1955-1956 Bulletin
The University of Dayton

1. Field House
2. Albert Emanuel Library
3. Business Annex
4. Old Gymnasium
5. St. Mary's Hall
6. Chaminade Hall
7. Chapel
8. St. Joseph's Hall
9. Stadium
10. Music Building
11. Alumni Hall
12. Founders Hall
13. ROTC Building
14. Mechanical Engineering Building
15. Student Union
16. Chemistry Annex
UNIVERSITY OF DAYTON
BULLETIN
ONE HUNDRED AND SIXTH YEAR

CATALOGUE

1955-1956

COLLEGE OF ARTS AND SCIENCES
COLLEGE OF ENGINEERING
TECHNICAL INSTITUTE

VOLUME LXVI
MAY, 1955
NUMBER 2

Entered as second-class matter July 15, 1918, at the post office
at Dayton, Ohio, under Act of August 24, 1912.
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

The provisions of this catalogue are to be considered directive in character, and not as an irrevocable contract between the student and the University. The University reserves the right to change any provision or requirement of this catalogue.

For catalogue and information, address:

The DIrector of Admissions
University of Dayton
Dayton 9, Ohio
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## CALENDAR

**Day Classes, 1955-1956**

### FIRST SEMESTER

<table>
<thead>
<tr>
<th>Date</th>
<th>Events</th>
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<tbody>
<tr>
<td>Sept. 9, 10, Friday, Saturday, 8:20 a.m.</td>
<td>Placement tests for all new students, including transfer students, who have not already taken these tests at the University of Dayton Guidance Center.</td>
</tr>
</tbody>
</table>
| Sept. 12, Monday | Registration for upperclassmen of Dayton area:  
Juniors and Seniors—8:00 a.m. to 11:00 a.m.  
Sophomores—11:00 a.m. to 3:00 p.m. |
| Sept. 13, Tuesday | Registration for beginning freshmen:  
8:00 a.m. to 10:00 a.m.—A and B  
10:00 a.m. to 12:00 noon—C to G  
1:00 p.m. to 3:00 p.m.—H to K |
| Sept. 14, Wednesday | Registration for beginning freshmen:  
8:00 a.m. to 10:00 a.m.—L to O  
10:00 a.m. to 12:00 noon—P to S  
1:00 p.m. to 3:00 p.m.—T to Z |
| Sept. 15, Thursday | Registration for all transfer students, including U.D. students changing to a different division.  
(Consult EXPENSES regarding deviation from the registration schedule.) |
| Sept. 16, Friday | Registration for boarding students and those whose permanent residence is not in Dayton (excluding freshmen).  
As of this date, all withdrawals are recorded as WP or WF. |
| Sept. 19, Monday | Classes begin at 8:00 a.m. |
| Sept. 21, Wednesday | Evening classes begin. |
| Sept. 24, Saturday | Last day for late registration or change in schedules. |
| Oct. 10, Monday | As of this date, all withdrawals are recorded as WP or WF. |
| Nov. 1, Tuesday | Feast of All Saints. No classes. |
| Nov. 12, Saturday | Mid-term progress reports. |
| Nov. 24, Thursday | Thanksgiving Day. No classes. |
| Dec. 8, Thursday | Feast of the Immaculate Conception. No classes. |
| Dec. 17, Saturday | Christmas recess begins after the last class. |

1956

<table>
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<tr>
<th>Date</th>
<th>Events</th>
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<tbody>
<tr>
<td>Jan. 3, Tuesday</td>
<td>Campus students return before 11:50 p.m. (First meal served on following day in campus dining room.)</td>
</tr>
<tr>
<td>Jan. 4, Wednesday</td>
<td>Classes resume at 8:00 a.m.</td>
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</table>
SECOND SEMESTER

Jan. 30, 31  
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.

Jan. 30, Monday  
Registration for Juniors  
8:00 a.m. to 10:00 a.m.—A to L  
10:00 a.m. to 12:00 noon—M to Z  
1:00 p.m. to 3:00 p.m.  

Jan. 31, Tuesday  
Registration for Seniors  
8:00 a.m. to 10:00 a.m.—A to L  
10:00 a.m. to 12:00 noon—M to Z  
1:00 p.m. to 3:00 p.m.

Feb. 1, Wednesday  
Registration for Sophomores  
8:00 a.m. to 10:00 a.m.—A to G  
10:00 a.m. to 12:00 noon—H to O  
1:00 p.m. to 3:00 p.m.—P to Z

Feb. 2, Thursday  
Registration for Freshmen  
8:00 a.m. to 10:00 a.m.—A and B  
10:00 a.m. to 12:00 noon—C to G  
1:00 p.m. to 3:00 p.m.—H to K

Feb. 3, Friday  
Registration for Freshmen  
8:00 a.m. to 10:00 a.m.—L to O  
10:00 a.m. to 12:00 noon—P to S  
1:00 p.m. to 3:00 p.m.—T to Z

Feb. 6, Monday  
Classes begin at 8:00 a.m.

Feb. 11, Saturday  
Last day for late registration or change in schedules.

Feb. 15, Wednesday  
Ash Wednesday.

Feb. 27, Monday  
As of this date, all withdrawals are recorded as WP or WF.

Mar. 27, Tuesday  
Mid-term progress reports.

Mar. 27, Tuesday  
Easter recess begins after the last class on this day.

Apr. 2, Monday  
Campus students return before 11:50 p.m.

Apr. 3, Tuesday  
Classes resume at 8:00 a.m.

May 10, Thursday  
Feast of the Ascension. No classes.

May 30, Wednesday  
Memorial Day. No classes.

June 1, Friday  
Honors Convocation.

June 3, Sunday  
Baccalaureate service.

June 4-8  
Semester Examinations.

Monday-Friday  
Commencement, 2:30 p.m.
SUMMER SCHOOL
June 25-August 4, 1956

D AY CLASSES, 1956-1957

Sept. 7, 8, Friday,
Saturday, 8:20 a.m.

Sept. 10-14,
Monday-Friday

Sept. 17, Monday

Placement tests for all new students, including transfer students, who have not already taken these tests at the University of Dayton Guidance Center.

Registration Week.

Classes begin at 8:00 a.m.

ENROLLMENT

DAY CLASSES
September, 1954

<table>
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<tr>
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<th>Men</th>
<th>Women</th>
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<tbody>
<tr>
<td>Seniors</td>
<td>267</td>
<td>71</td>
<td>338</td>
</tr>
<tr>
<td>Juniors</td>
<td>323</td>
<td>90</td>
<td>413</td>
</tr>
<tr>
<td>Sophomores</td>
<td>478</td>
<td>117</td>
<td>595</td>
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<td>Freshmen</td>
<td>835</td>
<td>139</td>
<td>974</td>
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<tr>
<td>Unclassified</td>
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<tr>
<td>Off-campus Religious</td>
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EVENING CLASSES
September, 1954

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<td>1,592</td>
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GOVERNING BOARDS

BOARD OF TRUSTEES

Very Rev. John A. Elbert, s.m., Chairman
Rev. George J. Renneker, s.m., Secretary
Rev. Andrew L. Seebold, s.m.     Francis X. Neubeck, s.m.
Paul A. Sibbing, s.m.

ASSOCIATE BOARD OF LAY TRUSTEES

/ Samuel L. Finn, President     / David L. Rike, Vice President
/ Walter H. J. Behm, Treasurer     / Merle P. Smith, Secretary
/ Stanley C. Allyn
/ Edwin G. Becker
/ James M. Cox, Jr.
/ Harry F. Finke
/ Clarence H. Gosiger
/ Carroll A. Hochwalt
/ Kenneth C. Long
/ George H. Mead

/ Jerome A. McAvoy, s.m.

ADMINISTRATIVE COUNCIL

Fathers Seebold, Kobe, Collins, Leimkuhler; Brothers Lackner, Holian, McAvoy, Faerber.

ACADEMIC COUNCIL

Fathers Seebold, Kobe, Collins, Rhodes; Brothers Bellmer, Faerber, Mervar, Nagel, Parr.
ADMINISTRATION

ADMINISTRATIVE OFFICERS

VERY REV. ANDREW L. SEEBOULD, S.M., President

REV. HENRY J. KOBE, S.M., Vice-President, Dean of the University

REV. CHARLES L. COLLINS, S.M., Dean of Students, Director of Admissions

REV. EDWIN M. LEIMKUHLER, S.M., Chaplain

REV. EDMUND L. RHODES, S.M., Acting Dean, College of Arts and Sciences

JEROME H. PARR, S.M., Dean, College of Engineering

WILLIAM J. BELLMER, S.M., Associate Dean, Science

LOUIS J. FAERBER, S.M., Associate Dean, Education

GEORGE W. NAGEL, S.M., Associate Dean, Business Administration

DONALD C. METZ, Director, Technical Institute

DANIEL L. LEARY, Director, Student Teaching

R. KATHLEEN WHETRO, Dean of Women

JOSEPH J. MERVAR, S.M., Registrar, Director of Evening Classes

ELMER C. LACKNER, S.M., Development Director

AUSTIN J. HOLIAN, S.M., Business Manager

. JEROME A. MCAVOY, S.M., Comptroller

WILLIAM D. BUSCH, S.M., Treasurer

JAMES H. KLINE, S.M., Purchasing Agent

HARRY C. BAUJAN, Athletic Director
ADMINISTRATIVE ASSISTANTS

ROBERT E. DONOVAN, Assistant to Director of Evening Classes,
Evening Classes Representative at Wright-Patterson Air Force Base,
Director of Veterans' Affairs

JEROME VON MOHR, Assistant to Director of Veterans' Affairs

MARY TUIE, Assistant Registrar

JAMES E. GALLICO, Assistant to Director of Admissions

ROBERT C. WIECHMAN, Assistant to Associate Dean, Science

KATHLEEN J. DANZER, Assistant to Dean of Women

PAUL C. MICHEL, Assistant to Business Manager

MARY CAREY, Director of Clerical Personnel

JAMES F. WILSON, Publicity

JAMES F. CLARKE, Publicity

MARY SHAY, Alumni Secretary

-----------*

LOUIS H. ROSE, S.M., Supervisor, Founders Hall

ROBERT B. O’DONNELL, Supervisor, St. Joseph Hall

E. J. MCLAUGHLIN, M.D., Consulting Physician

SR. M. BARTHOLOMEW, M.S.C., R.N., Infirmarian

MAURICE F. CONNELL, S.M., R.N., Infirmarian

GEORGE N. MUKITS, S.M., Manager, U. D. Book Store

MRS. JOSEPH UNGER, Student Union Counselor

SECRETARIAL STAFF

KATHARINE ANGST, BARBARA BOESCH, BETTY CLARK, GLADYS CLEMENT,
LOUISE GIBSON, MARYLYN GOLDBERG, VIOLET GOULDBOURN, MARY HECKER,
MARY ANN KRAPF, ALAMEDA LAPP, GLORIA LEE, OLGA LORENCZ, ANN
LYKINS, DOLORES MCANESPIE, MARCIA MERCER, NORMA JEAN MINNICH,
FRANCES MURRAY, MARTHA O’BRIEN, LOUISE RAIFF, ANN RIEGER, DORIS
SCHOCK, EMMA JANE SHERWOOD, AGNES THIEMAN, PATRICIA TURBEN, MARY
ANN VOLBRECHT, CAROL VOLK, UNA WALKER, MARY ANN WALTERS, ANNE
WILKERSON.
GUIDANCE CENTER STAFF

Lloyd A. Rensel, Director; John C. Bramlage, Robert L. Noland, Charles Scheidler—Counselors; Gloria Gantz, Counselor and Administrative Supervisor; Roberta McMahon, Eileen Myers—Psychometrists; Janet Kinstle, Rose Stephan—Stenographers; Mary Bir, Lucy McNabb, Marion Williams—Scoring Technicians; Harry C. Murphy, Director, Student Part-time Employment; Edward E. Rieck, Veterans Administration Ad­viser; George Coffroad, Veterans Administration Training Officer.

UNIVERSITY RESEARCH STAFF

Andrews, Charles R. Luthman, Robert R.

Bosshart, Joseph E. McGovern, Francis G.

Brenberger, Lloyd P. Mills, Gordon W.

Busch, Gerald E. Morgan, Adrian J.

Chong, Benjamin M. Noland, Robert L.

Coy, Richard G. Peckham, Cyril G., Project Head

Engler, Nicholas A. Roth, George J.

Faso, Peter J. Schlei, Edward J.

Freeh, Edward J. Schmidt, Bernhard M., Project Head

Gallico, James E. Schraut, Kenneth C., Project Head

Hazen, Richard E. Stith, Raymond J.

Hovey, William J. Wehmanen, Roy W.

Janning, Edward A. Westbrock, Adrian J., Project Head

Jehn, Lawrence A. Whitford, Dale H.

Kester, Jack E. Wilder, Jesse H.

Lucier, John J., S.M. Wimsatt, Thomas K.

Westerheide, John R.
STANDING COMMITTEES

ADMISSIONS AND DEGREES
Father Collins, Chairman (for Admissions); Father Kobe, Chairman (for Degrees); Father Rhodes; Brothers Bellmer, Faerber, Mervar, Nagel, Parr.

CATALOGUE AND CURRICULUM
Father Kobe, Chairman
Fathers Collins, Rhodes; Brothers Bellmer, Faerber, Mervar, Nagel, Parr.

STUDENT AID
Father Collins, Chairman
Father Kobe; Brothers Holian, Lackner, McAvoy

FACULTY AFFAIRS
Father Kobe, Secretary for the Faculty, Chairman
Brothers Holian, Lackner, McAvoy, Mr. Chamberlain, Mr. Huth, Mr. Leary, Mrs. Miller, Mr. Schraut, Mr. Snyder.

RELIGIOUS ACTIVITIES
Father Leimkuhler, Chairman
Fathers Hoelle, Hofstetter

PUBLIC RELATIONS
Brother Lackner, Chairman
Mr. Clarke, Mr. Wilson, Miss Shay
RESOLUTIONS

Brother W. O. Wehrle, Chairman
Miss Whetro, Brother Price

HONORARY DEGREES

Father Kobe, Chairman; Brother Mervar, Secretary
Father Collins, Mr. O'Leary, Miss Whetro, Mr. Snyder

ATHLETICS

Faculty Representatives
Father Collins, Chairman; Mr. Baujan, Athletic Director
Brothers Bellmer, McAvoY, Wohlieben

Representatives at Large
James Finke, James Hanby, Bernard L. Keiter, Louis R. Mahrt,
J. Ellis Mayl, Dr. G. J. Rau, Lee Schmidt

BUDGET

Brother Holian, Chairman
Father Kobe; Brothers 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.

Richard A. Anduze (1951)
Part-time Instructor in Spanish, 1951.
B.S., University of Dayton, 1945.

Joseph E. Averdick (1954)
Assistant Professor in Technical Institute, 1954.
B.S., University of Dayton, 1924.

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 Chairman of Department of Civil Engineering, 1952.
B.S., Civil Engineering, University of Notre Dame, 1940; M.C.E., University of Michigan, 1951; Prof. Eng.

Peter J. Balsels (1954)
Part-time Instructor in Technical Institute, 1954.
B.M.E., University of Colorado, 1952.

Walter Charles Barnes (1945)
Part-time Instructor in Accounting, 1945.
A.B., Coe College, 1929.

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)
Associate Professor of History, 1954.
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.

ROBERT P. BEHLING (1954)
Instructor in Accounting, 1954.

WILLIAM JOSEPH BELLMER, S.M. (1927)
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.

ALAN C. BENDEK (1954)
B.S., Michigan State Normal College, 1948; M.S., University of Michigan, 1950.

FREEMAN F. BENTLEY (1952)
Part-time Instructor in Chemistry, 1952.
B.S., University of Georgia, 1947; M.S., University of Georgia, 1949.

FERNE R. BERNER (1945)
Assistant Professor of Nursing, 1949.
B.S., University of Dayton, 1945; R.N.

MARTHA VINSON BERNHARD (1955)
Instructor in Home Economics, 1955.
B.S., University of Arizona, 1927; M.S., Columbia University, 1932.

HAROLD TODD BEVAN (1953)
Instructor in Psychology, 1953.
Ph.B., University of Detroit, 1951.
GEORGE C. BIESSACK (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

PAUL BLAGG (1946)
   Part-time Instructor in Music, 1946.
   Musical Training: John Phillip Sousa Band, 1922-1923; Arthur Pryor Band,
   1924-1928; Soloist with Armco Band; Soloist, Dayton Municipal Band;
   Trumpet, Dayton Philharmonic Orchestra, 1942.

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.

LESTER J. BOHMAN (1954)
   Part-time Instructor in Sociology, 1954.
   A.B., University of Dayton, 1951; M.A., Loyola University (Chicago,
   Illinois), 1953.

LAWRENCE LEO BOLL, S.M. (1927)
   Professor of English, 1927.
   A.B., University of Dayton, 1912; M.A., The Catholic University of Amer-
   ica, 1925; Ph.D., The Catholic University of America, 1929.

EVANGELINE G. BOLLINGER (1954)
   Instructor in English, 1954.
   A.B., Madison College (Harrisonburg, Virginia), 1944; M.A., University
   of Michigan, 1945; Ph.D., University of Michigan, 1951.

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.

   Assistant Professor of Psychology, 1949.
   B.S., Ohio University, 1936; M.Ed., Ohio University, 1945.

JOHN CHARLES BRAMLAGE (1954)
   Counselor, Guidance Center, 1954.
   A.B., University of Dayton, 1952.
LLOYD P. BRENNBERGER (1951)
Instructor in Industrial Engineering, 1953.
B.S. in I.E., General Motors Institute, 1951.

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Part-time Instructor in Technical Institute, 1952.
B.Ch.E., University of Dayton, 1945

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Associate Professor of Philosophy, 1954.
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.

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.

CHESTER W. CARNEY (1955)
Instructor in Technical Institute, 1955.

JAMES G. CARTER (1954)
Part-time Instructor in Accounting, 1954.
B.S., Miami University (Oxford, Ohio), 1940; M.S., Michigan State College, 1951; C.P.A.

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)
Assistant Professor of Accounting and Business Organization, 1954.
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.

SIMON J. CHAVEZ (1954)
Assistant Professor of Education, 1954.

SHUN CHENG (1955)
Instructor in Mechanical Engineering, 1955.
B.S.M.E., National Northwestern Engineering College (China), 1942; M.S., University of Michigan, 1954.
Benjamin M. Chong (1954)

Part-time Instructor in Electrical Engineering, 1954.
B.E.E., University of Dayton, 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 Civille (1947)

Assistant Professor of Secretarial Studies, 1950.
B.S., Ohio University, 1934; M.Ed., University of Cincinnati, 1952.

James French Clarke (1952)

Director of Academic Publicity, 1952.

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.

Horace N. Coryell (1954)

Lecturer in Geology, 1954.
A.B., Indiana University, 1914; M.A., Indiana University, 1915; Ph.D., University of Chicago, 1919.

Ova B. Craft, M/Sgt. (1953)

Assistant Instructor in Military Science and Tactics, 1953.

Cecil M. Curles, Major (1954)

Assistant Professor of Military Science and Tactics, 1954.
BERNARD T. DALEY (1954)
Part-time Instructor in Education, 1954.

KATHLEEN J. DANZER (1954)
Assistant to the Dean of Women, 1954.
Graduate of the Portsmouth, Ohio, General Hospital School of Nursing; R.N.

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.

FRANCIS A. DEIBEL, S.M. (1954)
Assistant Librarian, 1954.
A.B., University of Dayton, 1929; B.S. in L.S., Western Reserve University, 1943.

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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.

HUGH J. DEVORE (1954)
Instructor in Physical and Health Education and Head Football Coach, 1954.
A.B., University of Notre Dame, 1934.

HERBERT J. DINTAMAN (1954)
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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.
ROCCO M. DONATELLI (1954)
Instructor in English, 1954.
B.S., St. John's University (Brooklyn, New York), 1949; M.A., Rutgers University, 1952.

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.

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.

RICHARD DUNHAM (1954)
A.B., Ohio Wesleyan University, 1947.

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Part-time Instructor in Mathematics, 1954.
B.S., Marietta College, 1948; M.S., The Ohio State University, 1950; Ph.D., The Ohio State University, 1953.

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Part-time Instructor in Mathematics, 1954.
B.S., Holy Cross College, 1949; M.S., University of Connecticut, 1951.

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.
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 Chairman of the Department of Education, 1951; Associate Dean, Head of the Division of Education, 1951.

JOHN M. FARNBACHER (1954)
    B.M.E., University of Dayton, 1945; M.S. in I.E., The Ohio State University, 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.

    Assistant Professor of Religion, 1948.
    A.B., University of Dayton, 1929; B.Th., University of Fribourg (Fribourg, Switzerland), 1937.

JAMES B. FISHER (1954)
    Instructor in English, 1954.
    A.B., University of Dayton, 1953.

L. HOWARD FLATTER (1951)
    Part-time Instructor in Psychology, 1951.

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.
ERNST K. FRANKE (1954)

Part-time Instructor in German, 1954.
M.S., Institute of Technology (Breslau, Germany), 1934; Ph.D., Institute of Technology (Berlin, Germany), 1939.

WALTER G. FREMONT, Sr. (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.

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.

JAMES EDWARD GALLICO (1947)

Assistant to Director of Admissions, 1949.
B.S., Fordham University, 1935.

MARGARET WILSON GALLICO (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.

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.

SISTER GRACE MARIE, S.C. (1954)

Assistant Professor of Nursing, 1954.
B.S., College of Mount St. Joseph-on-the-Ohio, 1953; R.N.

MICHAEL BENEDICT GRANDY, S.M. (1926)

Chairman 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.

LAWRENCE L. GRIER (1951)
Part-time Instructor in Business Organization, 1951.
B.S., Ohio University, 1938.

FREDERICK C. GRISWOLD, MAJOR (1954)
Assistant Professor of Military Science and Tactics, 1954.
A.B., Michigan State College, 1940.

EDWARD WILLIAM HARKENRIDER (1952)
Assistant Professor of Philosophy, 1953.

REGINALD HARLING (1954)
Part-time Instructor in Mathematics, 1954.
B.S., University of London (England), 1921; M.S., University of California, 1937.

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 O. 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.

HELMUT G. HEINRICH (1951)
Part-time Instructor in General Engineering, 1951.
B.M.E., Stettin (Germany), 1931; B.A.E., Institute of Technology (Stuttgart, Germany), 1937; M.A.E., Institute of Technology, 1938; D.E.S. (Doctor of Engineering Science), Institute of Technology, 1943.

NORRIS D. HELLWIG (1952)
Part-time Instructor in Speech, 1952.
B.S., University of Dayton, 1949; M.A., Northwestern University, 1951.
FRANCIS J. HENNESSY (1954)
Instructor in Education, 1954.
B.S., State Teachers College (Bridgewater, Massachusetts), 1950; M.S.,
Boston College, 1954.

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.

RAYMOND HOEFLING (1954)
Part-time Instructor in Industrial Engineering, 1954.
B.S., University of Dayton, 1935.

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.

CECIL HOGG, M/SGT. (1954)
Assistant Instructor in Military Science and Tactics, 1954.

AUSTIN JOSEPH HOLIAN, S.M. (1944)
Associate Professor of Electrical Engineering, 1946; Business Manager,
1955.
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.
ROBERT J. HORVAT (1954)
Instructor in Chemistry, 1954.
B.S., St. Mary's College (California), 1945; M.S., University of San Francisco, 1951.

SHAO TI HSU (1954)
Associate Professor of Mechanical Engineering, 1954.
B.S., Chiao Tung University (Shanghai), 1937; M.S., Massachusetts Institute of Technology, 1943; D.Sc., Swiss Federal Institute of Technology (Zurich), 1954.

GEORGE HUMM (1954)
B.S., University of Dayton, 1940.

ELMER E. HUNSAKER, M/Sgt. (1947)
Assistant Instructor in Military Science and Tactics, 1947.

FRANK E. HUSTMYER, JR. (1954)
Part-time Instructor in Psychology, 1954.
A.B., University of Dayton, 1951.

EDWARD ANDREW HUTH (1939)
Chairman 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.

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Assistant Instructor in Military Science and Tactics, 1954.

RUSSELL ALBERT JOLY, S.M. (1941)
Chairman of Department, 1949, and Associate Professor of Biology, 1951.
B.S., University of Dayton, 1930; M.S., Institutum Divi Thomae (Cincinnati, Ohio), 1940.

RALPH JOYNER (1954)
B.S., Miami University, 1950; M.S., Miami University, 1951.
STEPHEN D. JUNDANIAN (1954)
Part-time Instructor in Mathematics, 1954.

LUTHER JOHN JUNGEEMANN (1953)
Part-time Instructor in Technical Institute, 1953.
B.S.E.E., South Dakota School of Mines and Technology, 1950.

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 Hermann, Seveik, Ysaye; Theory with Reigger, Elwell, and Boulanger; B.Mus., Cleveland Institute of Music.

CHARLES L. KELLER, JR. (1954)
Instructor in Mathematics, 1954.
B.S., University of Dayton, 1948; M.A., University of Illinois, 1951.

JACK E. KESTER (1954)
Part-time Instructor in Mathematics, 1954.
B.S., University of Dayton, 1952.

EDWIN ROBERT KING (1953)
Instructor in History, 1953.
B.S., University of Dayton, 1949; M.A., Western Reserve University, 1950.

THERESA L. KING (1954)
Instructor in Nursing, 1954.
B.S. in Nursing Education, University of Dayton, 1954; R.N.

JEROME J. KLENNER (1954)
Instructor in Biology, 1954.
B.S., St. Francis College (Loretto, Pennsylvania), 1948; M.S., University of Pittsburgh, 1951.

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

MARJORIE KLINE (1950)
Part-time Instructor in Music, 1950.
Studied under Edw. Waechter, Giovanni Bruno, William Smith, Paul Katz, and Scott Westerman; Director of Dayton Junior Philharmonic Orchestra.
A. WARD KNISLEY (1954)
Instructor in Technical Institute, 1954.
Associate M.E., Drexel Institute, 1917; B.S., United States Naval Academy, 1920.

MARIA TORRES KNOX (1954)
Part-time Instructor in Spanish, 1954.
A.B., Incarnate Word College, 1946.

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.

REV. MATTHEW F. KOHMESCHER, S.M. (1951)
Instructor in Religion, 1931.
A.B., University of Dayton, 1942; S.T.B., University of Fribourg (Fribourg, Switzerland), 1948; S.T.L., University of Fribourg, 1949; S.T.D., University of Fribourg, 1950.

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.

CLEMENT B. KUNTZ (1954)
Part-time Instructor in Technical Institute, 1954.

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Assistant Professor of Biology, 1954.
B.S., University of Dayton, 1934; M.S., University of Pittsburgh, 1944; Ph.D., University of Pittsburgh, 1954.

ALFRED R. KURTZ (1953)
Part-time Instructor in Accounting, 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 LESEE (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 LEIMKUHLER, S.M. (1934)
Chairman of Department and Professor of Religion, 1934.
A.B., The Catholic University of America, 1927; M.A., The Catholic University of America, 1940.

DAVID B. LEONARD (1954)
Part-time Instructor in Technical Institute, 1954.
A.B., Marietta College, 1948; M.A., University of Wisconsin, 1951.

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Assistant Professor of Political Science and History, 1951.
B.S., University of Dayton, 1939; M.A., Western Reserve University, 1947.

CLINTON E. LOTT, SFC. (1951)
Assistant Instructor in Military Science and Tactics, 1951.

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ROBERT R. LUTHMAN (1953)
Part-time Instructor in Mathematics, 1953.
B.S., University of Dayton, 1950.

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Comptroller, 1950.
A.B., University of Dayton, 1936; M.Ed., University of Pittsburgh, 1944.
CHARLES C. McGOVERN, M/SGT. (1954)
Assistant Instructor in Military Science and Tactics, 1954.

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.

JAMES L. McGraw (1952)
Instructor in Technical Institute, 1954.
B.S., Lafayette College, 1951.

EUGENE J. McLaughlin (1955)
Consultant in Biological Research, 1955.
B.S., University of Dayton, 1945; M.D., University of Cincinnati, 1947.

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B.S., University of South Dakota, 1942.

ETHEL MADDEN (1954)
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A.B., St. Joseph's College for Women, 1930; M.A., Fordham University, 1934; M.S., Columbia University, 1953.

ROBERT J. MAINS (1951)
Part-time Instructor in Accounting, 1951.
B.S., University of Dayton, 1949.

LEONARD ANDREW MANN, S.M. (1945)
Assistant Professor of Physics, 1954.
B.S., University of Dayton, 1937; M.S., The Ohio State University, 1945; Ph.D., Carnegie Institute of Technology, 1954.

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.

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M.D., Temple University, 1915; Fellow of American College of Physicians, 1934.

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GENERAL INFORMATION

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, Pre-Law, and in Electrical, Industrial, and Mechanical Technology. Journalistic, forensic, musical, and athletic programs are also sponsored by the University under the supervision of the faculty.

EDUCATIONAL OBJECTIVES

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: (1) to give the student a liberal education in philosophy, in the natural and social sciences, language, and literature; (2) 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; (3) to develop, 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.
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.
6. The Electrical, Industrial and Mechanical Technology programs are Engineers' Council for Professional Development accredited Technical Institute programs.

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 Veterans' Adviser, whose office is located in Room 105, 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 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
GENERAL INFORMATION

Engineers; Phi Alpha Theta; 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; Techn I 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; Knickerbocker Club.

