1971

1971-1972 Xavier University College of Arts and Sciences, College of Business Administration, Evening College, Graduate School Course Catalog

Xavier University, Cincinnati, OH

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Admission blanks and entrance requirements:
Director of Admissions

Alumni affairs:
Executive Director, X. U. Alumni Association

Bulletins and catalogues (undergraduate):
Director of Admissions

Bulletins and catalogues (graduate):
Dean of the Graduate School

Evening College:
Dean of the Evening College

For part-time and after graduation placement:
Director of Placement

Freshman interests:
The Associate Dean, College of Arts and Sciences,
or the Associate Dean, College of Business Administration

Graduate study:
Dean of the Graduate School

Guidance Center:
Director of Guidance

Honors Course:
Director of the Honors Course

Housing on campus:
Director of Student Housing

Refunds:
The Bursar

Reservation fees:
Director of Admissions

Room reservations:
Director of Housing

Student health:
Chairman of Student Health Service

Summer Sessions information:
Dean of Summer Sessions

Teachers' certification requirements:
Chairman of the Department of Education

Transcripts and certificates of honorable dismissal:
The Registrar

Tuition and payment of bills:
The Bursar

Veterans' education:
Director of Veterans' Education

Catalogue 1971-1972

The College of Arts and Sciences
The College of Business Administration
The Evening College • The Graduate School
Information concerning the Evening College is included under programs of the College of Arts and Sciences and the College of Business Administration.
### Last day for course changes

- **Undergraduate day colleges**
  - 8:30 AM to 5:00 PM
  - 6:30 to 8:30 PM

### Registration, Graduate School

- 8:30 AM to 5:00 PM

### Fall Counseling Program begins

- 7:00 PM
  - 9:00 to 11:30 AM
  - 1:00 to 3:30 PM

### Registration, Graduate School

- 8:30 AM to 5:00 PM

### Instruction begins, Graduate School and Evening College

- 1:30 to 3:30 PM; 6:30 to 9:00 PM

### Out-of-town freshmen and transfer students, who did not attend the Summer Counselling Program, will report to director of housing, 9:00 AM to 5:00 PM. Fall Counselling Program begins, 7:00 PM.

### Registration, Graduate School

- 8:30 AM to 5:00 PM

### Registration local seniors (90 or more hours)

- 9:00 to 11:30 AM

### Registration local juniors (55 to 89 hours)

- 1:00 to 3:30 PM

### Registration, Graduate School

- 8:30 AM to 5:00 PM; 6:30 to 8:30 PM

### Registration, Evening College

- 1:30 to 3:30 PM; 6:30 to 9:00 PM

### Out-of-town freshmen and transfer students, who attended the Summer Counselling Program, will report to director of housing, 9:00 AM to 5:00 PM.

### Registration local sophomores (28 to 54 hours)

### Registration, Graduate School

### Registration local sophomores (28 to 54 hours)

### Registration, Evening College

### Registration, Graduate School

### Registration local seniors (90 or more hours)

### Registration local juniors (55 to 89 hours)

### Registration, Graduate School

### Registration local seniors (90 or more hours)

### Registration local juniors (55 to 89 hours)

### Registration, Graduate School

### Registration local seniors (90 or more hours)

### Registration, Evening College

### Registration, Graduate School

### Registration local seniors (90 or more hours)

### Registration local juniors (55 to 89 hours)

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### Registration local seniors (90 or more hours)

### Registration local juniors (55 to 89 hours)

### Registration, Graduate School

### Registration local seniors (90 or more hours)

### Registration local juniors (55 to 89 hours)

### Registration, Graduate School
<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oct. 11, Monday</td>
<td>Columbus Day, holiday all divisions.</td>
</tr>
<tr>
<td>Oct. 25, Monday</td>
<td>Veterans Day, holiday all divisions.</td>
</tr>
<tr>
<td>Nov. 6, Saturday</td>
<td>Graduate School, Foreign Language Examinations, 2:00 P.M.</td>
</tr>
<tr>
<td>Nov. 8, Monday</td>
<td>Mid-semester grades for undergraduate students—day and evening—due in the respective offices by 5:00 P.M.</td>
</tr>
<tr>
<td>Nov. 10, Wednesday</td>
<td>Memorial Mass for deceased benefactors, alumni, faculty, and students, 1:30 P.M.; classes as usual.</td>
</tr>
<tr>
<td>Nov. 23, Tuesday</td>
<td>Thanksgiving recess begins after evening classes; all divisions.</td>
</tr>
<tr>
<td>Nov. 29, Monday</td>
<td>Classes resume, 8:30 A.M.; all divisions.</td>
</tr>
<tr>
<td>Nov. 30, Tuesday through Dec. 14, Tuesday</td>
<td>Pre-registration, undergraduate colleges, day and evening.</td>
</tr>
<tr>
<td>Dec. 20, Monday</td>
<td>Final date for withdrawal from courses without failure. Christmas vacation begins, all divisions, after evening classes.</td>
</tr>
<tr>
<td>1972</td>
<td></td>
</tr>
<tr>
<td>Jan. 3, Monday</td>
<td>Classes resume, all divisions, 8:30 A.M.</td>
</tr>
<tr>
<td>Jan. 7, Friday</td>
<td>Final date for submission of theses for January graduates, undergraduate colleges.</td>
</tr>
<tr>
<td>Jan. 8, Saturday</td>
<td>Senior Comprehensive Examinations, undergraduate colleges; M.Ed., M.B.A. Comprehensive Examinations, 1:30 P.M.</td>
</tr>
<tr>
<td>Jan. 17, Monday through Jan. 22, Saturday</td>
<td>Semester examinations, all divisions.</td>
</tr>
<tr>
<td>Jan. 22, Saturday</td>
<td>End of first semester, all divisions.</td>
</tr>
<tr>
<td></td>
<td><strong>Spring Semester</strong></td>
</tr>
<tr>
<td>Jan. 24, Monday</td>
<td>Registration, Graduate School, 8:30 A.M. to 5:00 P.M.</td>
</tr>
<tr>
<td>Jan. 25, Tuesday</td>
<td>Registration, Graduate School, 8:30 A.M. to 5:00 P.M.</td>
</tr>
<tr>
<td>Jan. 26, Wednesday</td>
<td>Registration, Graduate School, 8:30 A.M. to 5:00 P.M.; 6:30 to 8:30 P.M.</td>
</tr>
<tr>
<td>Jan. 27, Thursday</td>
<td>Registration, Graduate School, 8:30 A.M. to 5:00 P.M.; 6:30 to 8:30 P.M.</td>
</tr>
</tbody>
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<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jan. 28, Friday</td>
<td>Registration, Graduate School, 8:30 A.M. to 5:00 P.M.; 6:30 to 8:30 P.M. Registration, Evening College, 1:30 to 3:30 P.M.; 6:30 to 9:00 P.M.</td>
</tr>
<tr>
<td>Jan. 29, Saturday</td>
<td>Registration, Graduate School, 9:00 A.M. to 3:00 P.M. Registration, Evening College, 10:00 A.M. to 1:00 P.M.</td>
</tr>
<tr>
<td>Jan. 31, Monday</td>
<td>Instruction begins, Graduate School and Evening College, 9:00 A.M. Registration, day undergraduate colleges; all students taking a Monday evening class. Registration, local seniors (90 or more hours) 9:00 to 11:30 A.M. Registration, local juniors (55 to 89 hours) 1:00 to 3:30 P.M.</td>
</tr>
<tr>
<td>Feb. 1, Tuesday</td>
<td>Registration, day undergraduate colleges; all students taking a Tuesday evening class. Registration, local sophomores (28 to 54 hours) 9:00 to 11:30 A.M. Registration, local freshmen (27 or fewer hours) 1:00 to 3:30 P.M.</td>
</tr>
<tr>
<td>Feb. 2, Wednesday</td>
<td>Registration, out-of-town undergraduates, 9:00 to 11:30 A.M.; 1:00 to 3:30 P.M.</td>
</tr>
<tr>
<td>Feb. 3, Thursday</td>
<td>Instruction begins, undergraduate day colleges, 8:30 A.M.</td>
</tr>
<tr>
<td>Feb. 10, Thursday</td>
<td>Last day for late registration or changes in registration, day undergraduate colleges.</td>
</tr>
<tr>
<td>Feb. 14, Monday</td>
<td>Last day for course changes, Evening College students only.</td>
</tr>
<tr>
<td>Feb. 21, Monday</td>
<td>Washington-Lincoln Birthday; holiday, all divisions.</td>
</tr>
<tr>
<td>Mar. 18, Saturday</td>
<td>Graduate School, Foreign Language Examinations, 2:00 P.M.</td>
</tr>
<tr>
<td>Mar. 20, Monday</td>
<td>Mid-semester grades for undergraduate students—day and evening—due in respective offices by 5:00 P.M.</td>
</tr>
<tr>
<td>Mar. 24, Friday</td>
<td>Final date for filing application for degrees to be granted in June, all divisions.</td>
</tr>
<tr>
<td>Mar. 30, Thursday</td>
<td>Easter recess begins, all divisions, after last evening classes.</td>
</tr>
<tr>
<td>Apr. 8, Saturday</td>
<td>Classes resume, Graduate School and Evening College, 8:30 A.M.</td>
</tr>
<tr>
<td>Apr. 10, Monday</td>
<td>Classes resume, day undergraduate colleges, 8:30 A.M.</td>
</tr>
<tr>
<td>Apr. 22, Saturday</td>
<td>Final date for withdrawal from courses without failure.</td>
</tr>
<tr>
<td>Apr. 29, Saturday</td>
<td>Senior Comprehensive Examinations.</td>
</tr>
<tr>
<td>May 1, Monday</td>
<td>Honors Convocation, 1:30 P.M.</td>
</tr>
</tbody>
</table>
### Summer Sessions, 1972

<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>May 2 - May 15</td>
<td>Pre-registration, undergraduate colleges, day and evening.</td>
</tr>
<tr>
<td>May 5</td>
<td>Final date for submission of senior theses, June graduates.</td>
</tr>
<tr>
<td>May 6</td>
<td>M.Ed. and M.B.A. Comprehensive Examinations, 1:30 P.M.</td>
</tr>
<tr>
<td>May 16 - May 22</td>
<td>Semester examinations, Graduate School and Evening College.</td>
</tr>
<tr>
<td>May 22 - May 26</td>
<td>Semester examinations, day undergraduate colleges.</td>
</tr>
<tr>
<td>May 26</td>
<td>End of spring semester, all divisions.</td>
</tr>
<tr>
<td>May 31</td>
<td>Commencement Exercises, Graduate School.</td>
</tr>
<tr>
<td>June 3</td>
<td>Commencement Exercises, undergraduate colleges, day and evening.</td>
</tr>
<tr>
<td>June 12 - June 17</td>
<td>Intersession.</td>
</tr>
<tr>
<td>June 19</td>
<td>First Summer Session begins, all divisions.</td>
</tr>
<tr>
<td>June 24</td>
<td>Graduate School, Foreign Language Examinations.</td>
</tr>
<tr>
<td>July 13</td>
<td>M.Ed. and M.B.A. Comprehensive Examinations, 1:30 P.M.</td>
</tr>
<tr>
<td>July 21</td>
<td>First Summer Session ends, all divisions.</td>
</tr>
<tr>
<td>July 22</td>
<td>Graduate School, Foreign Language Examinations.</td>
</tr>
<tr>
<td>July 24</td>
<td>Second Summer Session begins, all divisions.</td>
</tr>
<tr>
<td>Aug. 17</td>
<td>M.Ed. and M.B.A. Comprehensive Examinations, 1:30 P.M.</td>
</tr>
<tr>
<td>Aug. 25</td>
<td>Second Summer Session ends, all divisions.</td>
</tr>
<tr>
<td>Aug. 26</td>
<td>Graduate School, Foreign Language Examinations.</td>
</tr>
</tbody>
</table>
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SCHOLARSHIPS. Fr. Besse, chairman; Fr. Buschmann, Dr. Garascia, Dr. Gruber, Dr. Hayes, Mr. Helmecamp, Mr. Henderson.

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UNDERGRADUATE STUDIES ABROAD. Mr. Leonard.

Members of the Faculty—1970-1971

The year mentioned in parenthesis is the date of appointment.

JAY C. ADRICK, B.S. (1971)
Instructor in Communication Arts

Professor of Education; Director, Guidance Program

Associate Professor of Business Administration; Director, Graduate Program in Hospital Administration

CHARLES J. AUSTIN, B.S., M.S. (1969)
Associate Professor of Business Administration

GUSTAVE K. BAHR, JR., B.S., M.S., Ph.D. (1965)
Adjunct Assistant Professor of Physics

Associate Professor of Accounting

ALFRED BEIGEL, A.B., M.A., Ph.D. (1967)
Associate Professor of Modern Language

ROBERT G. BENKERT, M.Ed. (1958)
Lecturer in Communication Arts

Assistant Professor of History and Political Science

NORMAN L. BERG, B.S., M.A., Ph.D. (1969)
Assistant Professor of Psychology

REV. CLIFFORD S. BESSE, S.J., A.B., Ph.D. (1952)
Professor of Economics; Associate Dean, College of Arts and Sciences

VYTAUTAS J. BIELIAUSKAS, A.B., M.A., Ph.D. (1958)
Professor of Psychology; Chairman, Department of Psychology

REV. ALBERT J. BISCHOFF, Ph.B., M.Ed. (1969)
Lecturer in Theology

ELENA BLAIR, A.B., M.A., M.S.Ed. (1968)
Instructor in Philosophy

Adjunct Assistant Professor of Education

JOSEPH E. BOURGEOS, A.B., M.A., Ph.D. (1946)
Professor of Modern Languages; Chairman, Department of Modern Languages

DOROTHY BOWER, M.Ed. (1967)
Montessori Directress

REV. EDWARD A. BRADLEY, S.J., A.B., M.S. (1957)
Associate Professor of Physics

ROBERT BREYER, B.S., M.B.A. (1968)
Lecturer in Management

Lecturer in Psychology

ÓSCAR BRITTON, B.S., M.Ed. (1969)
Adjunct Assistant Professor of Education

Professor Emeritus of Business Administration

MARTIN BROWN, A.B., M.S. (1966)
Adjunct Assistant Professor of Mathematics

Lecturer in Sociology

Professor of Theology; Chairman, Department of Theology

Instructor in Education

THOMAS J. BRUGGEGAN, B.S. in Ed., M.S. (1957)
Assistant Professor of Mathematics

W. THOMAS BRYAN, B.S., M.A., Ph.D. (1953)
Professor Emeritus of Business Administration

HAROLD L. BRYANT, B.S., M.C.P., Ph.D. (1967)
Associate Professor of Economics and Finance

Assistant Professor of Education

ANTHONY J. BRYSKI, B.S., M.A., Ph.D. (1966)
Associate Professor of Industrial Relations

VIRGINIA BURBRIDGE, A.B., M.A., Ph.D. (1967)
Assistant Professor of Modern Languages

Lecturer in Accounting

LOUISE BURKE, B.A., M.A. (1967)
Lecturer in History

Assistant Professor of Classical Languages

Assistant Professor of Education; Assistant Dean of Students

Associate Professor of Theology

VIRGIL CARTER, B.S., M.B.A. (1971)
Instructor in Marketing

Associate Professor of Marketing
JAMES L. CENTNER, Ph.B., M.B.A. (1955)
Adjunct Associate Professor of Management

GEORGE CERBUS, A.B., M.S., Ph.D. (1966)
Associate Professor of Psychology

GEORGE O. CHARRIER, B.S. (1967)
Lecturer in Mathematics

ROBERT F. CISSELL, B.S. in E.E., M.S. (1945)
Professor of Mathematics

Professor of Education and Psychology

EDWIN K. CLICKNER, B.S., M.A., Ph.D. (1968)
Associate Professor of Economics

JOHN C. COCKS, Bp.B.S., M.A. (1967)
Associate Professor of Education

ALEXANDER COHEN, B.S., M.S., Ph.D. (1962)
Adjunct Assistant Professor of Psychology

LYNN COHEN, A.B., M.A. (1968)
Lecturer in Psychology

THOMAS P. COLLINS, A.B., M.S. (1960)
Lecturer in Mathematics

Associate Professor of English

Associate Professor of Psychology and Management

Lecturer in Sociology

Instructor in Mathematics

MARK CUMMINGS, M.S. (1962)
Adjunct Associate Professor of Mathematics

Professor of Philosophy

ANNE CUSICK, B.S., M.S. (1967)
Laboratory Instructor, Biology

CHARLES J. CUSICK, B.S., M.S., Ph.D. (1955)
Professor of Biology; Chairman, Department of Biology

WILLIAM DAILY, B.S.B.A., M.Ed. (1967)
Assistant Professor of Education

KATHLEEN DAVIDOFF, A.B., M.A. (1966)
Assistant Professor of Mathematics

JAMES A. DELANEY, B.S., M.S. (1961)
Assistant Professor of Mathematics; Acting Chairman, Department of Mathematics

Lecturer in Mathematics

GEORGE F. DENTON, B.S. (1970)
Lecturer in Corrections

LAWRENCE DEVANNEY, Ch.E., M.S. (1969)
Lecturer in Mathematics

Adjunct Associate Professor of Education

ROBERT DINERMAN, A.B., M.A. (1966)
Lecturer in Communication Arts and Psychology

Assistant Professor of English

LAWRENCE I. DONNELLY, A.B., Ph.L., M.B.A., Ph.D. (1956)
Professor of Economics

Professor Emeritus of Theology

JEAN C. DRACH, A.B., M.S. (1970)
Lecturer in Mathematics

Lecturer in Education

Assistant Professor of Military Science

HARVEY A. DUBE, B.S., M.S., Ph.D. (1947)
Professor of Chemistry

RICHARD E. DUMONT, A.B., B.Ph., M.A., Ph.D. (1963)
Professor of Philosophy

CECILIA J. DWYER, A.B., M.S.W. (1964)
Lecturer in Sociology

WAYNE E. DYDO, H.A.B., M.S. (1969)
Instructor in Mathematics

KENNETH D. EBERHARD, A.B., B.D., M.A., Ph.D. (1968)
Assistant Professor of Theology

JOHN EICK, A.B., M.A. (1965)
Assistant Professor of Modern Languages

Assistant Professor of Psychology

Assistant Professor of Psychology

LOUIS A. FELDHAUS, A.B., M.A. (1934)
Associate Professor of English

Professor of Classical Languages; Dean, College of Arts and Sciences
CHARLES D. FEUSS, JR., M.D. (1962)  
Professor of Psychology

THOMAS C. FISCHER, B.S., M.B.A. (1965)  
Instructor in Physics

*DAVID C. FLASPOHLER, B.S., M.S. (1962)  
Assistant Professor of Mathematics

Professor of Communication Arts; Chairman, Department of Communication Arts

RICHARD FOGG, B.S.E., M.B.A. (1965)  
Lecturer in Marketing

REV. DANIEL P. FOLEY, S.J.,  
Associate Professor of Psychology

ERNEST FONTANA, B.S., M.A., Ph.D. (1966)  
Associate Professor of English

ROGER A. FORTIN, A.B., M.A., Ph.D. (1966)  
Associate Professor of History

FRANK C. FOSTER, A.B., M.A., B.D., Ph.D. (1967)  
Lecturer in Sociology

ATHANASIOS P. FOTINIS, A.B., M.A. (1968)  
Instructor in Philosophy

RICHARD FOX, B.S., M.S., Ph.D. (1970)  
Lecturer in Mathematics

Instructor in English

Associate Professor of Business Administration

JAMES P. GAFFNEY, A.B., M.Ed. (1960-1962; 1965)  
Assistant Professor of Education; Assistant to the Dean of the Graduate School

FRANK GALLENSTEIN, B.S., M.S. (1966)  
Lecturer in Education

RICHARD J. GARASCIA, B.S., M.S., Ph.D. (1942)  
Professor of Chemistry

GEORGE GARLAND, B.S., M.S., M.S.P.H. (1970)  
Lecturer in Management

MARIUS P. GAROFALO, B.S., M.A., Ph.D. (1965)  
Lecturer in Business Administration

LEONARD C. GARTNER, A.B., B.L., J.D. (1946)  
Lecturer in Communication Arts and Business Administration

Assistant Professor of Management

Professor of Philosophy

* On leave, 1969-1971
SIDNEY W. HALE, B.Sc., M.Ed., P.E.D. (1962)
Professor of Education; Director of Physical Education

Assistant Professor of Military Science

Associate Professor of Education; Associate Dean, Graduate School

Lecturer in Accounting

PAUL W. HARKINS, A.B., M.A., Ph.L., Ph.D., LL.D. (Hon.) (1946)
Professor of Classical Languages

JOHN B. HART, B.S., M.S. (1950)
Professor of Physics; Chairman, Department of Physics

J. KANEY HAYES, A.B., M.A., Ph.D. (1958)
Professor of Business Administration and Economics; Associate Dean, College of Business Administration

STANLEY E. HEDEEN, A.B., Ph.D. (1968)
Assistant Professor of Biology

NEIL R. HEIGHBERGER, B.S., M.A. (1968)
Instructor in Political Science

DAVID T. HELLKAMP, B.S., M.A., Ph.D. (1967)
Assistant Professor of Psychology

Associate Professor of Education; Dean, Evening College and Summer Sessions

JOHN L. HENDERSON, B.S., M.Ed. (1970)
Lecturer in Education

ROBERT HERBOLD, B.S., M.S., Ph.D. (1968)
Lecturer in Mathematics

J. DANIEL HESS, B.S., M.B.A. (1968)
Lecturer in Management

REV. WILLIAM P. HETHERINGTON, S.J., Ph.D., S.T.L. (1945)
Professor of Classical Languages; Director of Honors Course

DANIEL J. HIGGINS, B.S., M.S., Ph.D. (1965)
Associate Professor of Biology

RONALD A. HILVERS, A.B., M.Ed. (1967)
Adjunct Assistant Professor of Education

Adjunct Assistant Professor of Education

THOMAS C. HUTCHINSON, A.B., M.S., Ph.D. (1970)
Lecturer in Mathematics

Associate Professor of Mathematics

GEORGE JACOBS, Ph.D. (1970)
Lecturer in Education

Associate Professor of Political Science

ROBERT G. JOHNSON, B.S., Ph.D. (1954)
Professor of Chemistry; Chairman, Department of Chemistry

Assistant Professor of Philosophy

SR. DONNA P. JUDD, S.C., B.S., M.A. (1968)
Lecturer in Psychology

STEVEN KATKIN, A.B., M.A., Ph.D. (1969)
Assistant Professor of Psychology

Lecturer in Communication Art

Instructor in Modern Languages

ALBERT J. KLEEE, B.Ch.E., M.Ch.E., M.B.A., M.S. (1960)
Adjunct Associate Professor of Management and Mathematics

Assistant Professor of Theology

MARY GRACE KLEIN, A.B., M.A., Ph.D. (1968)
Associate Professor of Education

ROBERT C. KLEKAMP, B.S., M.B.A. (1957)
Associate Professor of Management

JOSEPH J. KLINGENBERG, B.S., M.S., Ph.D. (1949)
Professor of Chemistry

Professor of Management and Industrial Relations

JANE KLINGMAN, A.B., M.A., Ph.D. (1968)
Associate Professor of Business Administration

Instructor in English

EARL J. KRONENBERGER, B.S., M.A., Ph.D. (1962)
Professor of Psychology

Associate Professor of Business Administration

OTTO A. KVAPIL, B.S., M.A. (1957)
Assistant Professor of Communication Arts

GLEN A. LaGRANGE, A.B., M.A. (1947)
Associate Professor of Education and Psychology

Professor of Mathematics; Chairman, Department of Mathematics

ROBERT J. LAVELL, A.B., M.A. (1947)
Professor Emeritus of Education

DONALD L. LEONARD, A.B. (1964)
Instructor in Modern Languages

JOSEPH LINK, JR., Ph.B., M.Ed., D.Ed., D.Sc. (Hon.) (1946)
Professor of Business Administration and Education

* On leave, 1970-1971
Associate Professor of History

WALTER W. LIPPERT, JR., A.B., M.S., Ph.D. (1963)
Adjunct Associate Professor of Psychology

Lecturer in Marketing

GILBERT C. LOZIER, A.B., M.Ph., Ed.D. (1948)
Professor of Education

WALTER LUDMAN, B.S., M.S. (1967)
Lecturer in Mathematics

Assistant Professor of Communication Arts

Assistant Professor of Management and Industrial Relations

Associate Professor of Psychology; Director, Montessori Program

Associate Professor of Accounting; Chairman, Department of Accounting

ROBERT E. MANLEY, B.S., M.A., J.D. (1962)
Adjunct Associate Professor of Economics

WILLIAM MARCACCIO, B.S., M.S. (1934-1969)
Professor Emeritus of Physics

Assistant Professor of Management and Industrial Relations

ALVIN C. MARRERO, A.B., M.A. (1957)
Assistant Professor of Philosophy

Assistant Professor of Economics and Finance

FRANK MASTRIANNA, B.S., M.A., M.C.P., Ph.D. (1964)
Associate Professor of Economics; Chairman, Department of Economics and Finance

ROY D. MATTHEWS, B.S., M.Ed. (1969)
Lecturer in Education

JOHN G. MAUPIN, B.S., M.A. (1946)
Assistant Professor of Communication Arts

Assistant Professor of Education

ROSS R. McCABE, JR., A.B., M.A. (1968)
Instructor in Philosophy

Professor of Education; Dean, Graduate School

THOMAS J. MCCRYSTAL, A.B., M.A., Ph.D. (1967)
Assistant Professor of Psychology

JOHN E. McDAVID, B.S., M.B.A., Ph.D. (1964)
Associate Professor of Business Administration; Chairman, Department of Marketing

MARTHA McDERMOTT, B.S. (1967)
Director, Montessori Program

SFC BILLIE C. MC DONALD (1969)
Instructor in Military Science

LEO F. McMULLIN, A.B., M.B.A. (1956)
Adjunct Associate Professor of Marketing

Instructor in Theology

Assistant Professor of History

CHARLES MILLER, B.S., M.A. (1964)
Lecturer in Psychology

RAYMOND E. MILLER, B.S., Ph.D. (1965)
Associate Professor of Physics; Director of Graduate Studies, Department of Physics

M/SGT WILLIAM E. MILLS, (1970)
Assistant Instructor in Military Science

Instructor in Philosophy

Adjunct Assistant Professor of Mathematics

JON MOULTON, A.B., M.A., Ph.D. (1967)
Assistant Professor of Political Science

JOHN L. MUETHING, A.B., LL.B. (1951)
Lecturer in Management

Assistant Professor of Military Science

ROBERT J. MURRAY, H.A.B., M.A., Ph.D. (1960)
Professor of Classical Languages; Chairman, Department of Classical Languages

ANN NEUBERT, A.B., M.Ed.
Lecturer in Education

Assistant Professor of Physics

EDWARD J. O'CONNELL, A.B., M.B.A. (1960)
Adjunct Assistant Professor of Management

Assistant Professor of Theology; University Chaplain
JOHN O'CONNOR, A.B., LL.B. (1970)
Lecturer in Corrections

Lecturer in Accounting

Lecturer in Communication Arts

RICHARD T. O'NEILL, B.S., M.S., Ph.D. (1959)
Professor of Chemistry

Associate Professor of Philosophy

YOSHI OYAKAWA, B.S., M.Ed. (1968)
Lecturer in Education

Lecturer in Business Administration

Associate Professor of Education; Assistant Dean, Summer Sessions and Evening College

