BRO. WEBER, MR. WILDER

M.E. 205-206. PRODUCTION METHODS AND SHOP PRACTICES

SIX CREDIT HOURS

Lectures on production control, inspection, cost estimates, gear and cam production methods, interchangeable and progressive manufacturing methods, automatic machines and their economical employment; design, production, maintenance, and use of jigs, fixtures, tools and gauges; mass production and assembly systems; current practice in tolerance, finish, and class of fit. Exercises in the use of hand and machine tools and measuring instruments. Also, exercises requir-

ing the use of standard tool-room equipment, and practice based on foregoing principles. Two class periods and one laboratory period a week. Prerequisites: Math. 115, Phys. 206, G.E. 101.
Full Year Course, Each Year

M.E. 205a. MACHINE SHOP PRACTICE THREE CREDIT HOURS
Lectures on use of tools and gauges; current practice in tolerance, finish and class of fit. Exercises in the use of hand and machine tools and measuring instruments. Also, exercises requiring the use of standard tool-room equipment, and practice based on foregoing principles. For non-Mechanical Engineering students. Two class periods and one laboratory period a week. Prerequisites: Math. 115, Phys. 206, G.E. 101.
First Semester, Each Year

M.E. 301-302. THERMODYNAMICS SIX CREDIT HOURS
The general laws of thermodynamics as applied to gases, saturated and superheated vapors; entropy; isothermal and adiabatic processes; compressors and steam engines; internal combustion engine cycles; flow of fluids. Three class periods a week. Prerequisite: Math. 202; Corequisite: Phys. 208.
Full Year Course, Each Year

M.E. 301a. THERMODYNAMICS THREE CREDIT HOURS
The general laws of thermodynamics; entropy; isothermal and adiabatic processes; the cycles; flow of fluids. Three class periods a week. For non-Mechanical Engineering students. Prerequisite: Math. 202; Corequisite: Phys. 208.
Each Semester, Each Year

M.E. 303. METALLURGY THREE CREDIT HOURS
Structure and properties of metals and alloys; iron and steel; critical points; equilibrium diagrams of iron-carbon alloys; heat treatment of steel; metallographic analysis of metals; non-ferrous alloys. Two class periods and one laboratory period a week. Prerequisite: Chem. 108; Corequisite: G.E. 305.
First Semester, Each Year

M.E. 304. HEAT POWER FIVE CREDIT HOURS
The steam power plant; fuels and stokers, boilers and auxiliaries, condensers; chimney and draft equipment; steam engines and turbines; pumps; air compressors; water supply and purification; coal and ash handling machinery. Three class periods and two laboratory periods a week. Prerequisite: M.E. 301.
Second Semester, Each Year

M.E. 304a. HEAT POWER FOUR CREDIT HOURS
Course content similar to M.E. 304, but including consideration of internal combustion engines. Three class periods and one laboratory period a week. For non-Mechanical Engineering students. Prerequisite: M.E. 301a.
Each Semester, Each Year

M.E. 305. MECHANICAL ENGINEERING LABORATORY TWO CREDIT HOURS
Measurement of pressure, temperature, volume; planimeters; indicators; dyna-

ometers; calorific determination of fuels; flue gas analysis; air flow; lubricants. Detailed reports of experiments performed. Two laboratory periods a week. Prerequisite: Phys. 208.

First Semester, Each Year

M.E. 308. FLUID MECHANICS THREE CREDIT HOURS

Laws and theory relative to compressible and incompressible fluids; momentum relations for steady flow; resistance of immersed bodies; dynamic lift and propulsion; lubrication; pumps; turbines; fluid couplings; fluid power and control systems. Three class periods a week. Prerequisite: M.E. 301.

Second Semester, Each Year

M.E. 309. MECHANICS OF MACHINERY TWO CREDIT HOURS

Kinematics of machinery; linkwork; cams; gearing—spur, bevel, screw, etc.; flexible connectors; intermittent motion mechanisms; trains of mechanisms. One class period and one drawing period a week. Prerequisites: Math. 202, Phys. 206, G.E. 102.

First Semester, Each Year

M.E. 310. MECHANICS OF MACHINERY TWO CREDIT HOURS

Velocity and acceleration determinations by graphical means, Coriolis Law, static, and inertia forces of machines. Two class periods a week. Prerequisite: M.E. 309.

Second Semester, Each Year

M.E. 401-402. INTERNAL COMBUSTION ENGINES SIX CREDIT HOURS

A study of the Otto and Diesel cycles including fuels, combustion, detonation, knock testing, performance factors, performance testing, exhaust gases, and engine vibration. Three class periods a week. Prerequisites: M.E. 301, 302, 305.

Full Year Course, Each Year

M.E. 403. HEATING AND AIR CONDITIONING FIVE CREDIT HOURS

The mechanical problem of heating and air conditioning a room is studied from the thermodynamic viewpoint. The effect of conditioned air on occupants receives attention. Three class periods and two laboratory periods a week. Prerequisites: M.E. 301, 302, 305; Corequisite: M.E. 409.

First Semester, Each Year

M.E. 404. REFRIGERATION THREE CREDIT HOURS

Thermodynamics of mechanical refrigeration; refrigerating systems; refrigerants; heat transfer; application of refrigeration. Three class periods a week. Prerequisites: M.E. 301, 302, 305.

Second Semester, Each Year

M.E. 406. MECHANICAL ENGINEERING LABORATORY TWO CREDIT HOURS

Tests of a boiler and steam turbine installation, steam engines, internal combustion engines, and a refrigeration unit. Two laboratory periods a week. Prerequisites: M.E. 304, 305, 401.

Second Semester, Each Year

M.E. 407a. ELEMENTS OF MACHINE DESIGN THREE CREDIT HOURS

An elementary course in stress analysis, columns, riveted construction; cou-

plings and keys, brakes; clutches, gears and welding techniques. Two class periods and three hours of laboratory a week. For non-Mechanical Engineering students. Prerequisites: G.E. 301, 303, M.E. 309. *First Semester, Each Year*

M.E. 407-408. MACHINE DESIGN SIX CREDIT HOURS
 Stress analysis; columns; screw fastenings; rivets; keys and couplings; connectors and drives; gearing; bearings; springs; brakes, friction clutches and friction drives; cams; welding; design problems. Two class periods and one design period a week. Prerequisites: C.E. 304, G.E. 301, 303, M.E. 309.

Full Year Course, Each Year

M.E. 409. HEAT TRANSMISSION THREE CREDIT HOURS
 Consideration is given to methods of heat transfer, laws of radiation, conduction and convection, dimensional analysis, film theory. Heat transfer from fluid to fluid through a separating wall is correlated with the flow characteristics of the fluids. Special attention is given to test methods, to prediction of heat exchanger performance, and to the economic factors affecting design. Three class periods a week. Prerequisite: M.E. 301; Corequisite: M.E. 308.

First Semester, Each Year

M.E. 411. PUMPS AND COMPRESSORS THREE CREDIT HOURS
 Factors determining pump and compressor performance. Selection of pumps including economic considerations. Major components of a centrifugal unit are designed. Prerequisite: M.E. 308.

First Semester, Each Year

M.E. 413. NON-FERROUS METALLURGY THREE CREDIT HOURS
 Structure and properties of non-ferrous alloys. Working, casting, heat treatment and use of alloys of aluminum, magnesium, copper, nickel, tin, zinc and miscellaneous metals. Two class periods and one laboratory period a week. Prerequisite: M.E. 303.

First Semester, Each Year

M.E. 414. SEMINAR ONE CREDIT HOUR
 Required of all junior and senior Mechanical Engineering students. One class period a week for Junior and Senior years.

M.E. 416. MECHANICAL VIBRATIONS THREE CREDIT HOURS
 Vibrations without damping; damped vibrations; vibration of systems with several degrees of freedom; vibration isolation and absorption; theory of balancing; the Mobility Method; mechanical and electrical models of vibration systems. Two class periods and one laboratory period a week. Prerequisite: M.E. 310.

Second Semester, Each Year

MEDICAL TECHNOLOGY (Met.)

- DR. ABRAMSON, HEAD (*St. Elizabeth Hospital*)
- DR. CAES, HEAD (*Good Samaritan Hospital*)
- DR. OOSTING, HEAD (*Miami Valley Hospital*)
- DR. THOMPSON, HEAD (*Veterans Administration Hospital*)

The work of the senior year in Medical Technology is done at Miami Valley

Hospital, St. Elizabeth Hospital, Good Samaritan Hospital, or Veterans Administration Hospital. The courses are conducted by the respective hospital faculties.

MET. 450. INTRODUCTION TO MEDICAL TECHNOLOGY SIX CREDIT HOURS

A concentrated introduction to medical technology prepares the student for participation in the regular laboratory activities. This consists of two daily lectures on specific subjects pertaining to the laboratory diagnosis of disease stressing the anatomy and physiology of the organ involved followed by practical study of the tests involved.

MET. 451. URINALYSIS AND RENAL FUNCTION THREE CREDIT HOURS

Instruction in various methods of performing these tests with interpretation based on anatomical and physiological functions of the organs. Repeated studies stress need for accuracy.

MET. 452. HEMATOLOGY FOUR CREDIT HOURS

Instruction in various methods for studying the cellular components of the blood with practice to facilitate speed. Interpretation of findings based on anatomical and physiological functions of the cellular components of the blood.

**MET. 453. BACTERIOLOGY, SPUTUM, PARASITOLOGY,
FECES, AND SPECIAL FLUIDS FOUR CREDIT HOURS**

Instruction in various methods of bacteriological examination of various excreta or secretions of the human body; tests for reactions of the body to specific diseases; tests for and study of various parasites found as pathogenic organisms in the human body.

MET. 454. CHEMISTRY AND GASTRIC ANALYSIS SIX CREDIT HOURS

Instruction in biological chemical analyses pertaining to blood and to various excreta of the human body.

MET. 455. HISTOLOGY AND CYTOLOGY THREE CREDIT HOURS

Instruction in various methods of preparation for sectioning and staining of tissues in preparation for microscopic examination.

MET. 456. SEROLOGY AND SPINAL FLUIDS FOUR CREDIT HOURS

Instruction in the mechanism of and the performance of these tests, and some interpretation of the results.

MET. 457. ELECTROCARDIOGRAPHY; BASAL METABOLISM THREE CREDIT HOURS

The student familiarizes herself with the more commonly used machines, and masters the techniques of doing basal metabolisms and electrocardiograms.

MILITARY SCIENCE AND TACTICS (Mil.)

COL. KINNEY, HEAD

LT. COL. STERNER, CAPT. DELPINO, CAPT. DRISCOLL, CAPT LLANA,
CAPT. WEBBER, CAPT. WHITNEY, WOSG LONG, M/SGT. ALLEN,
M/SGT. CRAFT, M/SGT. GABRIEL, M/SGT. MAUSHARDT,
M/SGT. ROEBUCK, SFC. DAVISON, SFC. EVANS, SFC. LOTT

MIL. 101-102. FIRST YEAR BASIC COURSE THREE CREDIT HOURS
To provide training in those military subjects common to all branches of the Army, such as organization of the Army and the ROTC; American military history; individual weapons and marksmanship; school of the soldier and exercise of command. Theoretical and practical. Prerequisite to the Advanced Course. *Full Year Course, Each Year*

MIL. 201-202. SECOND YEAR BASIC COURSE THREE CREDIT HOURS
Continuation of the above course. Subjects include: crew-served weapons and gunnery; map and aerial photograph reading; school of the soldier and exercise of command. Theoretical and practical. Prerequisite to the Advanced Course. *Full Year Course, Each Year*

MIL. 301-302. FIRST YEAR ADVANCED COURSE SIX CREDIT HOURS
Enrollment limited to students who have: 1) satisfactorily completed the Basic Course ROTC; 2) passed required physical examination; 3) been selected to continue military studies. Subjects include: small unit tactics and communications; organization, function and mission of the Arms and Services; military teaching methods; advanced training in leadership and command. Within certain limitations, veterans of World War II and/or Korea may be allowed credit for part or all of the Basic Course ROTC. Students selected for enrollment receive commutation of subsistence and uniforms from the Government during the two-year Advanced Course. Attendance at ROTC Summer Camp is required. *Full Year Course, Each Year*

MIL. 401-402. SECOND YEAR ADVANCED COURSE SIX CREDIT HOURS
Continuation of the above course. Subjects include: logistics; operations; military administration and personnel management; service orientation. Prerequisite: satisfactory completion of the First Year Advanced Course. Commissions in the United States Army Reserve are awarded to selected students upon satisfactory completion of this course. Branch in which commissioned is influenced by major course of study, demonstrated aptitude, and requirements of the Military Service. *Full Year Course, Each Year*

MUSIC (Mus.)

MR. REICHARD, HEAD

MR. DEGER, MR. ENOCH, MR. HEIMANN, MR. KATZ, MISS KLINE,
MR. REGER, MRS. SMOOT, MR. TAGG, MISS THOMAS. MR. ZECH

MUS. 102. MUSIC LITERATURE AND APPRECIATION TWO CREDIT HOURS
A study of the masterpieces of music, with special reference to the listener. Its

aim is to develop a broader understanding and an intelligent discrimination of music.

Second Semester, Each Year

MUS. 111-112. FIRST YEAR HARMONY SIX CREDIT HOURS

Formation of Scales and Intervals; positions and progressions of triads, seventh chords and their inversions; simple modulations; voice leading. Prerequisite: Knowledge of the fundamentals of music and preparatory study of piano or other keyboard instrument.

To be announced—Evening

MUS. 115-116-117. FIRST YEAR HARMONY SIX CREDIT HOURS

The material of the course is essentially the same as Mus. 111-112. Designed for students who study privately with members of the staff. Not open to students with credit for Mus. 111-112. Subject to private instruction fee.