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 obliged 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) Education Division requires competence in the communication skills. The student's total record will be reviewed at the close of his first year to determine whether he is a fit candidate for teacher education.

c) Science Division requires:
   1 unit in algebra (students who wish to major in chemistry, mathematics, or physics, should present 1½ units in algebra)
   1 unit in chemistry or physics
   1 unit in geometry (students who wish to major in chemistry, mathematics, or physics, should present 1½ units in plane and solid geometry)
d) 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

e) 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 back­
ground 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 Li­
brary, 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 Monday
through Friday, until noon on Saturday. Appointments may be made by
telephone.
CURRICULUM

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

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 Carthagena, 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, 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 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 are deferred from induction into the Armed Forces as long as they remain in good standing in their academic and military courses. The acceptance of a deferment 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 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
ACADEMIC REQUIREMENTS

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 point average of 2.00. A cumulative point average of 2.00 is required for graduation.

2. Any student who has a semester 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 twice in the same division.

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 curricula as they deem advisable.

Students from outside the Dayton area, particularly freshmen, reside on campus unless the residence halls are fully occupied, and take their meals in the cafeteria provided for their service, choosing either the 5-day or the 7-day week meal service.

The University cafeteria is open during the vacation periods. Meals may be purchased during these periods on a cash basis.

Students may live in the residence halls during the Christmas and summer periods at a reasonable charge.

Tuition is payable in full at the time of registration. If required by circumstances, deferred payments with a moderate carrying charge may be arranged by full-time students through the Business Manager's Office. When deferred payments are allowed, the initial payment at the time of registration must be a minimum of 50% of the total charges and the balance paid within 60 days. 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.

All checks 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.

Officers and faculty advisers in charge of organizations and activities approved by the University are required to deposit all funds with the Treasurer of the University. The financial accounts of all organizations and activities are subject to audit by the Comptroller's Office.

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

During 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 12 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
Orientation and placement services, payable once, at entrance .......... 10.00
Tuition, per credit hour ................................................................. 15.00
(Number of credit hours varies according to the program of studies. Consult index for specific programs.)
Deposit on uniform, for students taking Military Science ................. 20.00
Laboratory fee, for each laboratory (variations depend upon the course) ................................................................. 5.00-15.00
Laboratory breakage deposit (variations depend upon the course) 5.00-10.00
Books and stationery, at University Book Store, depending upon courses, minimum expenses approximately ................. 30.00
For campus students:
Room and laundry ................................................................. 125.00
Room deposit to cover possible damage (refundable) ................. 10.00
Meals:
Five-day meal ticket (3 meals a day, Monday through Friday) per semester ................................................................. 170.00
Seven-day meal ticket (3 meals a day, Monday through Saturday; Sunday breakfast and noon dinner) per semester ................................................................. 230.00
N.B. The cafeteria is closed on Sunday evenings.
Teacher training fee (Student Teachers) per credit hour ............... 6.00
(Maximum fee $36.00 in addition to the tuition fee)
Late registration:
 a) Any deviation from the registration schedule as outlined in the Calendar, not approved by the student's dean prior to registration week, will carry a $5.00 clerical fee.
 b) Any student who has not completed his registration during the scheduled registration days will be assessed a $15.00 late registration fee.
Proficiency and other special examinations, average fee ................ 5.00
Graduation fee ................................................................. 20.00

PART-TIME STUDENTS
Matriculation fee, payable at first registration each year ............ 5.00
Tuition and other fees, as above for full-time students.

SPECIAL STUDENTS
Special students, non-matriculated students, and auditors are subject to the expenses outlined above.
College of Arts and Sciences

FATHER RHOADES, 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. Sixty-four of the 128 credit hours required for graduation must be on the upper level. Possible majors are: art, economics, English, history, journalism, 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 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

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<th>First Semester</th>
<th>Cr. Hours</th>
<th>Second Semester</th>
<th>Cr. Hours</th>
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<td>Mil. 102 First Yr. Basic Course</td>
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<td>Phe. 101 Physical Education</td>
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<td>Phe. 102 Physical Education</td>
<td>1</td>
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<tr>
<td>Phe. 103 Health</td>
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<td>Phe. 104 Health (Women)</td>
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<td>Spe. 101 Fund. of Eff. Speaking</td>
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<td>Eng. 101 English Composition</td>
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</tr>
<tr>
<td>Hist. 111 Hist. of Mod. Europe</td>
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<td>Hist. 112 Hist. of Mod. Europe</td>
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### Sophomore Year

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<th>Cr. Hours</th>
<th>Second Semester</th>
<th>Cr. Hours</th>
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<td>Religion or Philosophy</td>
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<td>Mil. 202 Second Yr. Basic Course</td>
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<td>Psych. 201 Introd. Psychology</td>
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<td>Soc. 201 General Sociology</td>
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<td>Hist. 252 Amer. Hist. since 1865</td>
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<td>Language</td>
<td>3</td>
<td>Language</td>
<td>3</td>
</tr>
<tr>
<td>Elective</td>
<td>2-3</td>
<td>Elective</td>
<td>2-3</td>
</tr>
</tbody>
</table>

### Junior Year

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Cr. Hours</th>
<th>Second Semester</th>
<th>Cr. Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Major Field</td>
<td>6</td>
<td>Major Field</td>
<td>6</td>
</tr>
<tr>
<td>(2) Philosophy</td>
<td>3</td>
<td>(2) Philosophy</td>
<td>3</td>
</tr>
<tr>
<td>Second Minor</td>
<td>3</td>
<td>Second Minor</td>
<td>3</td>
</tr>
<tr>
<td>(3) Electives</td>
<td>3-6</td>
<td>(3) Electives</td>
<td>3-6</td>
</tr>
</tbody>
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### Senior Year

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Cr. Hours</th>
<th>Second Semester</th>
<th>Cr. Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Major Field</td>
<td>6</td>
<td>Major Field</td>
<td>6</td>
</tr>
<tr>
<td>(2) Philosophy</td>
<td>3</td>
<td>(2) Philosophy</td>
<td>3</td>
</tr>
<tr>
<td>Second Minor</td>
<td>3</td>
<td>Second Minor</td>
<td>3</td>
</tr>
<tr>
<td>(3) Electives</td>
<td>3-6</td>
<td>(3) Electives</td>
<td>3-6</td>
</tr>
</tbody>
</table>

(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

<table>
<thead>
<tr>
<th>Subjects</th>
<th>Cr. Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Religion or Philosophy</td>
<td>2</td>
</tr>
<tr>
<td>Eng. 101 English Composition</td>
<td>3</td>
</tr>
<tr>
<td>Art At Art Institute</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>
SECOND SEMESTER

<table>
<thead>
<tr>
<th>Subjects</th>
<th>Cr. Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Religion or Philosophy</td>
<td>2</td>
</tr>
<tr>
<td>Spe. 101 Fund. of Eff. Speaking</td>
<td>3</td>
</tr>
<tr>
<td>Art At Art Institute</td>
<td>10</td>
</tr>
</tbody>
</table>

Summer Session

Art At Art Institute.............. 6

Sophomore Year

FIRST SEMESTER

<table>
<thead>
<tr>
<th>Subjects</th>
<th>Cr. Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Religion or Philosophy</td>
<td>2</td>
</tr>
<tr>
<td>Eng. 221 English Literature, or</td>
<td>3</td>
</tr>
<tr>
<td>Eng. 222 American Literature</td>
<td>3</td>
</tr>
<tr>
<td>Art At Art Institute</td>
<td>10</td>
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</tbody>
</table>

SECOND SEMESTER

<table>
<thead>
<tr>
<th>Subjects</th>
<th>Cr. Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Religion or Philosophy</td>
<td>2</td>
</tr>
<tr>
<td>Hist. 112 Hist. of Mod. Europe, or</td>
<td>3</td>
</tr>
<tr>
<td>Hist. 252 Amer. Hist. since 1865</td>
<td>3</td>
</tr>
<tr>
<td>Art At Art Institute</td>
<td>10</td>
</tr>
</tbody>
</table>

Summer Session

Art At Art Institute.............. 6

Junior Year

FIRST SEMESTER

<table>
<thead>
<tr>
<th>Subjects</th>
<th>Cr. Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phil. 300-400 Philosophy</td>
<td>3</td>
</tr>
<tr>
<td>Psych. 201 Introductory Psych.</td>
<td>3</td>
</tr>
<tr>
<td>Art At Art Institute</td>
<td>9</td>
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</tbody>
</table>

SECOND SEMESTER

<table>
<thead>
<tr>
<th>Subjects</th>
<th>Cr. Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phil. 300-400 Philosophy</td>
<td>3</td>
</tr>
<tr>
<td>Soc. 201 General Sociology</td>
<td>3</td>
</tr>
<tr>
<td>Art At Art Institute</td>
<td>9</td>
</tr>
</tbody>
</table>

Summer Session

Art At Art Institute.............. 5

Senior Year

FIRST SEMESTER

<table>
<thead>
<tr>
<th>Subjects</th>
<th>Cr. Hours</th>
</tr>
</thead>
<tbody>
<tr>
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SECOND SEMESTER

<table>
<thead>
<tr>
<th>Subjects</th>
<th>Cr. Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Art At Art Institute</td>
<td>15</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Subjects</th>
<th>Cr. Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Religion or Philosophy</td>
<td>2</td>
</tr>
<tr>
<td>Mil. 101 First Yr. Basic Course</td>
<td>1 1/2</td>
</tr>
<tr>
<td>Phe. 101 Physical Education</td>
<td>1/2</td>
</tr>
<tr>
<td>Phe. 103 Health</td>
<td>1</td>
</tr>
<tr>
<td>Spe. 101 Fund. of Eff. Speaking</td>
<td>3</td>
</tr>
<tr>
<td>Hist. 111 Hist. of Mod. Europe</td>
<td>3</td>
</tr>
<tr>
<td>Language</td>
<td>3</td>
</tr>
<tr>
<td>Art Basic Courses</td>
<td>3</td>
</tr>
</tbody>
</table>

#### SECOND SEMESTER

<table>
<thead>
<tr>
<th>Subjects</th>
<th>Cr. Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Religion or Philosophy</td>
<td>2</td>
</tr>
<tr>
<td>Mil. 102 First Yr. Basic Course</td>
<td>1 1/2</td>
</tr>
<tr>
<td>Phe. 102 Physical Education</td>
<td>1/2</td>
</tr>
<tr>
<td>Phe. 104 Health (Women)</td>
<td>1</td>
</tr>
<tr>
<td>Eng. 101 English Composition</td>
<td>3</td>
</tr>
<tr>
<td>Hist. 112 Hist. of Mod. Europe</td>
<td>3</td>
</tr>
<tr>
<td>Language</td>
<td>3</td>
</tr>
<tr>
<td>Art Basic Courses</td>
<td>3</td>
</tr>
</tbody>
</table>

### Sophomore Year

#### FIRST SEMESTER

<table>
<thead>
<tr>
<th>Subjects</th>
<th>Cr. Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Religion or Philosophy</td>
<td>2</td>
</tr>
<tr>
<td>Mil. 201 Second Yr. Basic Course</td>
<td>1 1/2</td>
</tr>
<tr>
<td>Phe. 201 Phys. Educ. (Women)</td>
<td>1/2</td>
</tr>
<tr>
<td>Eng. 221 English Literature</td>
<td>3</td>
</tr>
<tr>
<td>Hist. 251 Amer. Hist. to 1865</td>
<td>3</td>
</tr>
<tr>
<td>Psych. 201 Intro. Psychology</td>
<td>3</td>
</tr>
<tr>
<td>Language</td>
<td>3</td>
</tr>
<tr>
<td>Art Basic Courses</td>
<td>3</td>
</tr>
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</table>

#### SECOND SEMESTER

<table>
<thead>
<tr>
<th>Subjects</th>
<th>Cr. Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Religion or Philosophy</td>
<td>2</td>
</tr>
<tr>
<td>Mil. 202 Second Yr. Basic Course</td>
<td>1 1/2</td>
</tr>
<tr>
<td>Phe. 202 Phys. Educ. (Women)</td>
<td>1/2</td>
</tr>
<tr>
<td>Eng. 222 American Literature</td>
<td>3</td>
</tr>
<tr>
<td>Hist. 252 Amer. Hist. since 1865</td>
<td>3</td>
</tr>
<tr>
<td>Soc. 201 General Sociology</td>
<td>3</td>
</tr>
<tr>
<td>Language</td>
<td>3</td>
</tr>
<tr>
<td>Art Basic Courses</td>
<td>3</td>
</tr>
</tbody>
</table>

### Junior Year

#### FIRST SEMESTER

<table>
<thead>
<tr>
<th>Subjects</th>
<th>Cr. Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Art Advanced Art</td>
<td>6</td>
</tr>
<tr>
<td>Phil. 300-400 Philosophy</td>
<td>3</td>
</tr>
<tr>
<td>(1) Second Minor</td>
<td>3</td>
</tr>
<tr>
<td>(2) Electives</td>
<td>3-6</td>
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</tbody>
</table>

#### SECOND SEMESTER

<table>
<thead>
<tr>
<th>Subjects</th>
<th>Cr. Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Art Advanced Art</td>
<td>6</td>
</tr>
<tr>
<td>Phil. 300-400 Philosophy</td>
<td>3</td>
</tr>
<tr>
<td>(1) Second Minor</td>
<td>3</td>
</tr>
<tr>
<td>(2) Electives</td>
<td>3-6</td>
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</tbody>
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#### Senior Year

#### FIRST SEMESTER

<table>
<thead>
<tr>
<th>Subjects</th>
<th>Cr. Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Art Advanced Art</td>
<td>6</td>
</tr>
<tr>
<td>Phil. 300-400 Philosophy</td>
<td>3</td>
</tr>
<tr>
<td>(1) Second Minor</td>
<td>3</td>
</tr>
<tr>
<td>(2) Electives</td>
<td>3-6</td>
</tr>
</tbody>
</table>

#### SECOND SEMESTER

<table>
<thead>
<tr>
<th>Subjects</th>
<th>Cr. Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Art Advanced Art</td>
<td>6</td>
</tr>
<tr>
<td>Phil. 300-400 Philosophy</td>
<td>3</td>
</tr>
<tr>
<td>(1) Second Minor</td>
<td>3</td>
</tr>
<tr>
<td>(2) Electives</td>
<td>3-6</td>
</tr>
</tbody>
</table>

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 4 1/2 credit hours, commercial art 6 credit hours, crafts 4 1/2 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

<table>
<thead>
<tr>
<th>FIRST SEMESTER</th>
<th>Cr. Hours</th>
<th>SECOND SEMESTER</th>
<th>Cr. Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Religion or Philosophy</td>
<td>2</td>
<td>Religion or Philosophy</td>
<td>2</td>
</tr>
<tr>
<td>Mil. 101 First Yr. Basic Course</td>
<td>1½</td>
<td>Mil. 102 First Yr. Basic Course</td>
<td>1½</td>
</tr>
<tr>
<td>Phe. 101 Physical Education</td>
<td>1½</td>
<td>Phe. 102 Physical Education</td>
<td>½</td>
</tr>
<tr>
<td>Phe. 103 Health</td>
<td>1</td>
<td>Phe. 104 Health (Women)</td>
<td>1</td>
</tr>
<tr>
<td>Eng. 101 English Composition</td>
<td>3</td>
<td>Spe. 101 Fund. of Eff. Speaking</td>
<td>3</td>
</tr>
<tr>
<td>Hist. 111 Hist. of Mod. Europe</td>
<td>3</td>
<td>Hist. 112 Hist. of Mod. Europe</td>
<td>3</td>
</tr>
<tr>
<td>Language</td>
<td>3</td>
<td>Language</td>
<td>3</td>
</tr>
<tr>
<td>Or. 101 Orientation</td>
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### Sophomore Year

<table>
<thead>
<tr>
<th>FIRST SEMESTER</th>
<th>Cr. Hours</th>
<th>SECOND SEMESTER</th>
<th>Cr. Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Religion or Philosophy</td>
<td>2</td>
<td>Religion or Philosophy</td>
<td>2</td>
</tr>
<tr>
<td>Mil. 201 Second Yr. Basic Course</td>
<td>1½</td>
<td>Mil. 202 Second Yr. Basic Course</td>
<td>1½</td>
</tr>
<tr>
<td>Eng. 316 Advanced Composition</td>
<td>3</td>
<td>Eng. 222 American Literature</td>
<td>3</td>
</tr>
<tr>
<td>Language</td>
<td>3</td>
<td>Language</td>
<td>3</td>
</tr>
<tr>
<td>Math. 201 Differential and Integral Calculus</td>
<td>4</td>
<td>Math. 202 Differential and Integral Calculus</td>
<td>4</td>
</tr>
<tr>
<td>Eco. 201 Prin. of Economics</td>
<td>3</td>
<td>Eco. 202 Prin. of Economics</td>
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</tr>
</tbody>
</table>

### Junior Year

<table>
<thead>
<tr>
<th>FIRST SEMESTER</th>
<th>Cr. Hours</th>
<th>SECOND SEMESTER</th>
<th>Cr. Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phil. 300-400 Philosophy</td>
<td>3</td>
<td>Phil. 300-400 Philosophy</td>
<td>3</td>
</tr>
<tr>
<td>Math. 301 Differential Equations</td>
<td>3</td>
<td>Math. 302 Theory of Equations</td>
<td>3</td>
</tr>
<tr>
<td>Eco. 404 Business Cycles</td>
<td>3</td>
<td>Eco. 413 Economic Analysis</td>
<td>3</td>
</tr>
<tr>
<td>Psych. 201 Introd. Psychology</td>
<td>3</td>
<td>Soc. 201 General Sociology</td>
<td>3</td>
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</tbody>
</table>

### Senior Year

<table>
<thead>
<tr>
<th>FIRST SEMESTER</th>
<th>Cr. Hours</th>
<th>SECOND SEMESTER</th>
<th>Cr. Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phil. 300-400 Philosophy</td>
<td>3</td>
<td>Phil. 300-400 Philosophy</td>
<td>3</td>
</tr>
<tr>
<td>Math. 421 Advanced Calculus</td>
<td>3</td>
<td>Math. 422 Advanced Calculus</td>
<td>3</td>
</tr>
<tr>
<td>Eco. 408 Contemporary Economics</td>
<td>3</td>
<td>Eco. 300-400 Economics</td>
<td>3</td>
</tr>
<tr>
<td>Hist. 251 Amer. Hist. to 1865</td>
<td>3</td>
<td>Hist. 252 Amer. Hist. since 1865</td>
<td>3</td>
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</table>
PROGRAM IV

BACHELOR OF MUSIC

Requirements for the Degree of Bachelor of Music:

ACADEMIC

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
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</thead>
<tbody>
<tr>
<td>English</td>
<td>9</td>
</tr>
<tr>
<td>Speech</td>
<td>3</td>
</tr>
<tr>
<td>History, Social Science</td>
<td>6</td>
</tr>
<tr>
<td>Psychology</td>
<td>3</td>
</tr>
<tr>
<td>Philosophy (300 or 400 courses)</td>
<td>6</td>
</tr>
<tr>
<td>Electives (to include required basic Religion or Philosophy and Military Science courses)</td>
<td>14</td>
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</table>

41 Credit Hours

MUSICAL

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>Major (Piano, Organ, Violin, Voice, Theory, Composition)</td>
<td>20-24</td>
</tr>
<tr>
<td>Minor (Voice, Instrument, Theory)</td>
<td>12</td>
</tr>
<tr>
<td>Theory</td>
<td>20</td>
</tr>
<tr>
<td>History, Literature, Appreciation</td>
<td>10</td>
</tr>
<tr>
<td>Conducting, Instrumentation, Orchestration</td>
<td>5</td>
</tr>
<tr>
<td>Ensemble (Choir, Glee Club, Orchestra, Band)</td>
<td>2</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>FIRST SEMESTER</th>
<th>SECOND SEMESTER</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Subjects</strong></td>
<td><strong>Cr. Hours</strong></td>
</tr>
<tr>
<td>Religion or Philosophy</td>
<td>2</td>
</tr>
<tr>
<td>Mil. 101 First Yr. Basic Course</td>
<td>1½</td>
</tr>
<tr>
<td>Phe. 101 Physical Education</td>
<td>½</td>
</tr>
<tr>
<td>Phe. 103 Health</td>
<td>1</td>
</tr>
<tr>
<td>Spe. 101 Fund. of Eng. Speaking</td>
<td>3</td>
</tr>
<tr>
<td>Language</td>
<td>3</td>
</tr>
<tr>
<td>Mathematics or Science</td>
<td>3-4</td>
</tr>
<tr>
<td>Mus. 151 First Year Theory</td>
<td>5</td>
</tr>
</tbody>
</table>

### Sophomore Year

<table>
<thead>
<tr>
<th>FIRST SEMESTER</th>
<th>SECOND SEMESTER</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Subjects</strong></td>
<td><strong>Cr. Hours</strong></td>
</tr>
<tr>
<td>Religion or Philosophy</td>
<td>2</td>
</tr>
<tr>
<td>Mil. 201 Second Yr. Basic Course</td>
<td>1½</td>
</tr>
<tr>
<td>Eng. 221 English Literature</td>
<td>3</td>
</tr>
<tr>
<td>Language</td>
<td>3</td>
</tr>
<tr>
<td>Hist. 111 Hist. of Mod. Europe</td>
<td>3</td>
</tr>
<tr>
<td>Mus. 251 Second Year Theory</td>
<td>5</td>
</tr>
<tr>
<td>Mus. 102 Music Lit. and Apprec.</td>
<td>2</td>
</tr>
</tbody>
</table>

### Junior Year

<table>
<thead>
<tr>
<th>FIRST SEMESTER</th>
<th>SECOND SEMESTER</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Subjects</strong></td>
<td><strong>Cr. Hours</strong></td>
</tr>
<tr>
<td>Mus. 301 History of Music I</td>
<td>3</td>
</tr>
<tr>
<td>Mus. Applied Music</td>
<td>2</td>
</tr>
<tr>
<td>Phil. 300-400 Philosophy</td>
<td>3</td>
</tr>
<tr>
<td>Hist. 251 Amer. Hist. to 1865</td>
<td>3</td>
</tr>
<tr>
<td>Psych. 201 Introductory Psychology</td>
<td>3</td>
</tr>
<tr>
<td>Second Minor</td>
<td>3</td>
</tr>
</tbody>
</table>

### Senior Year

<table>
<thead>
<tr>
<th>FIRST SEMESTER</th>
<th>SECOND SEMESTER</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Subjects</strong></td>
<td><strong>Cr. Hours</strong></td>
</tr>
<tr>
<td>Mus. Advanced Music</td>
<td>3</td>
</tr>
<tr>
<td>Phil. 300-400 Philosophy</td>
<td>3</td>
</tr>
<tr>
<td>Second Minor</td>
<td>3</td>
</tr>
<tr>
<td>(1) Electives</td>
<td>3-6</td>
</tr>
</tbody>
</table>

(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

<table>
<thead>
<tr>
<th>Subjects</th>
<th>Cr. Hours</th>
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<tbody>
<tr>
<td>Phil. 307</td>
<td>Philosophy of Nature</td>
</tr>
<tr>
<td>Phil. 416</td>
<td>Hist. of Ancient Phil.</td>
</tr>
<tr>
<td>Hist. 313</td>
<td>History of Christian Antiquity</td>
</tr>
<tr>
<td>Psych. 201</td>
<td>Introductory Psychology</td>
</tr>
<tr>
<td>Educ. 202</td>
<td>Educational Psychology</td>
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<tr>
<td>Rel. 441</td>
<td>Ascetical Theology</td>
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SECOND SEMESTER

<table>
<thead>
<tr>
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<tbody>
<tr>
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<td>Philosophy of Man</td>
</tr>
<tr>
<td>Phil. 417</td>
<td>History of Medieval Philosophy</td>
</tr>
<tr>
<td>Hist. 301</td>
<td>Medieval Europe</td>
</tr>
<tr>
<td>Spe. 303</td>
<td>Advanced Interpretative Reading</td>
</tr>
<tr>
<td>Educ. 318</td>
<td>Mental Hygiene for Teachers</td>
</tr>
<tr>
<td>Educ. 302</td>
<td>Prin. of Secondary Education</td>
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Senior Year

FIRST SEMESTER

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<tbody>
<tr>
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<td>Phil. 422</td>
<td>Metaphysics II</td>
</tr>
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<td>Phil. 324</td>
<td>Ethics</td>
</tr>
<tr>
<td>Phil. 418</td>
<td>History of Modern Philosophy</td>
</tr>
<tr>
<td>Hist. 302</td>
<td>Renaissance and Reformation</td>
</tr>
<tr>
<td>Spe. 401</td>
<td>Advanced Public Speak.</td>
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SECOND SEMESTER

<table>
<thead>
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<tbody>
<tr>
<td>Phil. 423</td>
<td>Metaph. of Knowledge</td>
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<td>Phil. 424</td>
<td>Problems of Metaphysics</td>
</tr>
<tr>
<td>Phil. 419</td>
<td>History of Contemporary Philosophy</td>
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<td>Hist. 451</td>
<td>Modern Church History</td>
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<td>Soc. 404</td>
<td>Social Institutions</td>
</tr>
<tr>
<td>Phil. 433</td>
<td>Intro. to St. Thomas Aquinas</td>
</tr>
<tr>
<td>Educ. 301</td>
<td>Classroom Management</td>
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</table>
**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*

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<tr>
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</tr>
<tr>
<td>Mil. 101 First Yr. Basic Course</td>
<td>11/2</td>
<td></td>
</tr>
<tr>
<td>Phe. 101 Physical Education</td>
<td>1/2</td>
<td></td>
</tr>
<tr>
<td>Phe. 103 Health (Women)</td>
<td>1</td>
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<tr>
<td>Eng. 101 English Composition</td>
<td>3</td>
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<tr>
<td>Acc. 101 Elementary Accounting</td>
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<tr>
<td>Bus. 101 Intro. to Business</td>
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</tr>
<tr>
<td>Bus. 103 Math. of Finance I</td>
<td>3</td>
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</tr>
<tr>
<td>Or. 101 Orientation</td>
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<td>Mil. 102 First Yr. Basic Course</td>
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<td>Phe. 103 Health (Men)</td>
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<td></td>
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<tr>
<td>Phe. 104 Health (Women)</td>
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<td>Spe. 101 Fund. of Eff. Speaking</td>
<td>3</td>
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<td>Acc. 102 Elementary Accounting</td>
<td>3</td>
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<td>Bus. 102 Industrial Resources</td>
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<tr>
<td>Eco. 104 Economic Geography</td>
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BUSINESS ADMINISTRATION

Sophomore Year

FIRST SEMESTER

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<tr>
<td>Mil. 201 Second Yr. Basic Course 1 1/2</td>
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</tr>
<tr>
<td>Phe. 201 Phys. Educ. (Women) 1/2</td>
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<tr>
<td>(1) Acc. 201 Intermediate Acctg. 3</td>
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</tr>
<tr>
<td>Eco. 201 Principles of Economics 3</td>
<td></td>
</tr>
<tr>
<td>Bus. 201 Business Machines 3</td>
<td></td>
</tr>
<tr>
<td>Eng. 222 American Literature 3</td>
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SECOND SEMESTER

<table>
<thead>
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<tbody>
<tr>
<td>Religion or Philosophy</td>
<td>2</td>
</tr>
<tr>
<td>Mil. 202 Second Yr. Basic Course 1 1/2</td>
<td></td>
</tr>
<tr>
<td>Phe. 202 Phys. Educ. (Women) 1/2</td>
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<tr>
<td>(1) Acc. 201 Intermediate Acctg. 3</td>
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<tr>
<td>Eco. 202 Principles of Economics 3</td>
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<td>Eco. 205 American Eco. History 3</td>
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</tr>
<tr>
<td>Psych. 201 Introductory Psychology 3</td>
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</tr>
</tbody>
</table>

(1) Students majoring in business organization and economics and who do not wish to elect Acc. 201-2 should consult their adviser for substitution. Usually, Speaking Techniques, 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 Accounting, Business Organization, Economics, Industrial Management, Personnel, Retailing, Business Education, or in Hospital Administration. A student may choose to major in two, or major in one and have minors in two other fields. However, there are no elective minors in Industrial Management, Personnel, or Hospital Administration. 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 a minimum of six credits in philosophy.