Laboratory Instructor, Biology

FRANCIS L. PEDROTTI, S.J., B.S., M.S., Ph.L., Ph.D. (1970)
Lecturer in Physics

Lecturer in English

Professor of Biology

GRAHAM F. PETRI, A.B., M.S. (1967)
Assistant Professor of Biology

*JOHN V. PETROF, A.B., M.B.A., Ph.D. (1968)
Professor of Business Administration

VERY REV. DUSAN PETROVICH, M.A. (1966)
Lecturer in Theology

Lecturer in Corrections

THOMAS J. PHILLIPS, B.S. (1970)
Laboratory Instructor, Physics

ROBERT PICKERING, B.S., M.S. (1969)
Adjunct Associate Professor of Education

MARK E. PLAGEMAN, A.B., M.A. (1964)
Lecturer in Modern Languages

JOHN POHLMAN, B.S., M.Ed. (1969)
Lecturer in Communication Arts

CHARLES Pritchett, B.S. (1968)
Lecturer in Communication Arts

* On leave, 1970-1971

GERALD QUATMAN, A.B., M.A., Ph.D. (1962)
Associate Professor of Psychology

Assistant Professor of Economics and Finance

WILLIAM RENGERING, A.B., M.A. (1968)
Instructor in Modern Languages

JOHN RETTIG, H.A.B., M.A., Ph.D. (1968)
Associate Professor of Classics

PAUL J. RIESELMAN, Ph.B., M.A. (1948)
Assistant Professor of Modern Languages

S/Sgt. JONATHAN ROCHELLE (1968)
Instructor in Military Science

HILDA ROTHSCILD, A.B., M.A. (1965)
Associate Professor of Education and Psychology; Supervisor of Montessori Interns

JOHN C. ROTHWELL, B.S.B.A., M.B.A. (1964)
Assistant Professor of Economics and Finance; Assistant to the Dean

Lecturer in Accounting

Adjunct Associate Professor of Psychology

REV. THOMAS G. SAVAGE, S.J., M.A., (Oxon.) (1962)
Associate Professor of English; Chairman, Department of English

KENNETH T. SCHEURER, B.S., M.Ed. (1963)
Associate Professor of Education; Acting Chairman, Department of Education

HANS SCHMIDT, JR., A.B., B.S., M.A., Ph.D. (1967)
Associate Professor of Psychology

Professor of Philosophy; Chairman, Department of Philosophy

JAMES L. SCHOTTEN, A.B., M.Ed. (1970)
Lecturer in Corrections

Associate Professor of Economics and Finance

Assistant Professor of Accounting

ROMAN J. SCHWEIKERT, A.B., M.A. (1964)
Associate Professor of Education and English

Assistant Professor of Accounting

REV. ALFRED E. SCHWIND, S.J., M.A. (1959)
Assistant Professor of Theology

AUGUST SEHER, A.B., M.A. (1966)
Instructor in History

Instructor in Theology
NICHOLAS A. SETA, B.S., M.Ed. (1961)
Adjunct Associate Professor of Psychology

JOSEPH H. SETELLMAYER, LL.B. (1945)
Lecturer in Management

Professor Emeritus of History

PAUL L. SIMON, A.B., M.A., Ph.D. (1963)
Associate Professor of History and Political Science; Chairman, Department of History and Political Science

JAMES B. SMART, B.S., M.S., Ph.D. (1967)
Assistant Professor of Chemistry

Lecturer in History

Associate Professor of Accounting

CLARENCE A. SOMMER, B.S., M.A., Ph.D. (1948)
Professor of Education; Director, Teacher Training, Student Teaching, and Placement

Lecturer in Fine Arts

MAJ. PHILLIP R. STEWART, B.S. (1968)
Assistant Professor of Military Science

Lecturer in Hospital and Health Administration

ROBERT C. STRUNK, H.A.B., M.S. (1967)
Assistant Professor of Mathematics; Systems Manager, Computer Center

JOSEPH M. SULLIVAN, B.S., M.Ed. (1967)
Assistant Professor of Education

REV. PAUL D. SULLIVAN, S.J., A.B., M.A., Ph.D. (1945)
Professor Emeritus of English

JOHN F. TAFURI, B.S., M.S., Ph.D. (1951)
Professor of Biology

REV. THEODORE C. THEPE, S.J., A.B., Ph.L., M.S. (1961)
Assistant Professor of Chemistry

CHARLES THIEMAN, D.B.A. (1965)
Adjunct Associate Professor of Business Administration

MICHAEL J. THIERAUF, B.S., M.S. (1970)
Lecturer in Management

Associate Professor of Management; Chairman, Department of Management and Industrial Relations

REV. STANLEY C. TILLMAN, S.J., A.B., M.A., S.T.L. Ph.L., Ph.D.
Professor of Philosophy (1953-1962; 1969)

TERRENCE P. TOEPKER, B.S., M.S., M.Ed. (1964)
Assistant Professor of Physics

JOHN TOMLIN, A.B., LL.B. (1967)
Adjunct Assistant Professor of Hospital Administration

Associate Professor of Theology

Assistant Professor of Philosophy

Assistant Professor of Theology

DORIS TRÖGER, A.B., M.A. (1968)
Assistant Professor of Modern Languages

REV. WILLIAM TRUMMER, O.F.M. (1969)
Lecturer in Modern Languages

DAVID TRUNNELL, A.B., M.S. (1968)
Assistant Professor of Mathematics

ELMER TUDOR, B.S., M.S. (1967)
Assistant Professor of Management

Lecturer in Marketing

Lecturer in Fine Arts

AUGUST J. VENTURA, B.S., M.Ed. (1970)
Lecturer in Education

MATIAS G. VEGA, Ph.D. (1954)
Professor of Modern Languages

Professor of Philosophy

REV. LEO VOLLMAYER, S.J., A.B., M.S. (1942)
Professor of Physics

Lecturer in Accounting

WESLEY P. VORDENBERG, A.B., M.A., Ph.D. (1965)
Professor of Education

PETER WEBB, A.B., M.A., Ph.D. (1968)
Assistant Professor of Business Administration

JAMES R. WEIR, B.S., M.A. (1969)
Associate Professor of Sociology

KARL P. WENTERSDORF, M.A., Ph.D. (1956)
Professor of English

FREDERICK G. WERNER, A.B., M.A., Ph.D. (1960)
Professor of Physics
MAXWELL WERNER, B.S., M.Ed. (1965)
Adjunct Associate Professor of Education

Lecturer in Education

JOSEPH H. WESSLING, B.S., M.A. (1964)
Assistant Professor of English; Acting Chairman, Department of English

Associate Professor of Theology; Associate Registrar

COL. DONALD E. WHISTLER, B.S., M.S. (1970)
Professor of Military Science; Chairman, Department of Military Science

JOSEPH WHITE, B.S., M.S.W., LL.B. (1970)
Lecturer in Corrections

WILLIAM H. WILLER, A.B., M.A., Ph.D. (1946)
Professor of English

F. HENRY WILLIAMS, B.S., M.A., Ph.D. (1968)
Associate Professor of Economics

JAMES A. WILLIAMS, B.S., M.A. (1964)
Lecturer in Geography

Lecturer in Communication Arts

Professor of Accounting

SR. ROSEMARY WINKELJOHANN, O.S.U., B.S., M.Ed. (1968)
Assistant Professor of Education

Lecturer in Psychology

Lecturer in Accounting

ROBERT WUBBOLDING, A.B., M.Ed. (1969)
Adjunct Assistant Professor of Education

REV. BERNARD J. WUELLNER, S.J., M.A., Ph.D. (1967)
Professor of Philosophy

CATHERINE WULFTANGE, S.N.D., A.B., M.A., Ph.D. (1966)
Associate Professor of Education

WILLIAM M. ZEITZ, B.S. (1969)
Laboratory Instructor, Physics

Assistant Professor of Economics and Finance

OLEG ZINAM, B.S., M.B.A., Ph.D. (1958)
Lecturer in Modern Languages

Lecturer in History

HOWARD ZUCKERMAN, A.B., M.B.A. (1968)
Lecturer in Hospital Administration

Graduate Assistants

Accounting

ROBERT A. NICELY, B.S.B.A.

Chemistry

RICHARD G. AUSTIN, A.B.
RICHARD A. BURGE, A.B.
GRACE A. CORRY, A.B.
JAMES A. DAVIS, A.B.
RICHARD J. GRANT, A.B.

Computer Center

DARCEY HAVILL, B.S.
TERRENCE JANSON, B.S.

Economics

DAVID H. HEHMAN, A.B.

English

RICHARD HOLCOMB, A.B.
DAVID KUHN, A.B.

History

JOHN TENHUNDFELD, A.B.

Management and Industrial Relations

RALPH G. MEADE, A.B.

Marketing

JOHN M. TEPE, B.S.

Mathematics

DENNIS B. KAY, M.S.

Psychology

LOUIS S. BELLI, B.S.
JOHN G. BOSE, B.S.
KENNETH P. GEIL, A.B.
ROBERT A. KAIDAN, A.B.

WILLIAM P. MARGRETT, A.B.
SR. NANCY JANE MEYER, A.B.
J. PATRICK SCHMITT, A.B.
Xavier University was founded in 1831 as a literary institute by Edward Dominic Fenwick, of the Order of Preachers, who was the first Bishop of the Diocese of Cincinnati. He called the school The Athenaeum and erected buildings on Sycamore Street in downtown Cincinnati.

In 1840, his successor, Bishop John Baptist Purcell, invited the Jesuits to take over the administration of the school. They arrived on October 1, 1840, and began first classes on October 17. The Jesuits changed the name to Saint Xavier College. In 1919 the College moved to the present site on Victory Parkway in Evanston-Avondale. In 1930 the name was again changed, this time to Xavier University.

Objectives of Xavier University

Xavier University is an institution of higher learning set in the worldwide traditions of the Roman Catholic Church and the Jesuit Order and drawing upon the cultural heritage of the Ohio Valley. The teaching of the Church on the nature of man, his origin and destiny, and how he should use and develop his talent is central to the educational philosophy of the University. It subscribes to the expression of Pope Pius XI in his *Christian Education of Youth*, "The proper and immediate end of Christian education is to cooperate with divine grace in forming the true and perfect Christian. . . . The true Christian, product of Christian education, is the supernatural man who thinks, judges and acts constantly in accordance with right reason illumined by the supernatural light of the example and teaching of Christ."

The University strives to foster conditions favorable for intellectual leadership. To this end it strives to impart a superior body of knowledge to its students and to help them acquire power to think clearly and penetratingly. The University wants its graduates to be literate, persons of good taste, frequent and familiar in the use of books, alert, and retentive of significant ideas. These ideals are promoted by curricular and co-curricular activities that contribute to the intellectual, the religious, the moral, and the physical enrichment of its students.

In seeking to fulfill its responsibilities, the University is guided by the principles of the *Rerum Studiorum*. This Jesuit code of liberal education, developed and revised through some four hundred years of experience, stresses the liberally educative value of mathematics and the natural sciences to teach the student to reason about the material universe. It uses language and literature to bring him into contact with new habits of thought and expression to enrich the appreciation of his own culture. History and social studies broaden his knowledge of men and events, and lead to a deeper understanding of his own role in society. And philosophy and theology help integrate the entire program of studies by the insight they afford of the total reality of God's plan for the individual and for society.

Along with general education, the University provides for concentration in special areas of learning. To the extent consonant with its resources, Xavier University fosters scholarly investigation and creative ability so that its members may contribute to mankind's quest for the fullness of truth. Its philosophy of education shapes and directs the curricula and the educational methods of Xavier University. The various programs, those in the natural sciences, business administration and pre-professional education, no less than those in the humanities, give the student a core of required, broadly educative courses so that concentration on special objectives is carried on in the context of liberal education.

In fine, Xavier University regards the development of the intellectual abilities of its students in their pursuit of truth as its specific, primary responsibility. And it sees itself sharing with the Church, the family, and other social institutions the
responsibility for developing the other characteristics of the “true and perfect Christian”—strong moral character, intelligent appreciation of beauty, sound physical health, and appropriate social attitudes and habits. Jesuit education thus prepares its students for eternity as well as for time; for life as well as for vocation.

The College of Arts and Sciences

The College of Arts and Sciences has been traditionally that part of any Jesuit University which most contributes to the Jesuit ideals in higher education. The College in each of its disciplines is convinced of the value of a liberal education, the mark of which is, it has been said, "a combination of skill in analysis and judgment with informed human concern." The College does not, therefore, regard its only role, or even chief role, as the preparation of students for graduate and professional schools. Its goal is to produce this skill in analysis and judgment, this knowledge concerning human things as the substance of its education. The College agrees in emphasizing the notion of concern, which notion implies as well the imparting of a hierarchy of values.

This hierarchy distinguishes the liberal education offered at one college from that obtainable at another. Xavier's College of Arts and Sciences believes that it has something distinctive—something not possessed by non-Catholic and non-Jesuit colleges of Arts and Sciences. If it did not, the College probably would not survive and probably should not survive.

What are its distinctive features? There is, first of all, the conviction that God has a central place in the universe and in the activities of men, that final judgments on human affairs cannot be made without reference to God. There is, secondly, the conviction that a valid objective standard of morality is obtainable by human reason. There is, thirdly, a basic optimism concerning human affairs—an optimism based on the firm belief in God's love for the human race, in the consequent value of the human person, and in the meaningfulness of life. In traditional Jesuit education, eloquencia was given strong emphasis. The College will continue to stress excellence in communication in all departments. What will be communicated is not simply communication itself, but its belief, its convictions, its balanced world-view, its desire to understand divine and human things more completely and to stress the need of basing all activity on this understanding.

In common with other colleges which offer a truly liberal education, the College will continue to stress the knowledge of human activity in the past, both within and without the Western Cultural tradition, to furnish a frame of reference for judging the wisdom of present and future actions. Otherwise “informed human concern” would hardly be properly informed.

The College of Business Administration

After operating its business departments for many years as a part of the College of Arts and Sciences, the University established the College of Business Administration on September 1, 1961.

The College of Business Administration conforms to the general principles and objectives of the University in particular; and of Jesuit education in general. It recognizes the indispensability of cultural subjects which motivate the higher powers of the mind and spell the difference between an educated man and a mere technician.

The objectives, therefore, of the College of Business Administration are threefold: 1. To develop the cultural, intellectual, and moral qualities of the student; 2. To provide a solid undergraduate base for those students who wish to continue study at the graduate level; 3. To prepare the student in the area of business so that he may be more qualified to accept a position of responsibility and leadership in the business community.
The following buildings are used primarily for administration and classroom purposes:

**Albert Hall**, 1929, is the gift of the late William H. Albers. It contains classrooms, laboratories, and offices of the staff in biology.

**The Karl J. Alter Classroom Building**, dedicated in 1960 to honor the Archbishop of Cincinnati, contains all major academic administration offices, 32 classrooms, four seminar rooms, faculty and student lounges, and the Schott-Link studios for radio and closed-circuit television. The Edward H. Kelley Lecture Hall seats 322 in theater-type chairs. The building is air-conditioned.

**Alumni Hall**, 1920, is the gift of the alumni to the University on its diamond jubilee. It contains the Department of Physics, the Geoghegan Memorial Language Laboratory, classrooms, and offices.

**The Armory**, 1949, houses classrooms, an auditorium, a drill hall, a rifle range, storage rooms, and garages.

**Saint Barbara Hall**, 1947, is the headquarters of the Reserve Officers’ Training Corps.

**Boylan Hall** commemorates the late Rev. Murtha J. Boylan, S.J., professor of psychology at Xavier for many years. It houses the Assistant to the President.


**The McDonald Memorial Library**, 1966, is the gift of the Walter A. and George McDonald Foundation in memory of Andrew J. and Mary McDonald. This air-conditioned building seats 700 students. Open shelves have a capacity of 350,000 volumes, and there is a closed stack area in the Schmidt Building for an additional 80,000 volumes. An enclosed garden area provides space for future expansion of the building.

**Thomas J. Logan Chemistry Building**, 1953, contains the Albert D. Cash Memorial Room, classrooms, offices, and laboratories.

**Elet Hall**, 1924, houses the Department of Psychology.

**Hinkle Hall**, faculty office building, was erected in 1920 by Mrs. Frederick Wallis Hinkle.

Residence halls:

**Brockman Hall**, a residence for 300 men, was dedicated in 1955, to the memory of the Very Rev. Hubert F. Brockman, S.J., twenty-fourth president of the University.

**Husman Residence Hall**, erected in 1965, was made possible by a gift from Harry J. Husman in memory of his wife, Edna D. Husman. It provides accommodations for 292 students in suites and is entirely air-conditioned.

**Kuhlman Hall**, 1967, an air-conditioned high-rise residence for 432 students, stands across from the University Center on Ledgewood Avenue. It honors the late Mr. and Mrs. George H. Kuhlman, and contains the Kappelhoff Chapel, the Griffin Memorial Room, and the McGrath Health Center.

**Marion Residence**, 1942, is especially arranged for individual tutorial guidance of men honor students. A special selection of students assures representation in all phases of co-curricular life. Students may live in Marion Hall only by special recommendation.

**Rattermann Hall**, located at Redway and Dakota Avenues, was bequeathed to Xavier by the late Mrs. Henry C. Rattermann. This large English-style residence houses the Mermaid Tavern, the campus writers' club.

**The Walter E. Schott, Sr., Memorial Building**, completed in February, 1970, is a ten-story residence for the Jesuit community.

Other buildings of the University are:

**The Field House and Gymnasium**, 1928, is the gift of the late Walter S. Schmidt, Class of 1905. In addition to the large indoor stadium, it contains a boxing ring, badminton and handball courts, a basketball court, and shower and locker rooms.

**Xaver Stadium**, capacity of 15,000, was erected in 1928 through a public drive headed by the Governor of Ohio, the late Myers Y. Cooper.

**North Hall**, 1947, contains offices of the Department of Classics, the superintendent of buildings and grounds, and the maintenance department.

**South Hall**, 1947.

**The University Center**, 1965, combines dining facilities for resident and commuting students, student activity offices, the University Book Store, recreation facilities, a 500-seat theatre, and the offices of the President of the University, the Executive Vice-President, the Vice-President, Student Affairs; the Dean of Students, and the Director of Student Aid and Placement. The Center enjoys a commanding view of both Victory Parkway and the University Mall.

**The Williams Memorial—St. Robert Bellarmine Chapel**, 1962, is the gift of the five children of the Charles F. Williams family in honor of their parents. The Chapel, structurally unique in Cincinnati, is sheltered by a saddle-shell roof of reinforced concrete resting on two massive concrete piers. The design provides a maximum of clear floor space for a semi-circular seating arrangement to accommodate 500 worshippers. The Chapel is located at the head of the Mall.

**Sycamore House** adjoins Elet Hall and serves as headquarters for the University’s Public Relations and Development staff.

**The Joseph Center for Human Development**, 1968, Dana Avenue and Winding Way, houses Psychological Services, counseling, activities, and classrooms.

**The Mary Manning Walsh House**, commemorating Mr. Walsh’s scholarship bequest to the University, houses some Business and Finance offices.

**The Symmes Street Studios**, used for radio and television instruction by the Department of Communication Arts, formerly were the headquarters of WCPO-TV and Radio.

**The Pied Piper**, 3868 Ledgewood Avenue, houses students for Christian Community and also provides for student meetings.

**The Walker House**, 1500 Dana Avenue, houses The Graduate Program in Hospital and Health Administration offices and the Institute of Business and Community Services.

**The Finn Lodge**, 3846 Ledgewood Avenue, houses the office of University and Urban Affairs.

**The Breen Lodge**, 3832 Ledgewood Avenue, houses offices for several student organizations.
Services

University Services, Financial Aid, and Organizations

Religious Welfare

Xavier University uses various means of promoting a sincere Catholic way of living in its students. This influence permeates classroom and general campus atmosphere. From the celebration of Mass to a visit in Bellarmine Chapel, student life is vibrant with that simple devotion characteristic of Christian principles.

Each year the Spiritual Exercises of Saint Ignatius Loyola are given for Catholic students. Attendance at the exercises is encouraged for students in the undergraduate day colleges.

Student Health Service

The Student Health Service is the organization through which the University fulfills its obligation to its students for the care of their physical and mental health and at the same time assures itself and the families of these students that a reasonable supervision is being exercised by the institution for the maintenance of physical and mental fitness of the student.

Participation in the Student Health Service is obligatory for day undergraduates. Evening and graduate students may use some of the services. Health examinations are required for all day students as part of their entrance requirements to Xavier University. Forms for this examination are to be filled out by the family physician and must be in the hands of the medical director of the University before the beginning of the semester in which the applicant enters the University.

Student Guidance

The University strives to give students as much individual attention as possible.

Each student is assigned a faculty advisor whose duty it is to assist the student in the planning of his course. The student is expected to have at least one conference in each semester with the advisor.

For spiritual and personal guidance the University provides University Chaplains, who see students according to schedule or by appointment.

Psychological Services Center

The Center provides psychological services for students of Xavier University. It is equipped to handle behavioral problems in a variety of areas such as the choice of studies, of a school, or of an occupation; measurement of aptitudes, interests, abilities, etc.; failures in school or at work; difficulties in reading and unsatisfactory patterns of living. Psychological testing and vocational guidance, psychiatric evaluation, counselling, and psychotherapy are the fundamental services of the Center.

Undergraduate full-time students are provided the testing, counselling, and vocational guidance services free, except for a $5.00 test materials' replacement charge.

Center of University and Urban Affairs

The establishment of the Center of University and Urban Affairs was recommended by the ad hoc Planning and Development Committee in 1969. It is intended to increase concern for pressing community issues—civic, economic, social, cultural, and educational. It will recruit and aid minority and disadvantaged students, develop programs for better understanding of their problems by the University Community, and assist in efforts to recruit minority group faculty and graduate assistants.

The Placement Service

The Placement Service, located in the University Center, offers assistance to seniors, graduate students, and alumni in finding suitable employment commensurate with their education. The office provides occupational materials, placement guides, company literature, the College Placement Annual, other appropriate literature, and counselling service for those seeking career positions.

The Service arranges for representatives of companies and government agencies to interview students on campus, and aids as much as possible in arranging part-time and summer employment to meet the student's financial needs or to provide suitable work experience for his proper development.

Student Housing

Brockman Hall, Husman Hall, Kuhlman Hall, and Marion Residence are equipped to accommodate full-time students. Dormitory costs are listed under Fees.

Out-of-town students must live on campus. Exceptions to this regulation are granted by the Director of Housing.

Room reservations for the residence halls will not be held through the summer for students who are on academic probation at the end of the preceding spring term.

Library

The University Library, housed in the Walter Seton Schmidt Library Building since 1926, was moved into the new Donald Memorial Library during 1966.

The Library contains many interesting and valuable collections among which are the Williams Bible Collection; the original manuscripts of Francis J. Fint, S.J.; a fourteenth century vellum manuscript of the sermons of St. John Chrysostom; a fifteenth century antiphonary; several incunabula; letters of Andrew Jackson, Martin Van Buren, and others. Microfilm and microcard readers are available. The total number of volumes is 174,693.

The University has been a constant beneficiary of friends whose contributions have increased the number of volumes. Since 1925 the Booklovers Association has been outstanding in its gifts and contributions.

Art Gallery

The Fine Arts Gallery, located in the Carriage House of Marion Hall, is intended to be a living facility—one that will present works of art available to the University through loans, gifts, and travelling exhibitions. It was opened in the summer of 1966.

Laboratories

The Department of Biology, occupying Albers Hall, is well equipped for teaching undergraduate students the biological sciences. General laboratories are outfitted with compound and stereoscopic microscopes, ample slides and specimens, and fresh- and sea-water aquaria. Other laboratories are maintained for study in anatomy and development, behavior and physiology, plant biology, genetics, microbiology, and ecology. Advanced students use research space at the Albers Biological laboratories, which are particularly well suited for investigations dealing with the electrical activity of the senses, the nervous system, and the hearts of various animals.

The Department has assembled abundant visual aids—models, vertebrate and invertebrate museum specimens, a variety of projectors, and its own library of motion pictures and kodachrome slides. Modern laboratory instrumentation is used in appropriate courses and includes Tectronix oscilloscopes, Grass stimulators, electronencephalographs, and polygraphs; activity recorders, environmental growth chambers, Warburg apparatus, and sterilizing devices.
The Department of Physics has one large general physics laboratory, a newly designed laboratory for advanced physics at the junior level, a newly equipped atomic-nuclear physics laboratory for seniors, an optics laboratory, an analog computer laboratory, and a complete machine shop.

The seismology laboratory, for research in seismology, at present uses some of the facilities of the physics laboratories in addition to office, library and dark room in Fisher Lodge. For the purpose of advancing the science of seismology, Xavier University maintains a first class station and observatory. The station is located on a farm approximately sixteen miles east of the University. It is equipped with three Benioff short-period seismographs that are kept in continuous operation. In addition, an instrument vault situated in the basement of the Schmidt Building serves experimental purposes.

The chemistry laboratories are located in the Logan Chemistry Building. Five large laboratories are devoted to physical, organic, analytical, general inorganic chemistry, and graduate research. There are smaller laboratories for biochemistry, instrumental analysis, and radiochemistry.

The Department of Military Science is adequately equipped for the conduct of both field work and classroom instruction. Since Xavier's ROTC unit specializes in Field Artillery, 105mm howitzers and associated fire direction equipment are on hand. The Department has available models of military equipment for training in map reading, military communications, rifle marksmanship, and military missiles. Indoor instruction is augmented and facilitated by appropriate motion pictures, slides, and graphic training aids. Other facilities include a sixteen-point small-bore firing range, a military affiliate radio station, and an indoor drill and training area in the Armory. Selected senior cadets may participate in the Army Flight Training Program conducted at a civilian Flight Training School.

The Geoghegan Memorial Language Laboratory, which was given by Miss Marie Geoghegan as a memorial to her three brothers, William A. Geoghegan, Thomas M. Geoghegan, and J. Paul Geoghegan, is located on the second floor of Alumni Hall. Equipped with thirty booths and eleven program sources, it provides supplementary drill for students who are taking any one of the modern foreign languages.

**Computer Center**

The University Computer Center, located in the Walter Seton Schmidt Building, provides a complete range of services connected with the analysis and processing of data by means of electronic computers. These services, available to all branches of the University, may be categorized as services meeting University needs in the areas of education, research, and administration.

Faculty and student researchers are also provided analysis, programming, and operating services in support of their projects by the Center. The high speed and accuracy of the computers are invaluable to research involving complex and extended computations.

The Center assists the administrative offices of the University in processing data.

The Center has the following equipment to service the computer needs of the University:

- IBM 360 Model 30
- IBM 407 Accounting Machine
- IBM 085 Collator
- IBM 514 Reproducing Punch
- IBM 557 Interpreter
- IBM 082 Sorter
- One IBM 026 Keypunch

**Scholarships—Financial Aid**

**Types of Aid**

1. Scholarships.
2. Student Loans.
4. The College Work-Study Program.
5. Part-Time Jobs.
7. Law Enforcement Education Program.
8. Ohio Instructional Grants Program.

**Scholarships**

Information on University scholarships is provided by the sources indicated upon request.

1. For Undergraduate, Day Division, Academic Scholarships: The Director of Placement and Student Aid.
2. For Honors Course Scholarships: The Director of the Honors Course.
3. For Evening College Scholarships: The Dean, Evening College.
4. For Graduate Scholarships: The Dean, Graduate School.
5. For Reserve Officer Training Corps Scholarships: The Professor of Military Science.
6. For Athletic Grants-in-aid: The Director of Athletics.
7. For Band Scholarships: The Director, Xavier University Band.