On Request

MUS. 121-122. FIRST YEAR SIGHT SINGING AND EAR TRAINING

FOUR CREDIT HOURS

Acquiring of technique for hearing melodic, harmonic, and rhythmic elements of music as based on the styles of the 18th and 19th centuries; study of the types of triads and intervals derived from them; practice in rhythmic reading; harmonic, melodic and rhythmic dictation; seventh chords, modal scales, key feeling and modulation. Prerequisite: Knowledge of the fundamentals of music and preparatory study of the piano or other keyboard instrument.

To be announced—Evening

MUS. 141. INTRODUCTION TO MUSIC TWO CREDIT HOURS

Designed for the student with no previous experience with the theory of music. Reading and notation of music is developed along with key signatures and fundamental harmonic progression. Simple part-writing, easy sight singing and an introduction to the piano keyboard. Elementary ear training and dictation.

First Semester, Each Year

MUS. 151-152. FIRST YEAR THEORY TEN CREDIT HOURS

Designed for Music Majors and students in Music Education; the course combines the materials of Music 111-112 and Music 121-122 into an integrated program. Not open to students who have credit for Mus. 111-112 or Mus. 121-122.

Full Year Course, Each Year

MUS. 211-212. SECOND YEAR HARMONY SIX CREDIT HOURS

Continuation of Music 111-112. Further study of modulation; altered and mixed harmonies; melodic embellishment and figuration; analysis. Prerequisite: Mus. 111-112.

To be announced—Evening

MUS. 215-216-217. SECOND YEAR HARMONY SIX CREDIT HOURS

Continuation of Mus. 115-116-117. Material essentially the same as Mus. 211-212. Not open to students who have credit for Mus. 211-212. Subject to private instruction fee. Prerequisite: Mus. 115-116-117, or Mus. 111-112. *On Request.*

MUS. 221-222. SECOND YEAR SIGHT SINGING AND EAR TRAINING

FOUR CREDIT HOURS

Continuation of Mus. 121-122. Addition of altered chords; practical application of non-harmonic tones in chorale-style harmonic dictation. Two and three-voice contrapuntal dictation. Further practice in sight singing. Prerequisite: Mus. 121-122.
To be announced—Evening

MUS. 231. TEACHING MUSIC IN THE PRIMARY GRADES TWO CREDIT HOURS

Materials to be used in primary grade school music and their presentation; problems and possibilities of the primary school music program. Prerequisite: Knowledge of the fundamentals of music equivalent to Mus. 141.

First Semester, Each Year—Evening

MUS. 232. TEACHING MUSIC IN THE ELEMENTARY GRADES

TWO CREDIT HOURS

Materials to be used in elementary grade school music and their presentation; problems and possibilities of the elementary school music program. Prerequisite: Knowledge of the fundamentals of music equivalent to Mus. 141.

Second Semester, Each Year—Evening

MUS. 235-236. VOICE CLASS

FOUR CREDIT HOURS

Discussion and demonstration of the principles of good singing; development of voice; vocal literature. The course may be repeated to a total of eight credit hours with permission of the instructor. Prerequisite: permission of the instructor.

Full Year Course, Each Year

MUS. 245. GREGORIAN CHANT

TWO CREDIT HOURS

An introduction to Gregorian Chant. Principles of free rhythm; modal characteristics; fundamentals of choronomy. Conducted only at Mt. St. John and restricted to student members of the Society of Mary. *Second Semester, Each Year*

MUS. 251-252. SECOND YEAR THEORY

TEN CREDIT HOURS

Continuation of Mus. 151-152; for Music Majors and students in Music Education; the course combines the materials of Mus. 211-212 and Mus. 221-222 into an integrated program. Not open to students who have credit for Mus. 211-212 or Mus. 221-222.

Full Year Course, Each Year

MUS. 301. HISTORY OF MUSIC I

THREE CREDIT HOURS

Development of music, instruments, forms, sacred and secular, from the earliest records through the Classical period. The relationship of music to the other arts and to broad movements in society and civilization.

First Semester, Each Year

MUS. 302. HISTORY OF MUSIC II

THREE CREDIT HOURS

Music of the nineteenth century; Romanticism, impressionism; nationalism; beginnings of the modern period. Relationship of music to social and cultural trends in Europe and America during the last one hundred and fifty years.

Second Semester, Each Year

MUS. 303. MODERN MUSIC **TWO CREDIT HOURS**
 A survey of contemporary music; its relationship to modernism in the other arts and to present-day society; American music. *To be announced*

MUS. 311-312. EIGHTEENTH CENTURY COUNTERPOINT **FOUR CREDIT HOURS**
 A study of the contrapuntal technique of the eighteenth century particularly as used in the instrumental works of Johann Sebastian Bach. Original compositions in the forms of the Invention. Chorale-Prelude and Fugue.
Full Year Course, 1955-1956

MUS. 315-316. THE OPERA **SIX CREDIT HOURS**
 A survey of opera from Gluck, Mozart and other eighteenth century composers to later Italian opera writers; the Wagnerian music drama; modern trends in opera.
To be announced—Evening

MUS. 321. INSTRUMENTAL CONDUCTING **TWO CREDIT HOURS**
 Methods of controlling tempo and the dynamic elements of instrumental musical groups; technique of the baton; score reading; rehearsal routine; practical experience with campus organizations. Prerequisite: Junior standing in music and permission of the instructor.
First Semester, Each Year

MUS. 322. INSTRUMENTATION AND ORCHESTRATION **THREE CREDIT HOURS**
 Scoring for string, reed and brass instruments, in small combinations and full orchestra and symphonic band; modern trends and techniques in orchestration. Prerequisite: Junior standing in music and permission of the instructor.
Second Semester, Each Year

MUS. 325. INSTRUMENTAL CLASS—STRINGED INSTRUMENTS **TWO CREDIT HOURS**
 Class instruction in stringed instruments; teaching of stringed instruments in the schools.
First Semester, 1955-1956

MUS. 326. INSTRUMENTAL CLASS—REED AND WOODWIND INSTRUMENTS **TWO CREDIT HOURS**
 Class instruction in reed and woodwind instruments; teaching of reeds and woodwinds in the schools.
First Semester, 1954-1955

MUS. 327. INSTRUMENTAL CLASS—BRASS INSTRUMENTS **TWO CREDIT HOURS**
 Class instruction in brass instruments; teaching brass instruments in the schools.
Second Semester, 1955-1956

MUS. 331. VOCAL MUSIC IN THE HIGH SCHOOL **TWO CREDIT HOURS**
 Materials used in the general music class and their presentation; glee club, choir, voice class, vocal ensembles. Prerequisite: Junior standing in Music Education.
First Semester, Each Year

- MUS. 332. THE SCHOOL BAND AND ORCHESTRA TWO CREDIT HOURS
A general course in the organization and teaching of instrumental music in the schools; materials; survey of equipment and facilities necessary for the instrumental music program. Prerequisite: Junior standing in Music Education.
Second Semester, 1954-1955
- MUS. 351. CHORAL CONDUCTING TWO CREDIT HOURS
Techniques needed to secure interpretative values in vocal groups; rehearsal routine; practical experience in experimental campus organizations. Prerequisite: Permission of the instructor.
Second Semester, Each Year
- MUS. 411-412. MUSICAL COMPOSITION FOUR CREDIT HOURS
Prerequisites: Mus. 251-252, Mus. 311-312 or Mus. 417-418; other prerequisites to be determined in consideration of the needs of the student; permission of the instructor.
Full Year Course, Each Year
- MUS. 413-414. FORM AND ANALYSIS FOUR CREDIT HOURS
A study of the structural designs used in musical composition; a survey of forms from the smallest to the largest; melodic figure and motive; sonata-allegro and rondo forms. Prerequisite: Mus. 251-252.
Full Year Course, 1954-1955
- MUS. 415-416. MODERN HARMONIC STYLES FOUR CREDIT HOURS
Analysis of contemporary harmonic and contrapuntal devices. Original composition in the styles of the composers studied. Prerequisite: Permission of the instructor.
Full Year Course, 1955-1956
- MUS. 417-418. SIXTEENTH CENTURY COUNTERPOINT FOUR CREDIT HOURS
A study of the medieval modes and the vocal polyphony of the motet and the Mass, up to and including five-part writing. Performance of sixteenth century polyphony and original student compositions. Prerequisite: Permission of instructor.
Full Year Course, 1954-1955
- MUS. 421-422. LABORATORY IN ORCHESTRATION TWO-SIX CREDIT HOURS
Advanced work in orchestration; special problems in scoring for full orchestra, symphonic band or dance orchestra; transcription of orchestral works for band. Prerequisite: Mus. 322, permission of instructor.
On Request
- MUS. 425-426. PROBLEMS IN INSTRUMENTAL MUSIC
FOUR-SIX CREDIT HOURS
Practical problems and experience in instrumental music in actual teaching situations approved by the Department of Music. Prerequisite: Senior standing in Music Education; permission of the Head of the Department.
Full Year Course, Each Year
- MUS. 431-432. PROBLEMS IN VOCAL MUSIC FOUR CREDIT HOURS
Practical problems and experience in vocal music in actual teaching situations

approved by the Department of Music. Prerequisites: Senior Standing in Music Education; permission of the Head of the Department.

Full Year Course, Each Year

MUS. 441-442. HARMONIC ANALYSIS **FOUR CREDIT HOURS**

An analytical study of the harmonic and melodic structures of music from the early classics up to and including some of the modern composers. Prerequisite: Mus. 251-252. *To be announced*

APPLIED MUSIC

Credit for private instructions in piano, organ, violin, voice, stringed or wind instruments is allowed at the rate of two credit hours per lesson a week.

In order to register for credit toward a major in Applied Music, students must have studied sufficient preparatory material. In Piano, this should include ability to play major and minor scales in a moderate tempo in parallel motion, ability to play major and minor triads in arpeggio form in all keys. The student should have studied Hanon, Vol. I; Pischna; Czerny, Op. 299, or their equivalent; some of the Mozart and Haydn sonatas, *Little Preludes and Fugues* by Bach, *Songs Without Words* by Mendelssohn, the *Lyric Pieces* by Grieg, or the equivalent.

<i>Piano</i> , semester fee	\$20.00 to \$64.00
<i>Voice</i> , semester fee	80.00
(Class instruction in Voice is likewise offered; see course number 235-236.)	
<i>Violin</i> , semester fee	32.00 to 64.00
<i>Reed, Woodwind Instruments</i> , semester fee	40.00
<i>Cornet, Trumpet, Horn</i> , semester fee	40.00
<i>Trombone, Baritone, Tuba</i> , semester fee	32.00

ENSEMBLES

Orchestra (Dayton Junior Philharmonic Orchestra)

Band (Marching Band, Concert Band)

Choir

Glee Clubs (Men's Glee Club, Women's Glee Club)

Ensembles (Brass Choir, String, Woodwind Ensembles)

Credit in Applied Music may be earned in Orchestra, Band, Choir, and Glee Club by students enrolled in music courses. Credit will be allowed at the rate of one-half credit hour per semester in each organization. *Maximum:* Toward Music Major in A.B. degree, or as elective in other degrees, four hours in all organizations; toward B.M. or B.S. in Mus. Ed. degrees, six credit hours. Prerequisite: Permission of the director.

NURSING EDUCATION (Ned.)

SR. M. MINALIA, HEAD

MRS. BERNER, MISS ERNST, MRS. EVERETT, MISS HERRIGAN,

MISS MITCHELL, MRS. WOESTE, MRS. ZIMMERMAN

All courses in Nursing Education are restricted to registered nurses whose professional qualifications have been approved by the University of Dayton and the Department of Nursing Education.

NED. 317. CURRENT TRENDS IN AMERICAN NURSING THREE CREDIT HOURS

A thorough discussion of the modern improvements and the prevailing professional problems arising in the different fields of nursing and the related professions. The relation of the nurse to these improvements and to the active work of the professional organizations. *Second Semester, 1953-1954*

NED. 329. GUIDANCE PROGRAMS IN SCHOOLS OF NURSING

THREE CREDIT HOURS

A discussion of the meaning and purpose of guidance with special emphasis on nursing education. Includes methods of studying the student nurse, of helping in orientation, and adjustment problems. Considers the characteristics of the guidance-minded instructor in the school of nursing; the functions of guidance counselors; as well as problems of organization and administration of guidance programs in schools of nursing. *Summer, 1954*

NED. 330. SURVEY OF PUBLIC HEALTH NURSING THREE CREDIT HOURS

Historical development of public health nursing and public health and its underlying principles and practices; the organized service given to urban and rural districts under private and public auspices; the duties of the nurse in various specialized services; study of community welfare and health programs to meet health needs. *Second Semester, 1954-1955*

NED. 331. PRINCIPLES OF SUPERVISION

THREE CREDIT HOURS

A study of the principles underlying effective supervision; the development of a supervisory program and the methods of making the program effective in nursing education. *Second Semester, 1954-1955*

NED. 332. PRINCIPLES AND TECHNIQUES OF TEACHING IN SCHOOLS OF NURSING

THREE CREDIT HOURS

General principles and techniques of teaching in the nursing school are outlined. Presentation of special problems in teaching, Observations of the teaching act in order to identify the use of the underlying principles of education. *Summer, 1955*

NED. 334 SURVEY OF THE NURSING SCHOOL CURRICULUM

THREE CREDIT HOURS

A study of the principles and practices used in the development or revision of the nursing school curriculum as a whole. Consideration is given to the various

factors involved in the construction of the curriculum including foundation of objectives, course placement, time element, unit plan, and evaluation.

First Semester, 1954-1955

NED. 337. TEACHING HEALTH IN THE BASIC NURSING CURRICULUM

THREE CREDIT HOURS

Study of the underlying principles of Health Teaching in the Basic Curriculum in Nursing. Survey of opportunities for health teaching in the various areas of the curriculum; development of methods, projects; seminars in health teaching.

To be announced

NED. 338. APPRENTICE TEACHING

THREE CREDIT HOURS

Prerequisite: Adequate basic preparation in the field of specialization. (To be arranged with the instructor.)