REQUIRED COURSES

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

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

THE FOLLOWING COURSES are prescribed for a minor in accounting:

<table>
<thead>
<tr>
<th>Course</th>
<th>Description</th>
<th>Cr. Hours</th>
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</thead>
<tbody>
<tr>
<td>Acc. 301-302</td>
<td>Advanced Accounting</td>
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<tr>
<td>Acc. 303-304</td>
<td>Cost Accounting</td>
<td>6</td>
</tr>
<tr>
<td>Acc. 401-402</td>
<td>Auditing</td>
<td>6</td>
</tr>
</tbody>
</table>

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
MINORS IN BUSINESS ORGANIZATION AND ECONOMICS

Junior Year

<table>
<thead>
<tr>
<th>Subjects</th>
<th>Cr. Hours</th>
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<tbody>
<tr>
<td>Acc. 301</td>
<td>Advanced Accounting I 3</td>
</tr>
<tr>
<td>Acc. 303</td>
<td>Cost Accounting I ...... 3</td>
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<tr>
<td>Bus. 301</td>
<td>Corporation Finance ...... 3</td>
</tr>
<tr>
<td>Bus. 313</td>
<td>Business Statistics ...... 3</td>
</tr>
<tr>
<td>Bus. 316</td>
<td>Industrial Management 3</td>
</tr>
<tr>
<td>Phil. 311</td>
<td>Logic, or</td>
</tr>
<tr>
<td>Phil. 306</td>
<td>Epistemology ............. 3</td>
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SECOND SEMESTER

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<th>Subjects</th>
<th>Cr. Hours</th>
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<tbody>
<tr>
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<tr>
<td>Bus. 303</td>
<td>Business Law I .......... 3</td>
</tr>
<tr>
<td>Bus. 305</td>
<td>Marketing ............... 3</td>
</tr>
<tr>
<td>Bus. 317</td>
<td>Labor Management .......... 3</td>
</tr>
<tr>
<td>Phil. 306</td>
<td>Epistemology, or</td>
</tr>
<tr>
<td>Phil. 324</td>
<td>Ethics ................... 3</td>
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Senior Year

First Semester

<table>
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<th>Subjects</th>
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<tbody>
<tr>
<td>Acc. 401</td>
<td>Auditing I 3</td>
</tr>
<tr>
<td>Acc. 407</td>
<td>Federal Taxation I 3</td>
</tr>
<tr>
<td>Bus. 404</td>
<td>Business Cycles ...... 3</td>
</tr>
<tr>
<td>Bus. 425</td>
<td>Seminar .............. 2</td>
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<tr>
<td>Eng. 408</td>
<td>Business English .......... 3</td>
</tr>
<tr>
<td>Phil. 324</td>
<td>Ethics, or</td>
</tr>
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<td>Bus. 300-400 Elective</td>
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Second Semester

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<td>Acc. 408</td>
<td>Federal Taxation II 3</td>
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<td>Acc. 412</td>
<td>C.P.A. Problems .......... 3</td>
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<tr>
<td>Bus. 405</td>
<td>Money, Credit, Banking 3</td>
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PROGRAM II
BACHELOR OF SCIENCE WITH A MAJOR IN
BUSINESS ORGANIZATION
MINORS IN ACCOUNTING AND ECONOMICS

Junior Year

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<td>Bus. 301</td>
<td>Corporation Finance ...... 3</td>
</tr>
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<td>Bus. 313</td>
<td>Business Statistics ...... 3</td>
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<td>Bus. 316</td>
<td>Industrial Management 3</td>
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<td>Phil. 311</td>
<td>Logic, or</td>
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<td>Phil. 306</td>
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Second Semester

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<td>Bus. 303</td>
<td>Business Law I .......... 3</td>
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<td>Bus. 305</td>
<td>Marketing ............... 3</td>
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<td>Bus. 300-400 Elective</td>
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Senior Year

First Semester

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<td>Acc. 401</td>
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<td>Salesmanship .......... 3</td>
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<tr>
<td>Phil. 324</td>
<td>Ethics, or</td>
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Second Semester

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<td>Advertising ............ 3</td>
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<tr>
<td>Bus. 309</td>
<td>Retail Merchandising ... 3</td>
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<tr>
<td>Bus. 405</td>
<td>Money, Credit, Banking 3</td>
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<tr>
<td>Bus. 423</td>
<td>Seminar ............... 2</td>
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### PROGRAM III

**BACHELOR OF SCIENCE WITH MAJORS IN BUSINESS ORGANIZATION AND ECONOMICS**

#### Junior Year

<table>
<thead>
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<th>Cr. Hours</th>
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<th>Cr. Hours</th>
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<td><strong>Subjects</strong></td>
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<td>3</td>
<td>Bus. 301 Corporation Finance</td>
<td>3</td>
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<td>Bus. 305 Marketing</td>
<td>3</td>
<td>Bus. 304 Business Law II</td>
<td>3</td>
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<td>Bus. 310 Salesmanship</td>
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<td>Bus. 317 Labor Management</td>
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<td>Bus. 313 Business Statistics</td>
<td>3</td>
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<tr>
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<td>3</td>
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<tr>
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<td>3</td>
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#### Senior Year

<table>
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<td><strong>Subjects</strong></td>
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<tr>
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<td>3</td>
<td>Bus. 311 Sales Promotion</td>
<td>3</td>
</tr>
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<td>Bus. 405 Money, Credit, Banking</td>
<td>3</td>
<td>Bus. 401 Investments</td>
<td>3</td>
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<tr>
<td>Bus. 425 Seminar</td>
<td>2</td>
<td>Eco. 408 Contemporary Economics</td>
<td>3</td>
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<td>Eng. 408 Business English</td>
<td>3</td>
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<td>3</td>
<td>Eco. 425 Seminar</td>
<td>2</td>
</tr>
<tr>
<td>Phil. 324 Ethics, or</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bus. 300-400 Elective</td>
<td>3</td>
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### PROGRAM IV

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

#### Junior Year

<table>
<thead>
<tr>
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<th>Cr. Hours</th>
<th>SECOND SEMESTER</th>
<th>Cr. Hours</th>
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<td><strong>Subjects</strong></td>
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<td><strong>Subjects</strong></td>
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<td>Bus. 304 Business Law II</td>
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<td>Bus. 307 Advertising</td>
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<td>Bus. 313 Business Statistics</td>
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<tr>
<td>Phil. 311 Logic, or</td>
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PROGRAM V
BACHELOR OF SCIENCE WITH A MAJOR IN ECONOMICS
MINORS IN BUSINESS ORGANIZATION AND AN UNRELATED FIELD

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**PROGRAM VI**
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MINORS IN BUSINESS ORGANIZATION AND ECONOMICS

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### PROGRAM VII
**BACHELOR OF SCIENCE WITH A MAJOR IN INDUSTRIAL MANAGEMENT**
**MINORS IN BUSINESS ORGANIZATION AND ECONOMICS**

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### PROGRAM VIII
**BACHELOR OF SCIENCE WITH A MAJOR IN RETAILING**
**MINORS IN BUSINESS ORGANIZATION AND ECONOMICS**

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PROGRAM IX
BACHELOR OF SCIENCE WITH A MAJOR IN BUSINESS ORGANIZATION
MINORS IN ECONOMICS AND RETAILING

Junior Year

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<table>
<thead>
<tr>
<th>SECOND SEMESTER</th>
<th>Subjects</th>
<th>Cr. Hours</th>
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<tbody>
<tr>
<td>Bus. 304 Business Law II</td>
<td>3</td>
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<tr>
<td>Bus. 311 Sales Management</td>
<td>3</td>
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<tr>
<td>Bus. 425 Seminar</td>
<td>2</td>
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</tr>
<tr>
<td>Eco. 408 Contemporary Economics</td>
<td>3</td>
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</tr>
<tr>
<td>Bus. 300-400 Electives</td>
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</table>
PROGRAM X
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**

<table>
<thead>
<tr>
<th>Subjects</th>
<th>Cr. Hours</th>
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<tbody>
<tr>
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<tr>
<td>Phe. 101 Physical Education</td>
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<tr>
<td>Phe. 103 Health</td>
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<td>Eng. 101 English Composition</td>
<td>3</td>
</tr>
<tr>
<td>Sec. 101 Elementary Shorthand</td>
<td>3</td>
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<td>Sec. 110 Secretarial Math.</td>
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**SECOND SEMESTER**

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<tr>
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</tr>
<tr>
<td>Phe. 102 Physical Education</td>
<td>½</td>
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<tr>
<td>Phe. 104 Health</td>
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<td>Spe. 101 Fund. of Eff. Speaking</td>
<td>3</td>
</tr>
<tr>
<td>Sec. 102 Elementary Shorthand</td>
<td>3</td>
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<tr>
<td>Sec. 104 Elementary Typing</td>
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Sophomore Year

**FIRST SEMESTER**

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<td>Phe. 201 Physical Education</td>
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<td>Eco. 204 Survey of Economics</td>
<td>3</td>
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<tr>
<td>Sec. 201 Advanced Shorthand</td>
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</tr>
<tr>
<td>Sec. 203 Advanced Typing</td>
<td>3</td>
</tr>
<tr>
<td>Sec. 105 Secretarial Accounting</td>
<td>3</td>
</tr>
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<td>Sec. 205 Secretarial Theory</td>
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**SECOND SEMESTER**

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<th>Cr. Hours</th>
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<tr>
<td>Bus. 201 Business Machines</td>
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</tr>
<tr>
<td>Sec. 202 Advanced Shorthand</td>
<td>3</td>
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<tr>
<td>Sec. 204 Advanced Typing</td>
<td>3</td>
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<tr>
<td>Sec. 106 Secretarial Accounting</td>
<td>3</td>
</tr>
<tr>
<td>Sec. 206 Secretarial Theory</td>
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</tbody>
</table>
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.

A large part of the curriculum is directed toward gaining the elements of a broad and sound education of a general nature. It is called "general" since it excludes definite vocational preparation; it endeavors to acquaint the student with the major areas of knowledge and includes the development of those attitudes, interests, and skills necessary to meet the problems of Christian living in American democratic society.

In addition, the teacher should have a feeling of power in his prospective teaching field, which requires that his specialization be as comprehensive as possible.

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.

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. Show satisfactory evidence of having participated in a variety of planned field experiences essential to the development of the resourcefulness needed
by teachers. At least from 25 to 50 clock hours need to be devoted to these field experiences prior to student teaching. At least twenty of these hours shall be in directed observation of teaching.

3. Earn 128 semester credit hours in approved courses.

4. Meet the following letter-grade requirements:
   A. Earn a grade-point average of 2.00 ("C" average) 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 professional education courses and in one's specialized teaching field. (No grade of "D" is acceptable in the student's teaching field or in his professional education work.)

5. Complete requirements in psychology and professional education courses in accordance with the following pattern:

<table>
<thead>
<tr>
<th>Cr. Hours</th>
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<tbody>
<tr>
<td>A. Introduction to Education .................................................................</td>
</tr>
<tr>
<td>B. General and Educational Psychology ..................................................</td>
</tr>
<tr>
<td>C. Mental Hygiene for the Teacher .......................................................</td>
</tr>
<tr>
<td>D. Child Psychology (for elementary teachers)</td>
</tr>
<tr>
<td>- Adolescent Psychology (for secondary teachers)</td>
</tr>
<tr>
<td>- Human Growth and Development (for combined elementary and high school teaching)</td>
</tr>
<tr>
<td>E. The Elementary School: Purposes and Organization ............................</td>
</tr>
<tr>
<td>F. Techniques of Teaching .......................................................................</td>
</tr>
<tr>
<td>G. Special Methods ..................................................................................</td>
</tr>
<tr>
<td>H. Philosophy of Education ......................................................................</td>
</tr>
<tr>
<td>I. Student Teaching ................................................................................</td>
</tr>
</tbody>
</table>

(1) This is an elective, intended for students who wish to go more deeply into human growth and development.

(2) Not required of students following specialized curricula, e.g., Art Education, Music Education, Physical Education, Home Economics Education.

(3) Students in Elementary Education follow special courses in methods covering (a) Reading and Language Arts, (b) Arithmetic. 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 courses as noted in the catalogue.

COUNSELING

Each freshman education student elects or is assigned to a counselor to whom he reports at least once a month for an interview. Upper-classmen report at least once every semester to the dean of the Education Division or to the chairman of the department in which he is majoring for proper guidance.
OFFICE OF COORDINATOR OF FIELD EXPERIENCES

This office functions to facilitate the gaining of necessary field experiences by students prior to student teaching. Referrals to the office are made by the respective instructors. The office makes appointments with the schools and other agencies, keeps records of all student field experiences, counsels students regarding proper procedures, promotes desirable balance between observation and direct participation.

STUDENT TEACHING

This consists of actual classroom teaching under competent supervision. During the semester of student teaching, the student is not permitted to carry more than six semester hours of additional work.

In order to be admitted to student teaching, the staff of the education division passes on each candidate on the bases of quality-point average, skill in communication arts, desirable personal and moral traits, and freedom from disqualifying physical defects.

The campus supervisor has direct charge of the student teaching experience. He makes the periodic observations in the classroom and confers with the critic teacher regarding the student's progress. In addition to the regular supervisor, some of the special fields such as home economics, music, business, and art have a special supervisor who also makes periodic observations.

Once a week throughout the semester a conference on student teaching is held; students meet with the campus supervisor to discuss common problems.

Those students in elementary education who give evidence of at least three years successful teaching experience attested by designated school officials may, with the permission of the dean of Education, substitute six semester hours of prescribed professional work for student teaching. Further information may be gained by writing to the director of student teaching.

TEACHER PLACEMENT

Students who qualify for teacher certification in the Division of Education are helped to secure teaching positions through the Division's placement service. This requires cooperation from the candidate in filling out the necessary papers and in submitting names for references.

TEACHING CERTIFICATION

The Division of Education is on the approved list of the 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 certification in Art, Physical Education, Home Economics, Business Education, Music, and Speech.

A curriculum in Home Economics Education has been established by the vocational division of the State Department of Education. This permits teachers to be prepared for Smith-Hughes home economics courses in the public high schools of the state. Graduates of this curriculum are certified to teach in vocational high schools as well as non-vocational.
# PROGRAM I
FOR STUDENTS MAJORING IN ELEMENTARY EDUCATION

Degree: Bachelor of Science in Education

**Freshman Year**

<table>
<thead>
<tr>
<th>FIRST SEMESTER</th>
<th>Cr. Hrs.</th>
<th>SECOND SEMESTER</th>
<th>Cr. Hrs.</th>
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<tbody>
<tr>
<td>Religion or Philosophy</td>
<td>2</td>
<td>Religion or Philosophy</td>
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<tr>
<td>Educ. 100 Orientation</td>
<td>1</td>
<td>Educ. 190 General and Educ. Psych.</td>
<td>3</td>
</tr>
<tr>
<td>Educ. 101 Intro. to Educ.</td>
<td>3</td>
<td>Educ. 103 Science for Elementary School Teacher I</td>
<td>4</td>
</tr>
<tr>
<td>Educ. 102 Science for Elementary School Teacher I</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eng. 101 Eng. Composition</td>
<td>3</td>
<td>Hist. 112 Hist. of Modern Europe</td>
<td>3</td>
</tr>
<tr>
<td>Hist. 111 Hist. of Modern Europe</td>
<td>3</td>
<td>Spe. 101 Fund. of Effective Speaking</td>
<td>3</td>
</tr>
<tr>
<td>*Art 101 Drawing</td>
<td>2</td>
<td>*Art 201 Principles of Design</td>
<td>2</td>
</tr>
<tr>
<td>*Sec. 107 Personal Typing</td>
<td>2</td>
<td>*Math. 200 Teachers' Arithmetic</td>
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</tr>
<tr>
<td>Phe. 101 Physical Education</td>
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<td>Phe. 102 Physical Education</td>
<td>1/2</td>
</tr>
<tr>
<td>Phe. 103 Health</td>
<td>1</td>
<td>Phe. 104 Health (Women)</td>
<td>1</td>
</tr>
<tr>
<td>Mil. 101 First Year Basic</td>
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<td>Mil. 102 First Yr. Basic Course</td>
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**Sophomore Year**

<table>
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<th>Cr. Hrs.</th>
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<tbody>
<tr>
<td>Religion or Philosophy</td>
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<td>Religion or Philosophy</td>
<td>2</td>
</tr>
<tr>
<td>Educ. 203 Educ. Psych. II</td>
<td>3</td>
<td>Educ. 318 Mental Hygiene for Teachers</td>
<td>3</td>
</tr>
<tr>
<td>Eng. 221 Eng. Literature</td>
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<td>Eng. 222 Amer. Literature</td>
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</tr>
<tr>
<td>*Hist. 251 Am. Hist. to 1865</td>
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<td>Hist. 252 Am. Hist. since 1865</td>
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<tr>
<td>*Mus. 141 Introduction to Music</td>
<td>2</td>
<td>Art 221 or 222 Practical Arts</td>
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<tr>
<td>Eco. 204 Survey of Economics</td>
<td>3</td>
<td>Mus. 102 Music Lit. and Appr.</td>
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<tr>
<td>Phe. 201 Physical Education (Women)</td>
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<td>Soc. 201 General Sociology</td>
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<td>Mil. 201 Second Year Basic</td>
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**Junior Year**

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<tr>
<td>Phil. 311 Logic, or Phil. of Educ.</td>
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<td>Phil. 324 Ethics</td>
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<tr>
<td>Phil. 306 Epistemology</td>
<td>3</td>
<td>Educ. 308 Techniques of Teaching</td>
<td>3</td>
</tr>
<tr>
<td>Educ. 306 Child Psych.</td>
<td>3</td>
<td>Educ. 320 Reading and Lang. Arts in Elem. School</td>
<td>4</td>
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<tr>
<td>Educ. 310 The Elementary School</td>
<td>3</td>
<td>Educ. 403 Arith. in Elementary Sch.</td>
<td>2</td>
</tr>
<tr>
<td>Educ. 322 Lit. in Elem. School</td>
<td>3</td>
<td>Phe. 130 Fundamental Rhythms or</td>
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<tr>
<td>Geo. 105 Prin. of Geog.</td>
<td>3</td>
<td>Phe. 131 Games of Low Organ</td>
<td>2</td>
</tr>
<tr>
<td>Mus. 231 or 232 Teaching Music</td>
<td>2</td>
<td>Pol. 201 American Gov't</td>
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**Senior Year**

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<tbody>
<tr>
<td>Educ. 419 Phil. of Educ.</td>
<td>3</td>
<td>Educ. 414 Student Teaching</td>
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<tr>
<td>Educ. 325 Social Studies in Elem. School</td>
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<td>Electives</td>
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<tr>
<td>Phe. 413 Health in Elem. School</td>
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<td>Art 407 Art in Elem. School</td>
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<td>Electives</td>
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*These courses are contingent on previous training.*
**PROGRAM II**

**FOR STUDENTS MAJORING IN SECONDARY EDUCATION**

*Degree*: Bachelor of Science in Education

**Freshman Year**

<table>
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<td>Educ. 101 Introduction to Educ.</td>
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<td>Math. 112 Fund. of College Math</td>
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<td><em>Sec.</em> 107 Personal Typing</td>
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<td><em>Hist.</em> 111 Hist. of Modern Europe</td>
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<tr>
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<td>Mil. 102 First Year Basic</td>
<td>½</td>
</tr>
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<td>Phe. 103 Health</td>
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<td>Mil. 102 First Year Basic</td>
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<tr>
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**Sophomore Year**

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<td><strong>Subjects</strong></td>
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<td>Educ. 203 Educ. Psych. II</td>
<td>3</td>
<td>Educ. 318 Mental Hygiene for Teachers</td>
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<tr>
<td>Eng. 221 English Literature</td>
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<td>Eng. 222 American Literature</td>
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<tr>
<td>Phe. 201 Physical Educ. (Women)</td>
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<td>Electives in Fields of Concentration</td>
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**Junior Year**

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<td><strong>Subjects</strong></td>
<td><strong>Cr. Hrs.</strong></td>
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<td>Phil. 311 Logic, or</td>
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<td>Phil. 306 Epistemology</td>
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<td>Educ. 508 Techniques of Teaching</td>
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<td>Educ. 304 Adolescent Psych</td>
<td>3</td>
<td>Special Methods in Main Teaching Field</td>
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</tr>
<tr>
<td>Educ. 311 Secondary Educ</td>
<td>3</td>
<td>Electives in Fields of Concentration</td>
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**Senior Year**

<table>
<thead>
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<th>SECOND SEMESTER</th>
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<tbody>
<tr>
<td><strong>Subjects</strong></td>
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<td><strong>Subjects</strong></td>
<td><strong>Cr. Hrs.</strong></td>
</tr>
<tr>
<td>Educ. 419 Philosophy of Educ</td>
<td>3</td>
<td>Educ. 414 Student Teaching</td>
<td>6-12</td>
</tr>
<tr>
<td>Electives in Fields of Concentration</td>
<td>9-12</td>
<td>Electives in Fields of Concentration</td>
<td>6-12</td>
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# PROGRAM III

## FOR STUDENTS MAJORING IN PHYSICAL EDUCATION

**Degree:** Bachelor of Science in Education

### Freshman Year

<table>
<thead>
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<th><strong>FIRST SEMESTER</strong></th>
<th><strong>SECOND SEMESTER</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Subjects</strong></td>
<td><strong>Cr. Hrs.</strong></td>
</tr>
<tr>
<td>Religion or Philosophy</td>
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</tr>
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<td>Educ. 101 Introduction to Educ.</td>
<td>3</td>
</tr>
<tr>
<td>Bio. 101 General Biology</td>
<td>4</td>
</tr>
<tr>
<td>Eng. 101 Eng. Comp.</td>
<td>3</td>
</tr>
<tr>
<td>Phe. 116 Methods in Minor Sports</td>
<td>2</td>
</tr>
<tr>
<td>Phe. 117 Team Sports (Women)</td>
<td>2</td>
</tr>
<tr>
<td>Phe. 119 Officiating (Men)</td>
<td>1</td>
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### Sophomore Year

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### Junior Year

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### Electives in Second Teaching Field...

3-6
### Senior Year

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### PROGRAM IV

**FOR STUDENTS MAJORING IN MUSIC EDUCATION**

*Degree: Bachelor of Science in Music Education*

#### Freshman Year

#### FIRST SEMESTER

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<td>Eng. 101 Eng. Comp. ............</td>
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<td>Phe. 103 Health .................</td>
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#### Sophomore Year

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<td>Bio. 101 General Biology, or...</td>
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## Junior Year

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<td>Eng. 221 Eng. Literature</td>
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<td>Mus. 235 Voice Class, or</td>
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<td>Mus. 325 Instrumental Class</td>
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<td>Mus. 301 History of Music</td>
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<td>Eng. 222 Amer. Literature</td>
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<td>Mus. 236 Voice Class, or</td>
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<td>Mus. 326 Instrumental Class</td>
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<td>Mus. 302 History of Music</td>
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<td>Mus. 351 Choral Conducting</td>
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<td>Mus. 322 Instr. &amp; Orches.</td>
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<td>Appl. Mus. or Elec.</td>
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## Senior Year

### FIRST SEMESTER

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<td>Mus. 235 Voice Class, or</td>
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<td>Mus. 327 Instrumental Class</td>
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<td>Mus. 325 Prob. in Instr. Mus.</td>
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<td>or Mus. 431 Prob. in Vocal Mus.</td>
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<td>Appl. Mus. or Elec.</td>
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<td>Mus. Theory Elec.</td>
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## PROGRAM V

**FOR STUDENTS MAJORING IN ART EDUCATION**

*Degree: Bachelor of Science in Art Education*

### Freshman Year

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<td>Phe. 101 Physical Educ.</td>
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<td>Phe. 103 Health</td>
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### Sophomore Year

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<td>Art Appreciation of Arts</td>
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<td>Art Cast Drawing</td>
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<td>Art Form and Color</td>
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<td>Phe. 201 Phys. Educ. (Women)</td>
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**SECOND SEMESTER**

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### Junior Year

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<td>Art Life Drawing</td>
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<td>Art Adv. Design</td>
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<td>Art Appreciation of Arts</td>
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<td>Art Methods and Materials</td>
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<td>Art Life Drawing</td>
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### Senior Year

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<td>Art Commercial Illus.</td>
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<td>Art Crafts</td>
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### PROGRAM VI

FOR STUDENTS MAJORING IN BUSINESS EDUCATION

**Degree:** Bachelor of Science in Education

### Freshman Year

**FIRST SEMESTER**

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<td>Religion or Philosophy</td>
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<tr>
<td>Educ. 100 Orientation</td>
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<tr>
<td>Educ. 101 Intro. to Educ.</td>
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</tr>
<tr>
<td>Eng. 101 Eng. Comp.</td>
<td>3</td>
</tr>
<tr>
<td>Bio. 101 Gen. Biology, or</td>
<td>4</td>
</tr>
<tr>
<td>Math. 111 Fund. of College Math.</td>
<td>3</td>
</tr>
<tr>
<td>Eco. 104 Economic Geog.</td>
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</tr>
<tr>
<td>Phe. 101 Physical Educ.</td>
<td>½</td>
</tr>
<tr>
<td>Phe. 103 Health</td>
<td>1</td>
</tr>
<tr>
<td>Mil. 101 First Year Basic</td>
<td>1½</td>
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</table>

**SECOND SEMESTER**

<table>
<thead>
<tr>
<th>Subjects</th>
<th>Cr. Hrs.</th>
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</thead>
<tbody>
<tr>
<td>Religion or Philosophy</td>
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</tr>
<tr>
<td>Educ. 190 General and Educ.</td>
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</tr>
<tr>
<td>Psych. I</td>
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</tr>
<tr>
<td>Spe. 101 Fund. of Eff. Speaking</td>
<td>3</td>
</tr>
<tr>
<td>Bio. 101 Gen. Biology, or</td>
<td>4</td>
</tr>
<tr>
<td>Math. 112 Fund. of College Math.</td>
<td>3</td>
</tr>
<tr>
<td>Bus. 101 Intro. to Business</td>
<td>3</td>
</tr>
<tr>
<td>Bus. 201 Business Machines</td>
<td>3</td>
</tr>
<tr>
<td>Phe. 102 Physical Educ.</td>
<td>½</td>
</tr>
<tr>
<td>Phe. 104 Health (Women)</td>
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<td>Mil. 102 First Year Basic</td>
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Sophomore Year

FIRST SEMESTER

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<tbody>
<tr>
<td>Religion or Philosophy</td>
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<tr>
<td>Educ. 203 Educ. Psych. II</td>
<td>3</td>
</tr>
<tr>
<td>Acc. 101 Elementary Acctg.</td>
<td>3</td>
</tr>
<tr>
<td>Eco. 204 Survey of Economics</td>
<td>3</td>
</tr>
<tr>
<td>Sec. 101 Elem. Shorthand</td>
<td>3</td>
</tr>
<tr>
<td>Sec. 103 Elem. Typing</td>
<td>3</td>
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<tr>
<td>Phe. 201 Phys. Educ. (Women)</td>
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SECOND SEMESTER

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<th>Cr. Hrs.</th>
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<tr>
<td>Religion or Philosophy</td>
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</tr>
<tr>
<td>Educ. 318 Mental Hygiene</td>
<td>3</td>
</tr>
<tr>
<td>Acct. 102 Elementary Acct.</td>
<td>3</td>
</tr>
<tr>
<td>Sec. 110 Secretarial Math.</td>
<td>3</td>
</tr>
<tr>
<td>Sec. 102 Elem. Shorthand</td>
<td>3</td>
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<tr>
<td>Sec. 104 Elem. Typing</td>
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<tr>
<td>Phe. 201 Phys. Educ. (Women)</td>
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Junior Year

FIRST SEMESTER

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<thead>
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<th>Subjects</th>
<th>Cr. Hrs.</th>
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<tbody>
<tr>
<td>Phil. 311 Logic, or</td>
<td>3</td>
</tr>
<tr>
<td>Phil. 306 Epistemology</td>
<td>3</td>
</tr>
<tr>
<td>Educ. 300 Human Growth and Devel</td>
<td>3</td>
</tr>
<tr>
<td>Bus. 301 Corporation Finance</td>
<td>3</td>
</tr>
<tr>
<td>Sec. 201 Advanced Shorthand</td>
<td>3</td>
</tr>
<tr>
<td>Sec. 203 Advanced Typing</td>
<td>3</td>
</tr>
<tr>
<td>Sec. 205 Secretarial Theory</td>
<td>3</td>
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<tr>
<td>Eng. 408 Business English</td>
<td>3</td>
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SECOND SEMESTER

<table>
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<tr>
<th>Subjects</th>
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<tbody>
<tr>
<td>Phil. 324 Ethics</td>
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</tr>
<tr>
<td>Educ. 308 Techniques of Teaching</td>
<td>3</td>
</tr>
<tr>
<td>Bus. 305 Principles of Marketing</td>
<td>3</td>
</tr>
<tr>
<td>Eco. 205 Am. Eco. History</td>
<td>3</td>
</tr>
<tr>
<td>Sec. 206 Secretarial Theory</td>
<td>3</td>
</tr>
<tr>
<td>Eng. 408 Business English</td>
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Senior Year

FIRST SEMESTER

<table>
<thead>
<tr>
<th>Subjects</th>
<th>Cr. Hrs.</th>
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</thead>
<tbody>
<tr>
<td>Educ. 419 Phil. of Educ.</td>
<td>3</td>
</tr>
<tr>
<td>Bus. 303 Business Law</td>
<td>3</td>
</tr>
<tr>
<td>Bus. 307 Advertising</td>
<td>3</td>
</tr>
<tr>
<td>Bus. 309 Retail Merchandising</td>
<td>3</td>
</tr>
<tr>
<td>Bus. 310 Salesmanship</td>
<td>3</td>
</tr>
<tr>
<td>Educ. Special Methods</td>
<td>3</td>
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SECOND SEMESTER

<table>
<thead>
<tr>
<th>Subjects</th>
<th>Cr. Hrs.</th>
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</thead>
<tbody>
<tr>
<td>Educ. 414 Student Teaching</td>
<td>6-12</td>
</tr>
<tr>
<td>Elective in Accounting</td>
<td>3</td>
</tr>
<tr>
<td>Elective</td>
<td>3</td>
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</tbody>
</table>

PROGRAM VII

FOR STUDENTS MAJORING IN HOME ECONOMICS EDUCATION

Degree: Bachelor of Science in Education

Freshman Year

FIRST SEMESTER

<table>
<thead>
<tr>
<th>Subjects</th>
<th>Cr. Hrs.</th>
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</thead>
<tbody>
<tr>
<td>Religion or Philosophy</td>
<td>2</td>
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<tr>
<td>Bio. 101 General Biology, or</td>
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<tr>
<td>Chem. 110 General Chemistry</td>
<td>5</td>
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<tr>
<td>Educ. 100 Orientation</td>
<td>1</td>
</tr>
<tr>
<td>Educ. 101 Intro. to Education</td>
<td>3</td>
</tr>
<tr>
<td>Eng. 101 English Composition</td>
<td>3</td>
</tr>
<tr>
<td>Hec. 102 Foods I</td>
<td>3</td>
</tr>
<tr>
<td>Hec. 103 Intro. to Related Art</td>
<td>3</td>
</tr>
<tr>
<td>Phe. 101 Physical Education</td>
<td>½</td>
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SECOND SEMESTER