**The General Motors Scholarship**

Xavier participates in the General Motors College Scholarship Plan. The amount awarded under this plan ranges from an honorary award of $200.00 up to an award of $2,000.00 per year, depending upon the need of the individual. This scholarship is administered by the University.

**The Cincinnati Gas & Electric Scholarship**

This annual scholarship provides full tuition and fees for a freshman and half-tuition and fees in his remaining three years of college. The Company will refund tuition costs not initially covered if the scholarship recipient accepts postgraduate
employment with the Company. The scholarship is restricted to a student in the College of Business Administration who either resides in, or attended, a high school in the Company's service area or who is the son or daughter of a C. G. & E. employee.

Honors Course Scholarships

Scholarships for study in the Honors Course are offered to students who have maintained an excellent academic standing in high school. Four years of high school Latin are a prerequisite. The number of freshmen in this course is limited. For this reason the funds set aside for scholarships are normally adequate to provide partial or full tuition and, in some cases, help beyond tuition to a deserving student. The amount of the scholarship is determined partly by the academic record and partly by the real need of the applicant.

Xavier Achievement Scholarships

A limited number of scholarships are available for superior students providing a minimum of full tuition and fees. The academic requirement is 3.0 in first year, and 3.25 thereafter.

University Tuition Scholarships

The University provides a limited number of four-year tuition assistance scholarships for black students. These are awarded at the discretion of the Scholarship Committee. Stipends are determined in accordance with Parents' Confidential Statement.

ROTC Scholarships

The Department of the Army annually awards one-year, two-year, three-year and four-year ROTC Scholarships to outstanding students. Applications for the four-year scholarships are submitted by high school senior candidates through the Army Headquarters in the area of the student's residence. For additional information, high school seniors should contact their guidance counsellors or the Xavier University Military Department. Several one-year, two-year, and three-year scholarships are awarded annually and respectively to members of the Xavier University junior, sophomore, and freshman ROTC classes. All scholarships cover the cost of books, tuition, and fees, plus a monthly $50 allowance.

Students in the advanced course (junior and senior years) also receive a $50 per month allowance.

Presidential Scholarships for Greater Cincinnati

A minimum of twelve scholarships, which may amount to half-tuition, are awarded to graduates of high schools in the Greater Cincinnati area. The Greater Cincinnati area includes Hamilton, Butler, Clermont, and Warren counties of Ohio; Boone, Campbell, and Kenton counties of Kentucky; and Dearborn county of Indiana. These scholarships are awarded at the discretion of the Committee on Scholarships at Xavier University on the basis of scholastic excellence and financial need.

Presidential Scholarships Outside Greater Cincinnati

A minimum of twelve scholarships, which may amount to half-tuition, are awarded to graduates of high schools outside the Greater Cincinnati area. The scholarships are awarded at the discretion of the Committee on Scholarships at Xavier University on the basis of scholastic excellence and financial need.

Upperclassmen Scholarships

Full-time students who have been on the Dean's List for three succeeding semesters at Xavier University are eligible to apply for financial assistance. Applications should be submitted to the Director of Placement and Student Aid, Xavier University, no later than April 1. Applicants are required to provide a Parents' Confidential Statement processed by the College Scholarship Service.

Instructions for All Applicants

Applicants for scholarships shall have completed all the requirements for admission to the University before being considered for a scholarship. For further information concerning scholarship procedures, write to The Director of Placement and Student Aid, Xavier University.

Scholarship Regulations

1. Scholarships, other than the Xavier Achievement scholarships, apply to tuition only and do not excuse the designee or holder from payment of other fees.
2. Scholarships must be accepted for the year or years they are awarded. They may not be transferred by the holder and may not be resumed at will after having been relinquished.
3. The scholarship will be awarded for one year and will be renewable in favor of the holder for each successive semester of his four-year college period.
4. Holders of honor scholarships must maintain a quality-point ratio of at least 2.5 in the freshman year, and 3.0 in the sophomore, junior, and senior years. (Xavier Achievement Scholarships are an exception to this regulation.)
5. The award in all cases is made at the discretion of the Scholarship Committee of Xavier University.
6. Holders of honor scholarships are expected to participate in the co-curricular activities of the University.

Source of Scholarship Funds

The permanent scholarships that have been generously given to Xavier University in the past are listed below. Income from these scholarships is increased each year by gifts of annual scholarships. In addition, the University uses funds from its current income to make up the balance of these awards.

Perpetual Scholarships

Anonymous, $70,000
A scholarship fund—the gift of a friend of the University.
William F. Poland, S.J., Fund, about 1906, approximately $115,000
Fr. Poland established this fund from his patrimony at the time of the death of his parents.
Elizabeth Sullivan Scholarship, 1924, $3,000
Mary B. Shannon Scholarship Fund, 1925, $13,334
Worpenberg Family Scholarship, $5,000
This is a partial scholarship to be awarded preferably to a graduate of Saint Xavier High School.
Rev. James D. Foley, S.J., Scholarship (in his honor), $2,000
Mary Mohlenhoff Scholarship (in memory), $2,000
Passion Play Scholarship, 1928, $500
The Ryan Sisters Scholarship, $3,000
Siedenberg-King Scholarship, $2,000
Margaret Shea Scholarship, 1937, $3,500
Archbishop McNicholas Memorial Scholarship, 1940, $5,000
Mrs. F. W. Hinkle Memorial Scholarship, 1940, $5,000
The Ryan Sisters Memorial Scholarship, 1940, $5,000
Saint Xavier Church, Memorial Scholarship, 1940, $5,000

The four preceding scholarships were given on the occasion of the Quadricentennial Observance of the foundation of the Society of Jesus and the Centennial of the Jesuits in Cincinnati.

Rev. James McCarthy, S.J., Scholarship, 1942, $3,468

This partial scholarship is to be given to a needy and deserving student in honor of Fr. James McCarthy, S.J. It was donated by the will of Mrs. Clara Pressler.

Xavier Student Council, 1942, $2,087.47

The proceeds from a World War II metal scrap drive conducted by the Student Council were donated for this scholarship.

Bernard H. Ludwig Scholarship, 1948, $2,000

A partial scholarship to be given preferably to some member of Saint Augustine's Parish, to be selected by the pastor of Saint Augustine's, Cincinnati.

Charles A. Clasgens Scholarship, 1949, $3,576

A partial scholarship for any worthy poor student, preference to be given to a student of Saint Peter's Roman Catholic School, New Richmond, Ohio.

Blessed Virgin Mary Scholarship, $5,000

A partial scholarship established by an anonymous donor in honor of the Blessed Virgin Mary.

Rev. Albert Dierkes, S.J., Scholarship, $6,400

A partial scholarship established by an anonymous donor in memory of Fr. Dierkes.

Fred Tuke Scholarship, 1951, $10,000

A donation by Mr. Fred Tuke provided a full tuition scholarship.

Walter A. and George McDonald Fund

This fund, established in 1960 to honor Mr. and Mrs. Andrew J. McDonald, provides income for a graduate assistant in the Department of Chemistry.

Walter A. and George McDonald Scholarship, $1,000

Dr. Edward McGrath Scholarship, 1956

A partial scholarship donated in memory of Dr. McGrath.

Lillian W. Ochs, $250

Class of 1931 Scholarship, 1956, $7,500

A half-tuition scholarship donated by the Class of 1931 on the occasion of the twenty-fifth anniversary of their graduation.

The Stephens L. and Margaret J. Blakely Scholarship, 1958

A partial tuition scholarship maintained by the annual contribution of Mr. John R. Blakely and Mrs. Jane B. Woodrough in honor of their parents. The scholarship is awarded to a pre-law student from Kenton County, Kentucky.

The Richard A. Jones Journalism Scholarship, 1960, $19,161.83

A bequest from the estate of Mrs. Alma J. Snodgrass to the Evening College in memory of her father, Cincinnati newspaperman.

The Jesse K. Dunn Memorial Scholarship Fund, 1959, $7,000

The Frederick A. Hauck Physics Research Scholarship, 1962, $1,500 annually

This is an award to a student (or students) selected by the Department of Physics to pursue, on the undergraduate level, research projects commensurate with his (or their) intellectual promise.

The Matthew Ryan Family Scholarship, 1964, $10,000

Given at the request of the late Miss Margaret Ryan.

The Fredin Memorial Scholarships, 1964

These are annual awards for one or more students to pursue their studies in French in France. Established from the bequest of Mlle. Aline Fredin in memory of her parents. See Modern Languages, FR 298.

The Mr. and Mrs. Theodore H. Oppenheimer Scholarship Fund, 1966

A scholarship to be awarded at the discretion of the Scholarship Committee.

The Wilson J. (Woody) Sander Memorial Scholarship Fund, 1967, $15,700

This Scholarship Fund honors the memory of the late Mr. Sander, '34, whose service to his Alma Mater included chairmanships of the Athletic Board and the Alumni Living Endowment Fund.

The William V. Masterson, '41, Memorial Scholarship, $3,565.

This memorial provides tuition assistance to an outstanding student in marketing for his senior year.

The Raymond L. Buse Memorial Scholarship Fund, $27,500.

This scholarship was provided by an anonymous donor who wished to honor the President of Xavier University. It is intended that the income will assist worthy students selected by the Scholarship Committee.

The Reverend Paul L. O’Connor, S.J., Scholarship, $40,000.

This scholarship was provided by an anonymous donor who wished to honor the President of Xavier University. It is intended that the income will assist worthy students selected by the Scholarship Committee.

The Foster G. McGaw Scholarship from the Association of University Programs in Hospital Administration and the American College of Hospital Administrators is awarded by the program each year to an entering graduate student who exhibits potential for making a significant contribution to the hospital administration profession. The scholarship pays $1,000 toward the student's expenses.

The Mary Manning Walsh Scholarship Fund, $1,000,000.

The Mary Manning Walsh Scholarship Fund was established in 1968 by her husband, the late Thomas J. Walsh, with a gift in excess of $1,000,000.00. The income from this Fund is to be used for scholarships for worthy students unable to pay entirely for their education.

Edward F. Macke '98 Graduate Scholarship Endowment Fund, $50,000.

The Edward F. Macke '98 Graduate Scholarship Endowment Fund provides scholarship assistance to graduate students at Xavier University. This Fund was established in 1969 with a gift of approximately $30,000.00 from the late Edward F. Macke.
Class of 1969 Scholarship, $2,700

This scholarship is designed to provide financial assistance to any needy students, preferably from socio-economic minority groups, who have sought all other means of financial aid and cannot begin or continue their college education without financial assistance. It is not to be allocated in strict accordance with academic achievement. The sole criterion is that the student be qualified for admission or that he be in good academic standing.

Class of 1970 Scholarship, $2,360

This scholarship is to be awarded annually to a worthy student. The student must need financial assistance, must show better than average academic promise, and should espouse the ideals, aims, and goals of a Jesuit education. It may be awarded to any student regardless of race, creed, color, sex, or national origin. However, preference is to be given to sons or daughters of members of both the Day and Evening Undergraduate Divisions of the Class of 1970.

FINANCIAL AID

Law Enforcement Education Program

Under the provisions of Section 406 of the Omnibus Crime Control and Safe Streets Act of 1968 (Public Law 90-351), Xavier University participates in the Law Enforcement Education Program. LEEP awards provide student loans and/or grants to state and local public law enforcement personnel and to persons who promise to enter the law enforcement field. Loans may be made up to $1,800 per academic year. Grants, available only to currently employed law enforcement personnel, may amount to $300 per semester, but are not to exceed the cost of tuition and fees. For further information contact the Director of Placement and Student Aid, Xavier University.

Ohio Instructional Grants Program

The Ohio Instructional Grants Program, established by the 108th Ohio General Assembly, offers financial aid to Ohio students who have exceptional need and who are enrolled as undergraduates in an eligible Ohio institution of higher education. Grants are not awarded upon the basis of scholarship but on the relative financial need. The amount is based upon the adjusted effective income of the family, the number of dependent children in the family, and the total instructional charges of the educational institution. To be eligible, a student must be a resident of Ohio. For further information contact the Director of Placement and Student Aid, Xavier University.

National Defense Student Loan

The National Defense Education Act of 1958 provides for the creation, at American colleges and universities, of loan funds from which needy undergraduate and graduate students may borrow for the completion of their higher education. Recipients are selected by the school itself.

The borrower must be a full-time or half-time student, in need of financial aid for educational purposes, and capable of maintaining good academic standing. An undergraduate may borrow up to $1,000.00 in one year but not over $5,000.00 in his entire course of higher education. A graduate student may borrow, on the same basis and on the same repayment plans as the undergraduate, up to $2,500.00 per year but not to exceed a total of $10,000.00, including any undergraduate loans he may have incurred.

Repayments begin on a quarterly basis within nine months after the borrower ceases to be at least a half-time student. These loans carry a 3 percent interest on the unpaid balance during the repayment period. The loan must be repaid in accordance with the terms specified in the promissory note. Under no conditions may the repayment period exceed ten years. For further details, communicate with the Director of Placement and Student Aid, Xavier University.

The College Work-Study Program

In the Economic Opportunity Act of 1964, Government funds are made available to colleges and universities for part-time work, usually on campus. Applicants should be nationals (citizens) in need of the earnings to meet their college expenses, should have good academic standing, and should carry a normal (full-time) number of academic course hours. Under this program students may work up to 15 hours per week when their classes are in session and not more than 40 hours per week in vacation periods or during the summer when not enrolled in classes. Whenever possible, Work-Study jobs will be co-aligned with the student's course of studies to give the most valuable educational experience.

Xavier University participates in this program. For details communicate with the Director of Placement and Student Aid, Xavier University.

Educational Opportunity Grants

The Higher Education Act of 1965 provides funds through the United States Office of Education to Xavier University for making grants of from $200 to $1,000 a year to worthy undergraduate students in exceptional financial need. Grants are renewable for four years. The amount awarded to a student must be matched by some other type of financial aid provided either by the University, an outside scholarship, or other source.

Further information may be obtained from the Director of Placement and Student Aid, Xavier University.

Awards

The American Institute of Chemists' Medal. A gold medal is awarded to a senior majoring in chemistry for outstanding scholarship.

The Cincinnati Chapter, National Association of Accountants Manuscript Writing Awards. These awards of $25, $15, and $10 are granted students submitting the best manuscripts on subjects of working interest to the accountant in industry.

The Ervin A. Stadler Accounting Award. An award of $100 is offered by Mr. Ervin A. Stadler, resident partner of Haskins and Sells, to the student majoring in accounting who attains the highest cumulative average in scholarship and accounting at the completion of his junior year and is a member of the Accounting Society.
The Haskins and Sells Foundation Scholarship Award. The Haskins and Sells Foundation has established an annual award of $500 for the senior with an aptitude for public accounting and with the highest cumulative average in scholarship, accounting, and English at the completion of his junior year.

Financial Executives Institute, Cincinnati Chapter. Award. The sum of $50 is given to the senior majoring in accounting whose scholastic standing, leadership, and participation in co-curricular activities are exceptional.

The Dr. J. T. Clear Biology Key. This key, founded by Dr. J. T. Clear, is awarded annually to the senior who has completed his major in the Department of Biology with the highest distinction.

The Dorst Chemistry Key. This key, the gift of Arno A. Dorst, is awarded annually to the senior who has completed his major in the Department of Chemistry with the highest distinction.

Craig Menderson Memorial Economics Award. This award of a gold key and $50 was established in 1966 in memory of fifteen year old Craig W. Menderson. It is given to the senior in economics who best demonstrates intellect, maturity, integrity, spirituality, and personality.

The Intercollegiate English Prize. A purse of $100 is offered yearly by Mr. David F. Bremner of Chicago for excellence in English essay writing. The competition includes the Jesuit colleges and universities of the Chicago, Missouri, Detroit, and Wisconsin Provinces.

The Alumniæ English Prize. This prize is given by the Xavier University Alumniæ Association to the student winning the highest place in the Intercollegiate English contest.

The Sweeney English Award. A cash prize of $25.00 is given in memory of Thomas and Anthony Sweeney to the student completing his major in English with the highest distinction.

The Mermaid Tavern Prize Key. A gold key is offered by Mr. Anthony C. Elsasser, '12, to the Tavern member meriting highest distinction in literary composition and criticism. Mr. Elsasser has established an endowment to provide for this key in perpetuity.

The Catholic Poetry Society of America Award. This award is given for an original poem judged superior by the Department of English.

Athenæum Prize Keys. Two gold keys are given to authors of the best contributions by undergraduate students to the Athenæum literary magazine as judged by members of the Department of English.

Xavier Order of Military Merit Fourragère. This military decoration is presented to ROTC Advanced Course students as an honor for military attainment.

The American Marketing Association Award, Cincinnati Chapter. An award is made to the senior who has been outstanding in the study of marketing.

NFBA Foundation, Inc. Scholarship. The National Food Brokers Association annual award of $400 is given to a junior or senior majoring in marketing. It is presented to a student interested in making a career in the food industry.

The Kramer-Miller Mathematics Award. An award of $50 is made to the senior majoring in mathematics who has distinguished himself in his studies and has shown outstanding progress in mathematics.

The Richard J. Wehrmeyer—Pi Mu Epsilon Mathematics Award. A cash award is presented by the Mathematics Department and the Ohio Theta Chapter of Pi Mu Epsilon, National honorary mathematics fraternity, to the student in mathematics exhibiting excellence in problem solving competition. The award honors the memory of Richard J. Wehrmeyer, Class of 1970.

Xavier University Rifle and Pistol Awards. Trophies are presented for high team average and 2nd high average.

Pershing Rifles Awards. Medals are awarded by the National Society of Pershing Rifles.

Army ROTC awards from the following sources:
- Reserve Officers Association Award.
- Association of the United States Army Award.
- Veterans of Foreign Wars Award.
- American Legion Awards.
- The Combined Councils, Knights of Columbus Award.
- Department of the Army Superior Cadet Decoration.
- Xavier University President's Trophy.
- Colonel Charles F. Williams' Scholarship. Prize.
- Lieutenant Colonel Edward S. Maj Award.
- American Veterans of World War II Award.
- Sons of the American Revolution Award.
- Daughters of Founders and Patriots of America Award.
- Republic of India Visitation Award.
- Legion of Valor Bronze Cross for Achievement.

The German-American Citizens' League Award. An award of $25.00 is offered by the American Citizens' League of Cincinnati to the student who attains the highest scholastic average in German for the academic year.

The Heidelberg Club German Award. An award of books is given to the student in the upper division courses who attains the highest score in a test in German administered by the Department of Modern Languages.

The Francis I. Hamel Prize in Psychology. A book prize established by Dr. and Mrs. Ignatius A. Hamel in memory of their son, Francis I. Hamel, is awarded to a junior majoring or minoring in psychology who has demonstrated excellence in achievement in psychology and who is outstanding in his over-all academic work.

The Frederick A. Hauck Physics Research Awards. A fund of $1,500 provided annually by Mr. Frederick A. Hauck for research scholarships for undergraduates majoring in physics.

The Mrs. Magdalena Strobl Link Psychology Award. An award of $50.00 established by Dr. Joseph Link, Jr., in memory of his mother, Magdalena Strobl Link, is given to the best graduating psychology senior. The recipient is selected by the Department of Psychology on the basis of his over-all performance, his performance in psychology, and his achievement on the Graduate Record Examination or the Miller Analogies Test.

The Alpha Sigma Nu Religion Key. A gold key is awarded annually by the Xavier Chapter of the National Jesuit Honor Society to the freshman or sophomore who writes the best essay on a religious topic.

The Intercollegiate Latin Prize. The Very Reverend Provincials of the Midwest Jesuit Provinces offer $100 annually ($50 for the first prize, $30 for the second, and $20 for the third) for the best translation of classical English and classical Latin.
The contest is open to students of the Jesuit liberal arts colleges in the Chicago, Missouri, Detroit, and Wisconsin Provinces.

The Ragland Latin Medal. A gold medal, founded in 1935, in memory of Alice D. Ragland, is awarded to the participant who ranks highest in the Intercollegiate Latin Contest.

The Washington Oratorical Medal. A gold medal is offered by the Xavier University Alumni Association for the best original oration delivered in the annual contests in oratory.

The Joseph A. Verkamp Prize Award for the Study of Greek. To encourage the study of Greek, Mr. Joseph A. Verkamp, '07, founded in 1964 an annual award of a Greek Lexicon to the student who excels in Greek in the judgment of the Department of Classics.

The Tau Kappa Alpha—National Honorary Society Speech Fraternity Keys. Delta Sigma Rho-Tau Kappa Alpha Keys are awarded to students selected as members of the National Honorary Forensic Fraternity for their excellence in debate.

The Robert G. McGraw History Medal. This award is made to the student judged by the Department of History to excel in the study of history.

The Gasiевич Political Science Medal. This medal is awarded to the junior who has made the greatest progress in and contribution to the field of political science.

The Archbishop McNicholas Medal. A gold medal is offered in memory of the Most Reverend John T. McNicholas, O.P., D.D., to that member of the senior class who has excelled in the study of philosophy.

The Martin G. Dumler Key. A key is offered by Mr. Martin G. Dumler, LL.D., to that member of the junior class who has excelled in the study of philosophy.

The David Snyder Religion Medal. A gold medal, founded by Mr. and Mrs. John W. Snyder, Portsmouth, Ohio, in memory of their son, David William Snyder, '31, is awarded for the best catechetical essay written by a junior or senior.

The Religion Key. An award offered by the University Sodality to the student who excels in the subject of Theology.

The James D. Shouse Award. An award of $200, sponsored by the Aveco Broadcasting Corporation, is given annually to a senior for the most outstanding achievement in the broadcasting arts. The winner's name is also inscribed on a permanent plaque in the Communication Arts Department office.

The J. D. Cloud Accounting Award. This prize of $100.00 is awarded to the student of the Evening College in the senior accounting class attaining the highest average for his third and fourth years' work.

The Accounting Award of the Cincinnati Chapter, American Society of Women Accountants. This award of $25.00 is granted to a woman student in the Evening College for excellence in the study of accounting.

The Milton B. Kutmayer Award. This prize of $100.00 and a plaque is awarded to the most outstanding student in the Graduate Program in Hospital and Health Administration.

The Biology Award. This prize is presented to the senior completing major studies in Biology who has demonstrated superior achievement in scholarship, research, and co-curricular activities.

Rev. Francis J. Finn, S.J., Medal Award. The Rev. Francis J. Finn, S.J. Medal Award, established by the Xavier University Alumni Association in 1960, perpetuates the memory of the well known author of books for boys. It is presented to a senior who has emulated in an outstanding way the qualities of Father Finn's fictional heroes—leadership and breadth of interest. Father Finn was a trustee of Xavier University. Since 1925 Xavier teams have been called "The Musketeers," and the highest honor for any Musketeer athlete is to be named to the Legion of Honor. Both ideas were suggested by Father Finn.

Student Government

The purpose of student government at Xavier University is educational. Its goal is twofold: first, to develop a sense of individual and group responsibility for common ideals, and, secondly, to demonstrate through actual living experience the techniques of attaining those goals through group self-organization and self-government.

Student Organizations

Xavier University provides many forms of student activities and organizations for the purpose of promoting religious, social, academic, and cultural relations among the student body. All organizations of students are under the general supervision of the Dean of Students. Approval for meetings and programs must be secured from him directly or through the appointed faculty moderators. With the exception of activities and organizations of a purely religious nature, only such students as are free from disciplinary censure and the scholastic censure of probation are eligible for active membership. The University reserves the right to discontinue or moderate any student activity or organization. By means of its committees and agencies the University also has the right to limit the extent and degree of the individual student's participation.

Religious Activity

Students for Christian Community. This organization, formerly known as the Sodality, is affiliated with the International Sodality Movement, headquartered in Rome. The Sodality was established at Xavier in 1840. Today Students for Christian Community offers Catholic students a social program, a spiritual program, participation in Catholic action, and personal counseling.

Academic-Cultural Groups

The Xavier Accounting Society has the objectives of broadening of knowledge and deepening of interest of its members in the field of accounting, the promotion of mutual helpfulness, and the fostering of fellowship in the pursuit of this worthy aim.

Association of Afro-American Students, organized in 1968 at Xavier for Negro students, provides a forum for the exchange of ideas and the formulation of solutions to problems experienced by black people.

Association for Computing Machinery. Organized, November, 1969. The Xavier University Student Chapter is devoted to the free exchange of information regarding the arts and sciences of information processing and to the development of skill in these areas. Membership and associate membership are open to students of Xavier and other area universities and colleges who are interested, although not necessarily proficient, in computing.

The Alchemysts Club, an affiliate chapter of the American Chemical Society, furthers students' interest in chemistry. Together with the chemistry clubs of other Catholic colleges of Greater Cincinnati, it forms the Albertus Magnus Chemistry Club.
The Musketeer Band. The band promotes student interest in music, stimulates spirit at football and basketball games, gives concerts, and provides music for R.O.T.C. Corps Day formations and special University functions.

The Biology Club, open to students of biology, sponsors a variety of co-curricular activities including field trips and speakers on current topics and careers in the Biological Sciences.

The Xavier University Clef Club makes numerous concert appearances and entertains at University functions.

Economics Club. Undergraduates interested in economics have banded together for further discussion of this subject.

The French Club, le cercle François de Xavier promotes interest in French affairs and in the history, the literature, the art, and the customs of France.

The Heidelberg Club fosters an interest in the history, culture, and language of the Germanic people.

Organization for Interracial Awareness brings students together for the betterment of race relations and the awareness within the University community of racial problems.

The Jazz Club presents jazz programs on campus and on the University and other radio stations.

The Xavier University Marketing Club. This organization supplements the students' classroom activity by inviting outside speakers and by orienting the members toward opportunities in the field.

The University Players stage plays during the academic year, and afford members an opportunity to take part in phases of play production—acting, directing, stagecraft, lighting, and scenic design.

The Mathematics Club promotes scholarly development by interesting its members in pure and applied mathematics.

The Mermaid Tavern, a writers' club of limited membership, promotes the association of graduates and undergraduates actively interested in writing. The Tavern-acular, a privately circulated magazine, is issued quarterly.

Pershing Rifles: Company G-1, a member of The National Society of Pershing Rifles, is a voluntary association of college students enrolled in military science. Its purpose is to encourage, preserve, and develop the highest ideals of the military profession and to promote American citizenship. Company G-1 competes against drill teams from other universities at drill meets held at various locations in this part of the country. The company drills intensively and has developed a noteworthy esprit de corps. Elected Pershing Rifles members of the Advanced Course command the unit and administer its affairs. Any Basic Course student capable of passing certain tests is eligible for membership. Members wear the blue and white fourragere on the left shoulder of their ROTC uniforms.

Physics Club, an affiliate chapter of the American Institute of Physics, promotes good fellowship among the physics majors.

Pi Sigma Epsilon, a sales and marketing fraternity, provides students with training, with fellowship, and with association with business professionals.

The Xavier Philosophy Club fosters in its members greater interest in philosophical subjects. Meetings are informal and free discussion is encouraged.

The Psychology Club provides opportunity for students to increase their knowledge of psychology and to participate in extra-curricular work in this field.

The Society for the Advancement of Management. The University Chapter prepares Xavier men for business careers through seminars, conferences, and management development programs.

The Spanish Club encourages its members to learn more about the Iberian language and customs and the literature of Hispanic countries.

The St. Thomas More Pre-Law Society was founded by the Xavier University Pre-Legal Committee for students interested in a career in the legal profession. Its program affords its members, in addition to the guidance of the Pre-Legal Committee, the counsel also of law school deans, professors, and students, of members of the local judiciary and bar, and especially of members of the Natural Law Society.

Stock Market Club is for students interested in gaining practical experience in investments. Stocks are investigated and purchased as a cooperative venture. Speakers from investment counselling firms, brokerage houses, and government agencies are featured.