To be announced

NED. 341. FOUNDATIONS OF NURSING EDUCATION

THREE CREDIT HOURS

Historical survey and analysis of trends in nursing education. Evaluation of nursing education in relation to allied health fields. Discussion of the preparation of nurses to meet the needs of health service in the future.

To be announced

NED. 344. LEGISLATION AFFECTING NURSING

THREE CREDIT HOURS

A study of past and present problems, trends of nursing and related legislation, and their effects on nursing education.

To be announced

NED. 346. METHODS OF INTEGRATING THE SOCIAL AND HEALTH ASPECTS OF NURSING IN THE BASIC CURRICULUM

THREE CREDIT HOURS

A description of the factors implicated in the integration of the social and health aspects of nursing in the basic curriculum. *First Semester, 1954-1955*

NED. 451. SURVEY OF HISTORY OF NURSING

THREE CREDIT HOURS

A brief history of medicine and a complete survey of the history of nursing from ancient to modern times. This course particularly emphasizes the history of modern nursing and nursing education with discussion and analysis of present-day history of education problems.

To be announced

NED. 463. LEADERSHIP AND HUMAN RELATIONS IN NURSING

THREE CREDIT HOURS

Discussion and evaluation of inter-relationship of profession of nursing with allied health groups. Emphasis is placed on contemporary social influences as they are related to nursing. The role of the nurse as a citizen and member of the community is stressed.

First Semester, 1953-1954

NED. 464. MANAGEMENT OF HOSPITAL NURSING UNIT

THREE CREDIT HOURS

Principles and methods of organization and management as applied to the departmental unit of the hospital. Consideration of the head nurse's responsibility as team leader. Discussion of problems of organization and administration in the ward unit.

Summer, 1954

NED. 471. WARD ADMINISTRATION

THREE CREDIT HOURS

A study of the principles of scientific management and of the fundamentals

of effective administration. This includes a survey of hospital standards and requirements, planning for the care of the patients, record keeping, planning and supervising the work of the ward personnel, discussion and analysis of various problems relative to the administration of the hospital ward, and the relation of the ward to the school of nursing and to the hospital administration.

Second Semester, 1954-1955

PHILOSOPHY (Phil.)

FR. RHODES, HEAD

MR. BAKER, FR. BLOEMER, FR. BRUDER, FR. DOMBRO, FR. ENDERS,

MR. HARKENRIDER

PHIL. 101-102. LOGIC **FOUR CREDIT HOURS**
 Deductive logic treats of concepts and terms; of judgments and propositions; of inference, particularly in the syllogism. Inductive logic treats of the validity and method of scientific investigation. *Full Year Course, Each Year*

PHIL. 105-106. PROBLEMS IN ETHICS **SIX CREDIT HOURS**
 This course is given at Mount St. John. Enrollment is restricted to members of the Society of Mary. *Full Year Course, Each Year*

PHIL. 205-206. PHILOSOPHICAL PSYCHOLOGY **FOUR CREDIT HOURS**
 Essential difference between living and non-living beings; nature of the vital principle and vital operations in plant and animal life; essential superiority of human life; external and internal sense perception; the origin of ideas and the nature of the intellect; sensory and rational appetite; the nature, origin, and immortality of the soul. *Full Year Course, Each Year*

PHIL. 224. APPLIED ETHICS **TWO CREDIT HOURS**
 Offered for Technical Institute students. For description, see Phil. 324. *First Semester, Each Year*

PHIL. 303. COSMOLOGY **THREE CREDIT HOURS**
 A study of the principles of motion as found in Aristotle's philosophy of nature; matter and form; potency and act; types of causation. *First Semester, Each Year*

PHIL. 304. PHILOSOPHY OF MAN **FOUR CREDIT HOURS**
 The nature and act of knowledge; external and internal senses; the appetitive aspect of man; sentient life; rational life; man's intellect and will; liberty; the human soul; the origin of life. Conducted only in the Division of Arts at Carthage. *Second Semester, Each Year*

PHIL. 306. EPISTEMOLOGY **THREE CREDIT HOURS**
 A study of the validity of intellectual and sensory knowledge in the light of Thomistic principles, with special reference to the difficulties posed by modern thought. Offered to non-Catholics in the first semester and to Catholics in the second semester of the junior year. *Each Semester, Each Year*

PHIL. 307. PHILOSOPHY OF NATURE FIVE CREDIT HOURS
 Changeable being and its principles; the multiplicity and nature of bodies; quantity; motion; inorganic mobile being; living being; vegetative and sentient activities. Conducted only in the Division of Arts at Carthage.

First Semester, Each Year

PHIL. 311. LOGIC THREE CREDIT HOURS
 The nature of the course is the same as Phil. 101-102. Phil. 311 is a one-semester course offered in night school, summer school, and in the day classes to Catholics in the first semester of their junior year.

First Semester, Each Year

PHIL. 321-322 RATIONAL PSYCHOLOGY SIX CREDIT HOURS
 This course is given at Mount St. John. Enrollment is restricted to members of the Society of Mary.

Full Year Course, Each Year

PHIL. 324. ETHICS THREE CREDIT HOURS
 A study of the human act in its nature, ends, norms, morality, properties, consequences, and modifiers; man's threefold relation: to God, self, and neighbor.

Each Semester, Each Year

PHIL. 404. ONTOLOGY THREE CREDIT HOURS
 A study of the existential philosophy of St. Thomas Aquinas; the application of the theory of act and potency to various phases of the problem of the one and the many; a study of causality, substance, and person.

First Semester, Each Year

PHIL. 405. THEODICY THREE CREDIT HOURS
 A philosophic study of the existence and nature of God; criticism of atheism and agnosticism; the relation of the universe to God; the problem of evil.

Second Semester, Each Year

PHIL. 406. HISTORY OF GREEK PHILOSOPHY THREE CREDIT HOURS
 This course is a survey of philosophical speculation among the Greeks, with special emphasis on the philosophies of Socrates, Plato, and Aristotle.

First Semester, Each Year

PHIL. 407. HISTORY OF MEDIEVAL PHILOSOPHY THREE CREDIT HOURS
 This course traces the development of philosophy from the second to the fourteenth century.

Second Semester, Each Year

PHIL. 408. HISTORY OF MODERN PHILOSOPHY THREE CREDIT HOURS
 This course outlines the development of philosophy from the fourteenth to the twentieth century. It discusses the progress and the retrogressions of Philosophy.

To be announced

PHIL. 409. HISTORY OF CONTEMPORARY PHILOSOPHY THREE CREDIT HOURS
 A rapid survey of the systems of philosophy that are prominent in Europe and America today.

To be announced

PHIL. 414. PHILOSOPHY OF LAW

THREE CREDIT HOURS

Aim of the course is to explain nature of law, natural law, positive law, juridical origin of law, effect of law, limitations of civil law, justice, genetic origin of law, rights, and duties.

To be announced

PHIL. 416. HISTORY OF ANCIENT PHILOSOPHY

TWO CREDIT HOURS

A study of the development of philosophical thought from the beginnings of speculation among the Greeks until the time of St. Augustine. Special emphasis is placed upon the contributions of Plato and Aristotle. Readings in the works of the authors are an integral part of the course. Conducted only in the Division of Arts at Carthage.

First Semester, Each Year

PHIL. 417. HISTORY OF MEDIEVAL PHILOSOPHY

FOUR CREDIT HOURS

The tracing of the development of philosophy under the influence of Christianity from the time of St. Augustine to the full blossoming of Scholastic Philosophy in the thirteenth century is the aim of this course. Interest is centered upon the evolution of a truly Christian philosophy. Conducted only in the Division of Arts at Carthage.

Second Semester, Each Year

PHIL. 418. HISTORY OF MODERN PHILOSOPHY

FOUR CREDIT HOURS

This course outlines the breakdown of philosophy at the end of the Medieval Period and studies the principal attempts to supply a philosophy during the period stretching from the thirteenth to the twentieth century. Emphasis is placed upon the contributions and errors of those systems which influence the contemporary scene. Conducted only in the Division of Arts at Carthage.

First Semester, Each Year

PHIL. 419. HISTORY OF CONTEMPORARY PHILOSOPHY

TWO CREDIT HOURS

A rapid survey of the beginnings and present day development in Oriental Thought, and of the systems of philosophy that are prominent in Europe and America in this twentieth century. Stress is placed upon the development of Neo-Scholasticism. Conducted only in the Division of Arts at Carthage.

Second Semester, Each Year

PHIL. 421. METAPHYSICS I

THREE CREDIT HOURS

Preface to Metaphysics; a study of the existing of sense perceptible Being in so far as it demands the existing of Subsisting Being—the existence and simplicity of God. Conducted only in the Division of Arts at Carthage.

First Semester, Each Year

PHIL. 422. METAPHYSICS II

THREE CREDIT HOURS

An analysis of the attributes of participated Being and of Subsisting Being. Conducted only in the Division of Arts at Carthage.

First Semester, Each Year

PHIL. 423. METAPHYSICS OF KNOWLEDGE

THREE CREDIT HOURS

The metaphysics of knowing; a metaphysical analysis of the knowledge of man and of the knowledge of God. Conducted only in the Division of Arts at Carthage.

Second Semester, Each Year

- PHIL. 424. PROBLEMS OF METAPHYSICS THREE CREDIT HOURS
 Special problems of metaphysics in which the primary place is given to a metaphysical analysis of love and finality. Conducted only in the Division of Arts at Carthagena. *Second Semester, Each Year*
- PHIL. 430. PHILOSOPHY OF PLATO THREE CREDIT HOURS
 The purpose of the course is to give an insight into the philosophy of Plato by reading, analyzing and commenting on four of Plato's dialogues: Phaedo, Symposium, Protagoras and the Republic. *Second Semester, Each Year*
- PHIL. 432. PHILOSOPHY OF ARISTOTLE THREE CREDIT HOURS
 Readings and classroom discussion of selections from the basic works of Aristotle, including the Physics, Metaphysics, Ethics and Politics. *First Semester, Each Year*
- PHIL. 434. ST. THOMAS AQUINAS THREE CREDIT HOURS
 This course offers St. Thomas' teachings on God, Creation, Man, Law, Grace, Habit, Virtue and kindred subjects, derived from the Summa Theologica and the Summa Contra Gentiles. *First Semester, Each Year*
- PHIL. 482. MEDICAL ETHICS THREE CREDIT HOURS
 Problems of medical practice, professional rights and duties; religion and ethics; problems concerning birth and death; problems concerning marriage and the family, Prerequisite: Phil. 324. *Second Semester, Each Year*

PHYSICAL AND HEALTH EDUCATION (Phe.)

MR. SCHWARTZ, HEAD

MR. BAUJAN, MR. BLACKBURN, MR. DOUGLASS,

MR. FERRAZZA, MISS MONNETTE, MRS. REEL

- PHE. 101-102. PHYSICAL EDUCATION ONE CREDIT HOUR
 The teaching of fundamental skills in various individual sports and recreational activities, while aiming to promote vigorous health through large-muscle activities. Required of freshman men and women. Two class periods a week. *Full Year Course, Each Year*
- PHE. 103. HEALTH ONE CREDIT HOUR
 The course aims to establish and promote individual health and proper health habits through a study of the fundamentals of physical well being. Required of freshman men and women. One class period a week. *First Semester, Each Year*
- PHE. 104. HEALTH ONE CREDIT HOUR
 Continuation of Phe. 103. For freshman women. One class period a week. *Second Semester, Each Year*

PHE. 116. METHODS IN MINOR SPORTS (MEN) TWO CREDIT HOURS

This course deals with instruction in the skills and methods in some of the so-called minor sports such as soccer, speedball, volleyball, touch football, six-man football, and similar games. Three class periods a week.

First Semester, Each Year

PHE. 117. TEAM SPORTS (WOMEN) TWO CREDIT HOURS

Skills and methods needed to teach hockey, soccer, speedball, and basketball. Four class periods a week.

First Semester, 1955-1956

PHE. 118. RECREATIONAL SPORTS FOR WOMEN TWO CREDIT HOURS

Skills and methods needed to teach bowling, archery, volleyball and softball. Four class periods a week.

Second Semester, 1955-1956

PHE. 119. THEORY AND TECHNIQUES OF OFFICIATING (MEN)
ONE CREDIT HOUR

A development of knowledge of rules of football, basketball, baseball, and track, and the application of the knowledge to actual game situations. Two class periods a week.

First Semester, Each Year

PHE. 120. THEORY AND TECHNIQUES OF OFFICIATING (MEN)
ONE CREDIT HOUR

Continuation of Phe. 119. Two class periods a week.

Second Semester, Each Year

PHE. 130. TEACHING OF FUNDAMENTAL RHYTHMS AND FOLK DANCING
IN ELEMENTARY AND SECONDARY SCHOOLS TWO CREDIT HOURS

Includes a study and practice of simple rhythms, gymnastic dancing and clogging. Some attention will be given to social dancing and conducting of school dances. Three class periods a week.

Second Semester, Each Year

PHE. 131A (FOR MEN) GAMES OF LOW ORGANIZATION TWO CREDIT HOURS

Actual teaching of team and non-team games and stunts for progressive game parties, social mixers, noon hour activities, and camp nights. Elementary and secondary school levels. Three class periods a week.

Second Semester, Each Year

PHE. 131B (FOR WOMEN) GAMES OF LOW ORGANIZATION TWO CREDIT HOURS

Learning the game activities of elementary school children through participation and teaching; relating the needs and abilities of children to the games program. Includes methods and materials for planning, teaching, and evaluating the games program for elementary schools. Three class periods a week.

Second Semester, Each Year

PHE. 132. HYGIENE AND SANITATION (MEN) (WOMEN) TWO CREDIT HOURS

Personal health and prevention of disease in the family and community; relation of community health to disease control; important communicable diseases and their control. Lectures, discussions, and directed readings. Two class periods a week.