<table>
<thead>
<tr>
<th>Subjects</th>
<th>Cr. Hrs.</th>
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<tbody>
<tr>
<td>Religion or Philosophy</td>
<td>2</td>
</tr>
<tr>
<td>Educ. 190 General and Educ.</td>
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</tr>
<tr>
<td>Biol. 102 General Biology, or</td>
<td>4</td>
</tr>
<tr>
<td>Chem. 200 Organic Chemistry</td>
<td>5</td>
</tr>
<tr>
<td>Hec. 101 Beginning Clothing</td>
<td>3</td>
</tr>
<tr>
<td>Hec. 214 Textiles I</td>
<td>3</td>
</tr>
<tr>
<td>Phe. 102 Physical Education</td>
<td>½</td>
</tr>
<tr>
<td>Spe. 101 Fund. of Ef. Speaking</td>
<td>3</td>
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</table>
**Sophomore Year**

**FIRST SEMESTER**

<table>
<thead>
<tr>
<th>Subjects</th>
<th>Cr. Hrs.</th>
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<tbody>
<tr>
<td>Religion or Philosophy</td>
<td>2</td>
</tr>
<tr>
<td>Educ. 203 Educational Psych. II</td>
<td>3</td>
</tr>
<tr>
<td>Hec. 221 Home Management I</td>
<td>3</td>
</tr>
<tr>
<td>Hec. 311 Advanced Clothing</td>
<td>3</td>
</tr>
<tr>
<td>Phe. 201 Physical Education</td>
<td>1/2</td>
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<tr>
<td>Eco. 204 Survey of Economics</td>
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</table>

**SECOND SEMESTER**

<table>
<thead>
<tr>
<th>Subjects</th>
<th>Cr. Hrs.</th>
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</thead>
<tbody>
<tr>
<td>Religion or Philosophy</td>
<td>2</td>
</tr>
<tr>
<td>Educ. 318 Mental Hygiene</td>
<td>3</td>
</tr>
<tr>
<td>Hec. 201 Foods II</td>
<td>3</td>
</tr>
<tr>
<td>*Hec. 203 Health and Home Nursing</td>
<td></td>
</tr>
<tr>
<td>Phe. 202 Physical Education</td>
<td>1/2</td>
</tr>
<tr>
<td>Soc. 202 Social Problems</td>
<td>3</td>
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<tr>
<td>Eng. Elective in Literature</td>
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**Junior Year**

**FIRST SEMESTER**

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>Hec. 302 Meal Planning and Table Service</td>
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<tr>
<td>Hec. 303 Nutrition and Health</td>
<td>3</td>
</tr>
<tr>
<td>Hec. 309 Household Equipment</td>
<td>3</td>
</tr>
<tr>
<td>Hec. 425 Child Development I</td>
<td>3</td>
</tr>
<tr>
<td>Phil. 306 Epistemology, or</td>
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<tr>
<td>Phil. 311 Logic</td>
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**SECOND SEMESTER**

<table>
<thead>
<tr>
<th>Subjects</th>
<th>Cr. Hrs.</th>
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</thead>
<tbody>
<tr>
<td>Educ. 308 Techniques of Teaching</td>
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</tr>
<tr>
<td>Hec. 323 Demonstration Methods</td>
<td></td>
</tr>
<tr>
<td>Hec. 423 Home Furnishings</td>
<td>3</td>
</tr>
<tr>
<td>Hec. 426 Child Development II</td>
<td>3</td>
</tr>
<tr>
<td>Phil. 324 Ethics</td>
<td></td>
</tr>
<tr>
<td>*Hec. 315 Consumer Buying</td>
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</tbody>
</table>

**Senior Year**

**FIRST SEMESTER**

<table>
<thead>
<tr>
<th>Subjects</th>
<th>Cr. Hrs.</th>
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</thead>
<tbody>
<tr>
<td>Bio. 413 Bacteriology</td>
<td>4</td>
</tr>
<tr>
<td>Hec. 405 Teaching of Home Eco</td>
<td>4</td>
</tr>
<tr>
<td>Hec. 409 Advanced Foods</td>
<td>3</td>
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<tr>
<td>Hec. 415 Tailoring</td>
<td>3</td>
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<tr>
<td>Educ. 419 Philosophy of</td>
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<tr>
<td>Education</td>
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<tr>
<td>Elective</td>
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**SECOND SEMESTER**

<table>
<thead>
<tr>
<th>Subjects</th>
<th>Cr. Hrs.</th>
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</thead>
<tbody>
<tr>
<td>Educ. 414 Student Teaching</td>
<td>6-12</td>
</tr>
<tr>
<td>Hec. 406 Home Management II</td>
<td>3</td>
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</tbody>
</table>

**PROGRAM VIII**

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

**FIRST SEMESTER**

<table>
<thead>
<tr>
<th>Subjects</th>
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<tbody>
<tr>
<td>Religion or Philosophy</td>
<td>2</td>
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<tr>
<td>Educ. 100 Orientation</td>
<td>1</td>
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<tr>
<td>Educ. 101 Intro. to Educ</td>
<td>3</td>
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<tr>
<td>Educ. 102 Science for Elem. School Teacher I</td>
<td>4</td>
</tr>
<tr>
<td>Eng. 101 Eng. Composition</td>
<td>3</td>
</tr>
<tr>
<td>Hist. 111 Hist. of Modern Europe</td>
<td>3</td>
</tr>
<tr>
<td>Phe. 101 Phys. Educ.</td>
<td>1/2</td>
</tr>
<tr>
<td>Phe. 103 Health</td>
<td>1</td>
</tr>
<tr>
<td>*Art 101 Drawing</td>
<td>2</td>
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<td>*Sec. 107 Personal Typing</td>
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**SECOND SEMESTER**

<table>
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<tbody>
<tr>
<td>Religion or Philosophy</td>
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<tr>
<td>Educ. 190 Gen. and Educ. Psych</td>
<td>3</td>
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<tr>
<td>Educ. 103 Science for Elem. School Teacher II</td>
<td>4</td>
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<tr>
<td>Spe. 101 Fund. of Eff. Speaking</td>
<td>3</td>
</tr>
<tr>
<td>*Math. 200 Teachers' Arithmetic</td>
<td>3</td>
</tr>
<tr>
<td>Hist. 112 Hist. of Modern Europe</td>
<td>3</td>
</tr>
<tr>
<td>Phe. 102 Physical Educ.</td>
<td>1/2</td>
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<tr>
<td>Phe. 104 Health (Women)</td>
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Sophomore Year

FIRST SEMESTER

<table>
<thead>
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<th>Subjects</th>
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<tbody>
<tr>
<td>Religion or Philosophy</td>
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<tr>
<td>Educ. 203 Educ. Psych. II</td>
<td>3</td>
</tr>
<tr>
<td>Educ. 310 The Elem. School</td>
<td>3</td>
</tr>
<tr>
<td>Educ. 322 Lit. in Elem. School</td>
<td>3</td>
</tr>
<tr>
<td>*Mus. 141 Intro. to Music</td>
<td>2</td>
</tr>
<tr>
<td>Phe. 413 Health in Elem. School</td>
<td>3</td>
</tr>
<tr>
<td>Art 407 Art in Elem. School</td>
<td>2</td>
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<tr>
<td>Phe. 201 Physical Educ.</td>
<td>½</td>
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SECOND SEMESTER

<table>
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<tr>
<th>Subjects</th>
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<tbody>
<tr>
<td>Religion or Philosophy</td>
<td>2</td>
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<tr>
<td>Educ. 318 Mental Hygiene for the Teacher</td>
<td>3</td>
</tr>
<tr>
<td>Hist. 252 Am. Hist. since 1865</td>
<td>3</td>
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<tr>
<td>Educ. 320 Reading and Lang. Arts</td>
<td>4</td>
</tr>
<tr>
<td>Educ. 403 Arith. in Elem. School</td>
<td>2</td>
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<tr>
<td>Soc. 201 General Sociology</td>
<td>3</td>
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<tr>
<td>Phe. 202 Physical Educ.</td>
<td>½</td>
</tr>
</tbody>
</table>

SUMMER SESSION

Educ. 414 Student Teaching ............6

*These courses are contingent on previous training.

A Provisional Cadet Elementary Certificate 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

A. PROFESSIONAL REQUIREMENTS

<table>
<thead>
<tr>
<th>Cr. Hrs.</th>
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<tbody>
<tr>
<td>3</td>
</tr>
<tr>
<td>6</td>
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<tr>
<td>3</td>
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<tr>
<td>3</td>
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<tr>
<td>3</td>
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<tr>
<td>9</td>
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</tbody>
</table>

1. *Introduction to Education* ........................................ 3
2. *General and Educational Psychology* ................................ 6
3. *Mental Hygiene for Teacher* ....................................... 3
4. *Human Growth and Development* .................................... 3
5. *Techniques of Teaching* ........................................... 3
6. *Special Methods* .................................................... 9

7. Philosophy of Education .................................................. 3
8. Student Teaching .......................................................... 8-12
(On both elementary and high school levels.)

B. GENERAL REQUIREMENTS

<table>
<thead>
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<th>Cr. Hrs.</th>
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<tbody>
<tr>
<td>1. Religion—Philosophy ........................................... 14</td>
</tr>
<tr>
<td>2. Language Arts ...................................................... 15</td>
</tr>
<tr>
<td>English Composition, Speech, English Lit., American Lit., Literature in Elem. School</td>
</tr>
<tr>
<td>3. Social Studies ........................................................ 24</td>
</tr>
<tr>
<td>Modern European History, American History, Political Science, General Sociology, Principles of Geography Survey of Economics</td>
</tr>
<tr>
<td>4. Science ................................................................. 8</td>
</tr>
<tr>
<td>Science for the Elementary Teacher (or any other approved biological-physical science).</td>
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<tr>
<td>5. Health and Physical Education ................................ 3</td>
</tr>
<tr>
<td>Health in the Elementary School</td>
</tr>
<tr>
<td>6. Music ................................................................. 4</td>
</tr>
<tr>
<td>Introduction to Music, Music Literature and Appreciation</td>
</tr>
<tr>
<td>7. Art ................................................................. 4</td>
</tr>
<tr>
<td>Drawing, Art Appreciation</td>
</tr>
<tr>
<td>8. Arithmetic ......................................................... 3</td>
</tr>
<tr>
<td>Teachers' Arithmetic (may be waived on basis of tested competence in arithmetic)</td>
</tr>
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</table>

C. ELECTIVES ................................................................. 30

Elective credits should cover particularly the fields of teaching at secondary level. Credits in physical education and military are included in this area.
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:

<table>
<thead>
<tr>
<th>Course</th>
<th>Cr. Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Purposes and Practices of the Elementary School</td>
<td>3</td>
</tr>
<tr>
<td>2. Reading in the Elementary School</td>
<td>3</td>
</tr>
<tr>
<td>3. Arithmetic in the Elementary School</td>
<td>3</td>
</tr>
<tr>
<td>4. Child Psychology</td>
<td>3</td>
</tr>
</tbody>
</table>

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

MR. WIECHMAN, Assistant to the Dean

Candidates for the degree of Bachelor of Science may major in biology, chemistry, geology, mathematics, home economics, medical technology, medical radiological technique, nursing, 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:

ROBERT C. WIECHMAN, Chairman

CLETUS C. CHUDD, S.M. RAYMOND G. HIEBER
SYLVESTER EVESLAGE RUSSELL A. JOLY, S.M.
PETER J. FASO WILLIAM O. WEHRLE, S.M.
GERTRUDE D. HECKMAN VINCENT J. WOTTLE, S.M.
# UNIVERSITY OF DAYTON

## PROGRAM I

### BACHELOR OF SCIENCE WITH A MAJOR IN BIOLOGY

#### Freshman Year

<table>
<thead>
<tr>
<th>FIRST SEMESTER</th>
<th>Cr. Hours</th>
<th>SECOND SEMESTER</th>
<th>Cr. Hours</th>
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#### Sophomore Year

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<td>Phil. 482 Medical Ethics</td>
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<td>Soc. 201 General Sociology</td>
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<td>Soc. 202 Social Problems</td>
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<td>Pol. 201 American Government</td>
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<td>Hist. 251 Amer. Hist. to 1865</td>
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<td>Hist. 252 Amer. Hist. since 1865</td>
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<td>Chem. 302 Physical Chemistry</td>
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<td>Chem. 404 Biochemistry</td>
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<td>Phil. 311 Logic</td>
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<td>Eco. 203 Survey of Economics</td>
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# PROGRAM II

## BACHELOR OF SCIENCE WITH A MAJOR IN CHEMISTRY

### Freshman Year

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<td>Eng. 101 English Composition</td>
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<td>Math. 115 Analysis</td>
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<td>Mil. 101 First Year Basic Course</td>
<td>1 1/2</td>
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<tr>
<td>Phe. 101 Physical Education</td>
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<td>Math. 116 Analysis</td>
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<td>Mil. 102 First Year Basic Course</td>
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<td>Phe. 102 Physical Education</td>
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<td>Phe. 103 Health</td>
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<tr>
<td>Phys. 206 Mechanics and Sound</td>
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### Sophomore Year

#### FIRST SEMESTER

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<td>Ger. 101 Elementary German, or 3</td>
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<td>Ger. 201 Intermediate German</td>
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<td>Math. 201 Calculus</td>
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<td>Mil. 201 Second Yr. Basic Course</td>
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<td>Phys. 207 Electricity and Magnetism</td>
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<td>Ger. 202 Intermediate German</td>
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<td>Phys. 208 Heat and Light</td>
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### Junior Year

#### FIRST SEMESTER

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<td>Ger. 307 Chemical German, or 3</td>
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<td>Ger. 505 Scientific German</td>
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<td>Spe. 101 Fund. of Eff. Speaking</td>
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#### SECOND SEMESTER

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### Senior Year

#### FIRST SEMESTER

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<td>Chem. 405 Qualitative Organic Analysis</td>
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<td>Chem. 415 Inorganic</td>
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<td>Chem. 499 Research</td>
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<td>(1) Math. 421 Advanced Calculus</td>
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<td>Chem. 416 Inorganic</td>
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<td>Chem. 499 Research</td>
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<td>(1) Math. 422 Advanced Calculus</td>
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<td>Spe. 301 Speech Composition</td>
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(*) This alternate is permitted only at the discretion of the Dean and Chairman of the Department of Chemistry.

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

**BACHELOR OF SCIENCE WITH A MAJOR IN GEOLOGY**

#### Freshman Year

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<td>Chem. 115 General Chemistry</td>
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<td>Geo. 101 Physical Geology</td>
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<td>Mil. 101 First Year Basic Course</td>
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(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. 211-212 may be replaced by Chem. 313-314 or Chem. 303-304 if chemistry is a minor, or by Math. 301 or 441 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.

**GEOLOGY ELECTIVES**

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<td>Geo. 305 Petrology</td>
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<td>Geo. 307 Geomorphology</td>
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<td>Geo. 401 Paleontology</td>
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<td>Geo. 402 Micropaleontology</td>
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<td>Geo. 403 Sedimentation</td>
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<td>Geo. 405-6 Economic Geology</td>
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**BIOLOGY ELECTIVES**

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<td>Bio. 413 Gen. Bacteriology</td>
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**PROGRAM IV**

**BACHELOR OF SCIENCE WITH A MAJOR IN MATHEMATICS OR MATHEMATICAL STATISTICS**

**FIRST SEMESTER**

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**SECOND SEMESTER**

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<td>Eng. 221 English Literature</td>
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**Sophomore Year**

**FIRST SEMESTER**

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<th>Subjects</th>
<th>Cr. Hours</th>
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<tbody>
<tr>
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<tr>
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<td>Mil. 202 Second Yr. Basic Course 1 1/2</td>
<td>3 1/2</td>
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<tr>
<td>Phys. 207 Elect. and Magnetism</td>
<td>4</td>
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<tr>
<td>Ger. 101 Elementary German</td>
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**SECOND SEMESTER**

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<tr>
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<tr>
<td>Phys. 208 Heat and Light</td>
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**Junior Year**

**FIRST SEMESTER**

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<tr>
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<td>Phil. Advanced Course</td>
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<tr>
<td>Phys. Advanced Course, or</td>
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<tr>
<td>Chem. Advanced Course, or</td>
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<td>Ger. 305 Scientific German</td>
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**SECOND SEMESTER**

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<tr>
<td>(1) Math. 432 Fourier Series</td>
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<td>Phil. 324 Ethics</td>
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<td>Phys. Advanced Course, or</td>
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<td>Chem. Advanced Course, or</td>
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**Elective** | 3


**UNIVERSITY OF DAYTON**

---

**Senior Year**

**FIRST SEMESTER**

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<tr>
<td>(2) Math. 431 Vector Analysis</td>
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<td>Phys. Advanced Course, or</td>
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<td>Chem. Advanced Course</td>
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**SECOND SEMESTER**

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(1) Alternative courses are: Math. 311-312.

(2) Alternative courses are: Math. 411, Math. 416.

---

**PROGRAM V**

**BACHELOR OF SCIENCE WITH A MAJOR IN PHYSICS**

**Freshman Year**

**FIRST SEMESTER**

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<td>Or. 101 Orientation</td>
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**SECOND SEMESTER**

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<td>Phys. 206 Mechanics and Sound</td>
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<td>Phe. 103 Health</td>
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**Sophomore Year**

**FIRST SEMESTER**

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**SECOND SEMESTER**

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<td>Phys. 208 Heat and Light</td>
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<tr>
<td>(1) Ger. 102 Elementary German</td>
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**Junior Year**

**FIRST SEMESTER**

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<td>(2) Math. 341 Engineering Math I 3</td>
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<td>Phys. 301 Thermodynamics</td>
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**SECOND SEMESTER**

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<td>Phys. 303 Mechanics</td>
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### Senior Year

**FIRST SEMESTER**

<table>
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<th>Subjects</th>
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<tr>
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<td>Math. 421 Advanced Calculus</td>
<td>3</td>
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<td>Phys. 404 Optics</td>
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<td>Phys. 408 Elect. and Magn.</td>
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**SECOND SEMESTER**

<table>
<thead>
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<td>Math. 422 Advanced Calculus</td>
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<tr>
<td>Phys. 311 Atomic Physics</td>
<td>3</td>
</tr>
<tr>
<td>(3) Phys. Advanced Course</td>
<td>3</td>
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<tr>
<td>Elective</td>
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1. German could be replaced by another Modern Language.
2. Math. 341-342 may be replaced by Math. 431 and Math. 301.
3. Physics Electives suggested:

**Subjects**

- Phys. 411 Theoretical Physics
- Phys. 401 Vibration and Sound
- Phys. 321 Nuclear Physics
- Phys. 307 Elements of Electrical Engineering (E.E. 201)
- Phys. 308 Alternating Current Circuits (E.E. 305)
- Phys. 305-306 Electrical Engineering (E.E. 301-302)
- Phys. 309 Engineering Electronics (E.E. 312)
- Phys. 405 Industrial Electronics (E.E. 409)

### PROGRAM VI

**BACHELOR OF SCIENCE IN HOME ECONOMICS**

The Department provides four special curricula:
1. Clothing and Textiles.
2. Dietetics and Institutional Management.
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**

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<tr>
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<td>5</td>
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<tr>
<td>Hec. 100 Intro. to Home Economics</td>
<td>1</td>
</tr>
<tr>
<td>Hec. 102 Foods I</td>
<td>3</td>
</tr>
<tr>
<td>Phe. 101 Physical Education</td>
<td>1/2</td>
</tr>
<tr>
<td>Eng. 101 English Composition</td>
<td>3</td>
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<tr>
<td>Hec. 105 Introduction to Related Arts</td>
<td>3</td>
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<td>Or. 101 Orientation</td>
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**SECOND SEMESTER**

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<td>Chem. 200 Organic</td>
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<td>Hec. 101 Beginning Clothing</td>
<td>3</td>
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<td>Hec. 214 Textiles I</td>
<td>3</td>
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<tr>
<td>Phe. 102 Physical Education</td>
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<td>Spe. 101 Fundamentals of Effective Speaking</td>
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## Sophomore Year

### First Semester

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<tr>
<td>Hec. 318 Family Relationship</td>
<td>3</td>
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<tr>
<td>Phe. 201 Physical Education</td>
<td>½</td>
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<tr>
<td>Ret. 305 Introduction to Retail</td>
<td>3</td>
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<tr>
<td>Soc. 202 Social Problems</td>
<td>3</td>
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<tr>
<td>Psych. 201 Introductory Psychology</td>
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### Second Semester

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<td>Hec. 316 Textiles II</td>
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<td>Phe. 202 Physical Education</td>
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<td>Hec. 314 Costume Art, Design</td>
<td>3</td>
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<tr>
<td>Hec. 203 Health and Home Nsg.</td>
<td>3</td>
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<tr>
<td>Eco. 204 Survey of Economics</td>
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## Junior Year

### First Semester

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<td>Hec. 312 Children's Clothing</td>
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<td>Hec. 311 Advanced Clothing</td>
<td>3</td>
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<td>Hec. 412 Historic Costume</td>
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<td>Bio. 303 Physiology</td>
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<td>Phil. 324 Ethics</td>
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### Second Semester

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<td>Hec. 315 Consumer Buying</td>
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<td>Hec. 314 Costume Art, Design</td>
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<tr>
<td>Hec. 423 Home Furnishings I</td>
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<td>Hec. 431a Field Work</td>
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<td>Ret. 310 Retail Salesmanship</td>
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<td>Ret. 409 Retail Organization and Operation</td>
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### Senior Year

### First Semester

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<td>Hec. 427 Textile Economics</td>
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<td>Ret. 307 Retail Advertising, or</td>
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### Second Semester

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(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

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<td>1</td>
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<td>Hec. 102 Foods I</td>
<td>3</td>
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<tr>
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<td>Hec. 105 Introduction to Related Art</td>
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### Second Semester

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<td>Phe. 102 Physical Education</td>
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<td>Spe. 101 Fundamentals of Effective Speaking</td>
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### Sophomore Year

#### FIRST SEMESTER

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<td>Bio. 103 General Zoology</td>
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#### SECOND SEMESTER

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<td>Hec. 203 Health, Home Nursing</td>
<td>3</td>
</tr>
<tr>
<td>Hec. 305 Institutional Accounting</td>
<td>3</td>
</tr>
<tr>
<td>Phe. 202 Physical Education</td>
<td>1.5</td>
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<td>Eco. 204 Survey of Economics</td>
<td>3</td>
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<tr>
<td>Soc. 202 Social Problems</td>
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### Junior Year

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<td>Chem. 400 Biochemistry</td>
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#### SECOND SEMESTER

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<th>Cr. Hours</th>
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<tbody>
<tr>
<td>Hec. 304 Quantity Cookery</td>
<td>3</td>
</tr>
<tr>
<td>Hec. 307 Household Physics</td>
<td>3</td>
</tr>
<tr>
<td>Bio. 303 Physiology</td>
<td>3</td>
</tr>
<tr>
<td>Hec. 308 Institutional Buying</td>
<td>3</td>
</tr>
<tr>
<td>Hec. 323 Demonstration Methods</td>
<td>1</td>
</tr>
<tr>
<td>Hec. 401 Advanced Nutrition</td>
<td>3</td>
</tr>
<tr>
<td>Eng. 316 Advanced Composition</td>
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### Senior Year

#### FIRST SEMESTER

<table>
<thead>
<tr>
<th>Subjects</th>
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<tbody>
<tr>
<td>Hec. 309 Household Equipment</td>
<td>3</td>
</tr>
<tr>
<td>Hec. 405 Teaching of Home Economics in Schools</td>
<td>3</td>
</tr>
<tr>
<td>Hec. 409 Advanced Foods</td>
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<tr>
<td>Hec. 425 Child Development I</td>
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<td>Bio. 401 Bacteriology</td>
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#### SECOND SEMESTER

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<tr>
<td>Hec. 402 Diet in Disease</td>
<td>3</td>
</tr>
<tr>
<td>Hec. 406 Home Management II</td>
<td>3</td>
</tr>
<tr>
<td>Hec. 407 Institutional Organization and Management</td>
<td>3</td>
</tr>
<tr>
<td>Eng. Advanced Course</td>
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</tr>
<tr>
<td>(1) Phil. 311 Logic recommended.</td>
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<tr>
<td>Phil. 324 Ethics</td>
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### 3. MAJOR: BUSINESS: FOODS

(1) Minor In Retailing

### Freshman Year

#### FIRST SEMESTER

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<td>Chem. 110 General Chemistry</td>
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<td>Hec. 100 Intro. to Home Eco.</td>
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</tr>
<tr>
<td>Hec. 102 Foods I</td>
<td>3</td>
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<td>Phe. 101 Physical Education</td>
<td>1.5</td>
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<tr>
<td>Eng. 101 English Composition</td>
<td>3</td>
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<tr>
<td>Hec. 105 Introduction to Related Art</td>
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<td>Or. 101 Orientation</td>
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#### SECOND SEMESTER

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<td>Chem. 200 Organic</td>
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<tr>
<td>Hec. 101 Beginning Clothing</td>
<td>3</td>
</tr>
<tr>
<td>Hec. 214 Textiles I</td>
<td>3</td>
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<tr>
<td>Phe. 102 Physical Education</td>
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<tr>
<td>Spe. 101 Fundamentals of Effective Speaking</td>
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### Science 99
### Sophomore Year

#### FIRST SEMESTER

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<td>Hec. 221 Home Management I</td>
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<tr>
<td>Phe. 201 Physical Education</td>
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<tr>
<td>Psych. 201 Introductory Psychology</td>
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<td>Hec. 201 Foods II</td>
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<td>Hec. 203 Health, Home Nursing</td>
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<td>Phe. 202 Physical Education</td>
<td>1/2</td>
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<tr>
<td>Eco. 204 Survey of Economics</td>
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<td>Soc. 202 Social Problems</td>
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#### Junior Year

#### FIRST SEMESTER

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<td>Hec. 302 Meal Planning and Table Service</td>
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<td>Hec. 303 Nutrition and Health</td>
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<td>Hec. 309 Household Equipment</td>
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<td>Ret. 305 Introduction to Retailing</td>
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<td>Ret. 310 Retail Salesmanship</td>
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#### SECOND SEMESTER

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<td>Hec. 304 Quantity Cookery</td>
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<td>Hec. 423 Home Furnishings I</td>
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<tr>
<td>Ret. 409 Retailing Organization and Operation</td>
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<td>Ret. 414 Retail Buying</td>
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<tr>
<td>Bio. 303 Physiology</td>
<td>3</td>
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<tr>
<td>Hec. 401 Advanced Nutrition, or</td>
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<td>Hec. 402 Diet in Disease</td>
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#### Senior Year

#### FIRST SEMESTER

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<tbody>
<tr>
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<td>Eng. Advanced Course</td>
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<td>Bio. 401 Bacteriology</td>
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<td>Ret. 405 Retail Mathematics, or</td>
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<td>Ret. 307 Retail Advertising</td>
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<td>Hec. 431 Field Work</td>
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<td>Eng. 316 Advanced Composition</td>
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<tr>
<td>Phil. 324 Ethics</td>
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(1) Alternative minors may be selected in English, psychology, history and sociology.

(2) Phil. 311 Logic recommended.