Student Volunteer Services involve students in volunteer projects at the local level and in such organizations as the Peace Corps, the Papal Volunteers, Extension, and VISTA. The organization works closely with Chabanel House. Projects include tutoring, direction of recreation, trips to Appalachia, and other activities of social and civic significance.

WVXU-FM noncommercial, University owned, radio station broadcasts on a frequency of 91.7 mhz. with an ERP of 10 watts. This radio voice of Xavier is student operated.

The World Action Group studies the history, traditions, culture, and problems of various countries and areas.

Social and Service Clubs

The Xavier University Bridge Club has a franchise from The American Contract Bridge League. Its activities include monthly duplicate tournaments, invitational tournaments with other schools, and the sponsorship of bridge classes.

The Cheerleaders organize cheering at games and rallies.

The Dormitory Council consists of representatives of residents of the University halls, and promotes the spiritual and social welfare of the dormitory students.

The Flying Club provides students an opportunity to learn to fly. Aircraft and instructors of Victory Aviation, Inc., based at the Hamilton Airport, are available. Intercolligate flying meets are proposed.

The Xavier University ROTC Radio Club maintains a station operating in the amateur bands and as part of MARS—the Military Affiliate Radio System. Students receive instruction necessary for earning operators' licenses.

The Xavier Rifle and Pistol Club practices marksmanship under the direction of a member of the Department of Military Science. The teams participate in intercollegiate competition, varsity and ROTC competition as members of the Ohio-Kentucky Rifle League. The Club sponsors the Walsh Invitational Rifle Tournament.

The Sailing Club participates in intercollegiate regattas as a member of the Midwest Collegiate Sailing Association. Its home port is Lake Cowan.

The Student Directory is compiled annually by undergraduates working under the direction of the Dean of Students.

The Women's Rifle Team teaches the use of the rifle and develops markmanship. Teams participate in intercollegiate matches.
Regional Clubs

The Chicago Club
The Detroit Club
The East Coast Club
The Fort Wayne Club

The Hamilton Club
The Indianapolis Club
The Louisville Club
The Toledo Club

Intramural Athletics

Intramural programs are carried on in a variety of sports. Activities are carried on in baseball, basketball, bowling, handball, touch football, and other sports.

Intercollegiate Athletics

Xavier University believes that there are sound values in intercollegiate athletic competition and that it has a valid place in American education. Intercollegiate athletics, therefore, are conducted to further the education of the students physically, emotionally, intellectually, and morally. Participants learn the value of cooperative effort and the necessity of subordinating their own good to that of the group. They also see the need for poise and for competence in the face of opposition, and they learn a sportsmanlike respect for rules.

Intercollegiate rivalry also benefits the student body by providing wholesome recreation and the opportunity for the undergraduates to show their loyalty to all phases of the University's program. Students gain the educational value of sharing in group activity, and also learn to respect the rules as sportsmen.

The program of intercollegiate athletics at Xavier includes basketball, baseball, football, golf, sailing, tennis, a women's swim team, and occasional sports. These activities are administered by the Athletic Director, who is advised by the Athletic Board and who is responsible to the Vice President, Student Affairs.

Participants in intercollegiate athletics, as in other co-curricular activities, must be bona fide students in good standing. They will have entered the University in accordance with the admission norms published in the Catalogue and will be subject to the regular scholastic demands. If, in the judgment of the dean, their participation interferes with their progress toward a degree, he may forbid them to continue even though they are not formally on scholastic probation.

Xavier Publications

Primarily intended as a source of information for the Xavier family, these publications offer special opportunity to students who wish to learn news writing, editing, and creative literary expression.

The Athletic Review, published by the Department of Public Relations, is the official program for all home football and basketball games.

The Musketeer, the yearbook of the University, is a student-edited publication. Intended as a permanent record of student life at Xavier, The Musketeer presents a panorama of the various school events, social functions, athletics, and campus organizations.

The Athenaeum, a literary magazine that dates from the old college, is intended to foster literary effort among students. The stuff is composed of honor students in English.

The Xavier Alumnus combines campus news with reports about Xavier men and women everywhere. It is published by the Department of Public Relations.

FAX is a weekly publication with information for and about the faculty.

XAVIER is a quarterly publication of general interest circulated both on and off the campus.

Xaver Communiciqué, a bimonthly news chronicle, is a documentary communication medium for all members of the Xavier Community. It is distributed to students, parents, alumni, friends, faculty, and administrators.

The Xavier University News. Xavier University is the publisher of The Xavier University News. As publisher the University operates through a faculty advisor who is ultimately responsible to the President and who seeks to achieve the purposes of the publication through a program of pre-publication leadership and guidance as well as post-publication review and critique. The judgment of the advisor on the acceptability of material for publication is final.

Honor Societies

Alpha Sigma Nu. A chapter of this national honor fraternity for students of Jesuit colleges and universities was established at Xavier in 1933. Candidates for membership, chosen during their junior or senior year or from the Graduate School, must be outstanding in scholarship, in loyalty, and in service to the University.

Gamma Pi Epsilon. The national Jesuit honor society for women. Membership is limited to junior and senior women selected because of University loyalty, service, and activities. Women proposed for membership must have an accumulated average of at least 3.0.

Pi Mu Epsilon. The Ohio Theta Chapter of Pi Mu Epsilon, the national honorary mathematics fraternity, was established at Xavier University in 1962. The purpose of this organization is the promotion of scholarly activity in mathematics among students in academic institutions. Membership is limited to students, both graduate and undergraduate, majoring in mathematics or related subjects who have achieved distinction in scholarship and have done outstanding work in mathematics.

Psi Chi. Honorary psychology fraternity.

Sigma Pi Sigma. There is a chapter of Sigma Pi Sigma, national physics honor society, at Xavier University. Its purposes are to serve as a means of awarding distinction to students having high scholarship and promise of achievement in physics; to promote their interest in research; to encourage professional spirit and friendship among physics students; and to popularize interest in physics.

Tau Kappa Alpha. Honorary forensic fraternity.

The Xavier Order of Military Merit, XOMM is an honorary organization of Advanced Course students selected annually by a board consisting of elected representatives from the existing membership of XOMM and a member of the military faculty. The selection of new members is subject to approval by the PMS. Some of the criteria for selection to membership are leadership qualities, military and academic grades, and relative standing in the Cadet Regiment. Members of the order are awarded a red fourragere to be worn as part of the uniform.

Phi Alpha Theta. The national honor society in history, is open to majors with a 3.25 or better cumulative average.

Pi Sigma Chi. Membership in PSC is for students who have completed twelve credit hours in political science (or will complete them in the semester in which they apply). Applicants must have an A or B in all political science courses and must rank in the upper half of their class.

Delta Sigma Pi, a national business administration honorary fraternity, recognizes academic excellence and leadership.
University Groups

Kappa Kappa Psi, organized on campus in 1968, is a national band honorary fraternity that recognizes academic achievement and service.

Non-Student University Groups

The Booklovers Association, organized in 1925, actively promotes the interests of the library through the purchase of books and periodicals. Funds are raised by means of membership fees, benefit parties, and special gifts. This group, recruited largely from mothers of students, meets monthly during the academic year for lectures, card parties, and entertainments.

The Dads' Club of Xavier University has as its purpose: (1) cooperation with the administrative body of Xavier University in maintaining high standards of education; (2) the support of extra-curricular activities of the student body; (3) social acquaintance among members of the club; (4) promotion of the general welfare of Xavier University. Members of the faculty, and fathers of past, present, and prospective students are eligible for membership.

Xavier University Alumni Association. This association was organized in 1888. Its purpose is to strengthen and perpetuate college friendships; to preserve in the former students a warm regard for Alma Mater and a lively memory of the substantial benefits she has bestowed; to cherish and advance her interests, maintain her honor, and sustain her reputation by manly and honorable conduct.

The Xavier University Alumnae Association. Any woman student who has acquired thirty or more credits in residence is eligible for membership. The group, founded in 1926, is affiliated with the International Federation of Catholic Alumnae.

The Honors Course Committee. The women of this committee support the Honors Bachelor of Arts program and allied activities of the College of Arts and Sciences.

The Faculty Wives. This organization sponsors social activities to promote friendship among families of the faculty and the administration.

The Xavier Marian Society. This is an organization of men and women desiring to live and serve in accord with the spirit of Vatican II.

The Musketeer Club. Alumni and friends of the University's athletic program participate in the activities of this club.

The Natural Law Society. Sponsored by Xavier University, this Society was founded for members of the legal profession. Its purpose is to assist legislators, judges, and attorneys in the application of the natural law to the enactment, interpretation, and practice of law. Membership is informal and open to the entire legal profession. The Society has a Governing Board composed of Greater Cincinnati lawyers. It sponsors speakers, panel discussions, and study seminars.
The College of Arts and Sciences
The College of Business Administration

Application for Admission and Admission Requirements

Admission policies apply in general to all undergraduates. Those planning to enter the Evening College, however, should apply directly to the Dean of that college. No deposit is required of Evening College applicants.

Application for Admission

Application for admission to the College of Arts and Sciences or the College of Business Administration is made on a special form which will be supplied upon request made to: Director of Admissions, Xavier University, Victory Parkway, Cincinnati, Ohio 45207. The applicant must fill out the form and send it to the Director of Admissions. He must also request his high school (and any colleges he may have attended) to forward directly to the Director of Admissions a transcript of his academic record.

An application fee of $15.00 must accompany the application. The fee is not refundable or applicable to any account. Applicants are urged to submit their application forms with the fee as early as possible. Upon receipt of an application from a student requiring housing accommodations, the Director of Housing will communicate with the applicant concerning a campus residence hall reservation.

Requirements for Admission

To be eligible to apply, a student must be the graduate of an accredited high school with a minimum average of C (80%) and have a recommendation from his high school principal. A minimum academic average of B is ordinarily required for admission to the Pre-Medical program. An applicant with a lower average is admitted at the discretion of the Committee on Admissions.

Applicants are required to take the College Entrance Examination Board Scholastic Aptitude Test. They should consult their high school principals for details regarding the test.

An applicant who was registered previously on the Evanston Campus but who has interrupted his residence is required only to submit the Application for Admission, unless he has attended another school in the meanwhile.

A student who accepts admission to Xavier University also accepts the obligation of observing the regulations of Xavier University.

Subjects Required for Admission

A unit is the equivalent of a subject extending through a scholastic year of thirty-six weeks with five recitations per week. A minimum of fifteen units is required.

The following units are required of all applicants for admission:

<table>
<thead>
<tr>
<th>Subject</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>English</td>
<td>4</td>
</tr>
<tr>
<td>Mathematics</td>
<td>2</td>
</tr>
<tr>
<td>Foreign Language</td>
<td>2</td>
</tr>
<tr>
<td>Natural Science</td>
<td>1</td>
</tr>
<tr>
<td>History</td>
<td>1</td>
</tr>
<tr>
<td>Other subjects</td>
<td>5</td>
</tr>
</tbody>
</table>

Of the five non-specified units, one must be in a college-preparatory subject. Not more than four will be accepted in vocational subjects. The five units must be offered from courses approved by the applicant's high school, for which credit has been granted. Single half units are acceptable only in those courses considered half-year subjects. Less than one full unit is unacceptable in subjects which ordinarily cover a full year's work and for which a full unit is usually granted. Applicants offering a classical or modern language must present a minimum of two units. An applicant who does not present two units of credit in a language (modern or classical) may offer as a substitute two units of either history and/or natural science. More than four units in any specific subject is not acceptable.

Early Admission

Effective in September, 1970, Xavier University began admitting superior high school students, full-time or part-time, who have completed junior year and have the recommendation of their principal and counselor. Such students must have maintained a grade point average of at least a B. Courses completed in high school should include three units of English, two of mathematics, two of science, two of social science, and two units of one foreign language.

Admission on Probation

Applicants who do not meet the qualifications for admission may, under special circumstances, be admitted on probation at the discretion of the Committee on Admissions. They must pass whatever examinations the Committee on Admissions shall deem necessary.

Advanced Placement

The University grants advanced placement with credit in subjects in which a student has made a satisfactory score in the College Entrance Examination Board Advance Placement tests. There is a $5.00 service fee for students in this program who request that their grades be sent to another school.

Admission to the Pre-Medical Program

A minimum academic average of B is ordinarily required for admission to the pre-medical program. However, applicants whose averages are lower may be considered by the Committee on Admissions, given aptitude and intelligence tests, and admitted at the discretion of the Committee on Admissions.

Admission to Advanced Standing

Applicants from other institutions of collegiate rank must file with the Director of Admissions complete original credentials from all institutions attended. These credentials must include an official transcript of all high school and college credits showing the entire scholastic record; evidence of honorable dismissal or dismissals; and evidence of satisfactory completion of financial arrangements with the institution or institutions attended. No applicant may disregard his previous college record and apply for freshman standing.
Admission

The rank of advanced standing to which the student will be admitted will depend upon the quantity and quality of the work done in the other institution or institutions, the accreditation of the institution, and the conformity of the work to the degree program for which the student wishes to register. Courses in which the applicant has received the lowest passing grade will not be acceptable. These courses need not be repeated unless repetition be deemed necessary by the Dean or the directors of the departments. In all cases evaluation of credits for advanced standing will be provisional for at least one semester.

Students dismissed for poor scholarship from the University or from other institutions will not be eligible for admission or readmission until the lapse of at least one semester. In all cases, admission or readmission and the conditions of such will be determined finally by the Committee on Admissions.

All credentials must be on file in the office of the Director of Admissions at least one month prior to the day of registration. (See paragraph on Necessary Credentials.) It is advisable to get transcripts in much earlier.

Necessary Credentials

Applicants for admission to Xavier University must submit official records from all high schools and colleges previously attended. These records must be sent to Director of Admissions directly by the proper officer of the school or schools formerly attended—never through the student. Credentials accepted for admission become the property of the University and are kept on file permanently. All credentials must be filed at least one month before the day of registration.

Admission of Special Students

Although the University usually recommends a complete program of studies, students who possess sufficient maturity, experience, and educational background may, with the dean's consent, choose special courses without following a complete degree program. Courses thus taken may be subsequently credited toward a degree if proper credentials are presented.

Notification of Admission

The applicant will receive from Xavier University a notice of admission or a notice of unfavorable action as soon as the University has received his admission form and the official records from all high schools and all colleges previously attended.

Provisional Admission

Provisional admission may be granted by the Dean to a student who has been unable to complete arrangements for formal admission before registration dates. If the student is later discovered to be unqualified for admission, his admission and registration are canceled.

Admission of Veterans

Xavier University is approved by the Veterans Administration for the education and training of veterans and their dependents under all existing public laws.

All requests for information should be addressed to The Director, Veterans Educational Benefits, Xavier University, Alter 114, Cincinnati, Ohio 45207.

Admission to Evening College

Those seeking admission to the undergraduate Evening College, whether in Arts and Sciences or in Business Administration, should apply to: The Dean, Evening College, Xavier University, Cincinnati, Ohio 45207.

Most of the regulations under "Application for Admission and Admission Requirements" apply also to the Evening College. But certain differences must necessarily exist between admission to a full-time and a part-time program; hence, those seeking admission to the Evening College would be well advised to write or telephone that office.

It should be noted that non-local full-time students registered for 12 semester hours or more through the Evening College and attending day classes must live in the dormitory until they attain the status of Senior (90 semester hours completed). All fees applicable to full-time day students are applicable to full-time students registered for day classes through the Evening College.

Registration

Time of Registration

Fixed dates in each session found in the academic calendar of this Catalogue are reserved for registration.

Late Registration

Registration on days later than the assigned dates may be permitted upon the payment of a late registration fee of $5.00 and $1.00 per day up to ten days.

Change in Schedule

After the student has filed registration forms, changes in courses or sections can be made only with the consent of the Dean at the recommendation of the departmental advisor. No change in schedule may be made later than one week after the inception of classes.

A fee of $3.00 will be charged for each change.

Number and Choice of Courses Permitted

The number and choice of courses or total number of credit hours in a student's program of studies are subject to such restriction as shall be deemed necessary by the Dean or the departmental advisor.

Selection of Courses

Students must observe prerequisites set by the University or by the departments which conduct the instruction. Students may not disregard the directions of the dean and of the chairman of departments in this matter.

Since the University must consider the needs of all students, it may sometimes be unable to accommodate itself to the preferences of some students for particular hours and professors. The scheduling of courses and sections at certain hours does not mean that a student can always be admitted to any given section which he may select.
Communications concerning costs for the Evening College should be addressed to the Dean of the Evening College, Xavier University, Cincinnati, Ohio 45207. Certain charges, such as the deposit with the application, are not required by the Evening College.

The following rates are effective in the regular academic year and in the summer sessions. All communications concerning expenses for the College of Arts and Sciences or the College of Business Administration should be addressed to the Director of Admissions, Xavier University, Victory Parkway, Cincinnati, Ohio 45207.

A non-refundable fee of $15.00 must accompany the Application for Admission. For those requesting housing accommodations, an additional $100.00 is required. The housing deposit will be applied to the student's regular account. It will not be refunded if the applicant, having been accepted, cancels his application or fails to enter the University.

Accounts Payable (Undergraduate Day Classes)

All accounts must be settled on the day of registration. Attendance at classes will not be permitted until all financial obligations have been completed.

Ordinary Expenses

Tuition per credit hour, undergraduate colleges ........................................... $45.00

Tuition for 1970-71 is subject to change.

N.B.—Auditors pay same rate as above.

Matriculation fee (payable once) ................................................................. 10.00

R.O.T.C. fee (per semester) ............................................................................ 10.00

Deposit (partially refundable) ........................................................................ 25.00

Laboratory science fee (per course per semester, for Biology, Chemistry, Physics, Experimental Psychology, Physiological Psychology, and Statistical Techniques) ................................................................. 20.00

Laboratory materials deposit (per course per semester—partially refundable) 10.00

Laboratory materials deposit, Comparative Anatomy ................................ 15.00

Laboratory materials deposit for science thesis (partially refundable) 25.00

Medical Technology Fee (see block schedule) .............................................. 75.00

General fee (per semester) ........................................................................... 50.00

(The general fee includes the use of all non-classroom facilities, the Student Health Center, and a reduction in the fee charged for the services of the Psychological Services Center.)

Identification Card (annually) ....................................................................... 3.00

Language laboratory fee (to be paid by all students required to use the language laboratory, per semester) ................................................................. 5.00

Honors Course

A flat rate of $700.00 per semester (exclusive of military fees) has been approved by the Board of Trustees for students pursuing the Honors A.B. degree course. This flat rate will also include extra courses which the Honors A.B. student, with the permission of the Dean, wishes to take.

* These are 1970/71 rates. The fee schedule for 1971/72 is under study at the time of publication. The schedule may be increased. There will be no changes in tuition.

Fees

Contingent Expenses

Fee for change in registration ................................................................. $ 3.00

Late registration ...................................................................................... 5.00

Additional per day .................................................................................. 1.00

Maximum ................................................................................................. 10.00

Special examinations (each) ................................................................. 2.00

Duplicate transcript ................................................................................ 1.00

Undergraduate Record Examination .................................................. 4.00

Graduation fee ......................................................................................... 25.00

Service charge (deducted if bill is paid in full within thirty days after the opening date of the semester) ................................................................. 4.00

Room

Room, per semester ................................................................. $175.00-$200.00

Room damage deposit (refundable when student no longer lives on campus) 25.00

(Room charges are subject to periodic increase in accord with operating costs.)

Room Equipment

All rooms are equipped with a bed, desk, chair, bed linen, and desk lamp.

Students are expected to bring blankets, towels, and soap.

Board

Meals are served in the University Center. Students who live on campus are required to take their meals in the University Dining Room on a seven-day, 17-meal board plan. The board plan provides for three meals a day Monday through Friday and for dinner on Saturday and Sunday. During the academic year the board rate will be between $285.00 and $295.00, per semester, depending on food, labor, and maintenance costs. Breakfast and lunch on Saturdays are available in the Grill, and brunch on Sundays in the University Dining Room. These meals are served on a cash basis.

Refunds (Undergraduate)

A refund of tuition may be claimed in the case of withdrawal or dismissal. During the academic year the amount refunded will be diminished by 20 per cent of the total initial amount for each four class days of the session or fraction thereof. No refund will be made after classes have been in session for more than eight weeks. The amount of the refund will be calculated from the date of formal notification of withdrawal. Cf. Withdrawal from the University.

During summer sessions the amount refunded will be diminished by 20 per cent of the total initial amount for each four class days of the session or fraction thereof. No refund will be made after classes have been in session for more than sixteen class days.

Fees are not refunded in regular or summer sessions.

A refund of board expenses may be claimed by one separating from the University. The amount of refund will be proportional to the date at which the student gives formal notice of separating from the University. Students drafted or called to service as reservists will receive a 100% refund of tuition and a partial refund for the unused portion of their General Fee. At the time of application for this refund, the student's ID card must be returned to the Treasurer's office.
Academic Regulations

Classification of Students

Lower Division Groups:
1. Freshmen—students having less than 28 credit hours and 56 quality points.
2. Sophomores—students having from 29 credit hours and 58 quality points to 34 credit hours and 108 quality points.

Upper Division Groups:
1. Juniors—students having from 55 credit hours and 110 quality points to 89 credit hours and 178 quality points.
2. Seniors—students having a minimum of 90 credit hours and 180 quality points.

Other Groups:
1. Part-time—students taking less than 12 credit hours of work in any semester.
2. Unclassified—students who have not declared themselves as candidates for any degree.
3. Auditors—students not taking courses for college credit.

Unit of Instruction

A unit of instruction is one hour a week for a minimum of fifteen weeks. The unit is called a credit hour. A weekly two- or three-hour period of laboratory work is considered equivalent to one credit hour.

Examinations

Examinations in all courses are regularly held at mid-semester and the end of the semester. A student who has been absent from a mid-semester or semester examination will receive a grade of X if the excuse for the absence is acceptable to the dean; otherwise, the absentee will receive an automatic failure. Absence, however, does not excuse a student from the requirement of a special examination at a time determined by the Dean. If an X grade is not removed within two weeks, a grade of F will be given for the course.

Written assignments are due at the time specified by the instructor. If extension of time is granted, the student will be given a temporary grade of I. Unless the assignments are completed within two weeks after the last day of the regularly scheduled examinations, the student will be recorded as failing the course.

If a student claims knowledge of a subject for which he cannot furnish an official record, a special examination may be given with the approval of the Dean and the chairman of the department.

Grading System

A — Exceptional. Indicates not only high achievement but also an unusual degree of intellectual initiative.
B — Good. Indicates attainment above the average.
C — Average. Indicates the normal attainment for the average student.
D — Inferior. Indicates passing work but below the normal attainment.
F — Failure.

I — Incomplete; grade withheld pending fulfillment of assignment.
W — Withdrawal (approved).
X — Absent from examination.
S — Pass for Pass/Fail electives.
U — Unsatisfactory for Pass/Fail electives.

N.B.—No student may withdraw from a class within the last 28 days before the first day of the final examinations. At this time he must either take the examinations or receive a failure.

All withdrawals must be official.
1. The student must obtain written permission of his Dean.
2. The student must go to the Registrar's office and personally withdraw.

Quality Points

The quality point is the unit used in measuring the quality of student achievement in a course. The number of quality points received for any course is equal to the number of quality points attached to the grade received multiplied by the number of credit hours yielded by the course. Quality points are given as follows:

A — 4 points per credit hour
B — 3 points per credit hour
C — 2 points per credit hour
D — 1 point per credit hour

The scholastic standing of the student at the end of any session is the ratio of the total number of quality points received to the total number of credit hours carried in that session. An Evening College session or semester consists of twelve consecutive semester hours.

Pass/Fail

Effective in January, 1970, and continuing experimentally for two years, juniors and seniors may carry one course a semester on a Pass/Fail basis. The course will carry credit hours toward graduation but will have no effect on the quality point average. It may not be in the student's major nor in the BSBA Business Core. (Pre-medical students should not take science courses as Pass/Fail, nor should those working for teaching certificates elect education courses.) Students must indicate election of a Pass/Fail course at pre-registration. Changes to or from a grade basis are allowed until the close of late registration.

Probation

Freshmen admitted to the University on probation must earn a quality point average of 1.75 during the first semester to remove the probation.

Students whose academic work does not meet the following quality point norms will incur probation:

Freshmen whose average falls below 1.75 in either semester.
Sophomores, juniors, and seniors whose average falls below 2.00 in any semester.

Probation will continue for at least one semester. During that semester the student's program will be reduced by at least one course, and he may not participate in co-curricular activities except those of a religious nature. Probation which begins or ends at midyear shall begin or end with the first day of class in the second semester.

If the student fails to average 2.00 during the semester in which he is on probation, he will be dismissed from the University.

If his average during that semester is 2.00 but his over-all average is less than 2.00, his probation will continue for a second semester.
A student who continues on probation during two consecutive semesters because his average is below 2.00 will be dismissed from the University.

If the student’s record or certain modifying circumstances indicate that his work will improve and that he will graduate in approximately normal time, the dean will give due consideration to such facts as the record indicates. The above should be interpreted in the light of the fact that an average of 2.00 is a minimum requirement for graduation.

Warned List

A freshman student whose quality point average is low but not low enough to justify his incurring probation is placed on the warned list. Such a student does not come under censure, but his participation in co-curricular activities may be limited at the discretion of the dean or the student’s advisor.

Failure

A student who fails in two or more courses in a semester may be excluded from registration at the dean’s discretion. Permission to re-enter the University will be granted only after the student petitions for re-admission in writing and sets forth evidence of his ability to do satisfactory academic work.

Censure

The University reserves the right to censure the conduct of any student on or off the campus in accord with the generally accepted norms of good behavior, Catholic practice, and Catholic principles of morality. This censure will be regarded as purely disciplinary and may take the form of correction, suspension, or dismissal which the President of the University, upon advice of the Committee on Student Welfare, may deem appropriate. Suspension will carry with it the scholastic loss resulting from absence, and dismissal will mean the loss of credit hours. When a student incurs the disciplinary censure of dismissal, or withdraws while under the censure of suspension, the University has the right to declare, at the discretion of the President, the facts of disciplinary censure to the admissions officer of any educational institution to which the student may subsequently apply.

Attendance

In order to secure credit in any course in which he is registered, the student is required to attend classroom and laboratory exercises regularly and promptly. Absences date from the day of opening announced in the calendar.

Absence from a Test

Unexcused absence from a previously announced test may incur the penalty of a failure in that particular test.

Transfer within the University

A student who wishes to transfer from one college of the University to another must make application to the Dean of the college to which he desires to transfer. If the application is approved, arrangements for the transfer will be made. Ordinarily transfers from Evening College to Day School and from Day School to Evening College will not be approved for full-time students until after the student has completed two full semesters in the division from which he wishes to transfer.

Transfers should be arranged at least one month before the opening of a session.

Withdrawal from Courses

If a student withdraws from any or all courses without permission of the Dean or the Registrar, he receives an automatic failure. Permission will be given only when application is made within two weeks after discontinuance of attendance or from the corresponding portion of a summer session.

The student who withdraws from any or all courses with the requisite permission receives a grade of W. See Grading System.

Withdrawal from the University

A student who wishes to withdraw from the University must notify the office of the Dean or the Registrar either in person or in writing. A student is considered to be in attendance until he has given this formal notice of withdrawal.

A student will be obliged to withdraw for reasons of poor scholarship, failure to remove academic probation, or misconduct.

Xavier University reserves the right to require a student to withdraw if, in the judgment of University officials, such action would be beneficial to the physical, mental, emotional, or moral best interests of the student, or is considered necessary for the welfare of the University.