First Semester, Each Year

PHE. 133. PHYSICAL EDUCATION ACTIVITIES (MEN)

THREE CREDIT HOURS

Conditioning, tumbling, horses, bucks, low and high bar, pyramid building, wrestling, trampoline, stunts with and without equipment. Five class periods a week.
Second Semester, Each Year

PHE. 201-202. PHYSICAL EDUCATION (WOMEN)

ONE CREDIT HOUR

Continuation of Phe. 101-102. Two class periods a week.

*Full Year Course, Each Year***PHE. 203-204. HUMAN ANATOMY**

FOUR CREDIT HOURS

A study of the structure of the human body; the skeleton, the muscles, circulatory system, respiratory, digestive and nervous systems. Two class periods a week.
Full Year Course, Each Year

PHE. 210. COACHING FOOTBALL AND BASKETBALL

TWO CREDIT HOURS

Study of theory, strategy, generalship, styles of offense and defense, methods of organizing practice and handling men. Demonstration and practice in fundamentals for all positions. Two class periods a week. *First Semester, Each Year*

PHE. 212. COACHING BASEBALL AND TRACK

TWO CREDIT HOURS

One-half the time will be spent on the theory and practice of each sport. Form and not athletic achievement will be stressed considering the abilities to be acquired. All events and positions will be given due consideration. Two class periods a week.
Second Semester, Each Year

PHE. 221. THEORY OF PLAY AND RECREATION

TWO CREDIT HOURS

The meaning of play; characteristics of the different age periods. Classification and organization of play activities suitable for different age levels. Two class periods a week.
Second Semester, Each Year

PHE. 234. INDIVIDUAL SPORTS FOR WOMEN

TWO CREDIT HOURS

Skills and methods needed to teach badminton, tennis, golf and fencing. Four class periods a week.
Second Semester, 1954-1955

PHE. 235. CAMPING AND PLAYGROUNDS

THREE CREDIT HOURS

Study of facilities, programs, leadership, and administration of summer camps and playgrounds. Camp standards, program making and cabin counseling will be studied. Three class periods a week.
First Semester, Each Year

PHE. 245. MODERN DANCE (WOMEN)

TWO CREDIT HOURS

Techniques involved in modern dance with emphasis on composition. The study of dance as an art. Three class periods a week, *First Semester, 1954-1955*

PHE. 303. HUMAN PHYSIOLOGY

THREE CREDIT HOURS

Lectures and laboratory problems demonstrating the physiological bases for objectives and content of physical education programs. Three class periods a week. Prerequisite: Phe. 203-204.
First Semester, Each Year

- PHE. 309. METHODS IN PHYSICAL EDUCATION** **TWO CREDIT HOURS**
 Application of principle of methodology to physical education; analysis and study of the techniques of measurement devices for grading and classifying students. Practice will be given in leadership in physical education activities. Two class periods a week.
Second Semester, Each Year
- PHE. 323. PROGRAM BUILDING** **TWO CREDIT HOURS**
 Theory and principles of program construction applied to physical education. Critical analysis of existing programs and evaluation of activities in the light of modern trends. Practical application of principles in the construction of a program for a specific situation. Two class periods a week.
First Semester, Each Year
- PHE. 328. RECREATIONAL ACTIVITIES (MEN)** **ONE CREDIT HOUR**
 Teaching of the skills and methods of presenting individual activities such as tennis, badminton, handball, squash and bowling. Two class periods a week.
Each Semester, Each Year
- PHE. 329. RECREATIONAL ACTIVITIES (MEN)** **ONE CREDIT HOUR**
 Teaching of the skills and methods in golf and archery. Golf clubs must be furnished by the students. Two class periods a week. *Each Semester, Each Year*
- PHE. 330. INSTRUCTOR'S FIRST AID** **TWO CREDIT HOURS**
 A knowledge of first aid for injuries in the home, school, and community. Lectures and discussions on first aid as well as applied laboratory experiences relating to dressing, bandaging, splinting, etc. Three class periods a week. Prerequisite: Phe. 203-204.
Second Semester, Each Year
- PHE. 346. PROBLEMS IN PHYSICAL EDUCATION FOR WOMEN** **TWO CREDIT HOURS**
 A study of problems in the organization of intramural sports programs for girls and women; policies, activities, types of competition; point systems, awards, and athletic associations. Two class periods a week.
First Semester, Each Year
- PHE. 401. PRINCIPLES OF PHYSICAL EDUCATION** **TWO CREDIT HOURS**
 A study of the aims, scope, and biological aspects of physical education with special treatment of its place in education. Two class periods a week.
First Semester, Each Year
- PHE. 402. ORGANIZATION AND ADMINISTRATION OF PHYSICAL EDUCATION** **TWO CREDIT HOURS**
 Problems of organization and administration of physical education with added emphasis on the supervision of required and elective courses, intramural athletics and interschool athletics. Two class periods a week.
First Semester, Each Year

PHE. 403. PRINCIPLES AND ADMINISTRATION OF HEALTH EDUCATION
TWO CREDIT HOURS

Problems related to the organization and administration of the School Health education including the setting up of a school health council and the school community relationships. Selling the program of Health Education to the community. Two class periods a week.
First Semester, Each Year

PHE. 405. TESTS AND MEASUREMENTS IN PHYSICAL EDUCATION
TWO CREDIT HOURS

Critical analysis of existing testing methods in physical education. Study of current tests from the practical and theoretical viewpoint. The use of tests in the physical education program. Application of the principles of test construction to specific problems in physical education. Two class periods a week.
First Semester, Each Year

PHE. 407. MODERN PROBLEMS IN PUBLIC HEALTH
TWO CREDIT HOURS

The public health problems as they exist will be discussed with regard to their effect on living. Field trips will be included. Two class periods a week.
First Semester, Each Year

PHE. 409. CORRECTIVE PHYSICAL EDUCATION
TWO CREDIT HOURS

This course deals with the corrective or remedial measures to be used in providing proper exercises and procedures in handling individuals with handicapped conditions. Three class periods a week.
Second Semester, Each Year

PHE. 411. TEACHING OF HEALTH
TWO CREDIT HOURS

A course designed to prepare teachers for a progressive type of health work in schools. Four major objectives: 1) to enrich scientific backgrounds basic to an appreciation of personal and community health; 2) to stimulate interest in better health teaching; 3) to apply scientific knowledge to the solution of school health problems; and 4) to develop standards and techniques for selecting suitable source material to be used in health teaching.
Second Semester, Each Year

PHE. 412. TEACHING OF HEALTH
TWO CREDIT HOURS

A discussion and research course based on Phe. 411, dealing with live problems in health, plus actual teaching experience in class, and the establishment of a teaching plan for health.
First Semester, Each Year

PHE. 413. TEACHING OF HEALTH IN ELEMENTARY SCHOOL
THREE CREDIT HOURS

This course is designed to help teachers understand the health services the school should provide, the kind of physical and social environment essential for maintaining and promoting the growth and well-being of the elementary student, and the nature of the problems which should be studied in health and other related fields.
Second Semester, Each Year

PHYSICS (Phys.)

BRO. GRANDY, HEAD

MR. ENGLER, MR. HIEBER, MR. ROOT

A major in physics shall consist of 18 to 24 credit hours, exclusive of Phys. 206-207-208. The student intending to specialize in this field should consult with the head of the department in arranging his course.

PHYS. 12. ELEMENTARY PHYSICS **NO COLLEGE CREDIT**
 Primarily intended for those students who never have had a course in physics or wish to review the fundamentals of physics. Five class periods a week.
Each Semester, Each Year

PHYS. 101. HOUSEHOLD PHYSICS **THREE CREDIT HOURS**
 A course of lectures, demonstrations and discussions designed for those who require an elementary knowledge of physics. The subject matter is especially adapted for students of home economics. Neither high school nor college mathematics is required. Three class periods a week.
Second Semester, 1954-1955

PHYS. 201. GENERAL PHYSICS **FOUR CREDIT HOURS**
 This course, especially adapted to the needs of pre-medical and pre-dental students, covers the fields of mechanics and heat. Three class periods and one laboratory period a week.
First Semester, Each Year

PHYS. 202. GENERAL PHYSICS **FOUR CREDIT HOURS**
 A continuation of Phys. 201, covering the fields of magnetism, electricity, sound and light. Three class periods and one laboratory period a week. Prerequisite: Phys. 201.
Second Semester, Each Year

PHYS. 206. GENERAL PHYSICS **FOUR CREDIT HOURS**
 This course is intended for students preparing to major in physics or engineering. The laboratory work involves careful determination and precise measurements based on the fundamental laws of physics. Mechanics and Sound comprise the subject matter of the course. Three class periods and one laboratory period a week. Prerequisite: Math. 115-116 or registration in Math. 116.
Each Semester, Each Year

PHYS. 207. GENERAL PHYSICS **FOUR CREDIT HOURS**
 A continuation of Physics 206, covering the fields of magnetism and electricity. Three class periods and one laboratory period a week. Prerequisite: Phys. 206.
Each Semester, Each Year

PHYS. 208. GENERAL PHYSICS **FOUR CREDIT HOURS**
 A continuation of Phys. 206-207. Subject matter, Heat and Light. Three class periods and one laboratory period a week. Prerequisite: Phys. 206.
Each Semester, Each Year

PHYS. 301. THERMODYNAMICS **THREE CREDIT HOURS**

The general laws of thermodynamics; entropy, isothermal and adiabatic processes, the cycles; flow of fluids. Three class periods a week. Prerequisite: Math. 202; Corequisite: Phys. 208. *First Semester, 1955-1956*

PHYS. 303. MECHANICS **THREE CREDIT HOURS**

This course discusses the fundamental concepts of mechanics; discusses the dynamics and statics of both the particle and the rigid body, constrained motion, oscillations and the motion of aggregates of particles. Brief consideration will be given deformable bodies and mechanics of fluids. Prerequisites: Math. 201-202, Phys. 206, 207, 208. *Second Semester, 1955-1956*

PHYS. 305-306. ELECTRICAL ENGINEERING (E.E. 301-302) **SIX CREDIT HOURS**

A series of lectures and laboratory exercises designed to familiarize the student with the elements of circuit theory, machinery, electronics and measurements. Two class periods and one laboratory period a week. Prerequisite: Phys. 207 and Math. 202. *Full Year Course, Each Year*

PHYS. 307. ELEMENTS OF ELECTRICAL ENGINEERING (E.E. 201) **FOUR CREDIT HOURS**

A general survey course presenting the basic theories of magnetic and electric circuits and their application to engineering. Three class periods and one laboratory period a week. Corequisite: Phys. 207. *First Semester, Each Year*

PHYS. 308. ALTERNATING CURRENT CIRCUITS (E.E. 305) **FOUR CREDIT HOURS**

Vector and complex quantities applied to alternating currents. Single phase circuit analysis; non-sinusoidal waves; balanced and unbalanced polyphase systems. Three class periods and one problem period a week. Prerequisite: E.E. 201, Math. 202. *Each Semester, Each Year*

PHYS. 309. ENGINEERING ELECTRONICS (E.E. 312) **FOUR CREDIT HOURS**

Theory, construction and characteristics of vacuum tubes, thyratrons, phototubes, and the technical application of these electronic devices and circuits. Three class periods and one laboratory period a week. Prerequisite: E.E. 305. *Second Semester, Each Year*

PHYS. 311. ATOMIC PHYSICS **THREE CREDIT HOURS**

This course develops the concept of granular nature of matter, electricity and radiant energy. Development of Bohr theory and its modifications to fit experimental evidence are stressed to show the need for the more general theory of wave mechanics. Radioactivity and introductory nuclear theory are discussed briefly. Three class periods a week. Prerequisites: Math. 201-202, Phys. 206, 207, 208. *Second Semester, 1954-1955*

PHYS. 321. NUCLEAR PHYSICS **THREE CREDIT HOURS**

The aim of this course is to give, in concise form, a survey of the present

status of investigation of nuclear phenomena from the theoretical point of view. Three class periods a week. Prerequisites: Phys. 206, 207, 208.

First Semester, 1955-1956

PHYS. 401. VIBRATION AND SOUND **THREE CREDIT HOURS**
Discusses vibrating systems, sources of sound, the transmission of sound, the reception of sound, and the application of acoustics. Three class periods a week. Prerequisites: Math. 201-202, Phys. 206, 207, 208. *Second Semester, 1954-1955*

PHYS. 404. OPTICS **THREE CREDIT HOURS**
This course discusses the wave theory of light, interference, diffraction, dispersion, polarization, velocity of light and electromagnetic theory of light. Three class periods a week. Prerequisites: Math. 201-202, Phys. 206, 207, 208.

First Semester, 1954-1955

PHYS. 405. INDUSTRIAL ELECTRONICS (E.E. 409) **THREE CREDIT HOURS**
The purpose of this course is to give the students of physics the proper background for later actual experience. Three class periods a week. Prerequisite: Phys. 305-306.

First Semester, Each Year

PHYS. 408. ELECTRICITY AND MAGNETISM **THREE CREDIT HOURS**
This course discusses the electric field, electrostatic energy, conduction, the electro-magnetic induction, magnetic properties of matter. Also briefly, Maxwell's field equations; introduction to Quantum mechanics. Prerequisites: Math. 201-202, Phys. 206, 207, 208.

First Semester, 1954-1955

PHYS. 411. THEORETICAL PHYSICS **THREE CREDIT HOURS**
LaPlace's equation, coordinate systems, vectors, LaGrange's equations. Hamilton's equations, heat flow, Schrodinger's equation and the hydrogen atom. Three class periods a week. Prerequisites: Phys. 206, 207, 208, 303.

Second Semester, 1955-1956

POLITICAL SCIENCE (Pol.)

BRO. A. ROSE, HEAD

BRO. LIEBLER

Required courses for a major in Political Science are: Pol. 201, 202, 314, 412, 414 or 417, 421 or 431.