### 4. MAJOR: INTERIOR DECORATION

#### (1) Minor In Retailing

#### Freshman Year

#### FIRST SEMESTER

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<td>Eng. 101 English Composition</td>
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<tr>
<td>Chem. 110 General Chemistry</td>
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<tr>
<td>Hec. 106 Art Design</td>
<td>3</td>
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<tr>
<td>Hec. 203 Health and Home Nursing (W), or</td>
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<tr>
<td>Mil. 101 1st Yr. Basic (M)</td>
<td>1 1/2</td>
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<tr>
<td>Phe. 101 Physical Education</td>
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<td>Or. 101 Orientation</td>
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#### SECOND SEMESTER

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<td>Art 108 Cult. Hist. since 1850</td>
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<td>Spe. 101 Fund. of Eff. Speaking</td>
<td>3</td>
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<tr>
<td>Chem. 200 Organic Chemistry</td>
<td>5</td>
</tr>
<tr>
<td>Hec. 214 Textiles I</td>
<td>3</td>
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<tr>
<td>Mil. 102 1st Yr. Basic (M)</td>
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### Sophomore Year

<table>
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<td>Religion or Philosophy</td>
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<td>Phych. 201 Introductory Psych.</td>
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<td>Soc. 202 Social Problems</td>
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<td>Eco. 204 Survey of Economics</td>
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<td>Hec. 201 Field Work</td>
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<tr>
<td>Hec. 200 Field Work</td>
<td>1</td>
<td>Hec. 222 Historic Textiles</td>
<td>3</td>
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<tr>
<td>Ret. 305 Intro to Retailing</td>
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<td>Hec. 315 Consumer Buying</td>
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<td>Phe. 201 Physical Education</td>
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<td>Hec. 316 Textiles II</td>
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### Junior Year

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<td>Hec. 318 Family Relationships</td>
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<td>Hec. 430 Home Furnishings</td>
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<td>Ret. 310 Retail Salesmanship</td>
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<td>Hec. 323 Demonstration Methods</td>
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<td>Ret. 307 Retail Advertising, or</td>
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<td>Hec. 435 Advanced Home Plan</td>
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<td>Ret. 405 Retail Mathematics</td>
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<td>Ret. 409 Retail Org. and</td>
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<td>3</td>
<td>Operation</td>
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<td>Hec. 423 Home Furnishings I</td>
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### Senior Year

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<td>Hec. 424 Home Architecture</td>
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<tr>
<td>Hec. 431a Field Work</td>
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<td>Hec. 431b Field Work</td>
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<td>Ret. 414 Retail Buying</td>
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<td>Phil. 324 Ethics</td>
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<tr>
<td>Electives</td>
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<td>Electives</td>
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(1) Alternative minors may be selected in English, psychology, history and sociology.
(2) It is recommended that women students select Hec. 101 Beginning Clothing, Hec. 221 Home Management, or Hec. 311 Advanced Clothing, as their elective.
(3) Phil. 311 Logic 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, and Miami Valley 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 Patholo-
gists 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

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<td>Phe. 101 Physical Education</td>
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<td>Mil. 101 First Year Basic</td>
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<td>Math. 101 College Algebra</td>
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<td>Bio. 106 Zoology, or (Bio. 102 or Elective)</td>
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### Sophomore Year

#### FIRST SEMESTER

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<td>Bio. 311 General Genetics</td>
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<td>Bio. 203 Human Anatomy</td>
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<td>Eng. 305 Medical Terminology</td>
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<td>Phe. 201 Physical Education (W)</td>
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#### SECOND SEMESTER

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### Junior Year

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<td>Bio. 413 Bacteriology</td>
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#### SECOND SEMESTER

<table>
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<td>Chem. 314 Organic Chemistry</td>
<td>4</td>
</tr>
<tr>
<td>Bio. 306 Microtechnique</td>
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<tr>
<td>Phil. 482 Medical Ethics</td>
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<tr>
<td>Bio. 303 Physiology</td>
<td>3</td>
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<td>Elective</td>
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### Senior Year

#### FIRST SEMESTER

<table>
<thead>
<tr>
<th>Subjects</th>
<th>Cr. Hours</th>
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<tbody>
<tr>
<td>Met. 461 Urinalysis and Renal</td>
<td>4</td>
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<tr>
<td>Functions</td>
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</tr>
<tr>
<td>Met. 462 Hematology and Blood Bank</td>
<td>6</td>
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<tr>
<td>Met. 463 Bacteriology and Parasitology</td>
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#### SECOND SEMESTER

<table>
<thead>
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<tr>
<td>Met. 454 Chemistry and Gastric</td>
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<tr>
<td>Analysis</td>
<td></td>
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<tr>
<td>Met. 465 Histology and Cytology</td>
<td>4</td>
</tr>
<tr>
<td>Met. 466 Serology, Spinal Fluids</td>
<td>5</td>
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<tr>
<td>Met. 457 Electrocardiography, B.M.R.</td>
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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:

<table>
<thead>
<tr>
<th>Cr. Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mathematics: College Algebra ........................................... 3</td>
</tr>
<tr>
<td>Plane Trigonometry ..................................................... 3</td>
</tr>
<tr>
<td>Chemistry: General Inorganic .......................................... 6</td>
</tr>
<tr>
<td>Physics: General Physics ............................................... 10</td>
</tr>
<tr>
<td>English: Composition .................................................... 3</td>
</tr>
<tr>
<td>Theme Writing ............................................................. 3</td>
</tr>
<tr>
<td>Biology: General Biology ............................................... 8</td>
</tr>
<tr>
<td>Human Anatomy ............................................................ 4</td>
</tr>
<tr>
<td>Human Physiology ........................................................ 3</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>FIRST SEMESTER</th>
<th>Cr. Hours</th>
<th>SUBJECTS</th>
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<tbody>
<tr>
<td>Religion or Philosophy</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Eng. 101 English Composition</td>
<td>3</td>
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<tr>
<td>Math. 115 Math. Analysis</td>
<td>5</td>
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<tr>
<td>Bio. 101 General Biology</td>
<td>4</td>
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<tr>
<td>Mil. 101 First Basic Military</td>
<td>1 1/2</td>
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<tr>
<td>Phe. 101 Physical Education</td>
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<th>SECOND SEMESTER</th>
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<td>Eng. 221 English Literature</td>
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<td>Math. 116 Math. Analysis</td>
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<td>Mil. 102 First Basic Military</td>
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<td>Phe. 102 Physical Education</td>
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<tr>
<td>Phys. 206 Mechanics and Sound</td>
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Sophomore Year

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<tr>
<td>Religion or Philosophy</td>
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<tr>
<td>Bio. 203 Human Anatomy</td>
<td>2</td>
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<td>Bio. 201 Comp. Anatomy Lab</td>
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<tr>
<td>Math. 201 Calculus</td>
<td>4</td>
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<tr>
<td>Phys. 207 Electricity &amp; Magnetism</td>
<td>4</td>
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<tr>
<td>Mil. 201 Second Basic Military</td>
<td>1 1/2</td>
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<tr>
<td>E.E. 201 Elem. of Elect. Engr.</td>
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<tr>
<td>Religion or Philosophy</td>
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<tr>
<td>Bio. 204 Human Anatomy</td>
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<tr>
<td>Bio. 202 Comp. Anatomy Lab</td>
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<tr>
<td>Math. 202 Calculus</td>
<td>4</td>
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</tr>
<tr>
<td>Phys. 208 Heat and Light</td>
<td>4</td>
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<tr>
<td>Mil. 202 Second Basic Military</td>
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<td>Eng. Advanced Course</td>
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Junior Year

<table>
<thead>
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<th>FIRST SEMESTER</th>
<th>Cr. Hours</th>
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<tbody>
<tr>
<td>E.E. 305 Altern. Current Circuits</td>
<td>4</td>
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<td>Bio. Advanced Course</td>
<td>3</td>
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<td>Phil. 324 Ethics</td>
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<td>Electives</td>
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<table>
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<th>SECOND SEMESTER</th>
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<tbody>
<tr>
<td>E.E. 312 Engineering Electronics</td>
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<tr>
<td>Phil. 482 Medical Ethics</td>
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<tr>
<td>Electives</td>
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Senior Year

At Miami Valley or St. Elizabeth Hospital

<table>
<thead>
<tr>
<th>SUBJECTS</th>
<th>Weeks</th>
<th>Cr. Hours</th>
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<tbody>
<tr>
<td>Rad. 451 Radiological Physics</td>
<td>6</td>
<td>3</td>
</tr>
<tr>
<td>Rad. 452 The X-ray Machine</td>
<td>6</td>
<td>3</td>
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<tr>
<td>Rad. 453 Processing Technique</td>
<td>2</td>
<td>2</td>
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<tr>
<td>Rad. 454 Routine Standard Positioning</td>
<td>12</td>
<td>8</td>
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<tr>
<td>Rad. 455 Special Examinations (Opaque Material)</td>
<td>10</td>
<td>6</td>
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<tr>
<td>Rad. 456 Fluoroscopic Procedure</td>
<td>4</td>
<td>2</td>
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<tr>
<td>Rad. 457 Radiation Therapy</td>
<td>12</td>
<td>8</td>
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</table>
PROGRAM IX
NURSING

THE UNIVERSITY OF DAYTON offers the Bachelor of Science in Nursing (B.S.N.) and the Bachelor of Science (B.S.) degrees to registered professional nurses. (1) This prespecialization curriculum is planned to enhance the background of graduates of basic diploma schools of nursing, offering a deeper appreciation of professional responsibilities and further development of attitudes deemed necessary to provide total nursing care of the highest quality.

Nursing school credentials, employment history, participation in professional organizations and leadership potentialities will be evaluated upon an individual basis.

All enrolling students are required to take the National League for Nursing Graduate Nurse Qualifying Examination before being officially accepted as a candidate for the baccalaureate program. The examination is to be taken within the first full-time semester, or before completion of 12 credit hours (for part-time students), whichever occurs first. Deficiencies demonstrated by the examination may be removed by pursuing additional clinical and/or theoretical courses, upon the recommendation of the Department of Nursing.

Application forms for the Graduate Nurse Qualifying Examination must be obtained and signed by the Assistant to the Dean, Division of Science, before the applicant can be scheduled for the announced date of the examination. This authorizing individual is the only one to whom examination results will be released. The completed application card and required check or money order must be received by the National League for Nursing Evaluation and Guidance Service, 2 Park Avenue, New York 16, New York, at least one full week before the date of examination, in order to allow sufficient time for returning the admission receipt to the applicant.

A minimum of 128 credit hours is required for the B.S.N. or the B.S. degree. This must include:

1. A minimum of 42 academic or non-professional credits in the following subjects:
   - English ............................................................. 12 credit hours
   - Philosophy ....................................................... 6 credit hours
   - Psychology ....................................................... 6 credit hours
   - History and Social Sciences ......................... 12 credit hours
   - Natural Science .............................................. 6 credit hours

(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 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, and will complete the degree in fulfillment of those requirements.
2. In addition to the above, a minimum of 26 credit hours are required as follows:

A. For the Bachelor of Science in Nursing (B.S.N.)
   Nsg. 317 Current Trends in American Nursing .......... 3 credit hours
   Nsg. 432 Principles of Teaching in Schools of Nursing ........................................... 3 credit hours
   Nsg. 471 Ward Administration ........................................ 3 credit hours
   Nsg. Elective ........................................................................ 3 credit hours
   Nsg. Adv. Clinical Nursing Course .................... 7 credit hours
   Nsg. Adv. Clinical Nursing Course .................... 7 credit hours

B. For the Bachelor of Science (B.S.) degree, 12 additional hours in Biology or Chemistry, and 14 hours in Nursing electives are required.

3. The remaining 60 hours will be satisfied by the credit granted for:
   A. Basic nursing preparation.
   B. Professional accomplishments, interest and advancement.
   C. Leadership potentialities.
   D. Results of G.N.Q.E.
   E. Removal of deficiencies determined by an evaluation of "A" and "D" above.

Students entering the program may register for courses at the beginning of any semester or summer school, and receive full credit toward the degree for all courses taken, while awaiting evaluation of credentials, and receiving formal acceptance as a matriculant for the degree.

Interested applicants should write to the Office of Admissions for an application blank, and return it together with:
   1. Unmounted 2" x 2" photograph.
   2. High school transcript.
   3. School of Nursing transcript.
   4. Photostatic proof of R.N. registration.
   5. Any additional college transcripts of studies completed to date.
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

<table>
<thead>
<tr>
<th>1st Semester</th>
<th>2nd Semester</th>
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</thead>
<tbody>
<tr>
<td>Rel. or Phil.</td>
<td>Religion or Philosophy</td>
</tr>
<tr>
<td>Mil.</td>
<td>101-102 First Basic Military</td>
</tr>
</tbody>
</table>
CHEMICAL ENGINEERING

The course of Chemical Engineering has for its main objective the training of men for technical and executive positions in the chemical and allied 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, heat transfer, thermodynamics, unit operations, and plant design and 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 109)

Sophomore Year

<table>
<thead>
<tr>
<th></th>
<th>1st Semester</th>
<th>2nd Semester</th>
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<tbody>
<tr>
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<tr>
<td>Mil. 201-202</td>
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<tr>
<td>Math. 201-202</td>
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<td>Spe. 101</td>
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<tr>
<td>Ch.E. 202</td>
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Junior Year

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<th>1st Semester</th>
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<tbody>
<tr>
<td>Ch.E. 303-304</td>
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<td>Ch.E. 311-312</td>
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<td>Chem. 305-306</td>
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<tr>
<td>Chem. 303-304</td>
<td>Physical Chemistry</td>
<td>3</td>
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<tr>
<td>G.E. 202</td>
<td>Statics</td>
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<td>G.E. 303</td>
<td>Strength of Materials</td>
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<td>Electives</td>
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**Senior Year**

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<td>Ch.E. 413-414</td>
<td>Unit Operations Lab</td>
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<td>Ch.E. 421</td>
<td>Chem. Engineering Tech.</td>
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<td>Ch.E. 422</td>
<td>Plant Design</td>
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<td>Ch.E. 423-424</td>
<td>Seminar</td>
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<td>Ch.E. 426</td>
<td>Chem. Engineering Projects</td>
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<td>E.E. 301-302</td>
<td>Electrical Engineering</td>
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<td>G.E. 305</td>
<td>Materials Testing</td>
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<td>G.E. 402</td>
<td>Contracts and Specifications</td>
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<td>-</td>
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<tr>
<td>M.E. 304a</td>
<td>Heat Power</td>
<td>3</td>
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<td>M.E. 303</td>
<td>Metallurgy</td>
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<td>Electives</td>
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<td>Adv. Tech. Elective</td>
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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 109)

Sophomore Year

<table>
<thead>
<tr>
<th>Course</th>
<th>1st Semester</th>
<th>2nd Semester</th>
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<tbody>
<tr>
<td>Rel. or Phil.</td>
<td>Religion or Philosophy</td>
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<tr>
<td>Mil. 201-202</td>
<td>Second Basic Military</td>
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<tr>
<td>Math. 201-202</td>
<td>Calculus</td>
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</tr>
<tr>
<td>Phys. 207-208</td>
<td>Physics</td>
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<tr>
<td>Eng. 222</td>
<td>American Literature</td>
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<tr>
<td>Spe. 101</td>
<td>Fund. of Effective Speaking</td>
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<tr>
<td>C.E. 201-202</td>
<td>Elementary Surveying</td>
<td>2</td>
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<td>G.E. 202</td>
<td>Statics</td>
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Junior Year

<table>
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<td>Dynamics</td>
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<td>G.E. 303</td>
<td>Strength of Materials</td>
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<td>G.E. 307</td>
<td>Hydraulics</td>
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<tr>
<td>M.E. 301a</td>
<td>Thermodynamics</td>
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<td>C.E. 302</td>
<td>Route Surveying</td>
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<td>Adv. Strength of Materials</td>
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### Senior Year

<table>
<thead>
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The choice of electives is subject to the approval of the Chairman 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 109)

### Sophomore Year

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The choice of electives is subject to the approval of the Chairman 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 109)

**Sophomore Year**

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<th>Course</th>
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**Junior Year**

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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 109)

<table>
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<tr>
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#### M. E. ELECTIVES

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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

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Second Year

First Semester

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Second Semester

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<tr>
<th>Subjects</th>
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<tr>
<td>Religion or Philosophy</td>
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<td>ET</td>
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<td>GS</td>
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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.
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.
### Second Year

**Option A: Product Design**

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<td>3 Machine Drawing</td>
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<td>DM</td>
<td>20 Mechanics: Statics and Dynamics</td>
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<td>GS</td>
<td>3 Report Writing</td>
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<td>GS</td>
<td>22 Economics of Industry</td>
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<td>PS</td>
<td>12 Physics: Heat, Light, and Sound</td>
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<td>DM</td>
<td>22 Machine Design</td>
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<td>DM</td>
<td>23 Mechanism</td>
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<td>GS</td>
<td>21 American Political Ideas and Practices</td>
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<td>IT</td>
<td>2 Elements of Supervision</td>
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### Option B: Tool Design

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<td>DM</td>
<td>4 Tool Drawing</td>
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<td>DM</td>
<td>5 Die Design</td>
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<td>GS</td>
<td>3 Report Writing</td>
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<td>22 Economics of Industry</td>
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<td>IT</td>
<td>11 Operation Planning</td>
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<td>6 Jig and Fixture Design, or Gage Design</td>
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<td>DM</td>
<td>7 Gage Design</td>
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<td>DM</td>
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<td>2 Elements of Supervision</td>
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<td>IT</td>
<td>7 Elements of Cost Control</td>
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<td>12 Production Procedures</td>
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Courses of Instruction

ACCOUNTING (Acc.)

MR. CHANG, CHAIRMAN
MR. BEHLING, MR. PERDUE, MR. UPDYKE

Acc. 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

Acc. 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

Acc. 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

Acc. 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

Acc. 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

Acc. 310. COST ACCOUNTING ANALYSIS THREE CREDIT HOURS
The elements of manufacturing costs; cost and financial statement analysis; cost systems and budgets. Three class periods a week.

First Semester, Each Year

Acc. 312. GOVERNMENTAL ACCOUNTING THREE CREDIT HOURS
Accounting for institutions, municipalities, and for state and federal governments; organization; procedure, budget, accounts and records, reports. Three class periods a week.

Second Semester, Each Year
ACC. 401-402. AUDITING
SIX CREDIT HOURS
A review of accounting with particular attention given to the theory and practice 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. 

ACC. 407. FEDERAL INCOME TAX ACCOUNTING
THREE CREDIT HOURS
An interpretation of the income tax portions of the current Revenue Act. The preparation of the individual, partnership and corporation income tax returns. Three class periods a week.

ACC. 408. FEDERAL, STATE AND LOCAL TAXES
THREE CREDIT HOURS
An interpretation of the social security, estate, gift and excise tax portions of the current Revenue Act. A study of income, franchise, property, sales and payroll taxes currently typical in states (particularly Ohio) and municipalities. Three class periods a week.

ACC. 412. 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.

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.

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.

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.

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 Saracen; the Romanesque and Gothic; the Renaissance; the Baroque, the Rococo and the
Neo-Classic. Accredited in History. 

**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. 

*First 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 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*

**ART 408. THE GREAT MASTERS TWO CREDIT HOURS**
A study of the masters of art and the influences upon their works, beginning with the late Gothic period and continuing through the Baroque movement. 

*To be announced*

**ART 409. THE GREAT MASTERS TWO CREDIT HOURS**
A continuation of Art 408, beginning with the styles in the art of the masters of the Rococo period through Impressionism to contemporary movements in art. 

*To be announced*
BIOLOGY (Bio.)

BRO. JOLY, CHAIRMAN
BRO. BECK, MR. FASO, MISS HECKMAN, MR. KLENNER, BRO. KUNTZ, MR. WIECHMAN, DR. WILLIAMS

Bio. 102. General Biology
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
Lectures on structure, physiology, and life histories of invertebrates and vertebrates. Three class periods and one laboratory period a week.

*Second Semester, Each Year*

Bio. 105-106. General Zoology
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
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. 203-204. Human Anatomy
A foundation study in the basic anatomy of the human body, consisting of lecture-demonstrations on the bones, muscles, viscera, etc. This course will meet the needs of students in physical education. Two class periods a week.

*Full Year Course, Each Year*

Bio. 211-212. Comparative Anatomy
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. Two class periods and one laboratory period a week.

*Full Year Course, Each Year*

Bio. 213. Comparative Anatomy

Bio. 303. Physiology
A lecture course showing the functions of the human body as a living organism. Sufficient anatomy is introduced to give at least an elementary knowledge of the organs and organ systems. Three class periods a week.

*Each Semester, Each Year*
BIO. 304. Histology  
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  
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  
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, 1955-1956

BIO. 314. General Botany  
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

BIO. 350. Preventive Medicine  
The development of the science of public health, and the prevention of disease from the standpoint of the individual and the community.

First Semester, Each Year—Evening

BIO. 351. Epidemiology  
The occurrence of the more common communicable diseases, their methods of transmission, and the control of reservoirs between periods of activity.

Second Semester, Each Year—Evening

BIO. 403-404. Embryology  
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. 408. Biophysics  
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. Three class periods a week.

Second Semester, 1955-1956

BIO. 413. GENERAL BACTERIOLOGY
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
A brief survey of pathogenic organisms, including their classification, cultural
characteristics, biochemical and physiological reactions. Isolation and identifi­
cation of unknowns; demonstration of and limited training in clinical serologi­
cal methods as related to pathogens included in course. Two class periods
and one laboratory period a week.

To be announced

BIO. 420. SEMINAR
Practice in development, presentation, and discussion of papers dealing with
biological problems.

To be announced

BUSINESS ORGANIZATION (Bus.)

MR. O'LEARY, CHAIRMAN
MR. CHANG, MR. COMER, MR. MURPHY
MR. SNYDER, MR. WHALEN

Concentration Recommendations

MAJOR: Minimum of thirty hours of upper division courses are required of stu­
dents majoring in business organization. These courses should include 301, 303,
305, 313, 316, 317, 404, 405, 425. A minimum of two additional closely re­
lated courses is also required. These courses are to be selected in consultation
with the Department Chairman or the Dean.

Accounting 101-102 and Economics 201-202 are prerequisite to all ad­
vanced courses.

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

BUS. 101. INTRODUCTION TO BUSINESS
A survey of the fields of business and their inter-relationships. The uses and
functions of production and distributive systems, capital, labor, finance, ac­
counting, statistics, marketing, etc., are studied. The objectives are to empha­
size 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. 104. MATHEMATICS OF FINANCE I THREE CREDIT HOURS
This course is similar to Bus. 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

BUS. 201. BUSINESS MACHINES THREE CREDIT HOURS
Purposes to give students the opportunity to become acquainted with and to use correctly the machines commonly found in offices today. Such machines include two principal types of adding machines, three principal types of calculators and accounting mechanisms. Recommended prerequisite: Acc. 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 I: 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 contracts, sales, agency, and personal property. Three class periods a week. Each Semester, Each Year

BUS. 304. BUSINESS LAW II: 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.  Second 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. 312. PRINCIPLES OF INTERNATIONAL TRADE  THREE CREDIT HOURS
Principles and procedures in exporting and importing. Export and import organization, market analysis, handling shipments, packing, customs, and current practices. Three class periods a week.  First Semester, Each Year
BUS. 313. BUSINESS STATISTICS  
A survey of statistical methods including sampling, tabulations, graphics, averages, dispersions, index numbers, time series, trends, and simple correlations. Three class periods a week. Laboratory fee, $3.00.  
Each Semester, Each Year

BUS. 316. INDUSTRIAL MANAGEMENT  
Nature and place of management, and factors underlying management decisions; product designs, physical facilities, location and layout; job evaluation and classification; plant operation and output; control of purchases and inventories. Problems of production control and coordinating factory operations. Three class periods a week.  
Each Semester, Each Year

BUS. 317. LABOR MANAGEMENT  
Nature and development of the labor problem; selection, training and supervision of labor; wage practices; methods of wage payment; promotion and transfer policies; layoffs; employee morale; current practices in labor management relations. Three class periods a week.  
Each Semester, Each Year

BUS. 319. JOB EVALUATION AND WAGE DETERMINATION  
Job evaluation methods; determining requirements of jobs; establishing grade levels; development of basic rates, salary classifications and performance ratings. Three class periods a week.  
First Semester, Each Year

BUS. 320-321. MOTION AND TIME STUDY  
A study of the methods and apparatus used in achieving and perpetuating operation standardization. A study of motion and time of workers with the objective of increasing efficiency and enlarging production. Three class periods a week.  
Full Year Course, Each Year

BUS. 324. LABOR LEGISLATION  
The development, constitutional aspects, and practical effects of Federal and State legislation with respect to child labor, wages, hours, conditions of employment, industrial accidents, social security, civil and criminal liability and labor relations. Prerequisites: Bus. 316, 317, or permission of instructor. Three class periods a week.  
Each Semester, Each Year

BUS. 327. ELEMENTS OF SUPERVISION  
A consideration of the responsibilities of the shop or department head within the field of operative management; emphasis on training, motivation, grievances and maintenance of morale in the light of sound management principles. An exposition of accepted solutions to present day problems. Three class periods a week.  
First Semester, Each Year

BUS. 331-332. OFFICE MANAGEMENT AND OFFICE METHODS AND IMPROVEMENT  
The organization and management of an office and the functions of those in supervisory work. Planning, organizing and control of office work and per-
sonnel; 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.

**BUS. 401. INVESTMENTS**

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**

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. BUSINESS LAW III: LAW OF BUSINESS ORGANIZATION AND SECURITY RELATIONS**

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**

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**

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**

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**

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.  

**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.  

**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.  

**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.  

**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.  

**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.  

**CHEMICAL ENGINEERING (Ch.E.)**  
MR. WILSON, ACTING CHAIRMAN  
MR. SOFIANOPoulos, BRO. WOHLLEBEN  
CH.E. 202. CHEMICAL ENGINEERING FUNDAMENTALS I  
THREE CREDIT HOURS  
An introduction to chemical engineering with lectures and problems on material and heat balances as applied to industrial processes. Prerequisite: Math. 201.  

Second Semester, Each Year
CH.E. 303. CHEMICAL ENGINEERING FUNDAMENTALS II THREE CREDIT HOURS
Development of the fundamental principles of thermodynamics, particularly with respect to chemical engineering processes. Prerequisite: Ch.E. 202.

First Semester, Each Year

CH.E. 304. CHEMICAL ENGINEERING FUNDAMENTALS III THREE CREDIT HOURS
Kinetics and catalysis of the chemical reactions utilized in industrial processes. Prerequisite: Ch.E. 303.

Second Semester, Each Year

CH.E. 311. UNIT OPERATIONS I THREE CREDIT HOURS
Scientific principles forming the basis of the Unit Operations with particular reference to fluid flow and heat transfer. Prerequisite: Ch.E. 303.

First Semester, Each Year

CH.E. 312. UNIT OPERATIONS II THREE CREDIT HOURS
A critical study of the Unit Operations of chemical engineering. Lectures and problems. Prerequisite: Ch.E. 311.

Second Semester, Each Year

CH.E. 411. UNIT OPERATIONS III THREE CREDIT HOURS
Confirmation of Ch.E. 312. Lectures and problems. Prerequisite: Ch.E. 312.

First Semester, Each Year

CH.E. 413-414. UNIT OPERATIONS LAB FOUR CREDIT HOURS
To accompany Ch.E. 312 and 411. Corequisite: Ch.E. 411 for Ch.E. 413. Prerequisite: Ch.E. 413 for Ch.E. 414.

Full Year Course, Each Year

CH.E. 421. CHEMICAL ENGINEERING TECHNOLOGY TWO CREDIT HOURS
Discussion of industrial chemical processes and principles. Prerequisite: Ch.E. 303.

First Semester, Each Year

CH.E. 422. PLANT DESIGN TWO CREDIT HOURS
Problems in the design of complete chemical plants including estimation of operation and construction costs. Prerequisite: Ch.E. 411.

Second Semester, Each Year

CH.E. 423-424. SEMINAR NO CREDIT
Required of all junior and senior students in Chemical Engineering.

Each Semester, Each Year

CH.E. 426. CHEMICAL ENGINEERING PROJECTS TWO CREDIT HOURS
Laboratory development of individual projects. Senior standing in Chemical Engineering.

Second Semester, Each Year

CHEMISTRY (Chem.)
BRO. WOTTLE, CHAIRMAN
BRO. CHUDD, MR. EVESLAGE, MR. HORVAT, BRO. LUCIER, MR. MICHAELIS, BRO. WOHLLEBEN

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, Predental, and Medical Technology courses. Three class periods and one three-hour laboratory period a week.

Full Year Course, Each Year

CHEM. 115A. General Chemistry

FOUR CREDIT HOURS

This is a one-semester course, similar to Chem. 115 in scope, but designed for those who never had high school chemistry and/or score below a determined norm on a standardized test. Five class periods and one three-hour laboratory period a week.

First Semester, 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. 117A. General Chemistry

FOUR CREDIT HOURS

This course is similar to Chem. 117 in scope and similar to Chem. 115A in purpose. Five 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. The course will provide an introduction to instrumental methods of 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  
A theoretical discussion of ionization constant, solubility product, and equilibrium constants as influencing qualitative analysis. The laboratory work includes the semi-micro method for the separation and identification of common anions and cations. This is a one-semester course intended for Premedical, Predential and Medical Technology students. Two class periods and one four-hour laboratory period a week.  
First Semester, Each Year

CHEM. 301. Quantitative Analysis  
Short course intended for Premedical, Predental, 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  
A short course for Premedical and Predental 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  
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. 307. Chemical Literature  
The use of chemical literature, indexing methods, and patent procedure. Prerequisite: Ger. 307.  
Second Semester, Each Year

CHEM. 313-314. Organic Chemistry  
This is a less intensive course than Chem. 315-316 designed for Medical Technicians, Premedical, and Predental students. Three class periods and one three-hour laboratory period a week. Prerequisite: One full year of general chemistry; Chem. 207, 301 recommended.  
Full Year Course, Each Year

CHEM. 315-316. Organic Chemistry  
A study of the aliphatic, aromatic, and heterocyclic compounds, including laboratory preparations of typical compounds, and aimed to develop the basic techniques of organic methods. This course is required of Chemistry Majors and Chemical Engineers. Three class periods and two laboratory periods a week. Prerequisite: Chem. 205-206.  
Full Year Course, Each Year

CHEM. 400. Biochemistry  
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 diges-
tion, absorption, and intermediary metabolism. Four class periods and one three-hour laboratory period a week.  

First Semester, 1956-1957

CHEM. 404. BIOCHEMISTRY  
FOUR 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 three-hour laboratory period a week. Prerequisite: Chem. 301, 313-314.  
Second Semester, Each Year

CHEM. 405. QUALITATIVE ORGANIC ANALYSIS  
THREE CREDIT HOURS
A systematic study of the reactions of functional groups and of the physical properties which lead to the identification of organic compounds. One class period and two three-hour laboratory periods a week. Prerequisite: Chem. 315-316. Required of Chemistry Majors.  
First Semester, Each Year

CHEM. 406. ADVANCED ORGANIC CHEMISTRY  
TWO CREDIT HOURS
This course provides an understanding of the modern theory of organic chemistry with emphasis on reaction mechanisms. Prerequisite: Chem. 315-316. Required of Chemistry Majors.  
Second Semester, Each Year

CHEM. 408 LABORATORY TECHNIQUES IN ORGANIC CHEMISTRY  
ONE CREDIT HOUR
A one three-hour laboratory period covering the standard but more advanced techniques of organic chemistry, such as types of distillation, hydrogenation, etc. Prerequisite: Chem. 315-316.  
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

CHEM. 499. RESEARCH  
ONE-THREE CREDIT HOURS
Required of Chemistry Majors and arranged by consultation with staff members. Periodic oral and written reports will be required. Prerequisite: Senior standing.  
Full Year Course, Each Year

CIVIL ENGINEERING (C.E.)