Honorable Dismissal

Honorable dismissal is voluntary withdrawal from the University with the consent of the Dean or the Registrar. A statement to such effect, indicative of the student’s good standing so far as character and conduct are concerned, will be issued only when all indebtedness to the University has been adjusted.

Transcript Regulations

Application for a transcript of credits must be made in writing by the student himself and filed with the registrar at least two weeks before the record is needed.

Requests for transcripts for purpose of transfer to another university or for any other purpose cannot be granted during the busy periods of examination and registration.

Transcripts are issued only after the student has fulfilled all financial obligations to the University.

There is no charge for the first transcript. A fee of $1.00 is charged for each additional transcript.

Since the Registrar’s Office does not maintain Graduate School or Evening College records, students who have been registered in one of the undergraduate day colleges and later in the Graduate School or Evening College must apply to both the Registrar’s Office and the Graduate School or Evening College when requesting transcripts.

Auditor

A student may audit a course if he has the written permission of the Dean. No one may change from the status of auditor to that of credit student, or from credit student to auditor after the date of assigning the grade of W passes.

With permission, juniors and seniors who are on the Dean’s List may audit one extra course without charge. Others may enroll as auditors upon payment of the usual tuition. Academic credit is never given to an auditor.
Curricular Information

Degrees

The University will confer a bachelor's degree upon any candidate who has successfully completed an accepted program of studies, and who has fulfilled, prior to graduation, all degree requirements, both general and particular. Degrees conferred on candidates of the College of Arts and Sciences are the Bachelor of Arts, Honors Bachelor of Arts, Bachelor of Science, and Bachelor of Literature. Graduates of the College of Business Administration receive the Bachelor of Science in Business Administration.

Curricular Guidelines

1. Students entering Xavier University in and after September, 1969, will meet the new curricular requirements approved by the Board of Trustees on May 16, 1968.

2. Essentials of the new curriculum follow:

   Major Academic Subject
   —Hours vary according to the subject. See the department's requirements in the block schedules that follow.
   Supporting Courses
   —Students in the College of Arts and Sciences, except those in physical education and education-science, must complete nine or ten hours in a foreign language, either classical or modern.
   English Composition —unless the student passes the qualifying examination in writing skills. The course (En 101: English Composition), if it must be completed, will be worked into one of the semesters of freshman year. Credit for it applies as an unspecified elective if such exists in the degree program.
   Philosophy
   —Non-majors, except H.A.B. students, choose one of six programs. During freshman, sophomore, and junior years, however, PI 220: Philosophy of Man, PI 230: Metaphysics, and PI 240: Principles of Ethics, are common to all programs.
   Theology
   —Non-Catholic students complete only six hours—of their own choice.
   Courses, mostly elective, from three areas but exclusive of the student’s major department:
   Humanities
   —The Humanities: communication arts, fine arts, literature (classical, English, or a modern language, even in translation), and philosophy and Theology (beyond the fifteen and twelve required hours).
   —In the College of Arts and Sciences students must include six hours of literature as part of the Humanities area. Introductory foreign language courses do not meet this requirement.
   Philosophy
   —Non-majors, except H.A.B. students, choose one of six programs. During freshman, sophomore, and junior years, however, PI 220: Philosophy of Man, PI 230: Metaphysics, and PI 240: Principles of Ethics, are common to all programs.

Mathematics-Science
—Undergraduates must complete six hours of one science and six hours of mathematics.

Social Science
—The Social Sciences: economics, education, geography, history, political science, psychology, sociology, and all business administration subjects.
—Students in the College of Arts and Sciences must include HS 123, 124 (History of Europe) as part of the Social Science Area, unless they have been exempted through a test-out program, in which case they are permitted to substitute one of the following courses: HS 341, 342 (United States Survey) or 251, 252 (Latin American Survey) or the cycled Asian Survey courses: HS 272 and 273, 278 and 279, 283 and 284, 285 and 286.

Unspecified Electives
—Students may use these to complete the total of 120 hours (or 126 with Military Science).

3. This is the new system of numbering courses:

   100 to 199 Lower division courses
   200 to 399 Upper division courses, open to graduate students for graduate credit except where specified as for undergraduate credit only.
   400 to 499 Administrative use only
   500 to 599 Courses for graduate students only

4. Six-hour terminal science courses for non-science majors:
   BI 102-103, 104-105 Man and the Living World
   Ch 102-103, 104-105 Chemistry of Living Things
   Ph 100-101, 102-103 Elementary Astronomy
   Ps 116-117, 118-119 The Earth and Its Environment
   Ps 121-122, 123-124 General Experimental Psychology

5. In selecting courses for the areas in the Humanities, in Social Science, and for the unspecified electives:
—Students must consult approved lists of elective courses which are acceptable to meet Humanities and Social Science requirements.
—All courses offered by the University meet the requirements for unspecified electives.

6. Students will have at least one course in philosophy and one in Theology each year, in part as follows:
   PI 220: Philosophy of Man Th 101: Revelation and Christology
   PI 230: Metaphysics Th 102: Christian Life Within the Church
   PI 240: Principles of Ethics Th Elective

When class sections are filled, the preceding courses in philosophy and in Theology are interchangeable by semesters. During their first years at the University, underclassmen, except majors in philosophy and H.A.B. candidates, will elect one program, to be completed in senior year, from these variables:

I. PI 241: Current Moral Problems
   An elective from any other program.

II. PI 241: Current Moral Problems
   Select one: PI 243: Principles of Political Philosophy, or 244: Medical Ethics, or 246: Business Ethics
Curriculum

III. PI 381: Contemporary Continental European Philosophy
    PI 383: Contemporary British and American Philosophy

IV. Select two: PI 230: History of Ancient Philosophy
    PI 260: History of Medieval Philosophy
    PI 270: History of Modern Philosophy
    PI 280: History of Contemporary Philosophy (or 381 or 383)

V. PI 232: Philosophy of God
    PI 235: Theory of Knowledge

VI. PI 210: Logic (or 310)
    PI 237: The Material World (or 338)

Elective Courses in philosophy are listed in the block schedules in senior year as Program Electives.

—In Program I the elective may be taken after PI 230 (unless PI 240 is prerequisite).
In Program II the sequence is fixed.
In Program VI PI 210 may be taken before or after PI 220 and 230.
In Programs III, IV, and V the sequence after PI 230 is optional except as prerequisites apply.

—The Chairman may authorize substitutions in courses other than PI 220, 230, and 240.
—H.A.B. students will complete PI 200, 220, 230, 240, 260, 270, and 280 (or 381 or 383).
—Majors in philosophy will follow the block schedule for philosophy.

7. Students majoring in CA, En, HS, FL, PI, So, and Th may elect any lower division mathematics courses (except Mt 113 and 132). Students may not elect both Mt 101 and 103 or both Mt 121 and 122.

Requirements for Degrees

1. Candidates for undergraduate degrees must complete the curricular requirements listed under the preceding Curricular Guidelines.
2. Students must complete from six to fifteen hours of lower division work preparatory to the specialization of their choice.
3. They must also have no fewer than eighteen hours of upper division work in the major, in all of which they must attain an average of C.
4. They must have at least 120/126 hours with an overall average of C.
5. They must have an average of C in upper division courses.
6. They must have completed the last 30 hours in residence and with an average of C.
7. They must have filed formal application for the degree in the office of their college.
8. They must have taken the Undergraduate Record Examination (Advanced Test) in their major field if it is a departmental requirement.
9. They must have passed the comprehensive examination in the College of Arts and Sciences—unless the department has a substitute requirement. (When a thesis is required, the original and one copy must be deposited in the Registrar's office on or before the date designated in the University Calendar in the Catalogue.)
10. They must have discharged all financial obligations to the University.
11. They must have agreed to be present at the Commencement.

Graduation Honors

Honors are awarded on the basis of outstanding attainment. A student who has earned a quality-point average of 3.75 in his college work will be graduated Summa cum Laude; one who has earned 3.5, Magna cum Laude; one who has earned 3.25, cum Laude. These honors are announced at commencement and are inscribed on the diplomas of those meriting them.

For students graduating in June, the final semester's work cannot be computed in determining the quality-point average for honors.

Transfer students are eligible for honors at graduation only under the following conditions:

1. They must have completed the last sixty-four semester hours of work at Xavier University.
2. Their quality-point average must be computed on the basis of all of their college work.
3. Under no circumstances will honors be awarded that are higher than the honors merited by the quality-point average earned at Xavier University.

Reservation of Rights

The University reserves the right to modify its graduation and other requirements as may seem necessary from time to time. It will be obligated only during the academic year of the student's registration by requirements published in the Catalogue for that year.

Students who interrupt their attendance and who later return must meet the curricular requirements in force at the time of their return.

Studies Outside the United States

Students who desire to spend a year abroad as part of their undergraduate education have a number of possibilities open to them. The student should consult the Chairman of the International Education Committee for available opportunities. The program sponsored by Loyola University, Chicago, at the Rome Center of Liberal Arts is especially recommended. Students who wish to spend their sophomore or junior year at the Rome Center are urged to request information in the first semester of the previous year. A full complement of courses is taught by faculty from Loyola and other American and European universities. The transcript of credits is issued from Loyola, Chicago. Xavier University is an affiliate of Loyola University in sponsoring the year abroad at the Rome Center.

For the student's convenience, specific information about the purposes of, and the requirements for, the various degree programs is given on the following pages. A block schedule, suggesting the student's sequence of courses, is also presented. The student may increase his or her course load with the Dean's consent.
Honors Bachelor of Arts

En 3 En 3
Gk 172—Plato* or ................................ 3 Gk 162—Betrupides or ................................ 3
Gk 101—Elem. Greek ................................ 5 Gk 102—Intro. to Greek Lit. .................. 5
Hs 123—Europe to 1648† ................................ 3 Hs 124—Europe Since 1648† ........................ 3
Lt 128—Cicero .................................................. 3 Lt 133—Virgil: Aenid VII—XII ..................... 3
Mt 120—Calculus I .............................................. 3 Mt 130—Calculus II ....................................... 3

**Total ........................................15—17 **Total ........................................15—17

Sophomore Year

Ch 110—Gen. Chemistry I ......................... 3 Ch 112—Gen. Chemistry II ...................... 3
Ch 111—Gen. Chemistry I Lab ...... 1 Ch 113—Gen. Chemistry II Lab ...... 2
Gk 260—Sophocles ......................................... 3 Gk 331—Thucydides................................. 3
Lt 313—Latin Comp. ....................................... 3 Lt 231—Horace: Odes ............................. 3
Pl 200—Origins of Phil. ......................... 3 Pl 220—Phil. of Man ................................ 3
Th 101—Christology ...................................... 3 Th 102—Christian Life .............................. 3
Elective ....................................................... 3 Elective ............................................... 3
Total .............................................19 Total ...........................................19—20

Junior Year

En 3 En 3
Gk 371—Plato: Republic .............................. 3 Gk 251—Homer: Iliad ............................. 3
Hs—Elective .................................................. 3 Hs—Elective ........................................... 3
Lt 391—Lucretius .......................................... 3 Lt 312—Tuccidies................................. 3
Pl 230—Metaphysics ................................... 3 Pl 240—Prins. of Ethics ......................... 3
Th—Elective .................................................. 3 Electives ............................................. 6

Total .............................................15—21 Total ...........................................15—21

Senior Year

Gk 388—Hist. of Greek Lit. ....................... 3 Lt 388—Hist. of Latin Lit. ...................... 3
Lt 261—Roman Comedy .................................. 3 Pl 270—Modern Phil. ............................ 3
Pl 260—Medieval Phil. ................................. 3 Pl 280—Contemporary Phil. .................. 3
Th—Elective .................................................. 3 Electives ............................................. 12

Total .............................................12—21 Total ...........................................12—21

* Students having two units of high school Greek, or its equivalent, will register for Gk 172. Others will take Gk 101.
** Those not taking Gk 101, 102 ordinarily elect a modern language.
† Required, unless exempted through a test-out program. See Curricular Information: Curricular Guidelines No. 2.

Degree Programs—
The College of Arts and Sciences

THE HONORS BACHELOR OF ARTS

The Honors Bachelor of Arts is awarded to students who have completed the entire Honors program of the University. This curriculum was instituted in the belief that its values meet the needs of the day for Christian humanism. It attempts to build a security based on those things that are themselves secure—the great languages and their literatures; the nature of science; the history of human thought and action; philosophy, by which men come to understand themselves, the ways of God with humankind, their dignity as men, and their obligations to their fellowmen.

Only those ranking high in their high school graduating classes will be admitted to the Honors program. A special board of admissions passes on the fitness of applicants. In doubtful cases applicants will take special examinations to determine their qualifications for the program.

In addition to the regular requirements for admission to the University, students accepted for the Honors course must have four units of Latin, and it is desirable that they have two units of Greek.

It will be noted that the possibility of at least thirty-three elective hours enables the superior student, in addition to completing an intensive course in the liberal arts, to cover the pre-medical requirements or to do concentrated work in a major field—classics, economics, English, history, the modern languages, philosophy, physics, or psychology.

The minimum requirements:

<table>
<thead>
<tr>
<th>Subject</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>English</td>
<td>12</td>
</tr>
<tr>
<td>Greek</td>
<td>18—22</td>
</tr>
<tr>
<td>History</td>
<td>12</td>
</tr>
<tr>
<td>History of Classical Lit.</td>
<td>6</td>
</tr>
<tr>
<td>Latin</td>
<td>21</td>
</tr>
<tr>
<td>Mathematics*</td>
<td>6</td>
</tr>
<tr>
<td>Philosophy</td>
<td>21</td>
</tr>
<tr>
<td>Science**</td>
<td>8—9</td>
</tr>
<tr>
<td>Theology</td>
<td>12</td>
</tr>
<tr>
<td>Electives†</td>
<td>36</td>
</tr>
</tbody>
</table>

* The six hours of mathematics include Calculus I and II.
** The science requirement may be fulfilled by taking either General Zoology or General Chemistry.
† Students need not take all thirty-six hours of electives; or, with permission, they may take more than thirty-six hours.
THE BACHELOR OF SCIENCE (Biology)

The biology curriculum includes a core presenting current concepts of the molecular, cellular, organismal, and population levels of biological organization. It also offers electives to encourage students to acquire some depth in these areas. Lectures and laboratory procedures present basic biological principles, experience in careful observation, controlled experimentation, and thoughtful analysis of scientific data.

A student's program contributes to his liberal arts education and prepares him for career opportunities:

1. Graduate study
2. Entrance to schools of medicine, dentistry, veterinary medicine, and optometry
3. Teaching biology at the high school level
4. Specialized employment

Students planning graduate study, teaching, or similar employment complete General Zoology, General Botany, Genetics, General Physiology, and Methods of Biological Research (20 hours) and 16 hours of Bl electives.

Those going to medical or dental schools complete General Zoology, Microbiology or General Botany, Genetics, General Physiology, and Methods of Biological Research (20 hours), twelve recommended hours including Embryology, Comparative Anatomy, Vertebrate Histology, and four hours of Bl electives.

Majors must complete two semesters of physics, four of chemistry (through organic), and two of mathematics (statistics and calculus). The Chairman advises students as to course sequence and prerequisites for courses. With his approval, majors may substitute courses to fulfill requirements.

Program requirements are:

<table>
<thead>
<tr>
<th>Subject</th>
<th>L.D.</th>
<th>U.D.</th>
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</thead>
<tbody>
<tr>
<td>Biology</td>
<td>8</td>
<td>28</td>
</tr>
<tr>
<td>Chemistry</td>
<td>9</td>
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<tr>
<td>History</td>
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<td>Humanities</td>
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<tr>
<td>Mathematics</td>
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<tr>
<td>Modern Language</td>
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<tr>
<td>Philosophy</td>
<td>—</td>
<td>15</td>
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<tr>
<td>Social Science</td>
<td>6</td>
<td>—</td>
</tr>
<tr>
<td>Theology</td>
<td>6</td>
<td>6</td>
</tr>
</tbody>
</table>

The Bachelor of Science (Biology) program includes a core presenting current concepts of the molecular, cellular, organismal, and population levels of biological organization. It also offers electives to encourage students to acquire some depth in these areas. Lectures and laboratory procedures present basic biological principles, experience in careful observation, controlled experimentation, and thoughtful analysis of scientific data.

A student's program contributes to his liberal arts education and prepares him for career opportunities:

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Majors must complete two semesters of physics, four of chemistry (through organic), and two of mathematics (statistics and calculus). The Chairman advises students as to course sequence and prerequisites for courses. With his approval, majors may substitute courses to fulfill requirements.

Program requirements are:
THE BACHELOR OF SCIENCE (Chemistry)

The Department of Chemistry offers a comprehensive curriculum leading to the Bachelor of Science. The program covers the four major fields (inorganic, analytical, organic, and physical chemistry), the preparation and identification of compounds, and the literature on the subject. Ch 190 (Chemical Literature) fits the student to prepare his thesis and amounts to a beginning course in research.

Xavier University is approved by the American Chemical Society for its training in chemistry.*

Departmental requirements for a major include:

The completion of Ch 110, 111, 112, 113, 130, 131, 132, 133, 140, 141, 142, 143, 190, 230, 250, 260, 261, 280, 281, and one of the following: Ch 320, 340, or 370.

2. A senior research project culminating in a written thesis, Ch 298, 299.

The minimum program requirements follow:

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<td>Chemistry</td>
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<td>German**</td>
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* Students completing the approved program of studies are graduated as "certified" chemistry majors.
** Russian may be substituted for German.

B.S. (Chemistry)

Freshman Year

<table>
<thead>
<tr>
<th>First Semester (Sem. Hrs.)</th>
<th>Second Semester (Sem. Hrs.)</th>
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</thead>
<tbody>
<tr>
<td>Ch 110—Gen. Chemistry I</td>
<td>Ch 112—Gen. Chemistry II</td>
</tr>
<tr>
<td>Ch 111—Gen. Chemistry I Lab</td>
<td>Ch 113—Gen. Chemistry II Lab</td>
</tr>
<tr>
<td>Mt 120—Calculus I*</td>
<td>Mt 130—Calculus II</td>
</tr>
<tr>
<td>Hs 123—Europe to 1648**</td>
<td>Hs 124—Europe Since 1648**</td>
</tr>
<tr>
<td>Humanities Elective</td>
<td>Humanities Elective</td>
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<tr>
<td>Th 101—Christology</td>
<td>Pl 220—Phil. of Man</td>
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Total: 16

Sophomore Year

<table>
<thead>
<tr>
<th>First Semester (Sem. Hrs.)</th>
<th>Second Semester (Sem. Hrs.)</th>
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</thead>
<tbody>
<tr>
<td>Ch 130—Physical Chemistry I</td>
<td>Ch 132—Physical Chemistry II</td>
</tr>
<tr>
<td>Ch 131—Physical Chemistry I Lab</td>
<td>Ch 133—Physical Chemistry II Lab</td>
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<tr>
<td>Mt 110—Vectors and Geometry</td>
<td>Mt 220—Advanced Calculus I</td>
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<td>Ph 109—Univ. Physics I</td>
<td>Ph 110—Univ. Physics II</td>
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<td>Th 102—Christian Life</td>
<td>PI 230—Metaphysics</td>
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Total: 17

Junior Year

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<th>Second Semester (Sem. Hrs.)</th>
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<tr>
<td>Ch 140—Organic Chemistry I</td>
<td>Ch 142—Organic Chemistry II</td>
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<td>Ch 141—Organic Chemistry I Lab</td>
<td>Ch 143—Organic Chemistry II Lab</td>
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<td>Ch 280—Instrumental Analysis Lab</td>
<td>Ch 281—Instrumental Analysis Lab</td>
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<td>Gr 100—German I</td>
<td>Gr 102—Scientific German</td>
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<td>Mt 230—Advanced Calculus II</td>
<td>Mt 230—Physical Chemistry III</td>
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<td>Th—Elective</td>
<td>PI 240—Prins. of Ethics</td>
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Total: 17

Senior Year

<table>
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<th>First Semester (Sem. Hrs.)</th>
<th>Second Semester (Sem. Hrs.)</th>
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<tbody>
<tr>
<td>Ch 250—Qual. Organic Anal.</td>
<td>Ch 320, 340 or 370</td>
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<tr>
<td>Ch 260—Inorganic Chemistry</td>
<td>Ch 299—Senior Research II</td>
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<td>Ch 261—Inorganic Chemistry Lab</td>
<td>Pl—Program Elective</td>
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<td>Ch 298—Senior Research I</td>
<td>Social Sciences Elective</td>
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<td>Humanities Elective</td>
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<td>Social Sciences Elective</td>
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</tr>
</tbody>
</table>

Total: 17/16

* If a student has advanced standing in the calculus, he will begin his mathematics course with Mt 130 or Mt 110. Upper divisions courses beyond Mt 130 will be selected with the assistance of his departmental advisor. If the entering student has a serious mathematics deficiency, he may be required to take Mt 119: College Algebra and Trigonometry.
** Required, unless exempted through a test-out program. See Curricular Information: Curricular Guidelines No. 2.

77
THE BACHELOR OF SCIENCE (Chemical Science)

In addition to the B.S. (Chemistry) program (see pp. 76-77), the Department of Chemistry offers a program which leads to the degree of Bachelor of Science (Chemical Science). This latter program is intended primarily for those students who wish to make use of chemical knowledge in connection with a career in the business world, e.g., in sales or marketing, or in secondary education.

The course requirements in chemistry and mathematics are less than those of the B.S. (Chemistry) program. The hours thus released are made available as free elective hours which then can be applied to courses in accounting, business administration, economics, education, etc.

Where specific program requirements exist, they are indicated in the block schedule on the facing page. Substitutions can be made with permission of the chairman of the department.

General program requirements are as follows:

<table>
<thead>
<tr>
<th>Subject</th>
<th>Sem. Hrs.</th>
<th>L.D.</th>
<th>U.D.</th>
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<tbody>
<tr>
<td>Chemistry</td>
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<td>Mathematics</td>
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<td>Subject</td>
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<td>U.D.</td>
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<td>Social Studies</td>
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</tr>
<tr>
<td>Electives</td>
<td></td>
<td></td>
<td></td>
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</tbody>
</table>

The B.S. (Chemical Science) program includes the following courses in specific subjects:

**First Semester**
- Ch 110—Gen. Chemistry I............. 3
- Ch 111—Gen. Chemistry I Lab........ 1
- Mt 101—Statistical Inference........ 3
- Hs 123—Europe to 1648*.............. 3
- Th 101—Christology................ 3

**Total**................................. 13

**Second Semester**
- Ch 112—Gen. Chemistry II........... 3
- Ch 113—Gen. Chemistry II Lab....... 2
- Mt 121—Calculus (Science)......... 3
- Hs 124—Europe Since 1648*.......... 3
- Elective................................ 3

**Total**................................. 17

**Sophomore Year**
- Ch 120—Analytical, Physical........ 3
- Ch 121—Analytical, Physical Lab... 1
- Ph 104—College Physics I........... 3
- Ph 105—College Physics I Lab...... 1
- Th 102—Christian Life............... 3
- Humanities Elective................ 3
- Elective................................ 3

**Total**................................. 17

**Junior Year**
- Ch 140—Organic Chemistry........... 3
- Ch 141—Organic Chemistry I Lab.... 1
- ML Modern Language.................. 5
- Th—Elective........................... 3
- Elective................................ 3
- Social Science Elective............ 3
- Humanities Elective................ 3
- Elective................................ 3

**Total**................................. 15

**Senior Year**
- Ch 280—Instrumental Analysis...... 3
- Th—Elective........................... 3
- Mt—Program Elective................ 3
- Social Science Elective............ 3
- Elective................................ 3

**Total**................................. 15

* Required, unless exempted through a test-out program. See Curricular Information: Curricular Guidelines No. 2.
### A.B. (Classics)

#### Freshman Year

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<th>Second Semester</th>
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<tr>
<td>Hs 123—Europe to 1648*</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Lt 126—Cicero</td>
<td>3</td>
<td>Lt 151—Aeneld I-VI</td>
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<td>ML or Gk</td>
<td>5/3</td>
<td>ML or Gk</td>
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<td>Mt—Elective</td>
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<td>Mt—Elective</td>
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<tr>
<td>Th 101—Christology</td>
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<td>Th 102—Christian Life</td>
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#### Sophomore Year

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<td>Lt 131—Horace</td>
<td>3</td>
<td>Lt—Directed</td>
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<td>Gk or Elective</td>
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<td>Gk or Elective</td>
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<td>Science Elective</td>
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<td>Science Elective</td>
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<td>Th 102—Christian Life</td>
<td>3</td>
<td>Th 202—Phil. of Man</td>
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#### Junior Year

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<tr>
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<td>Lt</td>
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<td>Social Science Elective</td>
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<td>Social Science Elective</td>
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<tr>
<td>Th—Elective</td>
<td>3</td>
<td>Th 240—Prins. of Ethics</td>
</tr>
<tr>
<td>Gk or Elective</td>
<td>3</td>
<td>Gk or Elective</td>
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<td><strong>Total</strong></td>
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#### Senior Year

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<th>Second Semester</th>
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<td>Lt</td>
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<td>Electives</td>
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<td>Electives</td>
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<td>PI—Program Elective</td>
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<td>PI—Program Elective</td>
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<td>Th—Elective</td>
<td>3</td>
<td>Th</td>
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<tr>
<td><strong>Total</strong></td>
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<td><strong>Total</strong></td>
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</tbody>
</table>

* Required, unless exempted through a test-out program. See Curricular Information: Curricular Guidelines No. 2.
THE BACHELOR OF SCIENCE (Communication Arts)

The Department of Communication Arts develops responsible attitudes and skills in communication.

A student selects his concentration in a specific area, first taking those preparatory courses which equip him for basic courses in that area; electives enable him to add more depth.

Areas of concentration within the CA program (30 hours) are shown below. Core courses are required; electives are suggested. Creativity is encouraged at all stages of development, and one-hour Practicums in an area provide opportunities for original work.

A senior project and senior comprehensive examinations complete the degree program.

CA areas of concentration with specific requirements follow:

Communication-Speech (Core, 15 hours; Electives, 15 hours)
Core: 101, 102, 201, 203, 262
Electives: 202, 209, 227, 234, others

Film (Core, 18 hours; Electives, 12 hours)
Core: 101 or 102, 203, 262, 211, 213
Electives: 214, 215, 216, 217, others

Journalism (Core, 18 hours; Electives, 12 hours)
Core: 101 or 102, 203, 262, 241, 242, 243
Electives: 202, 222, 251, 252, 253

Public Relations (Core, 21 hours; Electives, 9 hours)
Core: 101 or 102, 203, 262, Journalism course(s), 251, 252, 253
Electives: others

Radio-Television (Core, 21 hours; Electives, 9 hours)
Core: 101 or 102, 201, 203, 262, 221, 224, 225
Electives: 222, 223, 226, 227, 229, others

Theatre (Core, 24 hours; Electives, 6 hours)
Core: 102, 201, 203, 262, 231, 234, 235 or 238
Electives: 233, 235, 236, 238, 239, 240, others

Further degree requirements follow:

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<th>Subject</th>
<th>L.D.</th>
<th>U.D.</th>
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<th>U.D.</th>
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<td>Philosophy</td>
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<td>Humanities</td>
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<td>Social Science</td>
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<td>Mathematics</td>
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B.S. (Communication Arts)

Freshman Year

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<td>CA—Core Course*</td>
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<td>Science Elective</td>
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<td>Th 101—Christology</td>
<td>3</td>
<td>PI 220—Phil. of Man</td>
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Sophomore Year

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<td>Hs 123—Europe to 1648**</td>
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<td>Hs 124—Europe Since 1648**</td>
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<td>Mt—Elective</td>
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<td>Mt—Elective</td>
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<td>Th 120—Christian Life</td>
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<td>PI 230—Metaphysics</td>
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Junior Year

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<td>PI 240—Prins. of Ethics</td>
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<tr>
<td>Elective</td>
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</tr>
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<td><strong>Total</strong></td>
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<td><strong>Total</strong></td>
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Senior Year

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<tbody>
<tr>
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</table>

* Core courses vary with specific areas of concentration. (See opposite page for areas of concentration, and for respective cores and electives.) Ordinarily, core courses should be completed before the electives.