POL. 201. AMERICAN GOVERNMENT—NATIONAL **THREE CREDIT HOURS**
A functional study of the origin, organization, and operations of the federal government with a rapid survey of the American system of state and local governments.

Each Semester, Each Year

POL. 202. OHIO GOVERNMENT—STATE AND LOCAL **THREE CREDIT HOURS**
An examination of the state, county, and local government of Ohio with special reference to Montgomery County and the City of Dayton.

Each Semester, Each Year

- POL. 304. EUROPEAN GOVERNMENTS THREE CREDIT HOURS
A general survey of the present status of the nations of Europe from the standpoint of government structure, operation, and policy.
Second Semester, 1954-1955
- POL. 306. INTERNATIONAL LAW THREE CREDIT HOURS
An analysis of the development of international law, its theory and application to the various phases of international relations.
First Semester, 1954-1955
- POL. 310. POLITICAL PARTIES THREE CREDIT HOURS
A descriptive analysis of the nature and interaction of parties, pressure groups, and the functioning of public opinion on the national and state level.
First Semester, 1955-1956
- POL. 314. INTERNATIONAL RELATIONS THREE CREDIT HOURS
An exposition of the dynamic forces influencing nations in their conduct of world affairs.
Second Semester, 1955-1956
- POL. 315. THE UNITED NATIONS IN ACTION THREE CREDIT HOURS
An evaluation of the actual achievements of the various organizations and specialized agencies operating under the United Nations.
Second Semester, 1954-1955
- POL. 405. WORLD PROBLEMS OF THE UNITED STATES THREE CREDIT HOURS
A critical examination of the development of the communist front in the Pacific areas and the attempts of the United States and other nations to meet this situation.
First Semester, 1954-1955
- POL. 408. AMERICAN FOREIGN POLICY THREE CREDIT HOURS
An analytic study of policies and methods followed by the State Department in its relations with other countries. Accredited in History.
Second Semester, 1955-1956
- POL. 410. PUBLIC ADMINISTRATION THREE CREDIT HOURS
A study of the nation-wide Public Administration Service, of local and national departments, and bureaus in their operations.
First Semester, 1955-1956
- POL. 412. CONSTITUTIONAL LAW THREE CREDIT HOURS
An exposition of the fundamental principles underlying the Constitution, Common Law, delegated powers of government, etc., with special application to contemporary situations.
Second Semester, 1955-1956
- POL. 414. PHILOSOPHY OF LAW THREE CREDIT HOURS
Aim of the course is to explain nature of law, natural law, positive law, juridical origin of law, effect of law, limitations of civil law, justice, genetic origin of law, rights, and duties.
To be announced
- POL. 415. PAN-AMERICAN RELATIONS THREE CREDIT HOURS
A development of the social, cultural, and political phases of relations among

the American countries with special consideration of recent developments. Accredited in History. *Second Semester, 1954-1955*

POL. 417. HISTORY OF POLITICAL THOUGHT **THREE CREDIT HOURS**
 A general survey of the development of political philosophy amid the interplay of the opposed principles of autonomy and authority from the days of the Ancient Chinese to and including its culmination in the modern theories of anarchism, democratic liberalism and state absolutism.

Second Semester, Each Year

POL. 421. GOVERNMENT SEMINAR **THREE CREDIT HOURS**
 Open only to majors in Political Science. Group discussions and projects on pertinent topics. *First Semester, 1954-1955*

POL. 431-432. SPECIAL PROBLEMS IN THE STUDY OF GOVERNMENT **ONE-FOUR CREDIT HOURS**
 Open to selected students with the consent of the Head of the Department. Development of a research problem in government. *Each Semester, Each Year*

PSYCHOLOGY (Psych.)

FR. ROESCH, HEAD
MR. BOWERS, MRS. GALICO, MR. SCHEIDLER,
MR. BEVAN, MR. RENSEL

PSYCH. 103. PSYCHOLOGY OF EFFECTIVE STUDY **THREE CREDIT HOURS**
 This course is designed to improve study habits. Analysis of the individual's problems will be made through self-administered and self-scored tests. This will be followed by a discussion of effective principles and techniques of learning. Practice under supervision will be provided and personal conferences offered. Improved academic achievement and self-management are the aims throughout. Sections are limited to 20 students. *Each Semester, Each Year*

PSYCH. 201. INTRODUCTORY PSYCHOLOGY **THREE CREDIT HOURS**
 Man as an integrated personality is the object of this introductory course in psychology. Topics treated will include human growth and development, motivation, emotion and adjustment, learning, perceiving and thinking, individual differences, and the application of psychological principles to personal, social, educational and industrial problems. This course will not include the physiological aspects of the brain, nervous system and sense organs. The course aims to prepare students for further studies which will benefit from a knowledge of fundamental psychological concepts. This course is to be replaced by Psych. 204 by students majoring in psychology, and all others who desire the physiological aspect of psychological phenomena. *Each Semester, Each Year*

PSYCH. 202. EDUCATIONAL PSYCHOLOGY I **THREE CREDIT HOURS**
 Human growth and development from the physical, emotional, social, intellectual, cultural and moral viewpoints during the first twenty years of life with

primary emphasis on the educational role. Designed especially for education students.
First Semester, Each Year

PSYCH. 203. EDUCATIONAL PSYCHOLOGY II **THREE CREDIT HOURS**

This course is equivalent to the psychology of learning with special emphasis on the educational aspects. Considers the nature, the conditions and the principles of learning. Noted studies in the field of learning as well as actual classroom experimentation in learning situations will be emphasized.

Second Semester, Each Year

PSYCH. 204. GENERAL PSYCHOLOGY **THREE CREDIT HOURS**

A study of the basic principles necessary for an understanding of any of the major fields of psychology. Views man as an integrated personality by thoroughly touching the physical, intellectual, emotional, social, moral and aesthetic growth and development of the human organism. Physiology of the brain, nervous system and sense organs is included. Sensation, perception, imagery, thought, intelligence, learning, and volition are studied. It is recommended that this course be followed by Elementary Statistics and Experimental Psychology. This course is required of students majoring in psychology, nursing and pre-medical programs.

Each Semester, Each Year

PSYCH. 205. APPLIED PSYCHOLOGY **THREE CREDIT HOURS**

Emphasizes serviceable applications of psychology to personal adjustment, leadership, employment and consumer behavior. Leadership, cooperation, and role playing in class provide actual applications. Intended primarily for those students not planning further courses in psychology.

Each Semester, Each Year

PSYCH. 302. ELEMENTARY STATISTICS **THREE CREDIT HOURS**

This course is an introduction to statistics applied to psychological, social and educational problems. No exceptional mathematical ability or training is necessary beyond high school algebra. Emphasis is placed on the understanding of applied statistics, rather than upon the memorization and derivation of formulae. Each student is allowed, within reason, to set his own pace, thus allowing for individual differences. Measures of central tendency, deviation, correlation, probability curve, and theory of errors are approached through problems and discussion. Required of all students majoring or minoring in psychology and sociology.

Each Semester, Each Year

PSYCH. 304. ADOLESCENT PSYCHOLOGY **THREE CREDIT HOURS**

Treats the interrelated physical, mental, social, emotional, moral and aesthetic development of adolescents, alerting the student to causal factors in preparing him to accept and to guide adolescent interests, ideals, and adjustments. Child Psychology is recommended as a prerequisite, though not required.

First Semester, Each Year

PSYCH. 305. MENTAL HYGIENE **THREE CREDIT HOURS**

Explains the underlying processes which motivate man in his adjustment to

life. Indicates in detail the various mechanisms of behavior that are employed when problem situations arise. Shows the interrelationship of the psychosomatic components in adjustment. Study of the neuroses included. Concentrates on the prevention of psychotic disorders, rather than on their treatment. Prerequisite for Abnormal and Clinical Psychology. *Each Semester, Each Year*

PSYCH. 306. CHILD PSYCHOLOGY **THREE CREDIT HOURS**

A longitudinal study of childhood development with some concentration on prenatal growth trends. Explains in detail the genetic sequences appearing in the life of the child, e.g., motor development, sociability, language, intelligence, and imaginative life. Shows how discipline or training should be dependent upon the developmental growth patterns that emerge in the life of the child. Treats children up to the age of puberty. *Each Semester, Each Year*

PSYCH. 307. PSYCHOLOGY OF CHILDHOOD PROBLEMS **THREE CREDIT HOURS**

Deals with an understanding, from a psychological point of view, of those children who are handicapped either physically, mentally, socially, or emotionally, when compared to the norms of average childhood development. Concentrates principally upon the early years in so far as adjustment at this level is preparatory to adjustment in adult life. Forms of psychotherapy as applied to children will be discussed. *First Semester, Each Year*

PSYCH. 308. EXPERIMENTAL PSYCHOLOGY I **THREE CREDIT HOURS**

Laboratory course comprising individual and group experiments designed to study in detail the psychological factors of vision, hearing, smell, taste and kinesthesia. Experimental work in perception also included. Required of all majors in psychology. *First Semester, Each Year*

PSYCH. 309. EXPERIMENTAL PSYCHOLOGY II **THREE CREDIT HOURS**

Laboratory experimentation in learning, memory, association, suggestibility, emotional reactions, higher thought processes and volition. Emphasizes scientific procedure and experimental design. Required of all majors in psychology. *Second Semester, Each Year*

PSYCH. 312. ABNORMAL PSYCHOLOGY **THREE CREDIT HOURS**

Explains the various types of abnormalities, concentrating principally upon the mental aberrations, whether influenced directly or indirectly by physical causes. Describes the syndrome, gives the etiology of the various disorders. Detailed treatment is given the neuroses, psychoses, mental deficiency, epilepsy, and the sociopathic personality. Various types of psychotherapies are discussed from an eclectic point of view. *Second Semester, Each Year*

PSYCH. 315. PERSONALITY DEVELOPMENT **THREE CREDIT HOURS**

An investigation into the determinants and structure of personality and an exploration of the dynamics and expressive style of personality development. The approach to be made through a critical evaluation of current theories and a discussion of both clinical and experimental findings.

First Semester, 1955-1956

PSYCH. 318. MENTAL HYGIENE FOR TEACHERS **THREE CREDIT HOURS**

This course explains the contribution which the classroom teacher can make in guiding the development of the normal, integrated personalities of their pupils. Provides basis for evaluating questionable school practices, especially through a constructive view of discipline. Deals primarily with the normal child. Mental health practices for the teacher are also stressed. Required of all Education students.
Each Semester, Each Year

PSYCH. 401. ADVANCED STATISTICS **THREE CREDIT HOURS**

A seminar-type course presenting some concepts of advanced psychological and educational statistics, including analysis of variance, multiple correlation, partial correlation, factor analysis, regression and prediction, and advanced correlational techniques. Prerequisite: Elementary Statistics or permission of the instructor.
Second Semester, 1954-1955

PSYCH. 402-403. PSYCHOLOGICAL TESTS AND MEASUREMENTS I AND II
SIX CREDIT HOURS

Opens with discussion of historical background of testing and the ethics involved in this field. Concentration is given to the requirements of tests in general. Intensive study is made of the principal individual tests of intelligence, both verbal and performance. There is additional treatment of verbal and non-verbal group tests of intelligence. The area of infant and baby tests of intelligence is also included. The second semester treats the clinical interpretation of intelligence tests, the study and evaluation of the projective methods. A practicum is offered in the use of a recognized test of intelligence. Class is limited to 12 students. Permission of instructor required for 403.

Full Year Course, 1954-1955

PSYCH. 408. SOCIAL PSYCHOLOGY **THREE CREDIT HOURS**

Presents a systematic, dynamic and practical treatment of the social forces affecting behavior. Topics discussed include the methods of social psychology, social learning and motivation, attitude testing, opinion polling, propaganda, communication analysis, rumor, group psychology and social norms. Basic principles and contemporary readings will be critically discussed and evaluated.

First Semester, 1954-1955

PSYCH. 409. HISTORY OF EXPERIMENTAL PSYCHOLOGY **THREE CREDIT HOURS**

Aims at a clearer view of modern psychology by pointing out its origin in philosophy and science and by tracing its vigorous development since the founding of the first psychological laboratory. The growth of principles and techniques central to modern movements receive emphasis.

First Semester, 1954-1955

PSYCH. 410. AMERICAN SCHOOLS OF PSYCHOLOGY **THREE CREDIT HOURS**

Treats of the historical rise of psychology as a science in America, from its roots in European laboratories, through the early masters of the field in the universities and clinics of the United States, to the phenomenal expansion of American psychological thought and research of today. The various schools,

functionalism, dynamic, hornmic, structuralism, Gestalt, psychoanalytic, and the neo-scholastic, are exposed for critical evaluation.

Second Semester, 1955-1956

PSYCH. 412. INTERVIEWING AND COUNSELING PROCEDURES

THREE CREDIT HOURS

Techniques, theories and levels of interviewing and counseling are discussed and evaluated. Practice provided by role playing and by actual counseling situations. Course is recommended for school counselors, social and personnel workers, teachers, and other professional advisers. Permission of the instructor required.

Second Semester, Each Year

PSYCH. 413. EDUCATIONAL AND VOCATIONAL TESTING

THREE CREDIT HOURS

Construction and selection of tests for educational and vocational guidance, aptitude, achievement, interest, mental capacities and special ability areas are investigated by individual and group techniques. Recommended for school guidance counselors and business personnel administrators.

Second Semester, Each Year

PSYCH. 420. INDUSTRIAL PSYCHOLOGY

THREE CREDIT HOURS

Introduction to modern psychological efforts to improve human adjustments in an industrial organization and society. Studies the selection of all classes of employees, the factors which favor optimum adjustment and efficiency under working conditions, including morale, incentive, and merit rating. Discusses also the psychology used in advertising, radio, television and other like media.

First Semester, 1954-1955

PSYCH. 451. DIFFERENTIAL PSYCHOLOGY

THREE CREDIT HOURS

The problems, methods and results of differential psychology, including the nature and distribution of individual differences, the role of heredity and environment, the organization of psychological traits, sex differences, and differences among racial, national and other common groupings.