MR. BALDINGER, ACTING CHAIRMAN
MR. CHAMBERLAIN, MR. GABRYS, MR. STITH

C.E. 201. ELEMENTARY SURVEYING  
TWO CREDIT HOURS
Elements of plane surveying, including measuring distances and angles, differential leveling. Application to topographic and construction surveys. Two class periods a week. Prerequisite: Math. 115.  
First Semester, Each Year
C.E. 201-L. **Elementary Surveying Field Work I**  
One credit hour  
Use and care of surveying instruments, practical use of instruments under actual field conditions. One field period a week. Corequisite: C.E. 201.  
*First Semester, Each Year*

C.E. 202. **Elementary Surveying II**  
Two credit hours  
Theory of stadia surveying, plane table, simple horizontal and vertical curves, and U. S. Public Land surveys. Two class periods a week. Prerequisite: C.E. 201.  
*Second Semester, Each Year*

C.E. 202-L. **Elementary Surveying Field Work II**  
One credit hour  
*Second Semester, Each Year*

C.E. 301. **Route Surveying**  
Three credit hours  
Theory of circular horizontal curves, transition curves and vertical curves. Calculation of earth work and mass diagram. Application to highways, railroads and other transportation methods. Three class periods a week. Prerequisite: C.E. 201.  
*First Semester, Each Year*

C.E. 301-L. **Route Surveying Field Work**  
One credit hour  
Layout of circular curves, transition curves and vertical curves. Cross-sections and slope stakes. One field period a week. Corequisite: C.E. 301.  
*First Semester, Each Year*

C.E. 302. **Advanced Surveying**  
Two credit hours  
Triangulation, precise leveling, astronomical calculations for latitude, longitude, time and azimuth. Adjustment of quadrilaterals and level net. Two class periods a week. Prerequisite: C.E. 201.  
*Second Semester, Each Year*

C.E. 302-L. **Advanced Surveying Field Work**  
One credit hour  
*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. 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*
C.E. 401. **Structural Design**
Two credit hours
The design of industrial buildings in steel, including miscellaneous building details. The design of railroad plate girders and highway bridges. Two class periods a week. Prerequisite: C.E. 306.  
*First Semester, Each Year*

C.E. 401-L. **Structural Design Laboratory**
Two credit hours
Actual calculations and engineering drawing of the work covered by lectures and instruction in C.E. 401. Two laboratory periods a week. Corequisite: C.E. 401.  
*First Semester, Each Year*

C.E. 402. **Structural Design**
Two credit hours
The design of typical reinforced concrete building including building details. The design of reinforced concrete arch and rigid frame bridges. Two class periods a week. Prerequisites: C.E. 306, 407.  
*Second Semester, Each Year*

C.E. 402-L. **Structural Design Laboratory**
Two credit hours
Actual calculations and engineering drawings of the work covered by lecture and instruction in C.E. 402. Corequisite: C.E. 402.  
*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.  
*First Semester, Each Year*

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

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

Introduction to theoretical soil mechanics including: soil classification, strength, seepage, settlement, stresses and stability of slopes. One class period a week. Prerequisite: G.E. 303, C.E. 307.

Second Semester, Each Year

C.E. 414-L. SOIL MECHANICS LABORATORY

Elementary soil tests including: the determination of grain size distribution, Atterberg Limits, shrinkage limit, specific gravity, bulk density permeability, strength and optimum moisture content; approximate methods for rapid field identification. One laboratory period a week. Corequisite: C.E. 414.

Second Semester, Each Year

ECONOMICS (Eco.)

MR. O'LEARY, CHAIRMAN
MR. FECHER, MR. MCGOVERN, BRO. NAGEL, MR. SNYDER,
MR. STEINBRUEGGE, MR. TORCHIA

Concentration Recommendation

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.

Economics 201-202 is prerequisite to all advanced courses.

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
305 Marketing
313 Statistics
316 Industrial Management

Eco. 104. ECONOMIC GEOGRAPHY

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

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

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.

First Semester, Each Year

Eco. 204. Survey of Economics

A general treatment of economics, as indicated in Eco. 203, but designed especially for students in Home Economics and in Secretarial Studies.

Second Semester, Each Year

Eco. 205. American Economic History

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. 305. Comparative Economic Systems

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

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

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

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
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.
Second 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, CHAIRMAN
BRO. BREWI, MR. BURROUGHS, MR. CHAVEZ, MR. DOUGLASS,
MR. FERRAZZA, MR. HENNESSY, FR. KOHMESCHER, MR. LEARY,
MRS. MILLER, MISS MONNETTE, BRO. PANZER,
SR. M. PELAGIA, MRS. REEL, MR. REICHARD, FR. ROESCH,
MRS. ROSE, MRS. RUHMSCHUSSEL,
MR. SCHWARTZ, BRO. SIBBING

EDUC. 100. ORIENTATION TO COLLEGE  ONE CREDIT HOUR
Deals with the total problem of adjustment to the college campus. Acquaints the beginning freshman student with the opportunities and responsibilities of college life and points out ways of utilizing them. Pays special attention to development of good study habits and effective techniques in note-taking.

First Semester, Each Year

EDUC. 101. INTRODUCTION TO EDUCATION  THREE CREDIT HOURS
Purposes to develop in the beginning student an adequate knowledge of and the right attitudes toward the teaching profession. It over-views the profession and examines the advantages, opportunities, and responsibilities of teaching as a professional career. It enables the student to select a field of education for major emphasis during his pre-service program. Observation of teaching for exploratory purposes is included. Required of all freshman students in Education.

First 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.  

**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. 190. GENERAL AND EDUCATIONAL PSYCHOLOGY I**  
**THREE CREDIT HOURS**  
This course covers backgrounds from General Psychology (human personality, mental powers, dynamic factors) and introduces the student to human growth and development through childhood and adolescence. It also endeavors to include such areas as nature and nurture of abilities, measurement of intelligence, individual differences. Observation is included. Intended for second semester freshmen. For irregular students, an approved course in General or Introductory Psychology may substitute for this.  

**Second 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. It includes such areas as readiness and its development, motivation, transfer of training, permanence of learning, evaluating educational progress, the developmental concept of teaching. It seeks to develop the concept of learning as a dynamic process and is accompanied by observation of children. Prerequisite: Educ. 190.  

**First Semester, Each Year**

**EDUC. 219. THEORY AND METHODS OF KINDERGARTEN INSTRUCTION**  
**THREE CREDIT HOURS**  
Deals both with the theory and the necessary practical skills to meet the needs of children in the Kindergarten. Observation in Kindergarten is included. Required for Kindergarten-Primary certification.  

**Second Semester, Each Year**

**EDUC. 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. Required of those preparing for Kindergarten-Primary certification. Accredited in Art.  

**Second Semester, Each Year**

**EDUC. 222. PRACTICAL ARTS IN THE INTERMEDIATE GRADES**  
**TWO CREDIT HOURS**  
Same as Educ. 221, adjusted to the maturity of children in the intermediate grades. Accredited in Art.  

**Second Semester, Each Year**
EDUC. 300. HUMAN GROWTH AND DEVELOPMENT THREE CREDIT HOURS
This course continues the study of human growth and development from where Educ. 190 left off. It does so by going into this area more deeply in order to yield sure insight into the physical, mental, emotional, and social development of children from infancy through adolescence. Factors influencing maturity levels of growth receive emphasis. It is taken concurrently with laboratory experiences. Although intended for students on a dual program (involving preparation for both elementary and high school teaching), it may be taken by others in substitution for either Child Psychology or Adolescent Psychology. Prerequisites: Educ. 190, 203.
First Semester, Each Year

EDUC. 303. READING IN THE ELEMENTARY SCHOOL THREE CREDIT HOURS
Covers the program of reading. Treats the following problems: reading-readiness, experience reading, methods of meeting individual differences, functional reading, diagnosis in reading, and remedial measures. Observation of teaching in the cooperating schools of the city by prearrangement. Intended for students on a retraining program. Prerequisite: Educ. 306 or Educ. 203.
Each 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. Required of students in Secondary Education. Prerequisites: Educ. 190, 203.
First Semester, Each Year

EDUC. 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. Required of students in Kindergarten-Primary Education and in Elementary Education. Prerequisites: Educ. 190, 203.
Each Semester, Each Year

EDUC. 308: TECHNIQUES OF TEACHING THREE CREDIT HOURS
Treats the practical aspects of teaching. Emphasizes the guidance function of teaching. Examines discipline as an aspect of school morale and studies ways of gaining acceptable student behavior. Includes the broader concept of method and of appraisal, and introduces the student to the use of audio-visual aids. Prerequisites: Educ. 190, 203, 318.
Second Semester, Each Year

EDUC. 310. THE ELEMENTARY SCHOOL: PURPOSES AND ORGANIZATION THREE CREDIT HOURS
Deals with objectives, organization, curricula, and community relationships of the elementary school in the United States. Visitation of schools for observation.
Each Semester, Each Year
EDUC. 311. SECONDARY EDUCATION: PURPOSES AND ORGANIZATION
THREE CREDIT HOURS
Traces the historical background in relation to the present system. Treats the purposes, organization, issues in secondary education, and places special emphasis on study of curriculum construction. Visitation of high schools for observation. Prerequisites: Educ. 190, 203.  First 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. Includes observation of classroom conditions.  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. Includes field experiences in teaching, particularly observation of teaching.  First 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. Directed observation of teaching is included. Acquisition of certificate in handwriting is required. Intended for students on a retraining program.  First 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, 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. 403. **Arithmetic in the Elementary School**

**TWO-THREE CREDIT HOURS**

History of number; distribution of content according to grade levels; methods of presentation; diagnosis of number difficulties; remedial instruction; testing. Directed observation of teaching. Prerequisite: Math. 200.

*First Semester, Each Year*

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.

*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.

*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.

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; materials and equipment; current trends. Directed observation of teaching on high school level.

First Semester, 1956-1957

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. Directed observation of teaching.

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.

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 and the use of standard tests in guidance. The application of basic principles of guidance in the daily contact of teacher and student is emphasized. Directed laboratory experience in the cooperating schools of city. 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.

To be announced

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.

To be announced

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.

Each 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.

To be announced
ELECTRICAL ENGINEERING

EDUC. 431. VISUAL AND OTHER SENSORY AIDS IN EDUCATION
TWO-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. Includes laboratory experience.
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. Demonstrations and directed observation of teaching. Prerequisite: The required 300 courses in Education.
To be announced

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. Demonstrations and directed observation of teaching. Prerequisite: The required 300 courses in Education.
Second Semester, 1955-1956

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. Includes demonstrations with children. Prerequisite: The required courses in psychology for Education students.
First Semester, Each Year

ELECTRICAL ENGINEERING (E.E.)

BRO. L. ROSE, CHAIRMAN
MR. MORGAN, MR. SCHMIDT, MR. SIMOPOULOS

E.E. 201. ELEMENTS OF ELECTRICAL ENGINEERING
THREE CREDIT HOURS
A general survey course presenting the basic theories of magnetic and electric circuits and their application to engineering. Three class periods a week. Co-requisite: Phys. 207.
Each Semester, Each Year

E.E. 201L. ELEMENTS OF ELECTRICAL ENGINEERING LABORATORY
ONE CREDIT HOUR
Circuit tracing, basic D.C. measurements, D.C. network experiments, D.C. meters and meter calibration, non-linear resistances, magnetic circuit experiments, simple RL and RC transients. One laboratory period a week.
Each Semester, Each Year
E.E. 301-302. ELECTRICAL ENGINEERING FOUR 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 a week. Prerequisites: Phys. 207, Math. 202. Full Year Course, Each Year

E.E. 301L-302L. ELECTRICAL ENGINEERING LABORATORY TWO CREDIT HOURS
Measurements involving direct and alternating current circuits; tests on direct current and alternating current machinery; elementary electronic experiments. One laboratory period a week. Corequisite: E.E. 301-302.

Full Year Course, Each Year

E.E. 303-304. ELECTRICAL MEASUREMENTS I AND II FOUR 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 instruments. Two class periods a week. Prerequisite: E.E. 201; Corequisite: E.E. 305.

Each Semester, Each Year

E.E. 303L. ELECTRICAL MEASUREMENTS LABORATORY I ONE CREDIT HOUR
Experiments covering current and ballistic galvanometers, potentiometers, Epstein test, recording instruments, Kelvin Bridge, oscilloscopes, elementary A.C. bridges. One laboratory period a week. Corequisite: E.E. 303.

Each Semester, Each Year

E.E. 304L. ELECTRICAL MEASUREMENTS LABORATORY II ONE CREDIT HOUR
Continuation of E.E. 303L in which experiments cover power measurements, Q-Meter, radio frequency bridge, instrument transformers, watt-hour meters, wave analyzer and frequency measurements. One laboratory period a week. Corequisite: E.E. 304.

Each Semester, 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 THREE CREDIT HOURS
Network theorems; bridge circuits; resonance; impedance transformation; response of simple cutworks to impulse and step function driving forces. Three class periods a week. Prerequisite: E.E. 312.

Each Semester, Each Year

E.E. 308L. COMMUNICATION ENGINEERING LABORATORY I ONE CREDIT HOUR
Application of network theorems to linear systems; bridge circuit fundamentals; time measurements; use of the Q meter; use of the RF bridge; response of simple cutworks to various types of driving forces. Corequisite: E.E. 308.

Each Semester, Each Year
E.E. 312. ENGINEERING ELECTRONICS  THREE CREDIT HOURS
Theory, construction and characteristics of vacuum tubes, thyratrons, phototubes, and the technical application of these electronic devices and circuits. Three class periods a week. Prerequisite: E.E. 305.  Each Semester, Each Year

E.E. 312L. ENGINEERING ELECTRONICS LABORATORY  ONE CREDIT HOUR
Receiving tube characteristics, thermionic emission, small signal amplifiers, power amplifiers, electronic instruments, power supplies, gas tube characteristics and circuits, wave shaping circuits. One laboratory period a week. Corequisite: E.E. 312.  Each Semester, Each Year

E.E. 318. MACHINERY I  THREE 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 a week. Prerequisite: E.E. 305.  Second Semester, Each Year

E.E. 318L. MACHINERY LABORATORY I  ONE CREDIT HOUR

E.E. 403. MACHINERY II  THREE 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 a week. Prerequisite: E.E. 318.  First Semester, Each Year

E.E. 403L. MACHINERY LABORATORY II  ONE CREDIT HOUR
Continuation of E.E. 318L in which experiments cover parallel and polyphase operation of transformers. Autotransformers, induction motors, synchronous generators and motors, single phase motors. One laboratory period a week. Corequisite: E.E. 403.  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. 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. 413. COMMUNICATION ENGINEERING II
THREE CREDIT HOURS
Conventional filter networks; the general transmission line; the high frequency transmission line; modulation and demodulation; oscillators; receiver and transmitter design; television systems. Three class periods a week. Prerequisites: E.E. 308 and E.E. 308L.
Each Semester, Each Year

E.E. 413L. COMMUNICATION ENGINEERING LABORATORY II
ONE CREDIT HOUR
Harmonic analysis; conventional filter design; receiver measurements and alignment; measurement of impedance by standing wave line. Transmitter design and analysis. One laboratory period a week. Corequisite: E.E. 413.
Each Semester, Each Year

The following electives will be offered as demanded:

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.

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.

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.

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.

E.E. 415-416. ULTRA-HIGH FREQUENCY THEORY AND PRACTICE
FIVE CREDIT HOURS
Electromagnetic waves; Maxwell's equations; transmission lines, wave guides, cavity resonators; radiation and reflection. Practical microwave generators and systems. E.E. 415 three class periods a week; E.E. 416 two class periods a week. Prerequisite: E.E. 308.

E.E. 416L. ULTRA-HIGH FREQUENCY THEORY AND PRACTICE LABORATORY
ONE CREDIT HOUR
UHF and microwave generators, microwave components, wave guides, microwave measurements, radiating systems. One laboratory period a week.
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.

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.

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. Prerequisites: Math. 341 and E.E. 305, or equivalent.

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. 318; Corequisite: E.E. 412.

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.

ENGLISH (Eng.)

BRO. WILLIAM WEHRLE, CHAIRMAN
BRO. BOLL, MISS BOLLINGER, MR. CONNER, MR. DONATELLI,
FR. DONNELLY, MR. FISHER, BRO. KOHLES, MR. LAKE, FR. LEES,
BRO. MATHEWS, BRO. PRICE, MR. ROUCH, MR. WELDON, MISS WHITROY

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. 221. ENGLISH LITERATURE
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
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. 304. THEME WRITING
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
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
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
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
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, 1956-1957

ENG. 325. TECHNIQUE OF VERSE
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
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
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
A study of the techniques employed in the writing of the 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
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, 1956-1957

ENG. 331. ROMANTIC POETS
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, 1956-1957

ENG. 351. AMERICAN DOCUMENTARY LITERATURE
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
The principles of letter writing are studied and applied in conformity with the best current practices in business.
Each Semester, Each Year

ENG. 414. FRANCIS THOMPSON
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
A study of Paradise Lost and Paradise Regained and a selected number of the minor poems of Milton.
Second Semester, 1956-1957

ENG. 416. BROWNING
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
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, 1956-1957

ENG. 419. NEWMAN
Second Semester, Each Year

ENG. 421. MODERN POETRY
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, 1956-1957*

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, 1956-1957*

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. **Dante**
Three Credit Hours
*The Divine Comedy* in English: a comprehensive study of the poem from a literary point of view.  
*Second Semester, Each Year*

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, Each Year*

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*

**Journalism (Jour.)**

Mr. Weldon

All majors in journalism must take Jour. 200 and 201 in addition to 24 semester hours of 300 and 400 courses.
JOURNALISM

JOUR. 200. INTRODUCTION TO JOURNALISM THREE CREDIT HOURS
This course covers the nature and purpose of the newspaper and other mass-communications media, occupational opportunities within the field, organization of a newspaper, and basic printing processes. First Semester, Each Year

JOUR. 201. HISTORY OF JOURNALISM THREE CREDIT HOURS
A critical survey of the development of the English language press. Emphasis will be placed on the American press. The work of notable editors and their papers will be stressed. Underlying purpose will be to fill in the student's background and point out the direction of future development of the press. Second Semester, Each Year

JOUR. 300 NEWS STORY WRITING FOUR CREDIT HOURS

JOUR. 301. FEATURE STORY WRITING FOUR CREDIT HOURS

JOUR. 302. LAW AND ETHICS OF THE PRESS THREE CREDIT HOURS
Limitations of freedom of the press. What you have a right to print. What people have a right to know. The right to privacy. Crime and sensational news. Censorship. Off-the-record material. Slander and libel laws. Copyright laws. Postal regulations. Three class periods a week. First Semester, Every Second Year

JOUR. 303. FREE-LANCE WRITING THREE CREDIT HOURS
Types of free-lance articles. Analysis of literary markets. Manuscript form and submission methods. Peculiarities of magazine and book publishing. Completion and submission of one saleable article required for credit. Students admitted to course only with approval of instructor. Second Semester, Every Second Year

JOUR. 400-401. EDITING AND COPYREADING EIGHT CREDIT HOURS
The copydesk on large and small newspapers. Editing, headline writing, page makeup, use of pictures, typography, composing room problems. Two semesters, 3 class periods and one laboratory period a week. Prerequisites: Jour. 300 and 301. Each Semester, Each Year
JOUR. 402. PUBLICITY AND PUBLIC RELATIONS  THREE CREDIT HOURS
A non-professional course for students in other fields such as business, education, personnel management, etc., who will be expected to direct publicity campaigns or write news releases in their future work. Explains nature, organization, and problems of newspaper publishing. How to pick out news value in a story and write it up in basic newspaper style. How to set up and administer a house organ or school paper. Practice in writing publicity releases. Not open to journalism majors. Three class periods a week.

First Semester, Every Second Year

JOUR. 403. PROPAGANDA ANALYSIS  THREE CREDIT HOURS
Use and abuse of propaganda. Editorial persuasion. Propaganda devices and techniques. An application of the principles of Aristotelian logic to the field of mass communications. Prerequisite: Phil. 101 or 311.

Second Semester, Every Second Year

JOUR. 404. NEWSPAPER MANAGEMENT PROBLEMS  THREE CREDIT HOURS
A study of the operation and problems of circulation, advertising, and printing departments as they affect the work of the reporter and editor. Since most journalism majors begin their careers on small weeklies or trade papers, this course will emphasize the problems peculiar to this type of publication. Visits to newspaper plants and guest lectures.

First Semester, Every Second Year

JOUR. 405-406. ADVERTISING COPY WRITING  SIX CREDIT HOURS
See current catalogue, under Bus. 307, Bus. 308.

GENERAL ENGINEERING (G.E.)

MR. BALDINGER, MR. CHAMBERLAIN, MR. GABRYS, MR. HAUENSTEIN,
BRO. MORGANA, MR. STITH, 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.

Each 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.

Each 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.

**Each Semester, Each Year**

G.E. 202. **STATICS**

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**

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. **Each Semester, Each Year**

G.E. 303. **STRENGTH OF MATERIALS**

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. 304. **ADVANCED STRENGTH OF MATERIALS**

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**

G.E. 305. **MATERIALS TESTING**

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. 402. **CONTRACTS AND SPECIFICATIONS**

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. SPRINGER, ACTING CHAIRMAN**

**MR. CORYELL, MRS. GRAY**

**GEO. 101. PHYSICAL GEOLOGY**

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
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. Pre-
requisite: Geo. 101.
Second Semester, Each Year

GEO. 103. PRINCIPLES OF GEOGRAPHY
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
This course shows the influence of physiography factors on the agricultural,
extractive and manufacturing industries, and the problems involved in transpor-
tation and commerce. Three class periods a week. Each Semester, Each Year.

GEO. 110. SURVEY OF GEOLOGY
A general study of the formation of minerals and rocks; the development of
land form through structural movements, weathering and erosion; a survey
of life of the geologic past as revealed by fossils. To be announced—Evening

GEO. 111. STRATEGIC MINERALS
An analysis of some minerals of peculiar importance in world affairs; geo-
graphic location of deposits, an evaluation of their importance, and a general
consideration of their geologic associations. To be announced—Evening

GEO. 201. MINERALOGY
A microscopic study of minerals, their chemical and physical properties and
economic uses. The course includes a discussion of crystallography and the de-
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
A study of the optical properties of the rock forming minerals, and the de-
determination of rock types through the use of thin sections and the polarizing micro-
scope. Two class periods and four hours of laboratory a week.
Second Semester, Each Year

GEO. 205. GEOLOGY FOR ENGINEERS
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
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
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 or eight weeks summer study of structural and age relationship problems in areas containing abundant crystalline and sedimentary exposures.
Summer, 1955

GEO. 305. Intermediate Petrology
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
A detailed study of landforms and the erosional processes that develop them. Three class periods and two hours of laboratory a week.
Second Semester, 1956-1957

GEO. 401. Paleontology
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.
First Semester, 1956-1957

GEO. 402. Micropaleontology
A study of microfossils with special attention given to index fossils characteristic of various geologic horizons. Three class periods and two hours of laboratory a week.
Second Semester, 1956-1957

GEO. 403. Sedimentation
Detailed study of sediments; their sources, environments of deposition, and methods of consolidation. Sedimentary rock classifications and analyses. Three class periods a week.
Second Semester, 1955-1956

GEO. 404. Problems in Geology
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
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, 1956-1957

GEO. 407. Photographic Interpretation
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, 1956-1957**

**GEO. 408-409. PETROLEUM GEOLOGY**

Consideration of formation of oil and natural gas deposits; geologic associations and geographic locations of major basins. Three class periods a week.

**Three Credit Hours**

**Full Year Course, 1955-1956**

**HISTORY (Hist.)**

MR. STEINER, CHAIRMAN

MR. BEAUREGARD, MR. KING, MR. O’DONNELL, FR. PREISINGER

Hist. 111, 112, 251, 252 are prerequisite courses and may not be applied toward a major or a minor.

**Hist. 103-104. ECClesiastICAL HISTORY**

This course is given at Mount St. John. Enrollment is restricted to members of the Society of Mary.

**Six Credit Hours**

**Full Year Course, Each Year**

**Hist. 111. HISTORY OF MODERN EUROPE**

A survey of European History from 1450 to 1789. Beginning with a rapid summary of the Renaissance, this course discusses the Protestant Revolution, Catholic Reformation, the development of absolute monarchies, and the background for the French Revolution. Together with History 112 this course serves as an introduction to European History.

**Three Credit Hours**

**Each Semester, Each Year**

**Hist. 112. HISTORY OF MODERN EUROPE**

A survey of European History from 1789 to the present. Following a discussion of the French Revolution and the Napoleonic era, 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.

**Three Credit Hours**

**Each Semester, Each Year**

**Hist. 205. AMERICAN ECONOMIC HISTORY**

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.

**Three Credit Hours**

**Each Semester, Each Year**

**Hist. 251. AMERICAN HISTORY TO 1865**

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.

**Three Credit Hours**

**Each Semester, Each Year**

**Hist. 252. AMERICAN HISTORY SINCE 1865**

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.

**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, 1956-1957*

**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, 1956-1957*

**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. Prerequisite: Hist. 111-112.

*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
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
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 Carthagena.

First Semester, Each Year

HIST. 351. AMERICAN COLONIAL HISTORY
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. 251-252.

First Semester, 1956-1957

HIST. 356. LATIN AMERICA—THE COLONIAL PERIOD
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. Prerequisite: Hist. 251-252.

First Semester, 1955-1956

HIST. 357. LATIN AMERICA—THE NATIONAL PERIOD
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. Prerequisite: Hist. 251-252.

Second Semester, 1956-1957

HIST. 401. PRO-SEMINAR IN HISTORY
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: 6 credit hours of upper division History.

First Semester, Each Year
HIST. 408. THE DIPLOMATIC HISTORY OF THE UNITED STATES
THREE CREDIT HOURS

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, 1956-1957

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. 420. HISTORY OF ENGLAND TO 1688
THREE CREDIT HOURS
The development of England from earliest times to the Glorious Revolution. The periods—Prehistoric, Roman, Anglo-Saxon, Norman, Plantagenet, Lancastrian, Yorkist, Tudor, and Stuart—are analyzed particularly for political and legal factors, but there is attention given to the economic and social elements. Prerequisite: Hist. 111-112. Second Semester, 1955-1956

HIST. 421. HISTORY OF ENGLAND SINCE 1688
THREE CREDIT HOURS
A study of England and Great Britain beginning with the Restoration. The aim of the course is to study the Hanoverian, Victorian, and modern periods of England in their economic, political, and cultural phases as transformed by the political and industrial revolutions, by imperialism, and by two world wars. Prerequisite: Hist. 111-112. First Semester, 1956-1957

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. 251-252. Second Semester, 1956-1957

HIST. 431. MODERN CHURCH HISTORY
THREE CREDIT HOURS
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, 1956-1957

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. 251-252. Second Semester, 1956-1957

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 Chris-
tianity and civilization; problems affecting the growth and integrity of the
republic of Mexico. Prerequisite: Hist. 251-252. First Semester, 1956-1957

HOME ECONOMICS (Hec.)

MRS. ROSE, CHAIRMAN
MRS. BERNHARD, MRS. PAYNE, MISS SEMAN

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 stu-
dents 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 simple 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. 106. ART AND DESIGN THREE CREDIT HOURS
Design fundamentals and their application in selecting and arranging creative materials. For majors in Interior Decoration. One class period and two two-hour laboratory periods a week.
Second Semester, 1955-1956

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, 1955-1956

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, 1956-1957

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, 1956-1957
HEC. 302. MEAL PLANNING AND TABLE SERVICE THREE CREDIT HOURS
Principles involving the planning and preparation of meals for families in
various income levels and special occasions. A study of table service, including
silverware, glassware and china. 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 ade­
quate diets for health. Three class periods and one two-hour laboratory period
a week. Prerequisites or Corequisites: Chem. 100, 200, 400.
First Semester, 1955-1956

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, 1956-1957

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, 1956-1957

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.
First Semester, 1956-1957

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 labora­
tory 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
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, 1956-1957*

HEC. 316. Textiles II
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, 1956-1957*

HEC. 318. Family Relationships
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
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
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
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, 1956-1957*

HEC. 402. Diet in Disease
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
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. Laboratory periods to be arranged for teachers.  
*First Semester, 1956-1957*

HEC. 406. Home Management II
Practical experience in maintaining a home on a minimum budget. Laboratory and conference periods to be arranged.  
*Each Semester, Each Year*
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, 1956-1957

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, 1956-1957

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. First Semester, 1956-1957

HEC. 415. TAILORING
THREE CREDIT HOURS
Tailored construction applied in the making of coats or suits. Three two-hour laboratory periods a week. Prerequisites: Hec. 101, 105, 311.
Second Semester, 1956-1957

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, 1956-1957

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, 1956-1957

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, Each Year

HEC. 426. CHILD DEVELOPMENT II
THREE CREDIT HOURS
Continuation of Child Development I. Two class periods a week; laboratory periods to be determined.
Second Semester, Each Year

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, 1956-1957

**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, 1956-1957

**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

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**INDUSTRIAL ENGINEERING (I.E.)**

**MR. BRENNERGER**

**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.

I.E. 306. **FOUNDRY PRACTICES**
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**
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. **MOTION AND TIME STUDY I**
An elementary course in motion and time 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 a week.

**First Semester, Each Year**

I.E. 403L. **MOTION AND TIME STUDY LABORATORY I**
A series of laboratory problems based on the above. One laboratory period a week. Corequisite: I.E. 403.

**First Semester, Each Year**

I.E. 404. **MOTION AND TIME STUDY II**
A study of advanced problems in establishing standard time data, progressive operations, application of statistics, micromotion study with practical problems.
Prerequisite: I.E. 403.

**Second Semester, Each Year**

I.E. 404L. **MOTION AND TIME STUDY LABORATORY II**
A series of laboratory problems based on the above. One laboratory period a week. Corequisite: I.E. 404.

**Second Semester, Each Year**

I.E. 405. **PRODUCTION PLANNING**
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**
The design of a plant for a specified product. The study to include: structure; power requirements; heat; light; sound; and ventilation; transportation facilities, material handling requirements and equipment. Two class periods a week.
Prerequisites: G.E. 101, I.E. 405.

**Second Semester, Each Year**

I.E. 406L. **PLANT LAYOUT LABORATORY**
The complete design of a light manufacturing plant including choice of site, building, equipment and organizational structure. One laboratory period a week. Corequisite: I.E. 406.