** Required, unless exempted through a test-out program. See Curricular Information: Curricular Guidelines No. 2.
THE BACHELOR OF ARTS (Economics)

A Bachelor of Arts degree in economics is offered those who wish to take the traditional liberal arts program. The curriculum of an economics major is designed to satisfy the student's desire for a broad liberal arts background, and to provide a general, but thorough, understanding and appreciation of economic activity.

Students majoring in economics must complete these specific courses:

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Subject</th>
<th>Sem. Hrs.</th>
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<tr>
<td>Ec 101, 102</td>
<td>Principles of Economics</td>
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</tr>
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<td>Ec 200</td>
<td>Microeconomic Analysis</td>
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<td>Ec 201</td>
<td>Macroeconomic Analysis</td>
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</tr>
<tr>
<td>Ec 202</td>
<td>History of Economic Thought</td>
<td>3</td>
</tr>
<tr>
<td>Ec 210</td>
<td>Human Resources</td>
<td>3</td>
</tr>
<tr>
<td>Ec 250</td>
<td>Money and Banking</td>
<td>3</td>
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<tr>
<td>Ec 345</td>
<td>International Economics</td>
<td>3</td>
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<tr>
<td>Ec 200-Microeconomics</td>
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<td>Ec 345-International Economics</td>
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Prescribed subjects and credit hours required by the A.B. (Economics) follow:

<table>
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<th>Subject</th>
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<tbody>
<tr>
<td>Economics</td>
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A.B. (Economics)

**Freshman Year**

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**Sophomore Year**

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**Junior Year**

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**Senior Year**

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* Required, unless exempted through a test-out program. See Curricular Information: Curricular Guidelines No. 2.
TEACHER CERTIFICATION

Secondary School

The sequential courses in education are planned to provide the required preparation for teaching in secondary schools of Ohio.

Each student must be formally accepted in writing into the teacher education program before he takes his first course in education. This acceptance is given in the Teacher Education and Placement Office, 14 Alter Hall. Prior to the semester in which he plans to do student teaching, he must receive formal acceptance from the Director of Student Teaching, 14 Alter Hall.

The minimum professional requirements for high school certification in Ohio are attained at Xavier University by the following:

2. For teaching particular subjects (history, English, etc.), the student must consult the specific state requirements of each subject. Copies of these requirements may be secured in the Teacher Education and Placement Office.
3. For teaching health and physical education, the student must follow the B.S. (Physical Education) program, outlined below, which constitutes a major in physical education. Information and counselling are available at the Physical Education Office in the Xavier University Fieldhouse.

Elementary School

The B.S. (Elementary Education) program is a major in Elementary Education and leads to certification to teach grades one through eight in Ohio. This program is outlined in the block schedule. Information and counselling are available in the Teacher Education and Placement Office.

Outside of Ohio

Students desirous of meeting professional requirements of other states should obtain an official statement of specific requirements from the Department of Education of their respective state. They should consult the Teacher Education and Placement Office before registering for courses in education.

THE BACHELOR OF SCIENCE (Physical Education)

The minimum program requirements for the Bachelor of Science in Physical Education are:

<table>
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<tr>
<th>Subject</th>
<th>Sem. Hrs.</th>
<th>L.D.</th>
<th>U.D.</th>
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B.S. (Physical Education)

Freshman Year

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<td>Th 101—Christology</td>
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<td>Pl 220—Phil. of Man</td>
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<td>Elective</td>
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| Total | 15 | Total | 15 |

Sophomore Year

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| Total | 15 | Total | 15 |

Junior Year

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| Total | 17 | Total | 16 |

Senior Year

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| Total | 14 | Total | 14 |

*Bl 106, 107, 108, 109 will be offered every other year, alternating with Ed 377, 378 in the freshman and sophomore program.
**Student Teaching may be taken in either semester of senior year, alternating with Electives B and C. These electives may complete the second teaching field or serve as free electives.
† Required, unless exempted through a test-out program. See Curricular Information: Curricular Guidelines No. 2.
### B.S. (Teaching Biology and General Science)

#### Freshman Year

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<td>Hs 123—Europe to 1648**</td>
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#### Sophomore Year

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<td>Th 102—Christian Life</td>
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#### Junior Year

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* May be taken in either semester. Interchangeable with philosophy and elective courses.

** Required, unless exempted through a test-out program. See Curricular Information: Curricular Guidelines No. 2.

### B.S. (Teaching of Chemistry and Mathematics)

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#### Junior Year

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#### Senior Year

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* May be taken in either semester. Interchangeable with philosophy and elective courses.

** Required, unless exempted through a test-out program. See Curricular Information: Curricular Guidelines No. 2.
### B.S. (Teaching General Science and Mathematics)

#### Freshman Year

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* May be taken in either semester. Interchangeable with philosophy and elective courses.

** Required, unless exempted through a test-out program. See Curricular Information: Curricular Guidelines No. 2.
### B.S. (Teaching Science: Comprehensive)

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* May be taken in either semester. Interchangeable with philosophy and elective courses.

** Required, unless exempted through a test-out program. See Curricular Information: Curricular Guidelines No. 2.

Note: Some minor shifts may be made according to science chosen as Science A.

### B.S. (Elementary Education)

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* Take science in freshman year if offered; otherwise take Hs 123 and Hs 124 and take science in place of history in sophomore year.

** Student teaching and the seminar may be assigned in either semester in alternation with Philosophy or other electives.

† Electives should be used to develop further one area of subject matter specialty.

‡ Required, unless exempted through a test-out program. See Curricular Information: Curricular Guidelines No. 2.
THE BACHELOR OF ARTS (English)

The Department of English offers training in composition, in the literature of England and of America, in literary backgrounds, and in criticism. The program results in cultural enrichment and in numerous vocational possibilities.

The following is a regulation passed by the Academic Council:

"The violation of any of the ESSENTIALS FOR WRITING (list submitted by the Department of English) in term papers or reports submitted by students to any professor must be penalized by a reduction in grade. Any unsatisfactory term paper or report submitted to any professor must be returned for re-writing and must be automatically penalized by the reduction of one letter in grading, e.g., a B paper automatically becomes a C paper."

In the judgment of any professor, a student whose written work is unsatisfactory in grammar, orthography, or syntax may be required to repeat En 101 at any time during his undergraduate education. He must then pass successfully the proficiency examination in English given at stated times during the academic year.

English majors must take En 113, 114, 131, and 132 as preparatory to upper-division work. On the upper-division level they must complete six hours of American literature and at least one course in Shakespeare (En 325, 326, or 327). Other courses should be chosen according to the student's interest and his post-graduation plans.

During their junior and senior years, English majors must work with an assigned member of the department to prepare for their senior comprehensive examination. The basis for their guidance is the Guide for English Majors, available in the Xavier University Book Store.

Students who wish to be certified as teachers of English on the secondary level must take En 200 and six other hours of composition and/or Linguistics and/or History of the English Language. Students are advised to consult with the Chairman or with the Office of Teacher Placement regarding any changes that might be forthcoming in the requirements for teacher certification.

Undergraduate English majors and students accepted into the M.A. program in English may substitute En 203, 206, 207 or 209 for En 200 with permission of the Chairman. Lower-division courses fulfilling the composition requirement are En 101, 113, and 114.

A summary of the curriculum follows:

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A.B. (English)

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Sophomore Year

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Junior Year

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* Required, unless exempted through a test-out program. See Curricular Information: Curricular Guidelines No. 2.
THE BACHELOR OF ARTS (History)

The Bachelor of Arts, conferred on history majors, requires Hs 123, 124, 341, 342, 294 (second semester, senior year), and five or seven additional courses. Those who plan careers in law or business should complete the 30 hour major. Those who will attend graduate school or become teachers should complete a 36 hour major. Thus they will use six hours of their electives. Seminars for seniors planning graduate study in history are offered in aspects of the history of the United States, Europe, Latin America, and Asia.

History is studied as a liberal art for its primary value of educating one toward proper appreciation of human living. Its memory of man and its insistence on accurate detail, on proof, and on the relation of cause and effect cultivate habits of mature judgment. It helps toward developing due respect and sympathy for others, and supreme regard for the final purpose of life.

A Senior Comprehensive requirement exists. It may be satisfied by: either a) A Senior Comprehensive Examination based on a departmental reading list; or b) Scoring above the 25 percentile in either the Graduate Record Examination or the Undergraduate Record Examination. (N.B. The 25 percentile rank on the Graduate Record Examination should not be interpreted as a qualifying rank for graduate school.)

Specific degree requirements follow:

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Freshman Year

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<tr>
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<tbody>
<tr>
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<td>Hs 124—Europe Since 1648*</td>
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<td>PI 220—Phil. of Man</td>
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Sophomore Year

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<tbody>
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Junior Year

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<td>Humanities Elective</td>
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<td>Humanities Elective</td>
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</tr>
<tr>
<td>Th—Elective</td>
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<td>PI 240—Prins. of Ethics</td>
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Senior Year

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<tr>
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</table>

* Required, unless exempted through a test-out program. See Curricular Information: Curricular Guidelines No. 2.
THE BACHELOR OF SCIENCE (Mathematics)

The Department of Mathematics offers a program intended to develop exact methods of thought and analysis, provide the mathematical background for work in science and business, and prepare students for teaching and for graduate work.

Sophomores wishing to major in mathematics should have a quality point average of 2.5 or better in Mt 110, 120, and 130. Any student wishing to major in mathematics should consult a member of the mathematics staff before registration. Mathematics majors should fulfill the Modern Language requirement in French, German, or Russian.

The program is summarized:

<table>
<thead>
<tr>
<th>Subject</th>
<th>Sem. Hrs.</th>
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<td>Science</td>
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<td>History</td>
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<td>Philosophy</td>
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B.S. (Mathematics)

**Freshman Year**

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<td>Hs 124—Europe Since 1648*</td>
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<td>Mt 120—Calculus I</td>
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<td>Mt 130—Calculus II</td>
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<td>Fl (Fr, Gr, Ru)</td>
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<td>Mt 110—Vectors and Geometry</td>
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<td>Fl 220—Phil. of Man</td>
<td>3</td>
<td>Th 101—Christology</td>
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**Sophomore Year**

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<tr>
<td>Humanities Elective</td>
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<td>Mt 210—Intro. to Infinite Series</td>
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<td>Fl 230—Metaphysics</td>
<td>3</td>
<td>Th 102—Christian Life</td>
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**Junior Year**

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<tbody>
<tr>
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<tr>
<td>Humanities Elective</td>
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<td>Elective</td>
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<tr>
<td>Mt 240—Matrices, Vector</td>
<td>3</td>
<td>Mt 250—Intro. to Mod. Algebra</td>
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<tr>
<td>Fl 240—Prins. of Ethics</td>
<td>3</td>
<td>Th—Elective</td>
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<td>Science Elective</td>
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<td>Total</td>
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**Senior Year**

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>Elective</td>
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<tr>
<td>Mt 260—Elem. Topology</td>
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<td>Mt 270—Interm. Analysis</td>
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<td>Mt—Elective</td>
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<td>Fl—Program Elective</td>
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<td>Total</td>
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<td>Total</td>
<td>15</td>
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</tbody>
</table>

* Required, unless exempted through a test-out program. See Curricular Information: Curricular Guidelines No. 2.
THE BACHELOR OF SCIENCE (Medical Technology)

The curriculum which leads to the B.S. in Medical Technology consists of three years of undergraduate study at Xavier University and a fourth year (twelve months) at a School of Medical Technology in a hospital accredited by the American Society of Clinical Pathologists and approved by Xavier University. During the fourth year, the student registers at Xavier University.

All requirements of the College of Arts and Sciences' core curriculum are fulfilled in the first six semesters; the year spent at the hospital teaching laboratories consists of specialized studies. These courses will be part of a program approved by ASCP for medical technologists. They include clinical microscopy, serology, immuno-hematology, clinical microbiology, and similar studies. The B.S. is awarded by Xavier University upon satisfactory completion of the fourth year.

After passing an examination administered by the Board of Registry of Medical Technologists of the ASCP, the graduate becomes a Registered Medical Technologist.

Specific course requirements for the first three years are indicated in the accompanying block schedule. Listed below are these requirements in summary.

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<thead>
<tr>
<th>Subject</th>
<th>Sem. Hrs.</th>
<th>Subject</th>
<th>Sem. Hrs.</th>
</tr>
</thead>
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<td>Biology</td>
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<td>Mathematics</td>
<td>6</td>
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<td>Chemistry</td>
<td>21</td>
<td>Philosophy</td>
<td>15</td>
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<td>Foreign Language</td>
<td>10</td>
<td>Social Science</td>
<td>6</td>
</tr>
<tr>
<td>Humanities</td>
<td>12</td>
<td>Theology</td>
<td>12</td>
</tr>
<tr>
<td>History</td>
<td>6</td>
<td></td>
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</tbody>
</table>

The B.S. (Medical Technology) degree will be awarded upon satisfactory completion of a fourth year (12 months) of study at an accredited (ASCP) School of Medical Technology administered by a hospital and approved by Xavier University. During fourth year of study, student registers at Xavier University for the first summer session, the fall semester, and spring semester. ($25 fee payable each registration.)

* Required, unless exempted through a test-out program. See Curricular Information: Curricular Guidelines No. 2.
THE BACHELOR OF ARTS (Modern Languages)

The Department of Modern Languages offers programs leading to the Bachelor of Arts in French, German, or Spanish.* The aim of the Department is to teach language as a means of introducing the student to another culture.

To prepare for the senior comprehensive examination, a requirement for graduation, majors will work during the junior and senior years with an assigned member of the Department.

An outline of the curriculum follows:

<table>
<thead>
<tr>
<th>Subject</th>
<th>Sem. Hrs.</th>
<th></th>
<th>Subject</th>
<th>Sem. Hrs.</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>L.D.</td>
<td>U.D.</td>
<td></td>
<td>L.D.</td>
</tr>
<tr>
<td>French, German, or Spanish</td>
<td>10</td>
<td>27</td>
<td>Philosophy</td>
<td>15</td>
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<tr>
<td>History</td>
<td>6</td>
<td></td>
<td>Social Science</td>
<td>6</td>
</tr>
<tr>
<td>Humanities</td>
<td>12</td>
<td></td>
<td>Theology</td>
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<tr>
<td>Mathematics</td>
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<td>Electives</td>
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</table>

* Lower division courses are offered in Russian.

A.B. (Modern Languages)

Freshman Year

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
<th></th>
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<tbody>
<tr>
<td>Hs 123—Europe to 1648*</td>
<td>3</td>
<td>Hs 124—Europe Since 1648*</td>
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<tr>
<td>ML</td>
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<td>ML</td>
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<tr>
<td>Science Elective</td>
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<td>Science Elective</td>
</tr>
<tr>
<td>Pl 220—Phil. of Man</td>
<td>3</td>
<td>Th 101—Christology</td>
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Sophomore Year

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<td>Mt</td>
<td>3</td>
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<tr>
<td>ML 200</td>
<td>3</td>
<td>ML Fr 202, or Gr 232, or Sp 202</td>
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<tr>
<td>ML 232—ML Literature Survey</td>
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<td>Th 102—Christian Life</td>
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<td>Pl 230—Metaphysics</td>
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Junior Year

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<td>ML Fr 235, or Gr 233, or Sp 204</td>
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<td>ML—Elective</td>
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<td>Pl 240—Prins. of Ethics</td>
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<td>Th—Elective</td>
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Senior Year

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<td>Th—Elective</td>
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</table>

*Required, unless exempted through a test-out program, See Curricular Information: Curricular Guidelines No. 2.
THE BACHELOR OF ARTS (Philosophy)

The undergraduate program in philosophy is intended to aid students to gain understanding in depth, to arrive at a true and unified view of all reality, and to form principles by which to evaluate the explanations proposed.

Majors will be expected to grasp the fundamental and unifying principles of reality and of understanding, the dignity of human nature, and the rational foundations of religion. They should acquire a broad but critical acquaintance with the positions advanced by the most important philosophers throughout history. They will complete a minimum of thirty-six hours in philosophy, taken in special or HIP sections when offered: PI 210 (or 310), 220, 230, 232, 237 (or 338), 235, 240, 241, 250, 260, 270, and one of PI 280, 381, or 383. PI 398 and 399 will be offered as an optional non-credit aid to the student.

They also will take written and oral comprehensive examinations with satisfactory performance.

They are encouraged to include French and Latin, which are of great importance for advanced study in philosophy.

A summary of requirements for the major follows:

<table>
<thead>
<tr>
<th>Subject</th>
<th>Sem. Hrs.</th>
<th>Subject</th>
<th>Sem. Hrs.</th>
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<td>Theology</td>
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<td>Science</td>
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<td>History</td>
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<tr>
<td>Foreign Language</td>
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</table>

The requisites of this program leave twenty-seven hours of electives—enough for a second concentration or specialization, which is strongly recommended rather than a wide dispersal of courses.

A.B. (Philosophy)

Freshman Year

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<thead>
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<tbody>
<tr>
<td>Hs 123—Europe to 1648*</td>
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<td>Hs 124—Europe Since 1648*</td>
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<tr>
<td>Science Elective</td>
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<td>Science Elective</td>
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<tr>
<td>Th 101—Christology</td>
<td>3</td>
<td>Pl 220—Phil. of Man</td>
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Sophomore Year

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<td>Pl 235—Theory of Knowledge</td>
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</tr>
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<td>Th 102—Christian Life</td>
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Junior Year

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<tbody>
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<td>Pl 310—Symbolic Logic</td>
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<td>Pl 270—Hist. of Modern Phil.</td>
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<td>Pl 237—Material World</td>
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<tr>
<td>Pl 250—Hist. of Ancient Phil. or</td>
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<tr>
<td>Pl 260—Hist. of Medieval Phil.</td>
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Senior Year

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<td>Pl 240—Prins. of Ethics</td>
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<td>Pl 241—Current Moral Probs</td>
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<td>Pl 250—Hist. of Ancient Phil. or</td>
<td>3</td>
<td>Pl 280—Contemp. Phil.</td>
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<td>Pl 260—Hist. of Medieval Phil.</td>
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<td>Phil. or</td>
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* Required, unless exempted through a test-out program. See Curricular Information: Curricular Guidelines No. 2.
THE BACHELOR OF SCIENCE (Physics)

The Department of Physics offers a curriculum leading to the Bachelor of Science in physics.

The educational benefits to be derived from a study of the science of physics are training in scientific method, acquaintance with the historical development of physical science, and a knowledge of the applications of physical laws which play so large a part in modern life. In all physics courses emphasis is laid on the intelligent comprehension of basic principles.

All physics majors are required to take a minimum of forty-six semester hours of physics. Courses are listed in the block schedule.

A working knowledge of algebra and trigonometry is assumed of freshman physics majors. Deficiencies in this area should be removed before the start of freshman course work.

The minimum requirements follow:

<table>
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<tr>
<th>Subject</th>
<th>Sem. Hrs.</th>
<th>L.D.</th>
<th>U.D.</th>
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<tbody>
<tr>
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<th>U.D.</th>
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B.S. (Physics)

**Freshman Year**

<table>
<thead>
<tr>
<th>First Semester</th>
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<tbody>
<tr>
<td>Mt 220—Advanced Calculus I</td>
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<tr>
<td>Ph 350—Theoret. Mechanics I</td>
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<td>Ph 351—Theoret. Mechanics I Lab</td>
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<tr>
<td>Ph 352—Electromagnetism I</td>
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<table>
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<th>Sem. Hrs.</th>
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<tr>
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<td>Ph 362—Physical Optics Lab</td>
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<td>Ph 366—Atomic Physics</td>
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**Sophomore Year**

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<td>Th 101—Christology</td>
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<td>Ph 247—Math-Physics</td>
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<td>Ph 248—Computer Lab</td>
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**Junior Year**

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<td>Mt 230—Advanced Calculus II</td>
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<thead>
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<tbody>
<tr>
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<tr>
<td>Ph 247—Math-Physics</td>
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**Senior Year**

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<tr>
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<tr>
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<td>Ph 375—Atomic Physics Lab</td>
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<td>Ph—Elective</td>
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<td>Ph 379—Senior Comp. Review</td>
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<table>
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<tbody>
<tr>
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<tr>
<td>Ph 380—Theoret. Mechanics II</td>
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</tr>
<tr>
<td>Ph 381—Nuclear Physics Lab</td>
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<td>Ph 384—Senior Comp. Review</td>
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<tr>
<td>Pl 240—Prims. of Ethics</td>
<td>3</td>
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<td>Th—Elective</td>
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<tr>
<td>Total</td>
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</tbody>
</table>

* Required, unless exempted through a test-out program. See Curricular Information: Curricular Guidelines No. 2.
**THE BACHELOR OF ARTS (Political Science)**

The Department of History and Political Science offers the Bachelor of Arts in political science. This program requires Po 101, 102, 131, 132, either 348 or 349, and five to seven additional courses.

Political science aims to produce a deep understanding of the functions and processes of political power, of the place of authority in society, of the use of freedom in human relations. Regard for institutional practice, to conserve freedom and employ sound social forces toward the perfecting of political action, is a prime purpose in the field. The American constitutional system will be given particular attention. A senior comprehensive examination is required.

Those who plan careers in law or business should complete the 30 hour major. Those who wish to attend graduate school or become teachers should complete a 36 hour major. Thus they will use six hours of their electives.

**Note:** There are no senior comprehensive requirements.

A summary of the program follows:

<table>
<thead>
<tr>
<th>Subject</th>
<th>Sem. Hrs.</th>
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<th>U.D.</th>
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<td>History</td>
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<td>Mathematics</td>
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**Senior Year**

<table>
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<th>Subject</th>
<th>Sem. Hrs.</th>
<th>L.D.</th>
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<tr>
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</table>

* Suggested: Principles of Economics

** Required, unless exempted through a test-out program. See Curricular Information: Curricular Guidelines No. 2.
THE BACHELOR OF SCIENCE (Psychology)

The Department of Psychology endeavors to acquaint students thoroughly with the content and methods of scientific psychology. While emphasizing the scientific approach in the understanding of human behavior and human personality, the psychology courses aim to show to the student that this branch of science is complementary to and compatible with a sound philosophy of human nature. In addition to the program leading to the Bachelor of Science in Psychology, the Department provides service courses to majors of other departments. The Bachelor of Science program in psychology aims to provide a general background for advanced studies in fields which presuppose understanding of human psychology such as clinical psychology, vocational and educational guidance, medicine, education, social work, and personnel work in business and industry.

Departmental requirements for a major are:

1. Completion of Ps 101 and 102 as an introduction to upper division work.
2. Twenty-seven credit hours in upper division courses including Ps 210, 221, 222, and 299.
3. Ten credit hours in French or German, unless substitution of another foreign language is approved by the Chairman of the Department of Psychology.
4. Satisfactory completion of Bl 110, 111, 112, 113 to fulfill the science requirement, unless substitution of other science courses is approved by the Chairman of the Department of Psychology.
5. Majors will select Mt 119 and 121 or 120 and 130.

A summary of program requirements follows:

<table>
<thead>
<tr>
<th>Subject</th>
<th>L.D.</th>
<th>U.D.</th>
<th>Subject</th>
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B.S. (Psychology)

Freshman Year

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Sophomore Year

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Junior Year

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Senior Year

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* Required, unless exempted through a test-out program. See Curricular Information: Curricular Guidelines No. 2.
THE BACHELOR OF ARTS (Sociology)

As part of the new curriculum, a major in sociology, leading to the Bachelor of Arts, is being introduced.

The purpose of this major is to study the nature of society—its origin, its evolution, its forms, its institutions, its current principles and attitudes, and its directions.

A summary of the program follows:

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<thead>
<tr>
<th>Subject</th>
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A.B. (Sociology)

Freshman Year

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Sophomore Year

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Junior Year

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Senior Year

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<td>15</td>
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</tbody>
</table>

* Required, unless exempted through a test-out program. See Curricular Information: Curricular Guidelines No. 2.
THE BACHELOR OF ARTS (Theology)

The Bachelor of Arts is awarded students who choose to major in Theology.

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The minimum requirements for the degree follow:

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<td>Theology</td>
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</table>
**THE BACHELOR OF SCIENCE (Natural Sciences)**
*(For Pre-Medical and Pre-Dental Students)*

The curriculum for pre-medical and pre-dental students presents a liberal arts program with emphasis on those sciences required for an adequate background for subsequent studies in medicine, in dentistry, and in similar professions. Recurrent pronouncements by Committees on Admissions at professional schools leave no doubt that they regard an education in the liberal arts as one of the most important factors in forming a genuinely capable and effective professional man.

Pre-medical students are advised to plan a four-year course.

If a student wishes to major in another area, he is free to do so. He should then seek advice from a member of the Committee for Health Sciences so that his selected course of studies will assure him of a degree and qualify him for admission to schools of medicine or dentistry.

The University proposes the following program:

<table>
<thead>
<tr>
<th>Subject</th>
<th>Sem. Hrs.</th>
<th>L.D.</th>
<th>U.D.</th>
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<tbody>
<tr>
<td>Biology</td>
<td>8</td>
<td>10</td>
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<tr>
<td>Modern Language</td>
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With the approval of a member of the Committee for Health Sciences, some of the scientific requirements in the program outlined above may be modified to suit the needs of individual students.

---

### Freshman Year

<table>
<thead>
<tr>
<th>Subject</th>
<th>Sem. Hrs.</th>
<th>L.D.</th>
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</thead>
<tbody>
<tr>
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<td>2</td>
<td>2</td>
<td></td>
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<tr>
<td>Biology II</td>
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<td>2</td>
<td></td>
</tr>
<tr>
<td>Chemistry I</td>
<td>3</td>
<td>3</td>
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<tr>
<td>Chemistry II Lab</td>
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Total: 17

### Sophomore Year

<table>
<thead>
<tr>
<th>Subject</th>
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<th>U.D.</th>
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<td></td>
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<td>Chemistry</td>
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<td>5</td>
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Total: 14

### Junior Year

<table>
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<th>U.D.</th>
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<tbody>
<tr>
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<td></td>
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<tr>
<td>Chemistry</td>
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<td>3</td>
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<td>History</td>
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<tr>
<td>Humanities</td>
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Total: 14

### Senior Year

<table>
<thead>
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<th>Subject</th>
<th>Sem. Hrs.</th>
<th>L.D.</th>
<th>U.D.</th>
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<tbody>
<tr>
<td>Humanities Elective</td>
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<td>3</td>
<td></td>
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<tr>
<td>Pl</td>
<td>3</td>
<td></td>
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<tr>
<td>Ps</td>
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<td>Bi</td>
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<td>3</td>
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</tbody>
</table>

Total: 13-14

* Required of those who plan to take Ch 398.