Second Semester, 1955-1956

PSYCH. 454-455. PHYSIOLOGICAL PSYCHOLOGY I AND II **SIX CREDIT HOURS**

Study of the physical structure and function related to and influencing human experience and behavior. It aims to acquaint the student with the role of the special senses, the nervous and the glandular systems in sensation, perception, learning and adjustment. Prerequisite: Human anatomy or physiology.

Full Year Course, 1954-1955

PSYCH. 460. CLINICAL PSYCHOLOGY

THREE CREDIT HOURS

An introduction to the theory and use of clinical methods and techniques, such as the interview, case history, psychological tests, projective methods, clinical observation, and psychotherapy as used in guidance, education, hospitals, industry and other areas. The interrelationship between clinical psychology and

experimental psychology will be considered. Prerequisites: Psych. 305 and 312; recommended 402 and 403.

First Semester, 1955-1956

PSYCH. 461. CLINICAL PRACTICUM

THREE CREDIT HOURS

Opportunities will be provided for students to receive practice in the use of various psychological and clinical techniques. Students may be rotated among several of the local social agencies and institutions, so that they might become familiar with the demands of the various areas of clinical psychology. Permission of instructor required.

Second Semester, 1955-1956

PSYCH. 470. CRITIQUE OF PSYCHOANALYTIC THEORY **THREE CREDIT HOURS**

This course opens with the reading of *An Introduction to Psychoanalysis* by Freud, continues with a critical evaluation of psychoanalysis both as a philosophical system and as a therapeutic method, and concludes with a dynamic theory of normal personality. The course is a specially designed seminar for students intending graduate work in psychology. Junior or Senior standing required.

First Semester, Each Year

RADIOLOGICAL TECHNIQUE (Rad.)

DR. NICOLL, HEAD (*Miami Valley Hospital*)

MISS COTRELL, MR. COTTER

DR. LAND, HEAD (*St. Elizabeth Hospital*)

SR. LAMBERTINA, MR. LYKINS, MISS MINNICK,

MISS ORDING, SR. PHILOBERTA

The work of the senior year in Radiological Technique is done at Miami Valley Hospital or St. Elizabeth Hospital. The courses are conducted by the respective hospital faculties.

RAD. 451. RADIOLOGICAL PHYSICS

THREE CREDIT HOURS

This is a practical course in X-ray physics and its application to radiography. Fundamental electric concepts, electron theory, and the X-ray tube. Basic X-ray generating circuits.

RAD. 452. THE X-RAY MACHINE

THREE CREDIT HOURS

A general discussion on the X-ray apparatus; a knowledge of the controls and the indicating instruments on the X-ray panel. Technique of manipulation of the X-ray machine. Essentials of an X-ray generating apparatus.

RAD. 453. PROCESSING TECHNIQUE

TWO CREDIT HOURS

Processing technique acquaints the student with development, fixing, and washing of films; procedures—care of films, screens, saucers, etc.; solutions—their composition and action, preparation and care; efficiency—controls, timing, wet viewing; dark room design—equipment, facilities, lighting, ventilation, and drying.

- RAD. 454. ROUTINE STANDARD POSITIONING** **EIGHT CREDIT HOURS**
Positioning in general, positioning in particular cases; demonstration; actual positioning with equipment and models; technical factors; systematic radiographic procedure; resultant radiographs; a detailed study of the roentgenogram.
- RAD. 455. SPECIAL EXAMINATIONS USING OPAQUE MATERIALS** **SIX CREDIT HOURS**
Examinations with contrast media; initial preparation, medium used; roentgen studies.
- RAD. 456. FLUOROSCOPIC PROCEDURE** **TWO CREDIT HOURS**
Technical factors in fluoroscopy; general assistance to the diagnostician; precautions and protection.
- RAD. 457. RADIATION THERAPY** **EIGHT CREDIT HOURS**
Knowledge of the X-ray for therapeutic purposes. Operation and care of the therapy equipment. Record keeping; positioning of patients under the supervision of the radiologist.

RELIGION (Rel.)

FR. LEIMKUHNER, HEAD
FR. BARTHOLOMEW, BRO. BECK, FR. HOELLE,
FR. HOFSTETTER, FR. MONHEIM, FR. STANLEY

The basic courses in religion for the first two years cover the fundamentals of a theology for the layman with emphasis upon awakening a sense of vocation and mission in the work of the lay apostolate. The courses on doctrine, morals, liturgy and marriage afford opportunities to stress the theory of the lay apostolate as well as the virtues and dispositions so necessary for the successful pursuance of the work in the various fields of lay endeavor.

- REL. 105. DOGMATIC THEOLOGY** **TWO CREDIT HOURS**
Theology; faith; revelation; God; Trinity; creation; Incarnation; Redeemer; Mary; Redemption; Holy Spirit; grace; the Church; sacraments; the last things.
First Semester, Each Year
- REL. 106. MORAL THEOLOGY** **TWO CREDIT HOURS**
End of man, human acts, conscience; law; sin; habits and virtues, theological and moral; gifts of the Holy Spirit; commandments; precepts of the Church; evangelical counsels.
Second Semester, Each Year
- REL. 115-116. LIFE OF CHRIST** **FOUR CREDIT HOURS**
Infancy and hidden life of Christ. His preaching through Galilee and ministry in Judea. His Passion, Death, Resurrection, Ascension, and the fruits of His

ministry. This course is given at Mount St. John. Enrollment is restricted to members of the Society of Mary.
Full Year Course, Each Year

REL. 203. CHRISTIAN MARRIAGE TWO CREDIT HOURS
A detailed study of the encyclical "On Christian Marriage" by Pius XI.
Second Semester, Each Year

REL. 205. THE EUCHARIST TWO CREDIT HOURS
The Eucharist; in our lives; worship. The study of the Mass.
First Semester, Each Year

The advanced courses for the last two years allow for electives, minors and majors in religion. These courses are founded upon the Papal Encyclicals and lay emphasis upon the theoretical and practical solutions of some of the social problems of the world today.

REL. 315-316. THE SACRAMENTS SIX CREDIT HOURS
Dogmatic treatment of the seven sacraments with pertinent questions and problems of Moral Theology and Canon Law. This course is given at Mount St. John. Enrollment is restricted to members of the Society of Mary.
Full Year Course, Each Year

REL. 317-318. MORALS SIX CREDIT HOURS
Course in general Moral Theology treating of human acts, the rules governing these acts, and the conformity or non-conformity of human acts with these rules. Also treatment of special Moral Theology—the general divine laws, or the Decalogue. This course is given at Mount St. John. Enrollment is restricted to members of the Society of Mary.
Full Year Course, Each Year

REL. 321. THE ANSWER TO COMMUNISM THREE CREDIT HOURS
A detailed study of the encyclical on "Atheistic Communism" by Pius XI with emphasis upon the historical background of Communism, its doctrinal errors, and social justice as the remedy. Accredited in Sociology. (Two credit hours for evening class)
Second Semester, 1954-1955

REL. 325. CHRISTIAN SOCIAL PRINCIPLES THREE CREDIT HOURS
A detailed study of the encyclical "On Reconstructing the Social Order" by Pius XI with emphasis upon the historical background, papal principles, and their application to current problems in the socio-economic order. Accredited in Sociology. (Two credit hours for evening class)
First Semester, 1954-1955

REL. 330. THE CHURCH: THE MYSTICAL BODY THREE CREDIT HOURS
A detailed study of the encyclical on "The Mystical Body" by Pius XII with emphasis upon the Church as the basis of the social order, the scope and norm of society, the basis of authority, and the right approach to non-Catholics. (Two credit hours for evening class)
First Semester, 1954-1955

REL. 331. THE SACRED LITURGY THREE CREDIT HOURS
A detailed study of the encyclical "Mediator Dei" by Pius XII with emphasis

upon a "social piety" that stems from the concept of the Mystical Body, and the doctrinal bases for liturgical observances. (Two credit hours for evening class)
Second Semester, 1954-1955

REL. 332. LEADERSHIP IN THE LAY APOSTOLATE THREE CREDIT HOURS
A detailed study of Catholic Action and the lay apostolate with a view to training leaders in the theory and practice of the activities and movements for the re-christianization of the world. (Two credit hours for evening class)
First Semester, 1954-1955

REL. 341. INTRODUCTORY ASCETICAL THEOLOGY TWO CREDIT HOURS
The meaning and nature of the ascetical concept of the Christian life. Obligation of tending to perfection. The various states of perfection. The eminent position of the virtue of charity. General means of perfection. An introductory analysis of the three ways of perfection. Conducted only in the Division of Arts at Carthage.
First Semester, Each Year

REL. 417-418. DOGMA SIX CREDIT HOURS
Course in general dogmatics treating of religion in general, Christianity, and Catholicism; special dogmatic treatment of God considered in Himself and considered in His relations with the world—Creator, Redeemer, and Sanctifier. This course is given at Mount St. John. Enrollment is restricted to members of the Society of Mary.
Full Year Course, Each Year

REL. 419. MARY IN DOGMA THREE CREDIT HOURS
Study of the place of the Mother of God in the great truths of faith, with emphasis on her own special prerogatives. This course is given at Mount St. John. Enrollment is restricted to members of the Society of Mary.
Each Semester, Each Year

REL. 420. RELIGION AND SCIENCE THREE CREDIT HOURS
A study of the relations of religion and science; an inquiry into the foundations of religion and science; proof of compatibility of religion and science as demonstrated from history. Science is shown as a source of prayerful contemplation of creation. (Two credit hours for evening class)
Second Semester, 1955-1956

REL. 423. THE PUBLIC LIFE OF CHRIST THREE CREDIT HOURS
A detailed study of the Public Life of Christ with emphasis upon the social message of the Gospels and the role of laymen in the lay apostolate. (Two credit hours for evening class)
First Semester, 1955-1956

REL. 430. MARIOLOGY THREE CREDIT HOURS
A detailed study of the prerogatives of the Mother of God, the doctrine of each and their relationships with each other, as well as their applications to the Marian apostolate. (Two credit hours for evening class)
First Semester, 1955-1956

REL. 431. CHURCH AND STATE THREE CREDIT HOURS
 A careful study of the nature and end of the Church and the State in the light of Christian principles; an appraisal of the application of these principles in the light of history; and the establishment of the norm of cooperation. Accredited in Political Science. (Two credit hours for evening class)
Second Semester, 1955-1956

REL. 441. ASCETICAL THEOLOGY TWO CREDIT HOURS
 The purification of the soul, or, the purgative way. The prayer of beginners. Penance. Mortification. The struggle against the capital sins and vices. Temptations. Conducted only in the Division of Arts at Carthage.
Second Semester, Each Year

SECRETARIAL STUDIES (Sec.)

MRS. MILLER, HEAD

MRS. CIVILLE, MR. KRIEGBAUM

SEC. 101. ELEMENTARY SHORTHAND THREE CREDIT HOURS
 Gregg Shorthand is the system employed. Using the functional method, the entire theory is covered during the first semester. Transcription is introduced. Five class periods a week.
Each Semester, Each Year

SEC. 102. ELEMENTARY SHORTHAND THREE CREDIT HOURS
 Gregg theory is reviewed. Reading practice continues but transcription is emphasized. Five class periods a week.
Each Semester, Each Year

SEC. 103. ELEMENTARY TYPEWRITING THREE CREDIT HOURS
 The keyboard is memorized. Drill is given in the function and care of the machine. A slow copying ability is the aim of this course. Five class periods a week. For use of typewriter, \$5.00 per semester.
Each Semester, Each Year

SEC. 104. ELEMENTARY TYPEWRITING THREE CREDIT HOURS
 The aim is to develop further skill in the use of the typewriter and to provide some experience in letter arrangement and simple tabulations. Five class periods a week. For use of typewriter, \$5.00 per semester.
Each Semester, Each Year

SEC. 105. SECRETARIAL ACCOUNTING THREE CREDIT HOURS
 A short course in accounting especially designed for private secretaries; covers the fundamental principles of accounting as applied to mercantile and personal service enterprises operated by sole proprietors. Two class periods and two laboratory periods a week.
First Semester, Each Year

SEC. 106. SECRETARIAL ACCOUNTING THREE CREDIT HOURS
 This course develops further the accrual basis of accounting for mercantile enterprises, with emphasis on partnership transactions, but with an introduction to corporation accounting. Practice sets of a general nature are introduced. Two class periods and two laboratory periods a week.
Second Semester, Each Year

- SEC. 107. PERSONAL TYPEWRITING TWO CREDIT HOURS
The aim is to familiarize the student with the keyboard and the various parts of the machine and to apply the typing machine to personal typing problems. Three class periods a week. For use of typewriter, \$3.00 per semester.
Each Semester, Each Year
- SEC. 108. PERSONAL TYPEWRITING TWO CREDIT HOURS
The students are encouraged to bring in personal problems of their own, such as themes, outlines, postal card messages, personal letters, etc. Continued emphasis is placed on the improvement of skill so that vocational typewriting power may be developed for those students who will continue in other typewriting classes. Three class periods a week. For use of typewriter, \$3.00 per semester.
Each Semester, Each Year
- SEC. 110. SECRETARIAL MATHEMATICS THREE CREDIT HOURS
Review and practice of the more common mathematical usages found in business offices; development of proficiency in these functions. Three class periods a week.
First Semester, Each Year
- SEC. 201. ADVANCED SHORTHAND THREE CREDIT HOURS
Principles are reviewed. Graded dictation is begun. Sustained writing periods are increased. Five class periods a week.
Each Semester, Each Year
- SEC. 202. ADVANCED SHORTHAND THREE CREDIT HOURS
Rapid reading is emphasized. Practical office dictation speeds are employed. Five class periods a week.
Each Semester, Each Year
- SEC. 203. ADVANCED TYPEWRITING THREE CREDIT HOURS
Advanced practice in various office skills. Survey of all letter forms and tabulation. Five class periods a week. For use of typewriter, \$5.00 per semester.
Each Semester, Each Year
- SEC. 204. ADVANCED TYPEWRITING THREE CREDIT HOURS
Designed to develop practice in business forms, more complicated tabulations, legal typing, etc., with emphasis upon office production standards; speed work. Five class periods a week. For use of typewriter, \$5.00 per semester.
Each Semester, Each Year
- SEC. 205. SECRETARIAL THEORY THREE CREDIT HOURS
A study of the duplicating processes, including mimeograph and hectograph. Practice in the use of the dictaphone, sound scribe, calculating machines, book-keeping machinery. Filing practice is also studied. Three lecture and two laboratory periods a week.
First Semester, Each Year
- SEC. 206. SECRETARIAL THEORY THREE CREDIT HOURS
Advanced training in color duplicating processes, dictating machine, and filing techniques. Three lecture and two laboratory periods a week.
Second Semester, Each Year

SEC. 301. METHODS IN SOCIAL-BUSINESS SUBJECTS THREE CREDIT HOURS
Objectives, instructional materials, teaching procedures, curricular organization and other teaching problems in the Social-Business program; emphasis on visual aids and projects in the field. Three class periods a week.