**Second Semester, Each Year**
I.E. 408. ADMINISTRATION AND ORGANIZATION
A thorough analysis of organizations both small and large; a detailed study of their functions; policy determination and administration. The study to include 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
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
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
Jig; fixture; tool design; sketching including the design of tools for a specific product.
Second Semester, Each Year

LANGUAGES

BRO. PERZ, CHAIRMAN
FR. BARTHOLOMEW, BRO. BECK, 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
Elements of French, including pronunciation, reading, translation, grammar, dictation and conversation.
Full Year Course, Each Year

Fr. 201-202. INTERMEDIATE FRENCH
Grammar review, selected readings from modern authors, exercises in composition and conversation.
Full Year Course, Each Year

Fr. 303-304. MODERN FRENCH LITERATURE
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, 1956-1957
Fr. 307-308. **ADVANCED FRENCH COMPOSITION AND CONVERSATION**

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 difficulties 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, 1956-1957*

Fr. 401-402. **FRENCH LITERATURE TO THE EIGHTEENTH CENTURY**

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**

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**

Elements of German, including pronunciation, reading, translation, grammar, dictation and conversation.

*Full Year Course, Each Year*

Ger. 201-202. **INTERMEDIATE GERMAN**

Grammar review, selected readings from modern authors, exercises in composition and conversation.

*Full Year Course, Each Year*

Ger. 301-302. **GERMAN LITERATURE TILL 1800**

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**

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**

A reading course intended to familiarize students with the technical vocabulary used in scientific fields.

*Full Year Course, Each Year*

Ger. 307. **CHEMICAL GERMAN**

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.

**GER. 401-402. CLASSICAL DRAMA**

A study of the dramatic works of Lessing, Goethe and Schiller. Lectures, discussions and reports on assigned readings.

*First Semester, 1956-1957*

**GER. 403-404. MODERN GERMAN PROSE WRITERS**

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, 1956-1957*

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**GREEK (Gr.)**

**GR. 101-102. ELEMENTARY GREEK**

A study of the essentials of Greek grammar with exercises and readings.

*Full Year Course, Each Year*

**GR. 201. INTERMEDIATE GREEK**

Continuation of the study of grammar. Readings from New Testament.

*First Semester, Each Year*

**GR. 303. PLATO**

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**

Readings from the *Iliad* and the *Odyssey*.

*Second Semester, Each Year*

**GR. 305. THE SEPTUAGINT**

Extensive readings. Comparison with the Vulgate. Excursions into the field of Biblical science.

*To be announced*

**GR. 306. THE NEW TESTAMENT**

Similar to Gr. 305. Comparison of the Greek and Latin texts with modern renditions.

*To be announced*

**GR. 403. GREEK DRAMA**

Reading of Sophocles' *Oedipus Rex* and *Antigone* with a study of the origin and development of Greek drama.

*To be announced*

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**LATIN (Lat.)**

**LAT. 101-102. ELEMENTARY LATIN**

A college course in Latin fundamentals.

*Full Year Course, Each Year*

*At Mt. St. John, First Semester, Each Year*
LAT. 201-202. Intermediate Latin
Second year course in Latin. Readings from classical authors of the pre-Christian periods.

LAT. 301. Latin Composition and Conversation
This course aims to give an intensive review of inflections and syntax with emphasis on original style and fluency of expression.

LAT. 304. Vergil
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.

LAT. 305. Medieval Latin
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.

LAT. 306. Horace
Readings of selected Odes and Epodes, and the Ars Poetica of Horace; a study of his lyric quality, workmanship, and meters.

LAT. 307. Readings in Latin Literature
This course embraces the reading of excerpts from a wide range of Latin authors.

LAT. 309. Cicero
A study of De Amicitia and De Senectute or other works of Cicero.

LAT. 310. Selected Letters of Pliny
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.

LAT. 313. Ovid
Intensive readings in the Metamorphoses with emphasis on the influence of the mythological epic on some of the modern literatures.

LAT. 314. Livy
This course comprises readings from Books I, XXI, and XXII of Livy's History and an examination of his historical method and literary form.

LAT. 401. Advanced Latin Composition
An intensive course in Latin composition, with special attention to the classical style of Cicero.
LANGUAGES

LAT. 403. SENeca
A study of Seneca’s philosophical style and the ethical teachings of Stoicism as revealed in his *Moral Epistles* and *Essays.*

LAT. 405-406-407. PHILOSOPHICAL LATIN

LAT. 412. ECCLESIASTICAL LATIN
The object of this course is to acquaint students for the priesthood with the Latin of the theologians.

LAT. 413. THE CONFESSIONS OF ST. AUGUSTINE
Excerpts are taken from the first Nine Books.

LAT. 414. PATRISTIC LATIN
Selections from St. Augustine, Tertullian, St. Cyprian, Lactantius, St. Ambrose, St. Jerome, and other Fathers.

RUSSIAN (Rus.)

RUS. 101-102. ELEMENTARY RUSSIAN
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.

RUS. 201-202. INTERMEDIATE RUSSIAN
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.

RUS. 203-204. SCIENTIFIC RUSSIAN
This course is given only at Wright-Patterson Air Force Base. Prerequisite: RUS. 101-102, or equivalent.

RUS. 301-302. RUSSIAN READING AND CONVERSATION
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.

RUS. 401-402. TECHNICAL AND SCIENTIFIC RUSSIAN
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.
SPANISH (Span.)

SPAN. 101-102. ELEMENTARY SPANISH
Elements of Spanish, including pronunciation, reading, translation, grammar, dictation and conversation. 
Full Year Course, Each Year

SPAN. 201-202. INTERMEDIATE SPANISH
Grammar review, selected readings from modern authors, exercises in composition and conversation. 
Full Year Course, Each Year

SPAN. 205-206. SPANISH READING AND CONVERSATION
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
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, 1956-1957

SPAN. 303-304. SPANISH-AMERICAN LITERATURE
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
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
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, 1956-1957

SPAN. 404. DRAMA OF THE GOLDEN AGE
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, 1956-1957

MATHEMATICS (Math.)

MR. SCHRAUT, CHAIRMAN
MR. BOSSHART, MR. JEHN, MR. KELLER, MR. KREIDER,
MR. NEFF, MR. PECKHAM, MRS. PRATHER, MR. SCHELL

MATH. 12. ELEMENTARY ALGEBRA I
This course is equivalent to the first year of high school algebra. Five periods a week. 
Each Semester, Each Year
Math. 13. Plane Geometry
This course is equivalent to one year of high school plane geometry. Three class periods a week.  
*First Semester, Each Year*

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
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
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
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. 105. Algebra
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. 111. Fundamentals of College Mathematics I
Three credit hours
Primarily for students in Education seeking to satisfy requirements in general education. Credit in this course is not applicable to the minimum requirements for a teaching field in mathematics. Reasoning and axioms in arithmetic; algebra and geometry; algebra as a generalization of arithmetic; logarithms; methods of elementary geometry and applications; coordinate geometry. Three class periods a week. Prerequisite: one year of high school algebra and one year of high school geometry.  
*First Semester, Each Year*

Math. 112. Fundamentals of College Mathematics II
Three credit hours
Continuation of Math. 111. The function concept; types of functions, including trigonometric with applications; the concept of a limit; rate of change of a function and elementary applications; significance of mathematics to other fields of knowledge. Three class periods a week. Prerequisite: Math. 111.  
*Second Semester, Each Year*

Math. 115. Freshman 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. FRESHMAN 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 I 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 II 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. 301. DIFFERENTIAL EQUATIONS
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.

First Semester, 1955-1956

MATH. 302. THEORY OF EQUATIONS
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
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
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
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.

First Semester, Each Year

MATH. 332. INDUSTRIAL AND ENGINEERING APPLICATIONS OF STATISTICS
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, Each Year

MATH. 341. ENGINEERING MATHEMATICS I
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 equa-
tions by the Laplace transformations, Bessel functions. Applications to prob-

First Semester, Each Year
MATH. 342. ENGINEERING MATHEMATICS II THREE CREDIT HOURS
Linear partial differential equations with solutions by the classical and operational 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. Second 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, 1955-1956

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, 1956-1957

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, 1956-1957

MATH. 421. ADVANCED CALCULUS I 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, 1956-1957

MATH. 422. ADVANCED CALCULUS II 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, 1956-1957

MATH. 431. VECTOR ANALYSIS THREE CREDIT HOURS

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 ex-
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, 1955-1956

**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, 1955-1956—Evening

**MECHANICAL ENGINEERING (M.E.)**

**MR. WESTBROCK, CHAIRMAN**

**MR. ALBERTS, MR. HSU, BRO. PARR, MR. SAVITSKI, MR. WILDER**

**M.E. 202. MECHANICS OF MACHINERY**  
**ONE CREDIT HOUR**
Kinematics of machinery; linkwork; cams; gearing-spur, bevel, screw, etc.; flexible connectors; intermittent motion mechanisms; trains of mechanisms. One class period a week. Prerequisites: Math. 201, Phys. 206, G.E. 102.  
Each Semester, Each Year

**M.E. 202L. MECHANICS OF MACHINERY LABORATORY**  
**ONE CREDIT HOUR**
Laboratory exercises based on the foregoing principles. One laboratory period a week. Corequisite: M.E. 202.  
Each Semester, Each Year

**M.E. 205-205a. MACHINE SHOP PRACTICE**  
**TWO CREDIT HOURS**
Constructions of basic machine tools and principles of operations. Machining

M.E. 205L-205aL. MACHINE SHOP PRACTICE LABORATORY
ONE CREDIT HOUR
Laboratory exercises on the foregoing principles. One laboratory period a week. Corequisite: M.E. 205-205a.

M.E. 206. PRODUCTION MACHINERY AND METHODS TWO CREDIT HOURS
Lectures on production control, inspection; mass production, and assembly systems; current practice in tolerance, finish, and class of fit. Two class periods a week. Prerequisite: M.E. 205.

M.E. 206L. PRODUCTION MACHINERY AND METHODS LABORATORY
ONE CREDIT HOUR
One laboratory period a week. Corequisite: M.E. 206.

M.E. 301-302. THERMODYNAMICS SIX CREDIT HOURS
The general laws of thermodynamics; properties and processes of gases, vapor, and gas-vapor mixtures; cycles; and the flow of fluids. The application of thermodynamics to machines such as engines, turbines, and compressors. Three class periods a week. Prerequisite: Math. 202; Corequisite: Phys. 208.

M.E. 301a. THERMODYNAMICS THREE CREDIT HOURS
The general laws of thermodynamics; properties and processes of gases, vapor, and gas-vapor mixtures; cycles; and the flow of fluids. For non-Mechanical Engineering students. Three class periods a week. Prerequisite: Math. 202; Corequisite: Phys. 208.

M.E. 303. METALLURGY TWO CREDIT HOURS
Structure and properties of metals and alloys with emphasis on steels and their heat treatment and mechanical working. Two class periods a week. Prerequisite: Chem. 108; Corequisite: G.E. 305.

M.E. 303L. METALLURGY LABORATORY ONE CREDIT HOUR
Metallographic inspection of iron-base, copper-base and aluminum-base alloys; polishing, etching, and photographing of specimens; determination of the critical points in steels; heat treatment of steel. One laboratory period a week. Corequisite: M.E. 303.

M.E. 304. HEAT POWER THREE CREDIT HOURS
A general course on the equipment of steam and gas power plants, including history of development and study of modern plant facilities. Fuels, combustion
processes, and complete heat balances. Three class periods a week. Prerequisite: M.E. 301.

M.E. 304L. Heat Power Laboratory Two credit hours
Heating value of fuels; analysis of combustion products; determination of selected physical qualities of oils and lubricants; pump tests; steam engines; and compressors. Two laboratory periods a week. Corequisite: M.E. 304.

Second Semester, Each Year

M.E. 304a. Heat Power Three credit hours
Fuels; application of thermodynamics to boilers, prime movers, auxiliaries and refrigeration machines. For non-Mechanical Engineering students. Three class periods a week. Prerequisite: M.E. 301a, or Ch.E. 301. Each Semester, Each Year

M.E. 304aL. Heat Power Laboratory One credit hour
Petroleum products testing; proximate analysis of coal; determination of heating value of solid, liquid, and gaseous fuels. One laboratory period a week. Corequisite: M.E. 304a.

Each Semester, Each Year

M.E. 305L. Mechanical Engineering Laboratory Two credit hours
Basic experiments designed to teach theory, techniques of application and calibration of instruments for pressure, temperature, and volume, fluid flow, and power measurement. Two laboratory periods a week. Prerequisite: Phys. 208.

Each Semester, Each Year

M.E. 307. Mechanics of Machinery Two credit hours
Velocity and acceleration determinations by graphical means, Coriole's Law, static and inertia forces of machines. Two class periods a week. Prerequisite: M.E. 202.

Each 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. 312. Production Machinery and Methods Two credit hours
Principles and applications of various production methods. Study of patterns for foundry, sand, and sandless castings, cold and hot shaping, turret and automatic lathes, other production machine tools, broaching and gear manufacturing machines, transfer and special machines, arc, gas, and resistance welding processes. Engineering materials and precision inspection apparatus. Prerequisite: M.E. 205.

Each Semester, Each Year

M.E. 312L. Production Machinery and Methods Laboratory One credit hour
One laboratory period a week. Corequisite: M.E. 312.

Each Semester, Each Year
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<tr>
<th>Course Code</th>
<th>Course Title</th>
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<th>Prerequisites</th>
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<tr>
<td>M.E. 401-402</td>
<td><strong>INTERNAL COMBUSTION ENGINES</strong></td>
<td>SIX CREDIT</td>
<td>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.</td>
<td>Full Year Course, Each Year</td>
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<tr>
<td>M.E. 403</td>
<td><strong>HEATING AND AIR CONDITIONING</strong></td>
<td>THREE CREDIT</td>
<td>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 a week. Prerequisites: M.E. 301, 302, 305; Corequisite: M.E. 409.</td>
<td>First Semester, Each Year</td>
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<tr>
<td>M.E. 403L</td>
<td><strong>HEATING AND AIR CONDITIONING LABORATORY</strong></td>
<td>TWO CREDIT</td>
<td>Laboratory exercises based on the foregoing principles. Two laboratory periods a week. Corequisite: M.E. 403.</td>
<td>First Semester, Each Year</td>
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<tr>
<td>M.E. 404</td>
<td><strong>REFRIGERATION</strong></td>
<td>THREE CREDIT</td>
<td>Thermodynamics of mechanical refrigeration; refrigerating systems; refrigerants; heat transfer; application of refrigeration. Three class periods a week. Prerequisites: M.E. 301, 302, 305.</td>
<td>Second Semester, Each Year</td>
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<tr>
<td>M.E. 406L</td>
<td><strong>MECHANICAL ENGINEERING LABORATORY</strong></td>
<td>TWO CREDIT</td>
<td>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.</td>
<td>Second Semester, Each Year</td>
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<tr>
<td>M.E. 407a</td>
<td><strong>ELEMENTS OF MACHINE DESIGN</strong></td>
<td>TWO CREDIT</td>
<td>An elementary course in stress analysis, columns, riveted construction; couplings and keys, brakes; clutches, gears and welding techniques. Two class periods a week. For non-Mechanical Engineering students. Prerequisites: G.E. 301, 303, M.E. 309.</td>
<td>First Semester, Each Year</td>
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<tr>
<td>M.E. 407aL</td>
<td><strong>ELEMENTS OF MACHINE DESIGN LABORATORY</strong></td>
<td>THREE CREDIT</td>
<td>Laboratory exercises based on the foregoing principles. Three laboratory periods a week. Corequisite: M.E. 407a.</td>
<td>First Semester, Each Year</td>
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<tr>
<td>M.E. 407-408</td>
<td><strong>MACHINE DESIGN</strong></td>
<td>FOUR CREDIT</td>
<td>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 a week. Prerequisites: C.E. 304, G.E. 301, 305, M.E. 309.</td>
<td>Full Year Course, Each Year</td>
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<tr>
<td>M.E. 407L-408L</td>
<td><strong>MACHINE DESIGN LABORATORY</strong></td>
<td>TWO CREDIT</td>
<td>Design problems on machine elements and entire assemblies based on the foregoing principles. One laboratory period a week. Corequisites: M.E. 407-408.</td>
<td>Full Year Course, Each Year</td>
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M.E. 409. HEAT TRANSMISSION THREE CREDIT HOURS
Laws of conduction, radiation and convection; heat transfer to boiling liquids or condensing vapors; over-all heat transfer steady state or variable flow. 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 TWO CREDIT HOURS
Structure and properties of copper-base, aluminum-base, and magnesium-base alloys with emphasis on melting and casting procedures and heat treatment. Two class periods a week. Prerequisite: M.E. 303.

First Semester, Each Year

M.E. 413L. NON-FERROUS METALLURGY LABORATORY ONE CREDIT HOUR
Age-hardening of aluminum alloys; determination of an equilibrium diagram of binary alloy via cooling curves; metallographic inspection of miscellaneous non-ferrous alloys, sintering of bronze and copper powders. One laboratory period a week. Corequisite: M.E. 413.

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 TWO 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 a week. Prerequisite: M.E. 310.

Second Semester, Each Year

M.E. 416L. MECHANICAL VIBRATIONS LABORATORY ONE CREDIT HOUR
Laboratory exercises based on the foregoing principles. One laboratory period a week. Corequisite: M.E. 416.

Second Semester, Each Year

MEDICAL TECHNOLOGY (Met.)
DR. ABRAMSON, CHAIRMAN (St. Elizabeth Hospital)
DR. THOMPSON, CHAIRMAN (Good Samaritan Hospital)
DR. OOSTING, CHAIRMAN (Miami Valley Hospital)

The work of the senior year in Medical Technology is done at Miami Valley Hospital, St. Elizabeth Hospital or Good Samaritan Hospital. The courses are conducted by the respective hospital faculties.
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. 457. ELECTROCARDIOGRAPHY  B.M.R.  THREE CREDIT HOURS
The student familiarizes herself with the more commonly used machines, and masters the techniques of doing basal metabolisms and electrocardiograms.

MET. 461. URINALYSIS AND RENAL FUNCTION  FOUR 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. 462. HEMATOLOGY AND BLOOD BANK  SIX 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. 463. BACTERIOLOGY AND PARASITOLOGY  FIVE 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. 465. HISTOLOGY AND CYTOLOGY  FOUR CREDIT HOURS
Instruction in various methods of preparation for sectioning and staining of tissues in preparation for microscopic examination.

MET. 466. SEROLOGY AND SPINAL FLUIDS  FIVE CREDIT HOURS
Instruction in the mechanism of and the performance of these tests, and some interpretation of the results.

MILITARY SCIENCE AND TACTICS (Mil.)
COL. STERNER, CHAIRMAN
MAJ. CURLES, MAJ. DELPINO, MAJ. GRISWOLD, MAJ. MACLANE,
CAPT. DRISCOLL, CAPT. O’MALLEY, M/SGT. CRAFT, M/SGT. HOGG,
M/SGT. HUNSAKER, M/SGT. JOHNSON, M/SGT. MCGOVERN,
M/SGT. MAUSHARDT, SFC. DAVIDSON, SFC. LOTT

MIL. 101-102. FIRST YEAR BASIC COURSE  THREE CREDIT HOURS
Training is provided 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.

Full Year Course, Each Year
MIL. 201-202. SECOND YEAR BASIC COURSE
Continuation of the above course. Subjects include: crew-served weapons and
gunnery; map and aerial photograph reading; school of the soldier and exer-
cise of command. Prerequisite: Mil. 101-102. 
*Full Year Course, Each Year*

MIL. 301-302. FIRST YEAR ADVANCED COURSE
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 communi-
cations; organization, function and mission of the Arms and Services; mili-
tary teaching methods; advanced training in leadership and command. Students
receive commutation of subsistence and uniforms from the Government. At-
tendance at ROTC Summer Camp is required. Prerequisite: Mil. 201-202.
*Full Year Course, Each Year*

MIL. 401-402. SECOND YEAR ADVANCED COURSE
Continuation of the above course. Subjects include: logistics; operations; mili-
tary administration and personnel management; service orientation. Com-
misions in the United States Army Reserve may be awarded to selected stu-
dents. Branch in which commissioned is influenced by major course of study,
demonstrated aptitude, and requirements of the Military Service. Prerequisite:
Mil. 301-302. 
*Full Year Course, Each Year*

MUSIC (Mus.)

MR. REICHARD, CHAIRMAN
MR. BLAGG, 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 I
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. 103. MUSIC LITERATURE AND APPRECIATION II
A continuation of Mus. 102 with different materials. 
*Second Semester, 1955-1956—Evening*

Mus. 111-112. FIRST YEAR HARMONY
Formation of Scales and Intervals; positions and progressions of triads, sev-
enth chords and their inversions; simple modulations; voice leading. Prereq-
uisite: Knowledge of the fundamentals of music and preparatory study of
piano or other keyboard instrument. 
*Full Year Course, Each Year—Evening*

Mus. 115-116-117. FIRST YEAR HARMONY
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 dic-
tation.

First Semester, Each Year

Mus. 151-152. First Year Theory
Ten Credit Hours
Designed for Music Majors and students in Music Education; the course com-
bines 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. 181. Music in the Catholic Elementary School I
Two Credit Hours
Materials and techniques used in teaching first year music; treatment of the
non-singer; care of the child voice; study of the development of intonation,
rhythmic feel, and sight-singing, applied in songs. One class period a week
for two semesters.

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. Prerequi-
site: 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 applica-
tion 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. 281. Music in the Catholic Elementary School II
TWO CREDIT HOURS
More complex problems in tone and rhythm; sight-singing in major, minor, and modal tonalities. Melodic and rhythmic dictation; creative activity; increase in song repertoire. One class period a week for two semesters. Prerequisite: Mus. 181.

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**
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**
A study of the contrapuntal technique of the eighteenth century particularly
as used in the instrumental works of Johann Sebastian Bach. Original composi-
tions in the forms of the Invention and the Fugue. Prerequisite: Mus. 251-252.

*Full Year Course, 1955-1956*

**Mus. 315-316. The Opera**
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**
Methods of controlling tempo and the dynamic elements of instrumental
musical groups; technique of the baton; score reading; rehearsal routine; prac-
tical experience with campus organizations. Prerequisite: Junior standing in
music and permission of the instructor.

*First Semester, Each Year*

**Mus. 322. Instrumentation and Orchestration**
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**
Class instruction in stringed instruments; teaching of stringed instruments in
the schools.

*First Semester, 1955-1956*

**Mus. 326. Instrumental Class—Reed and Woodwind Instruments**
Class instruction in reed and woodwind instruments; teaching of reeds and
woodwinds in the schools.

*First Semester, 1956-1957*

**Mus. 327. Instrumental Class—Brass Instruments**
Class instruction in brass instruments; teaching brass instruments in the
schools.

*Second Semester, 1955-1956*

**Mus. 328. Percussion Instruments—Marching Band Techniques**
Class instruction in percussion instruments; teaching of percussion instruments
in the schools. Materials and methods of instruction for the marching band.

**Second Semester, 1956-1957**

**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, 1956-1957**

**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. 381. MUSIC IN THE CATHOLIC ELEMENTARY SCHOOL III**
TWO CREDIT HOURS
Expanding vocal range and flexibility. Modulation to related major and minor keys; introduction of part-singing; methods of presenting Gregorian Chant to children; application of tonal and rhythmic skills in songs. Prerequisites: Mus. 181, 281.

**To be announced**

**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 all polyphonic, homophonic, and the larger forms. Prerequisite: Mus. 151-152.

**Full Year Course, Each Year**

**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, 1956-1957**

**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. Full Year Course, 1956-1957

MUS. 481. MUSIC IN THE CATHOLIC ELEMENTARY SCHOOL IV
TWO CREDIT HOURS
A study of Gregorian Chant, its notation, rhythm, modes; Latin pronunciation; the Ordinary of the Mass, integrated with the study of the Mass in Religion class, culminating in participation, through singing, in the Mass. 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.

\textit{Piano}, semester fee ...........................................................................$20.00 to $64.00

\textit{Voice}, semester fee ........................................................................... 20.00 to 80.00

(Class instruction in Voice is likewise offered; see course number 235-236.)

\textit{Violin}, semester fee ........................................................................... 32.00 to 64.00
Reed, Woodwind Instruments, semester fee ........................................... 40.00
Cornet, Trumpet, Horn, semester fee .................................................... 40.00
Trombone, Baritone, Tuba, semester fee ................................................. 32.00

ENSEMBLES

Orchestra (Dayton Junior Philharmonic Orchestra)
Band (Marching Band, Concert Band)
Choir (Mixed Chorus)
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 (Nsg.)

MISS O'BRIEN, CHAIRMAN
MRS. BERNER, SISTER GRACE MARIE, MISS KING, MISS VOJNOVICH

All courses in nursing are restricted to registered professional nurses whose professional qualifications have been approved by the University of Dayton and the Department of Nursing.

Nsg. 317. CURRENT TRENDS IN AMERICAN NURSING  THREE CREDIT HOURS
A thorough discussion of the modern improvements and the prevailing professional problems arising in the numerous fields of nursing and the related professions. Consideration is given to the relation of the nurse to these improvements and to the active work of the professional organizations.
Second Semester, 1955-1956

Nsg. 326. ADVANCED MEDICAL AND SURGICAL NURSING  THREE CREDIT HOURS
Advanced study and review of the principles and techniques of medical and surgical nursing. Consideration is given to the latest developments of medical science and the most recent information regarding causes, nursing care and prevention of medical and surgical conditions; wide reading of current literature in the field; study of social, economic and medical factors involved, research problems, discussions and reports of various medical and surgical situations with attendance at clinics, demonstrations, special lectures and ward rounds.
To be announced
Nsg. 327. Advanced Medical and Surgical Nursing Field Work

**FOUR CREDIT HOURS**

Practiced concurrently with Nsg. 326. Observation and supervised experience in the hospital, clinics, and other community agencies. Selected experience in the nursing of patients with medical and surgical conditions, with emphasis on social and emotional factors, and stressing rehabilitation and health teaching.

*To be announced*

Nsg. 329. Guidance Programs in Schools of Nursing

**THREE CREDIT HOURS**

A discussion of the meaning and purpose of guidance with emphasis on students in schools of nursing. Includes methods of studying the student nurse and assisting with orientation and adjustment problems. Considers the characteristics of the guidance-minded instructor and supervisor; the functions of guidance counselors, and techniques of organization and administration of guidance programs in hospitals and schools of nursing. *Second Semester, 1955-1956*

Nsg. 330. Survey of Public Health Nursing

**THREE CREDIT HOURS**

Historical development of public health nursing and public health with its underlying principles and practices; the organized services available to urban and rural areas under private and public auspices, the duties of the nurse in specialized programs, and the study of community welfare and health programs to meet health needs.

*To be announced*

Nsg. 332. Principles and Techniques of Teaching in Schools of Nursing

**THREE CREDIT HOURS**

Consideration is given to general principles underlying the learning process, types of learning, conditions affecting learning, the learning environment, and effective study habits as applied to students in schools of nursing. Techniques of teaching in the formal classroom and clinical area will be reviewed, with special emphasis on the use of audio-visual materials. Lesson planning and methods of evaluation will also be studied. *First Semester, 1955-1956*

Nsg. 339. Comprehensive Nursing

**THREE CREDIT HOURS**

Review of the necessity and opportunities for considering the patient as an individual with social, cultural, economical, spiritual, psychological and environmental needs, regardless of his physical illness or disability, real or imaginary. Consideration is given to health teaching in the home, clinic, school, industry or hospital, embracing preventive, curative and rehabilitative measures. Stress is placed upon a knowledge of community agencies to whom patients and/or their families may be referred for assistance or guidance.

*To be announced*

Nsg. 402. Diet in Disease

**THREE CREDIT HOURS**

Adaptation of diet to disease. A previous knowledge is required of the fundamentals of human nutrition, including requirements of the body for the nutritive essentials, the composition of foods and the planning of adequate diet for health. *Second Semester, 1955-1956*
Nsg. 431. **Advanced Obstetrical Nursing**

Three Credit Hours

Advanced study and review of the principles and techniques of obstetrical nursing, with consideration given to current trends to early ambulation, rooming-in and natural childbirth. Health teaching and utilization of community resources for the promotion of maternal and infant welfare are emphasized.

To be announced

Nsg. 432. **Advanced Obstetrical Nursing Field Work**

Four Credit Hours

Practiced concurrently with Nsg. 431. Observation and supervised experience in the application of the principles studied. Clinical experience is offered in the labor and delivery rooms, newborn and premature nurseries, formulae room, care of the post partum patient, participation in clinics and teaching the mother self care and the organization of environmental facilities for home care of the baby.

To be announced

Nsg. 471. **Ward Administration**

Three Credit Hours

A study of the principles of scientific management and of the fundamentals of effective ward management. This includes a survey of hospital standards and requirements, planning for total patient care, record keeping, planning and supervising activities of professional and ancillary personnel, discussion and analysis of problems relative to ward administration, and the relation of the clinical area to the school of nursing and to the hospital administration.

Second Semester, 1955-1956

Nsg. 481. **Advanced Psychiatric Nursing**

Three Credit Hours

Advanced study and review of the principles and techniques of psychiatric nursing. Consideration is given the latest theories and developments of the causes, management, treatment and rehabilitation of psychiatric conditions, with particular emphasis upon mental hygiene and the early recognition of symptoms, guidance and treatment for the prevention of serious consequences.

To be announced

Nsg. 482. **Advanced Psychiatric Nursing Field Work**

Four Credit Hours

Practiced concurrently with Nsg. 481. Observation and supervised experience in the application of the principles studied. Clinical experience is offered in planning daily activities, accompanying patients to observe reactions to treatments and activities, and assisting with therapies prescribed to aid in preventing, modifying or correcting disorders found among immature, disorganized or disintegrated personalities.