** Required, unless exempted through a test-out program. See Curricular Information: Curricular Guidelines No. 2.
Pre-Dental (Three-Year Program)

Freshman Year

--- | --- | --- | ---
BL 111—Gen. Zoology I Lab | 2 | | |
Ch 110—Gen. Chemistry I | 3 | Ch 112—Gen. Chemistry II Lab | 2
Ch 111—Gen. Chemistry I Lab | 1 | Ch 113—Gen. Chemistry II Lab | 2
Mt 101—Statistical Inference | 3 | Mt 121—Calculus (Scientific) | 3
Pl 220—Phil. of Man | 3 | Th 101—Christology | 3
Humanities Elective | 3 | |
Total | 17 | Total | 15

Sophomore Year

--- | --- | --- | ---
Humanities Elective | 3 | | |
Hs 123—Europe to 1648** | 3 | Hs 124—Europe Since 1648** | 3
Ph 104—College Physics | 3 | Ph 106—College Physics | 3
Ph 105—College Physics Lab | 1 | Ph 107—College Physics Lab | 1
Pl 230—Metaphysics | 3 | Th 102—Christian Life | 3
Ps 101—Gen. Psychology | 3 | |
Total | 16 | Total | 14

Junior Year

--- | --- | --- | ---
BL 310—Comp. Anat. Vertebrates | 2 | Ch 142—Organic Chemistry II | 3
BL 311—Comp. Anat. Vertebrates Lab | 2 | Ch 143—Organic Chemistry II Lab | 1
Ch 140—Organic Chemistry I | 3 | Pl—Program Elective | 3
Ch 141—Organic Chemistry I Lab | 1 | Th—Elective | 1
Pl 240—Prims. of Ethics | 3 | Ch 190—Chemical Lit.* | 1
Humanities Elective | 3 | |
Social Science Elective | 3 | |
Total | 17 | Total | 16–17

If the student plans to extend his education to obtain a B.S. (Natural Sciences), the following program is necessary:

Senior Year

--- | --- | --- | ---
Ch 120—Analytical, Physical | 3 | Bl 230—Genetics | 2
Ch 121—Analytical, Physical Lab | 1 | ML | 5
ML | 5 | Social Science Elective | 3
Pl—Program Elective | 3 | Sc—Bl 320, Ch, or Ph | 3/4
Sc—Bl 360, Ch, or Ph | 3/4 | Bl 399, Ch 399 | 1
Bl 398, Ch 398 | 1 | Th—Elective | 3
Total | 16–17 | Total | 17–18

* Required of those who plan to take Ch 398.
** Required, unless exempted through a test-out program. See Curricular Information: Curricular Guidelines No. 2.
THE BACHELOR OF SCIENCE IN BUSINESS
(Offered in General Business in the Evening College only)

This B.S.B.A. program for Evening College students requires the following non-business subjects:

<table>
<thead>
<tr>
<th>Subject</th>
<th>Sem. Hrs.</th>
<th>Subject</th>
<th>Sem. Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>English</td>
<td>3</td>
<td>Philosophy</td>
<td>15</td>
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<tr>
<td>Humanities</td>
<td>12</td>
<td>Social Sciences</td>
<td>6</td>
</tr>
<tr>
<td>Mathematics</td>
<td>6</td>
<td>Theology</td>
<td>12</td>
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</tbody>
</table>

The remainder of the curriculum is as follows:

Business Core:

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Subject</th>
<th>Sem. Hrs.</th>
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</thead>
<tbody>
<tr>
<td>Ac 100, 101</td>
<td>Principles of Accounting I-II</td>
<td>6</td>
</tr>
<tr>
<td>Ba 270</td>
<td>Business Statistics</td>
<td>3</td>
</tr>
<tr>
<td>Ba 280</td>
<td>Legal Environment</td>
<td>3</td>
</tr>
<tr>
<td>Ec 101, 102</td>
<td>Principles of Economics I-II</td>
<td>6</td>
</tr>
<tr>
<td>Ec 210</td>
<td>Human Resources</td>
<td>3</td>
</tr>
<tr>
<td>Ec 250</td>
<td>Money and Banking</td>
<td>3</td>
</tr>
<tr>
<td>Fi 255</td>
<td>Business (Corporation Finance)</td>
<td>3</td>
</tr>
<tr>
<td>Mg 100</td>
<td>Principles of Management</td>
<td>3</td>
</tr>
<tr>
<td>Mk 100</td>
<td>Principles of Marketing</td>
<td>5</td>
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Concentration

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Subject</th>
<th>Sem. Hrs.</th>
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<tbody>
<tr>
<td>Ac 260</td>
<td>Financial Statements</td>
<td>3</td>
</tr>
<tr>
<td>Ec 320</td>
<td>Economic Theory and Social Order</td>
<td>3</td>
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</tbody>
</table>

Electives

At least one upper division course from each of these fields:

- Economics
- Finance
- Industrial-Relations/Management
- Marketing

...
# Degree Programs

## The College of Business Administration

### THE BACHELOR OF SCIENCE IN BUSINESS ADMINISTRATION (Accounting)

The program in accounting is designed to provide intensive training of a comprehensive nature for the adequate preparation of public, private or industrial accountants; auditors; credit analysts and general business executives. The advanced courses which elaborate on the theory and practice of accounts, business analysis, costs, auditing and specialized accounting culminate in preparation for C.P.A. examinations and for actual entrance into the field of public accountancy.

Students majoring in accounting must complete these specified courses:

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Subject</th>
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<tbody>
<tr>
<td>Ac 100, 101</td>
<td>Principles of Accounting</td>
<td>6</td>
</tr>
<tr>
<td>Ac 200, 201</td>
<td>Intermediate Accounting</td>
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<tr>
<td>Ac 210</td>
<td>Advanced Accounting Problems</td>
<td>3</td>
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<tr>
<td>Ac 220, 221</td>
<td>Managerial Cost Accounting</td>
<td>6</td>
</tr>
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<td>Ac</td>
<td>Electives</td>
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<tr>
<td>BA 280</td>
<td>Legal Environment</td>
<td>3</td>
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<tr>
<td>BA 396</td>
<td>Business Administration Problems</td>
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THE BACHELOR OF SCIENCE IN BUSINESS ADMINISTRATION (Economics)

This Bachelor of Science in Business Administration provides the student with principles and procedures fundamental to the intellectual analysis of economic problems of the individual firm, industry, and the economy as a whole. Such training prepares the student to recognize the problem, to analyze it objectively, and to offer a proper solution. The program is beneficial to those who wish to assume positions as economists, either private or public; business analysts; investment analysts; business executives; and labor leaders. It encourages them not only to solve individual problems, but to analyze the monetary and fiscal policy of the government in relation to its effects on the total economy.

Students working for the B.S.B.A. (Economics) must complete these specified courses:

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B.S.B.A. (Economics)

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<td>Ec 210—Human Resources</td>
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<td>Pl 240—Prins. of Ethics</td>
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Junior Year

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Senior Year

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THE BACHELOR OF SCIENCE IN BUSINESS
ADMINISTRATION (Finance)

The Bachelor of Science in Business Administration program in finance develops an appreciation in the student of financial management and financial operation. Every one majoring in finance must take three basic courses designed to acquaint him with the various financial records of the firm, the character and appraisal of corporate securities, and the financial techniques applicable to the various phases of this discipline. In addition, the student may choose elective subjects. This permits him to aim at a particular segment of finance such as corporate finance, security sales, etc. Certain courses are offered each semester. Others are cycled every other semester of every other year to provide the greatest diversification possible. Majors in finance will be offered opportunities to inspect various financial institutions and to meet with professionals in the field.

Students working for the B.S.B.A. (Finance) must complete these specified courses:

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<td>Fi 380</td>
<td>Cases and Problems in Finance</td>
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<td>Ec 101, 102</td>
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Prescribed subjects and credit hours required for the B.S.B.A. (Finance) follow:

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B.S.B.A. (Finance)

Freshman Year

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Sophomore Year

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Junior Year

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Senior Year

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THE BACHELOR OF SCIENCE IN BUSINESS
ADMINISTRATION (Industrial Relations)

In an industrial society which is becoming increasingly more complex and interdependent, the need for leaders in the area of industrial relations with a well-rounded professional training is a necessity. This program is designed to provide specific knowledge of labor and is supported by strong cultural background in the liberal arts. Concentration in industrial relations will acquaint the student with the economic, social, political, and psychological aspects of labor problems and relations. It, also, prepares him for further academic study and for positions in government, industry, or the labor movement.

Students working for the B.S.B.A. (Industrial Relations) must complete these specified courses:

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Subject</th>
<th>Sem. Hrs.</th>
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<tr>
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<td>M 220</td>
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Prescribed subjects and credit hours required for the B.S.B.A. (Industrial Relations) follow:

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B.S.B.A. (Industrial Relations)

Freshman Year

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Sophomore Year

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Junior Year

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Senior Year

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THE BACHELOR OF SCIENCE IN BUSINESS
ADMINISTRATION (Management)

Contributions of the business world to society are largely dependent on good management.

The objectives of this program are to facilitate such contributions by:

1. Providing specialized professional training in the principles and the practices for the effective operation of the business organization.
2. Stimulating the application of sound philosophical principles to the wide range of problems encountered by management.
3. Aiding in the development of the student's intellect and personality to prepare him for leadership in society.

Students working for the B.S.B.A. (Management) must complete these specified courses:

**Course No.**  | **Subject**                               | **Sem. Hrs.**
---               | ---                                      | ---
Mg 100          | Principles of Management                 | 3
Mg              | Electives                                | 18
Ac 100, 101     | Principles of Accounting                 | 6
Ec 101, 102     | Principles of Economics                  | 6
Mk 100          | Principles of Marketing                  | 3
IR 210          | Human Resources                          | 3
Fi 250          | Money and Banking                        | 3
Fi 255          | Business Finance                         | 3
BA 270          | Business Statistics                      | 3
BA 280          | Legal Environment                        | 3
BA 396          | Business Administration Problems         | 3

**Prescribed subjects and credit hours required for the B.S.B.A. (Management) follow:**

| Subject             | **Sem. Hrs.** | **L.D.** | **U.D.** |
---                   | ---           | ---      | ---      |
Accounting           | 6            | —        | —        |
Business Admin.      | —            | 9        | —        |
Economics            | 6            | —        | —        |
Finance              | —            | 6        | —        |
Humanities           | 12           | —        | —        |
Management and I.R.  | 3 21         | —        | —        |
Marketing            | 3            | —        | —        |

| Subject             | **Sem. Hrs.** | **L.D.** | **U.D.** |
---                   | ---           | ---      | ---      |
Mathematics           | 6            | —        | —        |
Philosophy           | 6            | —        | —        |
Science              | 6            | —        | —        |
Social Science       | 6            | —        | —        |
Theology             | 6            | 6        | 6        |
Electives            | 6            | —        | —        |

Total                | 54           | —        | —        |

**B.S.B.A. (Management)**

**Freshman Year**

| First Semester | **Sem. Hrs.** | Second Semester | **Sem. Hrs.** |
---             | ---           | ---             | ---           |
Ac 100—Prins. of Accounting | 3 | Ac 101—Prins. of Accounting | 3 |
Ec 101—Prins. of Economics | 3 | Ec 102—Prins. of Economics | 3 |
Mt 112—College Math. (Business) | 3 | Mt 122—Calculus (Business) | 3 |
Pl 220—Phil. of Man. | 3 | Th 101—Christology | 3 |
Humanities Elective | 3 | Humanities Elective | 3 |

Total | 15 | Total | 15

**Sophomore Year**

| First Semester | **Sem. Hrs.** | Second Semester | **Sem. Hrs.** |
---             | ---           | ---             | ---           |
BA 280—Legal Environment | 3 | BA 270—Business Statistics | 3 |
IR 210—Human Resources | 3 | Fi 255—Business Finance | 3 |
Mg 100—Prins. of Management | 3 | Mk 100—Prins. of Marketing | 3 |
Pl 230—Metaphysics | 3 | Th 102—Christian Life | 3 |
Humanities Elective | 3 | Humanities Elective | 3 |

Total | 15 | Total | 15

**Junior Year**

| First Semester | **Sem. Hrs.** | Second Semester | **Sem. Hrs.** |
---             | ---           | ---             | ---           |
Mg—Elective | 3 | Mg—Elective | 3 |
Pl 240—Prins. of Ethics | 3 | Mg—Elective | 3 |
Science Elective | 3 | Th—Elective | 3 |
Social Science Elective | 3 | Science Elective | 3 |
Elective | 3 | Social Science Elective | 3 |

Total | 15 | Total | 15

**Senior Year**

| First Semester | **Sem. Hrs.** | Second Semester | **Sem. Hrs.** |
---             | ---           | ---             | ---           |
Mg—Electives | 6 | BA 396—Bus. Admin. Problems | 3 |
Pl—Program Elective | 3 | Ec 250—Money and Banking | 3 |
Electives | 6 | Mg—Elective | 3 |
Pl—Program Elective | 3 | Th—Elective | 3 |

Total | 15 | Total | 15
**THE BACHELOR OF SCIENCE IN BUSINESS**

**ADMINISTRATION (Marketing)**

The Bachelor of Science in Business Administration program with a concentration in marketing studies the institutions and functions of the modern distribution system. The program orients the student towards the total marketing concept so that, trained in the analytical processes, he is qualified for management responsibility in the marketing area. Furthermore, a student will find the study of marketing complementary to his choice of a career in the field.

Students working for the B.S.B.A. (Marketing) must complete these specified courses:

<table>
<thead>
<tr>
<th>Course No.</th>
<th>Subject</th>
<th>Sem. Hrs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mk 100</td>
<td>Principles of Marketing</td>
<td>3</td>
</tr>
<tr>
<td>Mk 201</td>
<td>Marketing Policy</td>
<td>3</td>
</tr>
<tr>
<td>Mk 202</td>
<td>Marketing Research</td>
<td>3</td>
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<tr>
<td>Mk 204</td>
<td>Marketing Management</td>
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<td>Mk</td>
<td>Electives</td>
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<tr>
<td>Ac 100, 101</td>
<td>Principles of Accounting</td>
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<tr>
<td>Ec 101, 102</td>
<td>Principles of Economics</td>
<td>6</td>
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<tr>
<td>Mg 100</td>
<td>Principles of Management</td>
<td>3</td>
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<tr>
<td>IR 210</td>
<td>Human Resources</td>
<td>3</td>
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<tr>
<td>Fi 250</td>
<td>Money and Banking</td>
<td>3</td>
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<tr>
<td>Fi 255</td>
<td>Business Finance</td>
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<tr>
<td>BA 270</td>
<td>Business Statistics</td>
<td>3</td>
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<tr>
<td>BA 280</td>
<td>Legal Environment</td>
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<tr>
<td>BA 396</td>
<td>Business Administration Problems</td>
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Prescribed subjects and credit hours required for the B.S.B.A. (Marketing) follow:

<table>
<thead>
<tr>
<th>Subject</th>
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<tbody>
<tr>
<td>Accounting</td>
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<td>Economics</td>
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<td>Finance</td>
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<tr>
<td>Management and I.R.</td>
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<tr>
<td>Marketing</td>
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**Freshman Year**

**First Semester**

<table>
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<th>Course No.</th>
<th>Subject</th>
<th>Sem. Hrs.</th>
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<tbody>
<tr>
<td>Ac 100</td>
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<tr>
<td>Ec 101</td>
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<tr>
<td>Mt 112</td>
<td>College Math. (Business)</td>
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<tr>
<td>P1 220</td>
<td>Phil. of Man</td>
<td>3</td>
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<tr>
<td>Humanities</td>
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**Second Semester**

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<th>Subject</th>
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<tbody>
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<tr>
<td>Ec 102</td>
<td>Principles of Economics</td>
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<tr>
<td>Mt 122</td>
<td>Calculus (Business)</td>
<td>3</td>
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<td>Th 101</td>
<td>Christology</td>
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<td>Humanities</td>
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**Sophomore Year**

**First Semester**

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<tr>
<th>Course No.</th>
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<th>Sem. Hrs.</th>
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<tbody>
<tr>
<td>Ac 200</td>
<td>Legal Environment</td>
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<tr>
<td>Ec 101</td>
<td>Human Resources</td>
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<tr>
<td>Mg 100</td>
<td>Principles of Management</td>
<td>3</td>
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<tr>
<td>P1 230</td>
<td>Metaphysics</td>
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<tr>
<td>Humanities</td>
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**Second Semester**

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<th>Sem. Hrs.</th>
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<tbody>
<tr>
<td>Ac 102</td>
<td>Principles of Marketing</td>
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<tr>
<td>Ec 103</td>
<td>Principles of Economics</td>
<td>3</td>
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<tr>
<td>Mt 123</td>
<td>Calculus (Business)</td>
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</tr>
<tr>
<td>Th 102</td>
<td>Christian Life</td>
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<tr>
<td>Humanities</td>
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**Junior Year**

**First Semester**

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<tr>
<td>Mk 201</td>
<td>Marketing Policy</td>
<td>3</td>
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<tr>
<td>P1 240</td>
<td>Prins. of Ethics</td>
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<td>Humanities</td>
<td>Elective</td>
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**Second Semester**

<table>
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<tr>
<th>Course No.</th>
<th>Subject</th>
<th>Sem. Hrs.</th>
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<tr>
<td>Mk 202</td>
<td>Marketing Research</td>
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<tr>
<td>Ec 104</td>
<td>Marketing Research</td>
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<td>Social Science</td>
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**Senior Year**

**First Semester**

<table>
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<tr>
<th>Course No.</th>
<th>Subject</th>
<th>Sem. Hrs.</th>
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</thead>
<tbody>
<tr>
<td>Ec 250</td>
<td>Money and Banking</td>
<td>3</td>
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<tr>
<td>Mk 204</td>
<td>Marketing Management</td>
<td>3</td>
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<tr>
<td>P1 250</td>
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**Second Semester**

<table>
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<th>Course No.</th>
<th>Subject</th>
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<tbody>
<tr>
<td>Ec 251</td>
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<tr>
<td>Mk 205</td>
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<td>P1 251</td>
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<tr>
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</tbody>
</table>
Departments—
The College of Arts and Sciences

Biology (BI)

Staff: DR. CUSICK, chairman; DR. HEDDE, DR. HIGGINS, FR. PETERS, MR. PETRI, DR. TAFURI

Laboratory Instructors: MRS. CUSICK, MR. PEQUET

BI 102 and 104 may not be taken for biology major, pre-medical, or pre-dental requirements.

BI 110 and 112 are required as introduction to all 200 level courses. In exceptional cases, BI 102 and 104 may be considered as partial fulfillment.

Lower Division Courses

102 MAN AND THE LIVING WORLD I. Two credit hours. The inter-relationships among man, the environment, and the wide variety of living things. Basic life-pattern from cell through plant and animal organisms. Fulfills science core curriculum requirement.

103 MAN AND THE LIVING WORLD I LABORATORY. One credit hour. Field trips and laboratory examination of form and function of representative plants and animals of importance to man.


105 MAN AND THE LIVING WORLD II LABORATORY. One credit hour. Field trips and exercises to illuminate principles of inheritance, development, evolution, and ecology. Observation of basic anatomy and functional activities of representative vertebrate organisms including man.

106 HUMAN ANATOMY AND PHYSIOLOGY I. Two credit hours. A study of the cells, tissues, organs, and systems of man with emphasis on the skeletal, muscular, and nervous systems and the physiology of exercise. For students majoring in physical education.

107 HUMAN ANATOMY AND PHYSIOLOGY I LABORATORY. One credit hour. Exercises and demonstrations to illustrate concepts discussed in the lectures. Study of the human skeleton with dissection of the neuro-muscular systems and internal anatomy of the cat.

108 HUMAN ANATOMY AND PHYSIOLOGY II. Two credit hours. A continuation of BI 106. The respiratory, circulatory, digestive, excretory, and endocrine systems. Prerequisites: BI 106 and 107.

109 HUMAN ANATOMY AND PHYSIOLOGY II LABORATORY. One credit hour. Examination of the microscopic anatomy of tissues and organs with some physiological studies of muscle, nerve, respiration, digestion, and circulation.

110 GENERAL ZOOLOGY I. Two credit hours. The basic principles of biology, classical and molecular, emphasizing the chordates and particularly the anatomy, physiology, development, and behavior of several representative vertebrates. Required as an introduction to most 200 level courses.

111 GENERAL ZOOLOGY I LABORATORY. Two credit hours. Dissection of the frog and microscopic study of vertebrate tissues with observations of physiological phenomena characteristic of cells, tissues, organs, and vertebrate behavior.

112 GENERAL ZOOLOGY II. Two credit hours. A continuation of BI 110. A systematic survey of the invertebrate phyla: their morphology, physiology, classification, life histories, development, and behavior. Current topics in heredity, evolution, ecology, and related areas.

113 GENERAL ZOOLOGY II LABORATORY. Lecture. Two credit hours. Representatives from each major phylum are studied using preserved specimens and slides with extensive use of living organisms including terrestrial, fresh water and marine forms. Genetic materials, fossils and invertebrate behavior patterns are examined.

114 INTRODUCTION TO THE LIFE SCIENCES. Three credit hours. Modern concepts of cells and heredity. Plants and animals with vertebrate morphology and physiology, especially the biology of man. Ecology and evolution. Students in B.S. (Elementary Education) curriculum only.

115 INTRODUCTION TO THE LIFE SCIENCES LABORATORY. One credit hour. Exercise and field trips to illustrate principles of ecology, evolution, behavior, taxonomy, vertebrate organization, genetics, and cell biology.

120 GENERAL BOTANY. Two credit hours. The morphology, physiology, reproduction, and classification of representatives of the major divisions of the plant kingdom. Seed plants are stressed.

121 GENERAL BOTANY LABORATORY. Two credit hours. Living and preserved specimens of representatives of the various plant groups. Demonstration of pertinent principles of plant physiology.

Upper Division Courses

200 ADVANCED BOTANY. Two credit hours. A study of representatives of the various plant divisions stressing the physiology and reproduction of these organisms. The effects of plants on the activities of man.

201 ADVANCED BOTANY LABORATORY. Two credit hours. An examination of plants in the field and laboratory. Experiments demonstrating aspects of plant physiology will be included together with methods of collecting, preserving, and identifying plants.

210 GENERAL MICROBIOLOGY. Two credit hours. The physiology and morphology of the algae, bacteria, and fungi. The beneficial and detrimental effects of these organisms to man and his environment.

211 GENERAL MICROBIOLOGY LABORATORY. Two credit hours. Methods of isolation and culture of the algae, bacteria, and fungi. Techniques of classification of these organisms.

230 GENETICS. Two credit hours. Principles of heredity and the operations of genetic factors in the development of individual traits. Prerequisite: BI 102, 104 or BI 110-112.

231 GENETICS LABORATORY. One or two credit hours. Techniques of investigating fundamental genetic principles. The fruit fly as an experimental animal with studies of bacterial genetics.
tissues.

240 **EVOLUTION.** Two credit hours. Evidence for and the mechanisms of evolutionary processes. Prerequisite: BI 102, 104 or BI 110, 112.

246 **HISTORY OF BIOLOGY.** Two credit hours. The historical development of the biological sciences. Prerequisite: BI 102, 104 or BI 110, 112.

250 **GENERAL ECOLOGY.** Two or three credit hours. The relationships between organisms and their living and non-living environments. Prerequisite: BI 102, 104 or BI 110, 112.

251 **GENERAL ECOLOGY LABORATORY.** One or two credit hours. Laboratory and field exercises to illustrate ecological principles. Local aquatic and terrestrial habitats are investigated and their biotic elements identified. Concurrently with BI 250.

260 **INVERTEBRATE ZOOLOGY.** Two credit hours. Characteristics, life cycles, habits, economic importance, and evolution of invertebrate animals. Prerequisite: BI 110, 112.

261 **INVERTEBRATE ZOOLOGY LABORATORY.** Two credit hours. Systematic study of the invertebrate phyla using fixed preparations; preserved specimens, and living forms.

266 **GENERAL ENTOMOLOGY.** Two credit hours. Structure, life histories, habits, habitats of insects. Prerequisite: BI 110, 112 including lab.

267 **GENERAL ENTOMOLOGY LABORATORY.** Two credit hours. The morphology and classification of the major orders of insects including some field experience in various collecting methods.

280 **TOPICS IN BIOLOGY.** One or two credit hours. Short term courses designed to explore biological phenomena of current interest.

290 **SPECIAL PROBLEMS IN BIOLOGY.** One to four credit hours. A program designed to give the student an opportunity to engage in independent study in some specialized area of biology. Prerequisite BI 110, 112 and permission of the Chairman. A charge will be made for materials used in the laboratory.

300 **GENERAL AND VERTEBRATE EMBRYOLOGY.** Two credit hours. The morphological and physiological aspects of vertebrate development. Prerequisite: BI 110, 112.

301 **GENERAL VERTEBRATE EMBRYOLOGY LABORATORY.** Two credit hours. A study of gametogenesis, fertilization, cleavage, and gastrulation, with some emphasis on organogenesis of the chick and pig. Experiments with living materials illustrate principles of development.

310 **COMPARATIVE ANATOMY OF THE VERTEBRATES.** Two credit hours. A study of morphology and morphogenesis of the vertebrates. The structure that characterizes vertebrate taxa, the relationship among the various structure patterns, phyletic lines, and evolutionary change. Prerequisite: BI 110, 112, BI 300.

311 **COMPARATIVE ANATOMY OF THE VERTEBRATES LABORATORY.** Two credit hours. Critical observation and analysis of structure and function in relation to principal adaptations, and to the development of dissecting skills.

320 **VERTEBRATE GENERAL HISTOLOGY.** Two credit hours. A study of tissue structure and function. Cells, intercellular substances, and the four primary tissues. Tissue specializations, relationship of structure to function, and adaptations of tissue for specific organ-purposes. Prerequisite: BI 110, 112, senior standing, or permission of instructor.

321 **VERTEBRATE GENERAL HISTOLOGY LABORATORY.** Two credit hours. A microscopic study of fixed materials employing routine and histological techniques to demonstrate cell, tissue, and organ morphology.

340 **BIOLOGICAL BASIS OF ANIMAL BEHAVIOR.** Two credit hours. The functions of receptors, nervous system, and effectors involved in the responses of animals to environmental changes, with emphasis on data and generalizations derived from experiments using modern chemical and electrical techniques. Prerequisite: BI 110, 112.

341 **BIOLOGICAL BASIS OF BEHAVIOR LABORATORY.** One or two credit hours. An examination of the gross and microscopic structure of adult and developing vertebrates, with emphasis on the nervous system. Secondly, electronic instruments used to modify the environment and record the responses of organisms.

360 **GENERAL VERTEBRATE PHYSIOLOGY.** Two credit hours. A study of function on the molecular, cellular, and organ systems level in vertebrates including contraction, perception, digestion, metabolism, circulation, respiration, and coordination. Prerequisite: BI 110, 112, senior standing, or permission of instructor.

361 **GENERAL VERTEBRATE PHYSIOLOGY LABORATORY.** Two credit hours. Exercises requiring careful preparation of living materials and observation of their functional responses using modern physiological instrumentation.

370 **BIOCHEMISTRY.** Three credit hours. (Ch 370)

398 **METHODS OF BIOLOGICAL RESEARCH.** One credit hour. Research in one of the fields of biology with emphasis on the gathering of experimental data from living organisms and their interpretation. Prerequisite: senior standing and approval of the Chairman. A charge of $25 for materials used will be payable only once for both BI 398 and BI 399.

399 **METHODS OF BIOLOGICAL RESEARCH.** One credit hour. A continuation of BI 398 emphasizing experimental design and controls together with the written and oral presentation of scientific reports.

**Chemistry (Ch)**

*Staff:* DR. JOHNSON, chairman; DR. DUBE, DR. GARASCA, DR. KLINGENBERG, DR. O'NEILL, DR. SMART, FR. THEPE.