First Semester, Each Year

SEC. 302. TEACHING OF COMMERCIAL SUBJECTS FOUR CREDIT HOURS
This course applies to the general principles of teaching high school commercial subjects. It includes a survey of commercial textbooks, curricula construction, testing programs, professional periodicals, commercial teacher organizations, commercial clubs, etc. Four class periods a week.

First Semester, Each Year

SEC. 303. DICTATION AND TRANSCRIPTION THREE CREDIT HOURS
Rapid dictation and transcription. Phraseology of a technical nature is taken up. Three class periods a week.

First Semester, Each Year

SEC. 304. DICTATION AND TRANSCRIPTION THREE CREDIT HOURS
Industrial and civil service testing programs are studied. Three class periods a week.

Second Semester, Each Year

SEC. 403. ADVANCED DICTATION AND TRANSCRIPTION THREE CREDIT HOURS
Gregg Reporting Shortcuts are studied. Rapid dictation and transcription. Three class periods a week.

First Semester, Each Year

SEC. 404. ADVANCED DICTATION AND TRANSCRIPTION THREE CREDIT HOURS
Gregg Shortcuts are continued. Legal dictation and transcription. Three class periods a week.

Second Semester, Each Year

SEC. 409. OFFICE MANAGEMENT TWO CREDIT HOURS
The technical skill of a secretary must be supplemented by various other abilities. This course is concerned with the management and organization of a modern office, handling appointments, managing callers, bank procedures. Two class periods a week.

Second Semester, Each Year

SEC. 410. OFFICE WORK THREE CREDIT HOURS
First-hand information and experience in actual office work. Each student spends not less than sixty clock hours working in some office. Prerequisite: Consent of the instructor. May be taken either semester as a whole, or one hour either semester and two hours the other.

Each Semester, Each Year

SOCIOLOGY (Soc.)

MR. HUTH, HEAD

MR. KASCHAK

The following courses are required of all students who select Sociology as their major subject: Soc. 201, 202, 401, and 414.

SOC. 201. GENERAL SOCIOLOGY **THREE CREDIT HOURS**
 The basic course in the principles of sociology; an introduction to the fundamental concepts of modern sociology. A systematic explanation of man's social nature, types of groups and institutions, social processes, and social change. A prerequisite for specialized courses in sociology. *Each Semester, Each Year*

SOC. 202. SOCIAL PROBLEMS **THREE CREDIT HOURS**
 This course deals with the facts of social pathology, the maladjustments of society. The aim is to provide a clear understanding of the causes, extent, treatment, mitigation, and prevention of abnormal conditions affecting society. Required for advanced courses in sociology. *Each Semester, Each Year*

SOC. 203. SOCIOLOGY FOR NURSES **ONE CREDIT HOUR**
 A short course in the principles and problems of sociology with special application to the nursing profession; nurse-patient situations; nurse-doctor problems; nurse-staff relationships; problems of the nurse concerning the patient's relatives and friends. *First Semester, Each Year*

SOC. 301. MARRIAGE AND THE FAMILY **THREE CREDIT HOURS**
 A general survey of the social nature of the family; its organization through courtship, marriage, and parenthood; its primary role in the development of personality; the influence of social and economic changes; means of ensuring family integrity; programs for the improvement and reconstruction of family life. *First Semester, Each Year*

SOC. 303. POPULATION **THREE CREDIT HOURS**
 A study of the growth, decline, distribution and classification of population; analysis of population theories; birth, death, and morbidity rates; relation of numbers to resources; human migration; future growth of population in the United States and its consequences; world population problems. *First Semester, 1954-1955*

SOC. 304. MINORITY GROUPS **THREE CREDIT HOURS**
 This course is concerned with the contributions of the "Old" and the "New" immigration to American life; immigration laws and policies; adjustment problems of the Negro, the Jew, and the immigrant; techniques of social control by the dominant group; types of minority counter-assertions. *Second Semester, 1955-1956*

SOC. 305. INTRODUCTION TO SOCIAL WORK **THREE CREDIT HOURS**
 This course is designed to introduce the preprofessional student to the field of social work. Among the fields included are: community organization, social casework, social group work, corrections, rehabilitation of the handicapped, and public welfare administration. The relationship of social work to other social developments, historical and contemporary, will be explained. *First Semester, 1955-1956*

- SOC. 307. CRIMINOLOGY AND PENOLOGY THREE CREDIT HOURS
A review of the etiology, extent, treatment, and means for the prevention of crime; history and methods of punishment; administration of criminal law; police systems; prisons and prison reform; indeterminate sentence, probation, parole, and pardon; objectives of the new penology. *First Semester, 1955-1956*
- SOC. 308. ANTHROPOLOGY THREE CREDIT HOURS
An introductory course in cultural and physical anthropology; the social, economic, political, religious, and artistic life of primitive people in relation to contemporary civilization; a study of customs, their form, meaning, use, and function. *Second Semester, 1954-1955*
- SOC. 309. URBAN SOCIOLOGY THREE CREDIT HOURS
A course dealing with the origin, development, nature and significance of urban communities; types of cities; structure and functions of the city; characteristics of urban populations; major problems of the city, including city planning. *Second Semester, 1954-1955*
- SOC. 310. RURAL SOCIOLOGY THREE CREDIT HOURS
History of the rural community and its social organization. An analysis of the family-farm system; the evolution and functioning of rural institutions; the ecology of rural problems such as housing, health, education, religion, morals, communication, and recreation; the characteristics of rural population. *Second Semester, 1955-1956*
- SOC. 313. JUVENILE DELINQUENCY THREE CREDIT HOURS
This is a study of the causes, extent, treatment, and prevention of juvenile delinquency. Among the topics considered are: the home, school, church, state, police, and juvenile court; child guidance clinics; bureau of juvenile research; probation and parole; correctional institutions. *Second Semester, 1954-1955*
- SOC. 316. ELEMENTARY STATISTICS THREE CREDIT HOURS
Frequency distributions, central tendency, dispersion, percentiles, probability curve and elementary theory of errors, theory of curve fitting and least squares, correlation table and coefficients of correlation. *First Semester, Each Year*
- SOC. 317. CHRISTIAN SOCIAL PRINCIPLES THREE CREDIT HOURS
The purpose of this course is to examine the facts and trends of contemporary society in their moral setting, and to show their agreement or disagreement with sound principles of social welfare. It deals with the forces of destruction and of evil which beset man, and of the means of protecting and promoting his integrity in modern social life. *First Semester, 1954-1955*
- SOC. 401. SOCIAL RESEARCH THREE CREDIT HOURS
The problems and methods of research in sociology and in social work. Methods of observation, collection, recording, classifying, evaluating, interpreting, and presenting social data statistically; planning and completing reports. A required course for majors in sociology. *First Semester, 1954-1955*

SOC. 404. SOCIAL INSTITUTIONS

THREE CREDIT HOURS

An analysis of the structure, functions, concepts, and problems of the basic social institutions, such as the family, the church, the state, the school, and economic institutions; an evaluation of their contributions. Conducted only in the Division of Arts at Carthage.

Second Semester, 1955-1956

SOC. 413. READING AND RESEARCH IN SOCIOLOGY

ONE-THREE CREDIT HOURS

With the consent of the department head, a student who is prepared by training and experience to do independent work may register for this reading and research course. The work may be in any sociological field for which the student has an adequate background.

Each Semester, Each Year

SOC. 414. SEMINAR

ONE CREDIT HOUR

This is a required course for sociology majors.

Second Semester, Each Year

SOC. 418. COMMUNITY ORGANIZATION

THREE CREDIT HOURS

An analysis of the nature and operation of social processes in urban and rural development; the history and functions of agencies designed to guide and enrich community life; methods of using institutions and equipment in the establishment of programs for the general welfare.

Second Semester, 1955-1956

SOC. 421. GROUP BEHAVIOR

THREE CREDIT HOURS

This course examines representative aspects of group behavior, including gangs, crowds, mobs, publics, classes and masses; collective behavior as illustrated in motion pictures and literature; social movements as stages in institutional disorganization and reorganization.

First Semester, 1955-1956

SOC. 431. POLICE ADMINISTRATION

THREE CREDIT HOURS

This course is given for the student of police problems, regardless of his rank or station. It describes superior practices in all branches and at all levels of police service. It analyzes the organization, structure, administrative practices, and operating procedures of police forces in the United States. This analysis is not by comparisons between departments, but by consideration of the fundamental purpose of each practice and the principles which should be followed in its achievement.

Second Semester, 1954-1955

SPEECH (Spe.)

FR. PREISINGER, HEAD

MR. BIRSACK, MR. LAKE, MR. MCGRATH

Valuable experience in all phases of the theatre can be obtained by joining the University Players.

SPE. 100. VOICE AND DICTION

THREE CREDIT HOURS

The speaking voice; training in voice improvement and effective utterance in

daily life; the correction of the ordinary speech defects. This course is primarily for Speech Majors. *First Semester, Each Year*

SPE. 101. FUNDAMENTALS OF EFFECTIVE SPEAKING THREE CREDIT HOURS
The basic principles of speech composition and delivery. Practice in preparing and presenting short, informative, entertaining and convincing talks. Methods are applicable to social and business conversation, as well as to public speaking. *Each Semester, Each Year*

SPE. 201. SPEAKING TECHNIQUES THREE CREDIT HOURS
The theory and practice of the application of the fundamentals of speech work in the special problems that the student will face in life. Practice in reading, speaking, and critical survey work throughout. *Second Semester, 1954-1955*

SPE. 202. INTERPRETATIVE READING THREE CREDIT HOURS
The reading of poetry and prose for private and professional use to enable the student to develop a deeper intellectual and emotional appreciation of literature. Practice and theory are combined throughout. *First Semester, 1954-1955*

SPE. 203. ACTING I THREE CREDIT HOURS
Study and practice in the fundamentals of acting technique, involving the physical, mental and emotional processes by means of the voice, imagination and bodily movements. *Each Semester, Each Year*

SPE. 204. DRAMATIC TECHNIQUE THREE CREDIT HOURS
A comprehensive course embracing the fundamentals of acting, stage movements, interpretation, and stagecraft. Assigned projects to meet special group interests. *Second Semester, 1955-1956*

SPE. 301. SPEECH COMPOSITION THREE CREDIT HOURS
The special methods by which speech is made clear, interesting and forceful before various groups of audiences, and on the ordinary occasions that the student is often called on to face in life. The writing and study of written speeches is emphasized. *First Semester, 1954-1955*

SPE. 302. ARGUMENTATION AND DEBATE THREE CREDIT HOURS
Analysis of the arguments that arise in conversation and group discussion and debate. Practice in finding evidence, brief-making, and presenting oral arguments in actual debating exercises. *To be announced*

SPE. 303. ADVANCED INTERPRETATIVE READING THREE CREDIT HOURS
This is a continuation of the fundamental course in this subject. Individual work and reading is stressed much more than in the previous course. Prerequisite: Spe. 202. *Second Semester, 1954-1955*

SPE. 304. ACTING II THREE CREDIT HOURS
This is a follow-up of the elementary course in acting. Much more individual training is here given. Prerequisite: Spe. 203. *Second Semester, Each Year*

SPE. 305. STAGECRAFT AND LIGHTING THREE CREDIT HOURS
 This is a more detailed treatment of the problems met with in the study of elementary dramatic technique. Stage mechanics, scene construction, painting, backstage organization, and the technical problems met with in lighting a play.
 Prerequisite: Spe. 204. *First Semester, 1955-1956*

SPE. 306. RADIO FUNDAMENTALS THREE CREDIT HOURS
 This course treats the elementary problems involved in adapting the principles of effective speaking to the radio. Practice is given in announcing, radio drama, etc. *First Semester, 1954-1955*

SPE. 401. ADVANCED PUBLIC SPEAKING THREE CREDIT HOURS
 This course takes for granted a modicum of skill and confidence in speech making. Then the advanced principles of personal development, audience psychology, speech composition and delivery are studied. Special types of speaking situations and their requirements are looked into. Constant practice. *First Semester, 1955-1956*

SPE. 402. PLAY DIRECTING THREE CREDIT HOURS
 The fundamentals of play directing: script selection, casting, rehearsal steps, stage business, tempo, etc. Problems ordinarily met in school dramatics will be discussed. *Second Semester, 1954-1955*

SPE. 403. HISTORY OF THE THEATRE I THREE CREDIT HOURS
 The history of the non-literary aspects of the theatre, from ancient Greece to the days of Shakespeare. This is a course in appreciation of dramatic art, as well as its history. *First Semester, 1955-1956*

SPE. 404. HISTORY OF THE THEATRE II THREE CREDIT HOURS
 The course of theatrical art from Shakespeare to the present day. When time allows, the history and appreciation of motion picture art is included. *Second Semester, 1955-1956*

SPE. 405. RADIO DRAMATICS THREE CREDIT HOURS
 This course continues the fundamentals of radio work, and emphasizes especially play production on the radio and television. Practice in dramatizing radio scripts. Prerequisite: Spe. 306 *Second Semester, 1955-1956*

SPE. 406. THE TEACHING OF SPEECH IN SECONDARY SCHOOLS THREE CREDIT HOURS
 This course treats the problems met with by the beginner in teaching speech work in secondary schools, the conducting of assemblies, of speech contests, and of school play production. *Second Semester, 1954-1955*

TECHNICAL INSTITUTE

MR. HAZEN, MR. HOLLY, BRO. MORGANA

DRAFTING AND MECHANICAL TECHNOLOGY (DM)

DM. 1. TECHNICAL DRAWING THREE CREDIT HOURS
 An introduction to technical drawing with the emphasis upon the use of instru-

ments, lettering, orthographic projection and conventional industrial practices. One hour of class and five hours of laboratory a week. Prerequisite or corequisite: PS 1.