To be announced

**Philosophy (Phil.)**

FR. RODERICK, CHAIRMAN
MR. BAKER, FR. BLOEMER, FR. BRUDER, FR. DOMBRO,
MR. HARKENRIDER, MR. WELDON

**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.  

**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.  

**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.  

**PHIL. 224. APPLIED ETHICS**  
Two Credit Hours  
Offered for Technical Institute students. For description, see Phil. 324.  

**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.  

**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 Carthagena.  

**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.  

**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 Carthagena.  

**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.  

**PHIL. 315. PHILOSOPHICAL PSYCHOLOGY**  
Three Credit Hours  
The nature of the course is the same as Phil. 205-206. Phil. 315 is a one-
semester course offered in night school, summer school, and in the day classes to Catholics of the Division of Arts in the second semester of their junior year.

Second 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 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. 413. Philosophy of the State  
Three credit hours
A consideration, in the light of Christian thought, of the nature, origin, end, and functions of the state; the nature, forms, and functions of government; law and political authority; the rights and duties of citizens; patriotism, nationalism, and internationalism; the various kinds of political freedom.

Second Semester, Each Year

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  \hspace{1in} 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 Carthagena.

First Semester, Each Year

PHIL. 417. HISTORY OF MEDIEVAL PHILOSOPHY  \hspace{1in} 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 Carthagena.

Second Semester, Each Year

PHIL. 418. HISTORY OF MODERN PHILOSOPHY  \hspace{1in} 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 Carthagena.

First Semester, Each Year

PHIL. 419. HISTORY OF CONTEMPORARY PHILOSOPHY  \hspace{1in} 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 Carthagena.

Second Semester, Each Year

PHIL. 421. METAPHYSICS I  \hspace{1in} 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 Carthagena.

First Semester, Each Year

PHIL. 422. METAPHYSICS II  \hspace{1in} THREE CREDIT HOURS
An analysis of the attributes of participated Being and of Subsisting Being. Conducted only in the Division of Arts at Carthagena. First Semester, Each Year

PHIL. 423. METAPHYSICS OF KNOWLEDGE  \hspace{1in} 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 Carthagena.

Second Semester, Each Year

PHIL. 424. PROBLEMS OF METAPHYSICS  \hspace{1in} 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
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
Readings and classroom discussion of selections from the basic works of Aristotle, including the Physics, Metaphysics, Ethics and Politics. First Semester, Each Year

PHIL. 433. INTRODUCTION TO ST. THOMAS AQUINAS
Introduction to the writings of St. Thomas: contents, chronology, style and structure, editions. Life of St. Thomas. Thomistic commentators and bibliographies. Methods of Interpretation. Selected passages from Aristotle and St. Thomas. Conducted only in the Division of Arts at Carthagena. Second Semester, Each Year

PHIL. 434. ST. THOMAS AQUINAS
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
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, CHAIRMAN
MR. BAUJAN, MR. BLACKBURN, MR. DEVORE, MR. DINTAMAN,
MR. DOUGLASS, MR. FERRAZZA, MISS MONNETTE,
MRS. REEL, MR. RUSH, MR. SHEEKETSKI

PHE. 101-102. PHYSICAL EDUCATION
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
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
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, Each Year*

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*
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>PHE. 133</td>
<td>Physical Education Activities (Men)</td>
<td>Three credit</td>
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<tr>
<td></td>
<td>Conditioning, tumbling, horses, bucks, low and</td>
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<td>high bar, pyramid building, wrestling,</td>
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<td>trampoline, stunts with and without equipment.</td>
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<td></td>
<td>Five class periods a week.</td>
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<td>Second Semester, Each Year</td>
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<tr>
<td>PHE. 201-202</td>
<td>Physical Education (Women)</td>
<td>One credit</td>
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<td>Continuation of Phe. 101-102. Two class periods</td>
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<td>a week.</td>
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<td>Full Year Course, Each Year</td>
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<tr>
<td>PHE. 203-204</td>
<td>Human Anatomy</td>
<td>Four credit</td>
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<td>A study of the structure of the human body; the</td>
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<td>skeleton, the muscles, circulatory system,</td>
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<td>respiratory, digestive and nervous systems.</td>
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<td>Two class periods a week.</td>
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<td>Full Year Course, Each Year</td>
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<tr>
<td>PHE. 210</td>
<td>Coaching Football and Basketball</td>
<td>Two credit</td>
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<tr>
<td></td>
<td>Study of theory, strategy, generalship, styles</td>
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<td>of offense and defense, methods of organizing</td>
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<td>practice and handling men. Demonstration and</td>
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<td>practice in fundamentals for all positions.</td>
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<td>Two class periods a week.</td>
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<td>First Semester, Each Year</td>
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<tr>
<td>PHE. 212</td>
<td>Coaching Baseball and Track</td>
<td>Two credit</td>
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<td>One-half the time will be spent on the theory</td>
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<td>and practice of each sport. Form and not</td>
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<td>athletic achievement will be stressed</td>
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<td>considering the abilities to be acquired. All</td>
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<td>events and positions will be given due</td>
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<td>consideration. Two class periods a week.</td>
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<td>Second Semester, Each Year</td>
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<tr>
<td>PHE. 221</td>
<td>Theory of Play and Recreation</td>
<td>Two credit</td>
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<td>The meaning of play; characteristics of the</td>
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<td>different age periods. Classification and</td>
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<td>organization of play activities suitable for</td>
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<td>different age levels. Two class periods a week.</td>
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<td>Second Semester, Each Year</td>
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<tr>
<td>PHE. 234</td>
<td>Individual Sports for Women</td>
<td>Two credit</td>
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<tr>
<td></td>
<td>Skills and methods needed to teach badminton,</td>
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<td>tennis, golf and fencing. Four class periods a</td>
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<td>week.</td>
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<td>Second Semester, 1956-1957</td>
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<td>PHE. 235</td>
<td>Camping and Playgrounds</td>
<td>Three credit</td>
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<td>Study of facilities, programs, leadership, and</td>
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<td>administration of summer camps and</td>
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<td>playgrounds. Camp standards, program making and</td>
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<td>cabin counseling will be studied. Three class</td>
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<td>periods a week.</td>
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<td>First Semester, Each Year</td>
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<tr>
<td>PHE. 245</td>
<td>Modern Dance (Women)</td>
<td>Two credit</td>
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<tr>
<td></td>
<td>Techniques involved in modern dance with</td>
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<td>emphasis on composition. The study of dance as</td>
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<td>an art. Three class periods a week.</td>
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<td>First Semester, 1956-1957</td>
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<tr>
<td>PHE. 303</td>
<td>Human Physiology</td>
<td>Three credit</td>
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<tr>
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<td>Lectures and laboratory problems demonstrating</td>
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<td>the physiological bases for objectives and</td>
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<td>content of physical education programs. Three</td>
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<td>class periods a week.</td>
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<td>Prerequisite: Phe. 203-204.</td>
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<td>First Semester, Each Year</td>
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</tbody>
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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 pro-
gram 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 ath-
etics 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, CHAIRMAN

MR. ENGLER, MR. HIEBER, BRO. MANN, 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 chairman 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. 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

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. Prerequisites: Phys. 207 and Math. 202. First Semester, 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. Each Semester, Each Year

PHYS. 311. ATOMIC PHYSICS THREE CREDIT HOURS

This course treats the electron and some of its properties as well as the photoelectric and thermionic emission of electrons. There is also a development of the special theory of relativity and an introduction to the quantum theory and wave mechanics. Atomic spectra and X-rays are also considered and an introduction to nuclear phenomena and cosmic rays. Three class periods a week. Prerequisites: Math. 201-202, Phys. 206, 207, 208. First Semester, 1956-1957

PHYS. 321. NUCLEAR PHYSICS THREE CREDIT HOURS

Primarily a descriptive course introducing nuclear physics. It discusses radioactivity, particle accelerators, the interaction of nuclear radiation with matter, particle detection, fission, and cosmic rays from the phenomenological point of view. Three class periods a week. Prerequisites: Math. 201-202, 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

**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, 1956-1957

**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
A study of the electric field, electrostatic energy and capacitance, conduction, magnetic fields and magnetic materials. The Maxwell equations and plane electromagnetic waves are also considered. Prerequisites: Math. 201-202, Phys. 206, 207, 208. Suggested concurrent course: Math. 431.
First Semester, 1956-1957

**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, CHAIRMAN
BRO. LIEBLER

Required courses for a major in Political Science are: Pol. 201, 202, 314, 412, 414, 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, 1956-1957
POLITICAL SCIENCE 211

POL. 306. INTERNATIONAL LAW
An analysis of the development of international law, its theory and application to the various phases of international relations. 
First Semester, 1956-1957

POL. 310. POLITICAL PARTIES
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, 1957-1958

POL. 314. INTERNATIONAL RELATIONS
An exposition of the dynamic forces influencing nations in their conduct of world affairs.
To be announced

POL. 315. THE UNITED NATIONS IN ACTION
An evaluation of the actual achievements of the various organizations and specialized agencies operating under the United Nations.
Second Semester, 1956-1957

POL. 331. BASIC ENGLISH AND AMERICAN DOCUMENTS
An analysis and appreciation of the great political documents.
Second Semester, 1956-1957

POL. 405. WORLD PROBLEMS OF THE UNITED STATES
A critical examination of the development of the communist front in the European and Asian areas and the attempts of the United States and other nations to meet this situation.
First Semester, 1956-1957

POL. 408. AMERICAN FOREIGN POLICY
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
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
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
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
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, 1956-1957
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, 1956-1957

POL. 431-432. SPECIAL PROBLEMS IN THE STUDY OF GOVERNMENT
ONE-FOUR CREDIT HOURS
Development of a research problem in government; by special arrangement with Dean and Chairman of Department.
Each Semester, Each Year

PSYCHOLOGY (Psych.)
FR. ROESCH, CHAIRMAN
MR. BEVAN, MR. BOWERS, MRS. GALlico, MR. RANCURELLO,
MR. RENSEL, MR. SCHEIDLER

Required courses for a major in Psychology are: Psych. 204, 302, 305, 308, 309, 402, 409 and 454. Also required are Bio. 101-102, 203-204.

PSYCH. 190. GENERAL AND EDUCATIONAL PSYCHOLOGY I
THREE CREDIT HOURS
This course covers backgrounds from General Psychology (human personality, mental powers, dynamic factors) and introduces the student to human growth and development through childhood and adolescence. It also endeavors to include such areas as nature and nurture of abilities, measurement of intelligence, individual differences. Observation is included. Intended for second semester freshmen. For irregular students, an approved course in General or Introductory Psychology may substitute for this.
Second 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. 203. EDUCATIONAL PSYCHOLOGY II THRE E 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 THRE E 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 THRE E 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 THRE E 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.

Each Semester, Each Year

PSYCH. 304. ADOLESCENT PSYCHOLOGY THRE E 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 THRE E 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 development 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 EXCEPTIONAL CHILDREN**

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. Prerequisite: Child or Adolescent Psychology. Second Semester, 1956-1957

**PSYCH. 308. EXPERIMENTAL PSYCHOLOGY I**

Three Credit Hours

Emphasizes scientific procedure and experimental design. Laboratory experimentation in learning, memory, association, suggestibility, emotional reactions, higher thought processes and volition. Required of all majors in psychology and personnel. First Semester, Each Year

**PSYCH. 309. EXPERIMENTAL PSYCHOLOGY II**

Three Credit Hours

Laboratory course comprising individual and group experiments designed to study in detail the psychological factors in vision, audition, olfaction, taste and kinesthesia. Experimental work in perception also included. 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. 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.

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.

PSYCH. 402. PSYCHOLOGICAL TESTS AND MEASUREMENTS
THREE 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 tests of intelligence. Reference is made to aptitude and achievement tests and rating scales. Appreciation of projective methods is included. Class is limited to twelve students. Prerequisite: Elementary Statistics.

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.

PSYCH. 409. HISTORY OF 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.

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.
PSYCH. 413. EDUCATIONAL AND VOCATIONAL TESTING

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

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.

Second Semester, Each Year

PSYCH. 451. DIFFERENTIAL PSYCHOLOGY

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.

First Semester, 1955-1956

PSYCH. 454. PHYSIOLOGICAL PSYCHOLOGY

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.

Second Semester, Each Year

PSYCH. 460. CLINICAL PSYCHOLOGY

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. 470. CRITIQUE OF PSYCHOANALYTIC THEORY

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

PSYCH. 480. SEMINAR IN CONTEMPORARY PSYCHOLOGICAL LITERATURE

The objective of this seminar is to gain acquaintance with the current status of
psychological thought. Emphasis will be upon trends in methods and in theoretical integration as these appear in the professional journals. Two hours of discussion each week are required.

Each Semester, Each Year

RADIOLOGICAL TECHNIQUE (Rad.)

DR. NICOLL, CHAIRMAN (Miami Valley Hospital)
MISS COTRELL, MR. COTTER
DR. LAND, CHAIRMAN (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

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

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

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

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

Examinations with contrast media; initial preparation, medium used; roentgen studies.

RAD. 456. FLUOROSCOPIC PROCEDURE

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. LEIMKUHLER, CHAIRMAN
FR. BARThOLOMEW, BRO. BECK, FR. HOELLE, FR. HOFSTETTER,
FR. KOHMESCHER, FR. ROCHA, FR. STANLEY, FR. STUEVE

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.
### RELIGION 219

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>REL. 315-316</td>
<td>THE SACRAMENTS</td>
<td>SIX</td>
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<tr>
<td></td>
<td>Dogmatic treatment of the seven sacraments with</td>
<td>CREDIT</td>
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<td></td>
<td>pertinent questions and problems of Moral Theology</td>
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<td></td>
<td>and Canon Law. This course is given at Mount St.</td>
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<td>John. Enrollment is restricted to members of the</td>
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<td>Society of Mary.</td>
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<td>Full Year Course, Each Year</td>
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<tr>
<th>REL. 317-318</th>
<th>MORALS</th>
<th>SIX</th>
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<tr>
<td></td>
<td>Course in general Moral Theology treating of</td>
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<td>human acts, the rules governing these acts, and</td>
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<td>the conformity or non-conformity of human acts</td>
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<td>with these rules. Also treatment of special Moral</td>
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<td>Theology—the general divine laws, or the</td>
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<td>Decalogue. This course is given at Mount St. John.</td>
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<td>Enrollment is restricted to members of the Society</td>
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<td>Full Year Course, Each Year</td>
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<th>REL. 321</th>
<th>THE ANSWER TO COMMUNISM</th>
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<td></td>
<td>A detailed study of the encyclical on “Atheistic</td>
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<td></td>
<td>Communism” by Pius XI with emphasis upon the</td>
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<td>historical background of Communism, its doctrinal</td>
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<td>errors, and social justice as the remedy. (Two</td>
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<td>credit hours for evening class)</td>
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<td>Second Semester, 1956-1957</td>
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<tr>
<th>REL. 325</th>
<th>CHRISTIAN SOCIAL PRINCIPLES</th>
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<tr>
<td></td>
<td>A detailed study of the encyclical “On</td>
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<td></td>
<td>Reconstructing the Social Order” by Pius XI with</td>
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<td>emphasis upon the historical background, papal</td>
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<td>principles, and their application to current</td>
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<td>problems in the socio-economic order. (Two credit</td>
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<td>hours for evening class)</td>
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<td>First Semester, 1956-1957</td>
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<tr>
<th>REL. 330</th>
<th>THE CHURCH: THE MYSTICAL BODY</th>
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<tr>
<td></td>
<td>A detailed study of the encyclical on “The</td>
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<td>Mystical Body” by Pius XII with emphasis upon the</td>
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<td>Church as the basis of the social order, the</td>
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<td>scope and norm of society, the basis of authority,</td>
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<td>and the right approach to non-Catholics. (Two</td>
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<td>credit hours for evening class)</td>
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<th>REL. 331</th>
<th>THE SACRED LITURGY</th>
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<tr>
<td></td>
<td>A detailed study of the encyclical “Mediator Dei”</td>
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<td>by Pius XII with emphasis upon a “social piety”</td>
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<td>that stems from the concept of the Mystical Body,</td>
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<td>and the doctrinal bases for liturgical observances.</td>
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<td>(Two credit hours for evening class)</td>
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<td>Second Semester, 1956-1957</td>
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<th>REL. 332</th>
<th>LEADERSHIP IN THE LAY APOSTOLATE</th>
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<tr>
<td></td>
<td>A detailed study of Catholic Action and the lay</td>
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<td>apostolate with a view to training leaders in the</td>
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<td>theory and practice of the activities and</td>
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<td>movements for the re-christianization of the</td>
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<td>world. (Two credit hours for evening class)</td>
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<td>First Semester, 1956-1957</td>
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<tr>
<th>REL. 341</th>
<th>INTRODUCTORY ASCETICAL THEOLOGY</th>
<th>TWO</th>
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<tr>
<td></td>
<td>The meaning and nature of the ascetical concept of</td>
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<td>the Christian life. Obligation of tending to</td>
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<td>perfection. The various states of perfection. The</td>
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<td>eminent position of the virtue of charity. General</td>
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<td>means of perfection. An introductory</td>
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analysis of the three ways of perfection. Conducted only in the Division of Arts at Carthagena.

REL. 417-418. DOGMA
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
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
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
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
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
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
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 Carthagena.

Second Semester, Each Year
RETAILING (Ret.)

MR. COMER, MR. MURPHY, MR. WHALEN

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.

**RET. 318. RETAIL PERSONNEL RELATIONS**

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.

*First Semester, Each Year*

**RET. 319. COLOR, DESIGN AND INTERIOR DECORATION**

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. 405. RETAIL MERCHANDISING MATHEMATICS**

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**

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**

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**

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. Pre-requisite: consent of instructor.

*Each Semester, Each Year*

**RET. 425. RETAILING SEMINAR**

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

SECRETARIAL STUDIES (Sec.)

MRS. MILLER, CHAIRMAN
MRS. CIVILLE, MR. KRIEGBAUM

SEC. 101. ELEMENTARY SHORTHAND THREE CREDIT HOURS
Gregg Shorthand is the system employed in this course. Using the simplified functional method, the entire theory is covered during the first semester. Transcription is introduced. Five class periods a week. First 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. Second 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. The ability to produce straight copy work is the aim of this course. Five class periods a week. For use of typewriter, $5.00 per semester. First 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. Second 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 students 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
Gregg principles are reviewed. Rapid reading is emphasized. Sustained writing periods are increased. Practical office dictation speeds are employed. Five class periods a week.

First Semester, Each Year

SEC. 202. ADVANCED SHORTHAND
THREE CREDIT HOURS
Phraseology of a technical nature is taken up. Industrial and civil service testing programs are studied. Rapid dictation and transcription. Five class periods a week.

Second Semester, Each Year

SEC. 203. ADVANCED TYPEWRITING
THREE CREDIT HOURS
Advanced practice in various office skills. Survey of all letter forms, tabulation, manuscripts, and rough drafts. Five class periods a week. For use of typewriter, $5.00 per semester.

First 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.

Second Semester, Each Year

SEC. 205. SECRETARIAL THEORY
THREE CREDIT HOURS
A study of the duplicating processes, including ditto and mimeograph. Practice in the use of dictaphone, ediphone, and soundscriber machines. Filing practice is also studied. Four class periods a week.

First Semester, Each Year

SEC. 206. SECRETARIAL THEORY
THREE CREDIT HOURS
Advanced training in color duplicating processes, dictating machines and filing techniques. Four class 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** Three 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, clubs, etc. Three 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.

*To be announced—Evening*

Sec. 304. **Dictation and Transcription** Three credit hours

Industrial and civil service testing programs are studied. Three class periods a week.

*To be announced—Evening*

**Sociology (Soc.)**

Mr. Huth, Chairman

Mr. Kaschak

A major in sociology must complete thirty semester hours in sociology, including Soc. 201, 202, 301, 401, and 414. A minor must complete eighteen semester hours in sociology, including Soc. 201, 202, and 301.

Sec. 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*

Sec. 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*

Sec. 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. Required of majors and minors in sociology. *First Semester, Each Year*

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 for preprofessional students in social work. Among the fields included are: social casework, social group work, community organization, and social welfare administration. Students who expect to become civic leaders will find this an invaluable course. *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. This course is designed to furnish a more objective understanding of contemporary civilization. *Second Semester, 1956-1957*

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, 1956-1957*

SOC. 310. *Rural Sociology* THREE CREDIT HOURS
History of the rural community and its social organization. An analysis of the farm-family 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. 311. *Public Opinion and Propaganda* THREE CREDIT HOURS
Public opinion and propaganda in relation to social control and collective behavior. Organized and unorganized communication processes. Press, radio,
television, motion pictures as agencies of mass-impression. Special attention
given to propaganda agencies and techniques; polling organizations and their
operations.  
First Semester, 1956-1957

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; bureaus of juvenile research; probation and parole; correctional institutions.  Second Semester, 1956-1957

Soc. 315.  INDUSTRIAL SOCIOLOGY  THREE CREDIT HOURS
A study of the industrial plant as a social system; sociological aspects of labor-management relations; the impact of industry on the community and society; social controls of industry. Analysis of work situations, labor movement, industrial leadership, and morale.  First Semester, 1956-1957

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, interpreting, and presenting social data statistically; planning and completing reports. A required course for majors in sociology.  First Semester, 1956-1957

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. Customs, norms, and other aspects of social conduct are related to general societal ideologies and patterns.  Second Semester, 1955-1956

Soc. 409.  SOCIAL CONTROL  THREE CREDIT HOURS
Means of control in primitive and advanced societies. The role of the family, school, and church; propaganda, indoctrination, advertising, campaign strategy; informal and formal phases of human control. Group valuations, praise, rewards, symbols, slogans, ridicule, and intimidation in relation to individual behavior.  First Semester, 1955-1956

Soc. 412.  EDUCATIONAL SOCIOLOGY  THREE CREDIT HOURS
The relationship of the school to the total cultural pattern and the development of interaction between school and community are appraised and concrete suggestions are presented. The nature of the individual child and his relations with his society and culture; the special culture of the school and its accompanying social world; school, teacher, and community relations.  Second Semester, 1956-1957

Soc. 413.  READING AND RESEARCH IN SOCIOLOGY  ONE-THREE CREDIT HOURS
With the consent of the department chairman, 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.

First Semester, Each Year

Soc. 414. Seminar
This is a required course for sociology majors.

Second Semester, Each Year

Soc. 418. Community Organization
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
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
This course 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. Discussion of the principles and practices of traffic regulation; state police and federal police organizations.

First Semester, 1956-1957

Soc. 434. Correctional Treatment of Lawbreakers
The major developments and trends in the correctional treatment of the offender. A broad coverage of the several varieties of correctional institutions for children, adolescents, and adults, together with discussions of extramural forms of treatment; probation, parole, and other services.

Second Semester, 1955-1956

Soc. 436. Human Ecology
Social class structure in the contemporary American community; its relation to social participation, the functioning of social institutions, conflicts and cleavages, integration, and other phases of community organization. Urbanization, patterns of urban growth and structure; the rural habitat; the agricultural revolution; rural-urban integration.

Second Semester, 1956-1957

SPEECH (Spe.)

FR. PREISINGER, CHAIRMAN
MR. BIERSACK, MR. LAKE, MR. MCGRATH, MR. SHEA

Valuable experience in all phases of the theatre can be obtained by joining the University Players.

Spe. 100. Voice and Diction
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.

**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.  
*First 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.  
*Each Semester, Each Year*

**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, 1956-1957*

**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, 1955-1956*

**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, 1956-1957*

**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
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
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, 1955-1956

SPE. 307. DISCUSSION AND REPORTS
Through principles and practice, this course treats the problems involved in group discussions, committee meetings, etc., and shows how to draw up a good report of the same in writing.
First Semester, 1955-1956

SPE. 308. ART OF PERSUASION
The theory and practice involved in convincing others are taught in this course.
First Semester, 1956-1957

SPE. 309. BASIC TELEVISION
This course covers equipment, personnel, and fundamentals of studio production.
Second Semester, 1955-1956

SPE. 401. ADVANCED PUBLIC SPEAKING
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
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, 1956-1957

SPE. 403. HISTORY OF THE THEATRE I
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
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
This course continues the fundamentals of radio work, and emphasizes espe-
cially 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**

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, 1956-1957

SPE. 411-412. **Television Problems**

Working with a television station, business problems, and studio production
technique, with actual work on TV shows, are treated in this course.

Full Year Course, 1955-1956

TECHNICAL INSTITUTE

MR. AVERDICK, MR. HAZEN, MR. HOLLY, MR. KNISLEY,

MR. MCGRAW, BRO. MORGANA

DRAFTING AND MECHANICAL TECHNOLOGY (DM)

DM 1. **Technical Drawing**

An introduction to technical drawing with the emphasis upon 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**

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 coreq-
suisite: PS 2.

DM 3. **Machine Drawing**

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**

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**

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  
FOUR CREDIT HOURS  
Forces acting on rigid bodies at rest and in motion. Four 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**

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**

Fundamentals of electrical equipment installation and maintenance. Three hours of laboratory a week.

**ET 6. ELECTRICAL CODE**

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**

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**

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**

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**

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**

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**

Standards and symbols used on electronic circuit diagrams. Prerequisite: DM 1; Prerequisite or corequisite: ET 21.

**GENERAL STUDIES (GS)**

**GS 1. EFFECTIVE SPEAKING**

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 10. TECHNICAL INSTITUTE SURVEY  NO CREDIT HOURS
An orientation course designed to give the freshman students a general view of the engineering technician and his place in the engineering team. In addition will be included such subjects as "How to Study," use of the slide rule and general information concerning the University. One hour 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 5, 1954

TWO-YEAR PROGRAMS

Associate Degrees in Arts and Sciences

Associate in Arts

Oscar Walter Kallam
Norma Brown Van Deinse

Associate in Business Administration

Carol Marie Bulcher
Kenneth Edward Graham
M. Kathleen Metz
Mary Kathaleen Monaghan
Margaret Ann O'Donnell
Joseph Francis Wetzel
Nancy Beth Wyrick

Associate Degree in Engineering

Associate in Engineering

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Eugene L. Hecker
Ivan Albert Jankowski
Joseph Herman Janning, Jr.
Thomas O'Neill Kittredge
Richard S. W. Lai
Thomas Joseph McKenny
Herman John Martin
William Gene Rose
John Joseph Rozzo
Charles Elmer Ruetschle
Donald Lee Schierloh
Philip Strauss
John E. Strobel
Joseph F. Umina
Robert William Widener
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Honolulu, Hawaii
Troy, Ohio
Coldwater, Ohio
Ashtabula, Ohio
Piqua, Ohio
Englewood, Ohio
Troy, Ohio
COLLEGE OF ARTS AND SCIENCES

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*Awarded the Alpha Sigma Tau Honor Key, signifying a cumulative Point Average for seven semesters of 3.50 based on 4.00 quality points.
†In absentia.
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Doctor of Laws
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August 1, 1954

TWO-YEAR PROGRAM

Associate Degree in Arts and Sciences
Associate in Arts

Jack Freeman Brooks
Miamisburg, Ohio
# COLLEGE OF ARTS AND SCIENCES

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- William John Coyle, S.M.
- Bernard John Cramer, S.M.
- James Joseph Cullina, S.M.
- Charles Clayton Gardner
- Robert William Hertweck, S.M.
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- Joseph Brendan Lynch, S.M.
- Edwin Henry Rauscher, S.M.
- James Aloysius Russell, S.M.
- Carl Bernard Smith, S.M.
- Stephen Hackett Smith
- Richard Zehle, S.M.

Other locations:
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- Pittsburgh, Pennsylvania
- Middletown, Ohio
- Richmond Hill, New York
- Springfield, Ohio
- Allison Park, Pennsylvania
- Lynbrook, New York
- Mineola, New York
- Chicago, Illinois
- Pittsburgh, Pennsylvania
- New Weston, Ohio
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- George Sonnenschein
- Jonas C. Strouth
- George Lawrence Tyler

Other locations:
- Cleveland, Ohio
- Clintwood, Virginia

## Bachelor of Science in Nursing

- Gladys Viola Amand
- Irene Mary Margaret Meyer
- Alvira Goubeaux Schultheis

Other locations:
- Fort Loramie, Ohio
- Youngstown, Ohio

## Bachelor of Science in Nursing Education

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- Helen Virginia Sauer
- Sr. M. Marguerite Yech, M.S.C.

Other locations:
- West Mansfield, Ohio
- Cincinnati, Ohio
- Reading, Pennsylvania

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- Jacqueline Tanganen Byrne
- Mildred L. Cramer
- LaVerne Mary Fischer
- Richard H. Gausling, S.M.
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- Charles Sandy McDaniell
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- Estelle Siler Petrey
- Corda Francis Sacksteder

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- Cincinnati, Ohio
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- Reading, Pennsylvania
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Delta Switzer  
Louise Smith Tupman  
Vernon E. Weber  
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Bachelor of Science in Music Education  

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COLLEGE OF ENGINEERING  

Bachelor of Electrical Engineering  

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Coldwater, Ohio  
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The Charles Huston Brown Award, in memory of Brother William Haebe, for Excellence in the Senior Class of Business Organization:


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**Harry James Smith**, of Shelbyville, Indiana.

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The Rev. Charles Polichek First Award of Excellence in Philosophy:

**Mary Elizabeth McAdam**, of Dayton, Ohio.

The Rev. Charles Polichek Second Award of Excellence in Philosophy:

**Marjorie Caroline Hegedus**, of Dayton, Ohio.

The Miami Valley Alumnae (Sorosis) Award of General Excellence in both academic and extra-curricular activities:

**Kate K. Maroglou**, of Dayton, Ohio.

The Phi Alpha Theta Scholarship Key, awarded on the basis of excellence in the study of History:

**Gerald Clarence Heberle**, of Dayton, Ohio.

The Montgomery County Chapter of the University of Dayton Alumni Association Award, known as the Father Renneker Award, for outstanding achievement in teacher education, for both academic and leadership standing:

**Kate K. Maroglou**, of Dayton, Ohio.
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