DM 2. GRAPHICAL COMPUTATION **THREE CREDIT HOURS**

Fundamental descriptive and analytic geometry principles as applied to the solution of engineering problems: included are intersections and developments of planes and solids, layout of objects in space and clearance. One hour of class and five hours of laboratory a week. Prerequisite: DM 1; Prerequisite or corequisite: PS 2.

DM 3. MACHINE DRAWING **TWO AND ONE-HALF CREDIT HOURS**

Preparation of complete working drawings from layouts for interchangeable manufacture, computation of fits, limit dimensions and tolerances. One and one-half hours of class and three hours of laboratory a week. Prerequisites: DM 2, and IT 3.

DM 4. TOOL DRAWING **TWO AND ONE-HALF CREDIT HOURS**

Fundamental tool drawing principles and methods. One and one-half hours of class and three hours of laboratory a week. Prerequisites: DM 2, and IT 3.

DM 5. DIE DESIGN **THREE CREDIT HOURS**

Fundamental principles of the design and construction of piercing, blanking, forming, drawing, progressive and compound dies. One hour of class and five hours of laboratory a week. Prerequisite: DM 4.

DM 6. JIG AND FIXTURE DESIGN **TWO AND ONE-HALF CREDIT HOURS**

Fundamental principles of the design and construction of drill and combination jigs, and milling, reaming and tapping fixtures. One and one-half hours of class and three hours of laboratory a week. Prerequisite: DM 4.

DM 7. GAGE DESIGN **TWO AND ONE-HALF CREDIT HOURS**

Design of gages for interchangeable manufacture. One and one-half hours of class and three hours of laboratory a week. Prerequisite: DM 4.

DM 10. MACHINE SHOP PRACTICES **THREE CREDIT HOURS**

A study of the use of hand and machine tools and measuring instruments as well as standard physical testing equipment such as the Rockwell hardness tester and tensile machines. One hour of class and five hours of laboratory a week. Prerequisites: PS 2, PS 11, DM 1.

DM 20. MECHANICS: STATICS AND DYNAMICS **THREE CREDIT HOURS**

Forces acting on rigid bodies at rest and in motion. Three hours of class a week. Prerequisites: PS 2, and PS 11.

DM 21. STRENGTH OF MATERIALS **THREE CREDIT HOURS**

Stress and strain; riveted and welded joints; torsion; shear; bending and deflection of beams; combined stresses; columns. Three hours of class a week. Prerequisite: DM 20.

DM 22. MACHINE DESIGN TWO AND ONE-HALF CREDIT HOURS
 Fundamentals of design and experimental procedure in the calculation of machine members and elements of testing. One and one-half hours of class and three hours of laboratory a week. Prerequisites: IT 3, and DM 20.

DM 23. MECHANISM THREE CREDIT HOURS
 Fundamentals of displacements, motions and velocities, design of linkages, gears, cams and flexible connections. One hour of class and five hours of laboratory a week. Prerequisites: DM 3, DM 20.

ELECTRICAL TECHNOLOGY

ET 1. ELECTRICAL CIRCUITS SIX CREDIT HOURS
 Nature of direct and alternating current; practical concepts of power, power factor, resistance, reactance, and impedance; simple a.c. and d.c. circuit calculations. Five hours of class and three hours of laboratory a week. Prerequisites: PS 2, PS 11.

ET 2. ELECTRONICS FOUR CREDIT HOURS
 Principles of operation of the more common types of vacuum and gas tubes, thyratrons, photoelectric cells and simple circuits used with them. Three hours of class and three hours of laboratory a week. Prerequisite: ET 1.

ET 3. ELECTRICAL MEASUREMENTS FOUR CREDIT HOURS
 Fundamentals of direct and alternating current measuring instruments and methods of measurement, with particular emphasis on industrial applications. Three hours of class and three hours of laboratory a week. Prerequisite: ET 1.

ET 5. ELECTRICAL SHOP PRACTICES ONE CREDIT HOUR
 Fundamentals of electrical equipment installation and maintenance. Three hours of laboratory a week.

ET 6. ELECTRICAL CODE ONE AND ONE-HALF CREDIT HOURS
 A study of the National Electrical Code to provide safe practices in the installations of electrical equipment in buildings. One and one-half hours of class a week.

ET 10. ELECTRICAL MACHINERY FOUR CREDIT HOURS
 Fundamentals of the construction and application of direct current and alternating current machines and apparatus to industrial uses. Three hours of class and three hours of laboratory a week. Prerequisite: ET 1.

ET 11. MOTOR CONTROL FOUR CREDIT HOURS
 Industrial uses of standard controllers for electric motors. Three hours of class and three hours of laboratory a week. Prerequisite or corequisite: ET 10.

ET 12. ELECTRICAL BLUEPRINTS AND DIAGRAMS ONE CREDIT HOUR
 Standards and symbols used on electrical blueprints and wiring diagrams primarily for control circuits. Three hours of laboratory a week. Prerequisite: DM 1.

- ET 20. RADIO FUNDAMENTALS FOUR CREDIT HOURS
Elementary principles of operation and structural details of fundamental units of radio apparatus. Three hours of class and three hours of laboratory a week. Prerequisite: ET 2.
- ET 21. TELEVISION FUNDAMENTALS FOUR CREDIT HOURS
Elementary principles of operation and structural details of basic television equipment with primary emphasis on receivers. Three hours of class and three hours of laboratory a week. Prerequisite or corequisite: ET 20.
- ET 22. ELECTRONIC CIRCUIT DIAGRAMS ONE CREDIT HOUR
Standards and symbols used on electronic circuit diagrams. Prerequisite: DM 1; Prerequisite or corequisite: ET 21.

GENERAL STUDIES (GS)

- GS 1. EFFECTIVE SPEAKING ONE AND ONE-HALF CREDIT HOURS
Organization and presentation of spoken material with special emphasis on voice and physical delivery and audience reaction. One and one-half hours of class a week.
- GS 2. CONFERENCE LEADERSHIP ONE AND ONE-HALF CREDIT HOURS
Training and practice in conducting and participating in small group conferences, shop committees, instructional groups and problem solving groups. One and one-half hours of class a week. Prerequisite: GS 1.
- GS 3. REPORT WRITING THREE CREDIT HOURS
The preparation and presentation of industrial reports. Three hours of class a week. Prerequisite: GS 4.
- GS 4. BUSINESS ENGLISH ONE AND ONE-HALF CREDIT HOURS
Review of basic principles of grammar, spelling and punctuation, with special emphasis on composition as used in business letter writing. One and one-half hours of class a week.
- GS 11. APPLIED PSYCHOLOGY THREE CREDIT HOURS
Fundamentals of psychology as applied to normal behavior and personal adjustment, with special emphasis on possible uses in industrial application. Three hours of class a week.
- GS 21. AMERICAN POLITICAL IDEAS AND PRACTICES THREE CREDIT HOURS
Fundamentals of democratic processes in government and the practices in which they function. Three hours of class a week.
- GS 22. ECONOMICS IN INDUSTRY THREE CREDIT HOURS
Basic economic principles as applied to major industrial problems. Three hours of class a week.

INDUSTRIAL TECHNOLOGY (IT)

IT 1. INDUSTRIAL ORGANIZATION AND PRODUCTION THREE CREDIT HOURS
 A survey of the operational, financial, marketing and accounting activities of industrial organization. Also included is a detailed survey of the duties of management as related to the production function of planning, control, personnel and human factors. Three hours of class a week.

IT 2. ELEMENTS OF SUPERVISION THREE CREDIT HOURS
 A study of the supervisor's relation to his men and his place in developing an effective production team. Three hours of class a week. Prerequisites: IT 1, GS 11.

IT 3. INDUSTRIAL MATERIALS AND METHODS OF MANUFACTURE TWO AND ONE-HALF CREDIT HOURS
 A study of modern materials used in industry with emphasis on their chemical and physical properties and methods by which they may be fabricated. One and one-half hours of class and three hours of laboratory a week.

IT 4. MOTION AND TIME STUDY THREE CREDIT HOURS
 Fundamentals of work simplification and motion economy using the techniques of motion and time study for the development of effective methods of production. Two hours of class and four hours of laboratory a week. Prerequisites: IT 1 and PS 2.

IT 6. JOB EVALUATION AND WAGE DETERMINATION THREE CREDIT HOURS
 Job evaluation methods; determining requirements of jobs; establishing grade levels; development of basic rates, salary classification and performance rating. Three hours of class a week. Prerequisites: IT 2, IT 8.

IT 7. ELEMENTS OF COST CONTROL THREE CREDIT HOURS
 A survey of the methods of breakdown and cost analysis of labor, material and overhead. All related to modern industrial practices. Three hours of class a week. Prerequisite: IT 1.

IT 8. PRODUCTION METHODS AND CONTROL THREE CREDIT HOURS
 Principles and the techniques used in production; current practices in production planning, routing, scheduling and dispatching; study of production standards, labor efficiency and costs; quantity and quality control. Three hours of class a week. Prerequisites: IT 1, IT 3.

IT 9. INDUSTRIAL SAFETY ONE AND ONE-HALF CREDIT HOURS
 Basic principles of industrial accident prevention and organization for mechanical safeguards, fire prevention, occupational disease, hygiene and first aid, safety codes, compensation and safety education programs. One and one-half hours of class a week. Prerequisite: IT 1.

IT 10. PLANT LAYOUT TWO AND ONE-HALF CREDIT HOURS
 A study of the economical arrangement of stocks, machines and layout of aisles

for efficient material handling and production. One and one-half hours of class and three hours of laboratory a week. Prerequisites: DM 1, IT 8.

IT 11. OPERATION PLANNING ONE AND ONE-HALF CREDIT HOURS
Pre-production planning of the most economical methods, machines, operations, and materials for the manufacture of a product. One and one-half hours of class a week. Prerequisites: IT 1, IT 3.

IT 12. PRODUCTION PROCEDURES ONE AND ONE-HALF CREDIT HOURS
Primarily for students enrolled in mechanical technology, Tool Design, Option B. A survey of production control, scheduling, dispatching, material handling, motion and time study and layout of production equipment. One and one-half hours of class a week. Prerequisite: IT 11.

IT 13. QUALITY CONTROL ONE AND ONE-HALF CREDIT HOURS
An introduction to the techniques of industrial process control using statistical methods. One and one-half hours of class a week. Prerequisite: PS 2.

PHYSICAL SCIENCE (PS)

PS 1. INDUSTRIAL MATHEMATICS I THREE CREDIT HOURS
A review of the fundamentals of arithmetic and a study of selected topics from geometry and algebra with application to industrial problems. Three hours of class a week.

PS 2. INDUSTRIAL MATHEMATICS II THREE CREDIT HOURS
Selected topics from algebra and trigonometry with particular emphasis on industrial problems. Three hours of class a week. Prerequisite: PS 1.

PS 11. PHYSICS: MECHANICS THREE AND ONE-HALF CREDIT HOURS
A study of the laws of simple machines, forces, linear and angular motion, conditions of equilibrium and fluids. Three hours of class and two hours of laboratory a week. Prerequisite or corequisite: PS 1.

PS 12. PHYSICS: HEAT, LIGHT AND SOUND THREE AND ONE-HALF CREDIT HOURS
The elementary principles of heat, light and sound with particular emphasis on industrial application. Three hours of class and two hours of laboratory a week. Prerequisite: PS 11.

PS 13. PHYSICS: ELECTRICITY THREE AND ONE-HALF CREDIT HOURS
The basic principles of electricity and their application in industry. Three hours of class and two hours of laboratory a week.

PS 21. INTRODUCTION TO INDUSTRIAL CHEMISTRY TWO AND ONE-HALF CREDIT HOURS
A survey of the general principles of chemistry including elements and their simpler compounds. Special emphasis on topics of importance in industrial activities. One and one-half hours of class and three hours of laboratory a week. Prerequisite: PS 1.

Degrees and Awards

DEGREES AWARDED

(No reference to the city of residence is made of those graduates who live in Dayton Ohio.)

June 6, 1953

College of Arts and Sciences

ASSOCIATE IN ARTS

Helen M. Rieger

BACHELOR OF ARTS

Ben Wai Chee Au	Honolulu, Hawaii
William Edward Barnett	
*Jerome Bernard Bohman	Houston, Ohio
Thomas Kneisley Borton	
Delayne K. Campbell	Centerville, Ohio
Walter E. Cassidy	Portsmouth, Ohio
Marilyn Frances Catron	
William Frederick Connaughton	Hamilton, Ohio
James Vincent Cosimati	Middletown, Ohio
Donald Clarence Dechant	Avon, Ohio
William Joseph Donohoue	
John P. Donovan, Jr.	
Charles Louis Elworth	
Thomas Charles Eshelman	
James Bernard Fisher	Fairborn, Ohio
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