*Graduate Assistants:* MR. AUSTIN, MR. BURGE, MISS CORRY, MR. DAVIS, MR. GRANT, MR. PESECI, MR. RANGWALLA, MR. SNIADOCH, MISS SOMMER, MR. ZINSER.
Lower Division Courses

102 CHEMISTRY OF LIVING THINGS I. Two credit hours. A terminal course for non-science majors. Introduces the principles of chemistry. Organic chemistry is taught in detail. Applications of interest to the modern student.

103 CHEMISTRY OF LIVING THINGS I LABORATORY. One credit hour. Chemical experimentation illustrates the chemistry taught in Ch 102. One two-hour period per week.

104 CHEMISTRY OF LIVING THINGS II. Two credit hours. The continuation of Ch 102. Biochemistry is taught in detail. Reactions of interest to the modern student, e.g., drugs, air and water pollution, disease, chemotherapy.

105 CHEMISTRY OF LIVING THINGS II LABORATORY. One credit hour. A continuation of Ch 103. Chemical experimentation illustrates the chemistry taught in Ch 104. One two-hour period per week.

110 GENERAL CHEMISTRY I. Three credit hours. Lectures and demonstrations combined with discussion of problems. An examination of the basic principles and descriptive facts of general chemistry. Included are treatments of atomic and molecular structure, states of matter, solutions, equilibrium and kinetics. A pre-professional course. Prerequisite to all other courses except Ch 102-105 inclusive.

111 GENERAL CHEMISTRY I LABORATORY. One credit hour. Practice in the basic operations of chemical laboratory work. Experiments illustrate topics and principles covered in Ch 110. One three-hour period per week.

112 GENERAL CHEMISTRY II. Three credit hours. A continuation of Ch 110. Subjects include aqueous equilibrium, thermodynamics, electrochemistry, and the chemistry of representative elements. Prerequisite: Ch 110.

113 GENERAL CHEMISTRY II LABORATORY. One or two credit hours. A continuation of Ch 111. The laboratory work includes some qualitative and quantitative inorganic analysis and some radiochemical experiments. One or two three-hour periods per week. Prerequisite: Ch 111.

120 ANALYTICAL AND PHYSICAL CHEMISTRY. Three credit hours. A course for pre-medical, pre-dental and education (those intending to teach chemistry) students. Lectures develop principles of physical chemistry and analytical chemistry, especially insofar as they relate to the health sciences. Prerequisite: Ch 112.

121 ANALYTICAL AND PHYSICAL CHEMISTRY LABORATORY. One credit hour. Practice in analytical techniques and instrumental methods of analysis. Four hours per week. Prerequisite: Ch 113.

130 PHYSICAL CHEMISTRY I. Three credit hours. An introduction to theoretical chemistry with emphasis on thermodynamics and chemical equilibrium. Prerequisites: Ch 112, Mt 120, and Ph 108, the last being taken at least concurrently.

131 PHYSICAL CHEMISTRY I LABORATORY. One credit hour. A course to accompany Ch 130 and to illustrate by means of selected experiments principles discussed in Ch 130. Prerequisite: Ch 113.

132 PHYSICAL CHEMISTRY II. Three credit hours. A continuation of Ch 130. Chief emphasis is on chemical kinetics and the states of matter. Prerequisite: Ch 130.

133 PHYSICAL CHEMISTRY II LABORATORY. One credit hour. A course to accompany Ch 132 and to illustrate, by selected experiments, principles discussed in Ch 132. Prerequisite: Ch 131.

140 ORGANIC CHEMISTRY I. Three credit hours. An introductory course treating of the structure, preparation, reactions, and properties of organic compounds. Prerequisite: Ch 112.

141 ORGANIC CHEMISTRY I LABORATORY. One credit hour. The practice of fundamental operations involved in the synthesis, separation, purification, and identification of organic compounds. One four-hour laboratory period per week. Prerequisite: Ch 113.

142 ORGANIC CHEMISTRY II. Three credit hours. A continuation of Ch 140 which extends the treatment of fundamental organic chemistry. Some special topics are included. Prerequisite: Ch 140.

143 ORGANIC CHEMISTRY II LABORATORY. One credit hour. A continuation of the laboratory work of Ch 141 with increased emphasis on the reactions and synthesis of organic systems. Prerequisite: Ch 141.

190 CHEMICAL LITERATURE. One credit hour. An introduction to the nature and use of the chemical literature, general research procedures, and technical report writing. Prerequisite: junior standing.

Upper Division Courses

230 PHYSICAL CHEMISTRY III. Two credit hours. An introduction to quantum chemistry, kinetic theory, and molecular structure. Prerequisite: Ch 132.

245 ORGANIC PREPARATIONS. One or two credit hours. Lecture or consultation and laboratory work dealing with the fundamental techniques and manipulations of organic synthesis. Both theory and practice of operations, such as distillation, melting point determination, recrystallization, etc., are reviewed. One lecture or individual consultation and three hours of laboratory work per week per credit hour. Prerequisite: Ch 143.

250 QUALITATIVE ORGANIC ANALYSIS. Three credit hours. The systematic identification of pure organic compounds and of mixtures. Instrumental methods of structure determination are included. One or two lectures and four to six hours of laboratory work per week. Prerequisites: Ch 142, 143.

260 INORGANIC CHEMISTRY. Three credit hours. Modern theories of bonding and structure applied to inorganic compounds. Acid-base and redox chemistry based on thermodynamic principles. Coordination compound chemistry. Prerequisite: Ch 230.

261 INORGANIC CHEMISTRY LABORATORY. One credit hour, Laboratory techniques and practice in synthetic inorganic chemistry. One laboratory period per week. Corequisite: Ch 260.
265 INORGANIC PREPARATIONS. One lecture or individual consultation, and three hours of laboratory work per credit hour. Laboratory preparation of various classes of compounds intended to develop technique and to illustrate the methods employed in the preparation of pure inorganic compounds.

275 INDUSTRIAL CHEMISTRY. Two credit hours. Principles and practices of the chemical manufacturing industry.

280 INSTRUMENTAL ANALYSIS. Two or three credit hours. Discussion of modern analytical chemistry with emphasis on instrumentation and measurement techniques. Prerequisite: Ch 132.

281 INSTRUMENTAL ANALYSIS LABORATORY. Two credit hours. Practice in the use of chemical instrumentation as available. Instruments and measurements illustrate topics discussed in the corresponding lecture course. Two three-hour periods per week. Prerequisites: Ch 133, 280.

290 PROBLEMS IN PHYSICAL CHEMISTRY. Credit by arrangement. Conferences and direction in library and/or laboratory work in some area of physical chemistry. A charge will be made for materials used. Prerequisite: permission of the Chairman of the Department.

291 PROBLEMS IN ORGANIC CHEMISTRY. Description as for Ch 290, but work done is in some area of organic chemistry.

292 PROBLEMS IN INORGANIC CHEMISTRY. Description as for Ch 290, but work done is in some area of inorganic chemistry.

293 PROBLEMS IN BIOCHEMISTRY. Description as for Ch 290, but work done is in some area of biochemistry.

294 PROBLEMS IN ANALYTICAL CHEMISTRY. Description as for Ch 290, but work done is in some area of analytical chemistry.

298 SENIOR RESEARCH I. One credit hour. Directed reading and undergraduate laboratory research required of all chemistry majors in their senior year. A charge will be made for materials used.

299 SENIOR RESEARCH II. One credit hour. A continuation and conclusion of research begun in Ch 298. No additional charge for materials will be made. A written thesis is required as a final report of the activities of Ch 298 and 299.

320 INTRODUCTION TO RADIOCHEMISTRY. Two credit hours. Lecture and laboratory totaling four hours per week. Basic principles of radiochemistry and the methodology of instrumental techniques in the field.

340 TOPICS IN ORGANIC CHEMISTRY. Two credit hours. An extension of fundamental organic chemistry to include more specialized topics not previously considered or extensively treated. Prerequisite: Ch 142.

370 BIOCHEMISTRY. Three credit hours. A lecture course treating of the chemistry and biochemistry of carbohydrates, lipids, and proteins. Special topics, such as enzymes, biochemical energetics, photosynthesis, and hormones, are included as time permits. Prerequisite: Ch 142.

Graduate Courses

500 GRADUATE CHEMISTRY SEMINAR. No credit. Critical discussion of, and progress reports on, theses and special topics by graduate students and staff members. Required each semester for all full-time graduate students. Prerequisite: graduate standing.

502 ORGANIC CHEMISTRY FOR TEACHERS. Lecture. Four credit hours. A course covering the structure, synthesis, properties, and reactions of carbon compounds—aliphatic, aromatic, and alicyclic.

503 ORGANIC CHEMISTRY FOR TEACHERS LABORATORY. Two credit hours. Laboratory practice in the techniques of preparation, separation, purification, and identification of organic compounds.

504 THEORETICAL CHEMISTRY FOR TEACHERS. Four credit hours. A course intended to present the basic principles of physical and analytical chemistry.

505 THEORETICAL CHEMISTRY FOR TEACHERS LABORATORY. Two credit hours. Experiments illustrate principles of both analytical and physical chemistry. Some instrumental methods of measurement are included.

506 INORGANIC CHEMISTRY FOR TEACHERS. Four credit hours. Lectures only. Chemical periodicity, ionic and covalent bonding, and acid-base and redox chemistry.

510 CHEMICAL RESEARCH FOR TEACHERS. Two credit hours. Laboratory work, library work, and written and oral report. After instruction in the use of chemical literature, the student selects a research topic upon which he will begin work during the same summer. Upon completion of the project, he submits a written report. An oral examination will be given over this material to satisfy the final examination requirement for the concentration in chemistry.

520 RADIOCHEMISTRY. Two credit hours. Principles of radiochemistry, properties of nuclides, advanced instrumental techniques, and methodology of radiochemical applications. Prerequisite: Ch 320 or its equivalent.

521 RADIOCHEMISTRY LABORATORY. One or two credit hours. Laboratory and instrumental technique in radiochemistry. Prerequisite: Ch 320. Corequisite: Ch 520.

525 THERMODYNAMICS. Two credit hours. Classical and statistical thermodynamics and the kinetic theory of gases.

530 CHEMICAL KINETICS. Two credit hours. Empirical and theoretical treatment of homogeneous reactions. Subjects covered include collision and transition state theories, experimental methods, and the differential and integrated rate expressions for a variety of mechanisms.

535 THE CHEMICAL BOND. Two credit hours. An introduction to the quantum theory of valence emphasizing calculations on molecular structure.
chemistry

538 INTRODUCTION TO VIBRATIONAL SPECTROSCOPY. Two credit hours. The theory of vibrational-rotational molecular spectroscopy.

550 ORGANIC STEREOCHEMISTRY. Two credit hours. Fundamental structural theory and symmetry operations applied to the three-dimensional static and dynamic aspects of organic compounds. Geometrical, optical, and conformational isomerism. The stereochemical factors in certain organic reactions. Stereochemistry of elements other than carbon.

555 HETEROCYCLIC ORGANIC CHEMISTRY. Two credit hours. The application of fundamental organic reactions as applied to the heterocyclic organic molecules. Two lectures per week.

570 NEWER METHODS OF SYNTHETIC ORGANIC CHEMISTRY. Two credit hours. Treatment of recently developed reagents, techniques, and processes in synthetic organic chemistry.

580 ADVANCED ORGANIC PREPARATIONS. One to three credit hours. Lectures and/or consultation, and three hours of laboratory work per week per credit hour. A laboratory course.

590 REACTION MECHANISMS. Two credit hours. Theories of reaction mechanisms and their applications to both organic and inorganic systems. Reaction mechanisms specific to certain types of compounds. Methods for determination of mechanisms. Prerequisite: Ch 530.

595 ORGANOMETALLIC CHEMISTRY. Two credit hours. Organometallic compounds and their chemistry. Synthesis, isolation, bonding, structure, and reactions are covered. Chief emphasis is on compounds containing sigma carbon-metal bonds.

610 STRUCTURAL INORGANIC CHEMISTRY. Two credit hours. Principles which determine the structure of inorganic substances. Emphasis is placed on periodic properties and bonding theories with special attention given to coordination chemistry. Prerequisite: Ch 535.

620 ADVANCED BIOCHEMISTRY. Two credit hours. A review and extension of fundamental biochemistry. Lectures supplemented by library assignments. Prerequisite: Ch 370 or its equivalent.

630 MEDICINAL CHEMISTRY. Two credit hours. The organic chemistry of medicinal products. Structure-activity relationships will be stressed.

640 CHEMICAL SEPARATIONS. Two credit hours. Methods of chemical separation and their application in chemical analysis. Emphasis is placed on the theory, techniques, and applications of current importance.

650 CHEMICAL MEASUREMENTS. Two credit hours. Methods for measuring the properties of chemical systems for the collection of analytical data. Modern methods will be stressed, especially those based on the optical and electrical properties of systems.

680 INSTRUMENTAL METHODS. One or two credit hours. A lecture and laboratory course to prepare the student for graduate study and research. Laboratory work consists of practice in the use of available instruments.

690 SPECIAL TOPICS. Two credit hours. Selections from the four major fields of chemistry. Varied topics representative of important phases of chemistry not treated in regular course work. The nature of the course material will be indicated by descriptive course titles, e.g., Polymer Chemistry, but the same course number will be retained.

692 SPECIAL STUDY. One credit hour. A short-term lecture series on special topics, emphasizing continuing education for practicing scientists. May be taken as a lecture series without credit. Nature of the course material will be indicated by descriptive subtitles.

699 MASTER'S THESIS. Six credit hours. Laboratory and library research under the supervision of a departmental research advisor. Problems may be selected from the general fields of organic, inorganic, analytical, or physical chemistry. A final written thesis is required for those desiring the Master's degree in chemistry. A charge will be made for materials and apparatus used in this work.

Classical Languages

Staff: DR. MURRAY, chairman; FR. BURKE, FR. FELTEN, DR. HARKINS, FR. HETHERINGTON, DR. RETTIG.

Classical Culture (CI)

Upper Division Courses

201 CLASSICAL ARCHAEOLOGY. Three credit hours. (Hs 201).

202 HISTORY OF ANCIENT GREECE. Three credit hours. See Hs 202.

204 CHRISTIAN ANTIQUITY. Three credit hours. See Hs 204.

206 HISTORY OF ANCIENT ROME. Three credit hours. See Hs 206.

207 CONSTITUTIONAL HISTORY OF ROME. Three credit hours. See Hs 207.

241 GREEK LITERATURE IN TRANSLATION. Three credit hours. (En 241).

244 LATIN LITERATURE IN TRANSLATION. Three credit hours. (En 244).

248 CLASSICAL MYTHOLOGY. Three credit hours. (En 248).

333 MEN AND IDEAS OF GREECE AND ROME. Three credit hours. (Th 333).

345 INTRODUCTION TO THE CHURCH FATHERS. Three credit hours. (Th 345).

Greek (Gk)

Lower Division Courses

101 ELEMENTARY GREEK. Five credit hours. One semester.

102 INTRODUCTION TO GREEK LITERATURE. Five credit hours. One semester.

107 XENOPHON. Three credit hours.

108 ST. LUKE. Three credit hours.

112 HERODOTUS: SELECTED READINGS. Three credit hours.
### Classics

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Course Title</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>117</td>
<td>LYSIAS: SELECTED READINGS</td>
<td>Three credit hours</td>
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<tr>
<td>123</td>
<td>GREEK PROSE COMPOSITION I</td>
<td>Three credit hours</td>
</tr>
<tr>
<td>124</td>
<td>GREEK PROSE COMPOSITION II</td>
<td>Three credit hours</td>
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<tr>
<td>151</td>
<td>HOMER</td>
<td>Three credit hours</td>
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<tr>
<td>152</td>
<td>HOMER</td>
<td>Three credit hours</td>
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<tr>
<td>162</td>
<td>EURIPIDES: MEDEA</td>
<td>Three credit hours</td>
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<tr>
<td>172</td>
<td>PLATO</td>
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<tr>
<td>201</td>
<td>CLASSICAL ARCHAEOLOGY</td>
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<tr>
<td>202</td>
<td>HISTORY OF ANCIENT GREECE</td>
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<td>204</td>
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<td>207</td>
<td>XENOPHON</td>
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<td>208</td>
<td>DEMOSTHENES: PHILIPPICS AND OLYNTHIACS</td>
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<td>LYSIAS</td>
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<td>251</td>
<td>HOMER: ILLIAD</td>
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<td>HOMER: ODYSSEY</td>
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<td>260</td>
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<td>DEMOSTHENES: THE CROWN</td>
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<td>313</td>
<td>GREEK STYLE I</td>
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<td>314</td>
<td>GREEK STYLE II</td>
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<td>331</td>
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<td>PLATO: THE REPUBLIC</td>
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<td>372</td>
<td>PLATO: DIALOGUES</td>
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<td>388</td>
<td>HISTORY OF GREEK LITERATURE</td>
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<td>397</td>
<td>SPECIAL STUDY</td>
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<td>399</td>
<td>SENIOR COMPREHENSIVE REVIEW</td>
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#### Upper Division Courses

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<td>201</td>
<td>CLASSICAL ARCHAEOLOGY</td>
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<td>202</td>
<td>HISTORY OF ANCIENT GREECE</td>
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<td>204</td>
<td>CHRISTIAN ANTIQUITY</td>
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<td>207</td>
<td>XENOPHON</td>
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<td>208</td>
<td>DEMOSTHENES: PHILIPPICS AND OLYNTHIACS</td>
<td>Three credit hours</td>
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<td>212</td>
<td>HERODOTUS</td>
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<tr>
<td>217</td>
<td>LYSIAS</td>
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<tr>
<td>248</td>
<td>CLASSICAL MYTHOLOGY</td>
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<td>251</td>
<td>HOMER: ILLIAD</td>
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<td>363</td>
<td>AESCHYLUS</td>
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<td>ARISTOPHANES</td>
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<td>371</td>
<td>PLATO: THE REPUBLIC</td>
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<td>372</td>
<td>PLATO: DIALOGUES</td>
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#### Graduate Courses

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<tr>
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<td>GREECE, THE FIFTH CENTURY</td>
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<td>512</td>
<td>HERODOTUS</td>
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<td>531</td>
<td>THUCYDIDES</td>
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<td>552</td>
<td>HOMER</td>
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<td>560</td>
<td>SOPHOCLES: EARLY PLAYS</td>
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<td>561</td>
<td>SOPHOCLES: LATER PLAYS</td>
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<td>AESCHYLUS</td>
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<td>571</td>
<td>PLATO: UTOPIA</td>
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<td>572</td>
<td>PLATO: EARLY DIALOGUES</td>
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<td>PLATO: MIDDLE DIALOGUES</td>
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<td>PLATO: LATE DIALOGUES</td>
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<td>575</td>
<td>ARISTOTLE: NICOMACHAEAN ETHICS</td>
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<td>576</td>
<td>ARISTOTLE: METAPHYSICS</td>
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<td>589</td>
<td>LONGINUS</td>
<td>Three credit hours</td>
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<td>604</td>
<td>GREEK PALAEOGRAPHY</td>
<td>Three credit hours</td>
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<td>615</td>
<td>GREEK AND ROMAN ART</td>
<td>Three credit hours</td>
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<td>616</td>
<td>TOPOGRAPHY OF ANCIENT ATHENS</td>
<td>Three credit hours</td>
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<tr>
<td>699</td>
<td>MASTER'S THESIS</td>
<td>Six credit hours</td>
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Latin (Lt)

Lower Division Courses

101 ELEMENTARY LATIN. Five credit hours.
102 INTRODUCTION TO LATIN LITERATURE. Five credit hours.
113 LATIN COMPOSITION I. Three credit hours.
114 LATIN COMPOSITION II. Three credit hours.
115 INTERMEDIATE LATIN. Three credit hours. Review of grammar with special emphasis on reading and composition.
117 PHILOSOPHICAL LATIN. Three credit hours. An intensive review of basic syntax intended to prepare students for the reading of philosophical texts in Latin.
119 THEORETICAL LATIN. Three credit hours. Graded readings selected from the Latin Fathers and theological authors.
120 CICERO. Three credit hours. The De Senectute and/or the De Amicitia.
121 VIRGIL: AENEID I-VI. Three credit hours.
122 VIRGIL: AENEID VII-XII. Three credit hours.
123 PLAUTUS AND TERENCE. Three credit hours. Selected readings.

Upper Division Courses

201 CLASSICAL ARCHAEOLOGY. Two or three credit hours. (Hs 201, Gk 201).
206 HISTORY OF ANCIENT ROME. Three credit hours. See Hs 206.
207 CONSTITUTIONAL HISTORY OF ROME. Three credit hours. See Hs 207.
208 LIVY. Three credit hours.
211 TACITUS: AGRICOLA, GERMANIA. Three credit hours.
212 CICERO: PRO ARCHIA, PRO LEGE MANILIANA, AND PRO MARCELLO. Three credit hours.
213 CICERO: PRO MILONE. Three credit hours.
214 INTRODUCTION TO A STUDY OF THE LATIN FATHERS. Three credit hours.
215 HORACE: ODES. Three credit hours.
216 CLASSICAL MYTHOLOGY. Three credit hours. (Gk 248, En 248, Cl 248).
217 VIRGIL: AENEID. Three credit hours.

Graduate Courses

505 ROMAN REPUBLIC. Three credit hours. (Hs 505).
506 EARLY ROMAN EMPIRE. Three credit hours. (Hs 506).
508 CAESAR. Three credit hours.
511 LIVY. Three credit hours.
512 THE ANNALS OF TACITUS. Three credit hours.
Classics

513 THE HISTORIES OF TACITUS. Three credit hours.
519 LETTERS OF CICERO. Three credit hours.
522 CONFESSIONS OF SAINT AUGUSTINE. Three credit hours.
531 HORACE. Three credit hours.
532 CATULLUS. Three credit hours.
533 ROMAN ELEGY. Three credit hours.
534 ROMAN BIOGRAPHY. Three credit hours.
551 VIRGIL. Three credit hours.
555 JUVENAL. Three credit hours.
556 SEMINAR IN ROMAN SATIRE. Three credit hours.
561 ROMAN COMEDY. Three credit hours.
564 LATIN PALAEOGRAPHY. Three credit hours.
614 STYLISTIC LATIN. Three credit hours.
624 SEMINAR IN PATRISTIC LITERATURE. Three credit hours.
627 ROMAN METRICS. Three credit hours.
638 MEDIAEVAL LATIN. Three credit hours.
680 READING LIST I. Three credit hours. Latin authors of the Republic.
681 READING LIST II. Three credit hours. Latin authors of the Augustan Age.
682 READING LIST III. Three credit hours. Latin authors of the Empire.
691 EPICUREANISM AT ROME. Three credit hours.
697 HISTORICAL DEVELOPMENT OF THE LATIN LANGUAGE. Three credit hours.
698 SPECIAL STUDY. Three credit hours.
699 MASTER'S THESIS. Six credit hours.

Communication Arts

Communication Arts (CA)

Staff: FR. FLYNN, chairman; MR. ADRIK, FR. HAGERTY, MR. KVAPIL, DR. LUNSFORD, MR. MAUPIN.

Lower Division Courses


102 VOICE AND DICTION. Three credit hours. Principles and practice in habits of correct breathing, quality, pitch, pause, variety, and rhythm. Study and practice of consonant and vowel articulation, of discritical marks, of pronunciation, and of correct dictionary usage.

122 WRITTEN COMMUNICATIONS AND REPORTS. Three credit hours. Basic written communication. Effective writing of business letters and reports. Other devices of practical communication.

Upper Division Courses

201 ORAL INTERPRETATION. Three credit hours. Study of the communicative art of oral interpretation of literary material. Analysis of, and practice in, personality projection, body control, communication of mood and emotion, vocal amplification. Listening and audience response. Prerequisite or corequisite: CA 101 or 102, except for graduate students.

202 SURVEY OF MASS MEDIA. Three credit hours. Survey of organization and functions of newspapers, magazines, radio, television, film, and other mass media for communicating information to the public. Introductory study for concentration in the mass media.


Electives

209 AUDIOVISUAL COMMUNICATION. Three credit hours. Relationship and audiovisual materials in the learning process. How these materials can enrich a particular field—their practical uses, advantages, limitations. Learning to make basic instructional materials and to use equipment. Role of the teacher and supervisor in an effective school program. (Ed 209)
Film

Certain film courses are taught at Xavier Symmes Studios


212 FILM HISTORY AND DIRECTORS. Four credit hours. (2 hrs. lec., 2 hrs. lab.) Complete survey of the history of the motion picture picture camera to current Hollywood and foreign film-makers and the new underground “avant-garde.” Screenings and discussion. Prerequisite or corequisite: CA 211 or 213.

213 FILM COMMUNICATION. Three credit hours. Visual communication in general. (Components: direction, line, color, shape, value, texture, motion, intervals, linear direction, space.) Film communication. Besides observing and criticizing visual components found in pictures taken by others, the student will take various assigned 35 mm stills and will complete various short films illustrating visual components.

214 FILM CRITICISM. Three credit hours. The philosophy of film. Arriving at critical criteria. Psycho-physical effects of film. Technique of film. Ethics and responsibility of the film-maker. Analysis and evaluation of many films with the student selecting one for detailed study. Prerequisite or corequisite: CA 211 or 213.

215 FILM PROPAGANDA AND DOCUMENTARY. Four credit hours. (2 hrs. lec., 2 hrs. lab.) Use of propaganda films as a means of expression and persuasion. Techniques of documentary production through ideas of Grierson and Flaherty. Propaganda techniques through studies of Riefenstahl and Capra. Prerequisite or corequisite: CA 211 or 213.

216 FILM MAKING AND TECHNIQUES. Three credit hours. Basic studies in the making of a film—economic, social, and technical—conducted by students under guidance, with emphasis on a pedagogical tool, as a creative art form. Prerequisite: Approval of Chairman.


Radio-Television

All radio-television courses, except CA 228, are taught at Xavier Symmes Studios.


222 CONTINUITY WRITING. Three credit hours. Fundamentals of effective commercial and program writing for radio and television. Duties and obligations of a writer. In-class writing assignments and critiques; lectures and discussions; homework assignments for stimulating the flow of ideas. Audio and visual aids for highlighting techniques. Emphasis on writing commercial copy. Prerequisite: En 101 or equivalent.

223 RADIO PRODUCTION. Four credit hours. (2 hrs. lec., 2 hrs. lab.) Discussion of basic radio programming, including program evolution, cues, interviews, newscasting, radio plays. Use of sound effects, music, and other audio resources.

224 BASIC EQUIPMENT OPERATION. Four credit hours. (Two hours of lecture, two hours of lab weekly—one evening.) Examination of various phases of equipment from operational standpoint. Tools, techniques, and skills of radio and television. Use of microphones, sound effects, music, tape recorders, audio and video controls, film cameras, sets, and lighting. Studio demonstration and practice in basic program procedures.

225 BASIC TV DIRECTION-PRODUCTION. Four credit hours. (Two hours of lecture, two hours of lab weekly—one evening.) Principles and practice in directing and producing television and radio programs. Use of studio equipment in camera techniques, pictorial composition, video and audio skills. Class participation in small programs. Prerequisite or corequisite: CA 224.

226 ADVANCED TV DIRECTION-PRODUCTION. Four credit hours. (Two hours of lecture, two hours of lab weekly—one evening.) Theories and techniques of control room directing. Proper pre-planning, quick reaction to unforeseen problems, making best possible decisions, working with people. Theories of staging, pacing, and acting. Proper dramatic effect—when and how to achieve it. Format and pace of program for best balance and timing. Prerequisite: CA 225, or corequisite: CA 224.

227 RADIO-TV PERFORMANCE. Three credit hours. (Two hours of lecture, two hours of lab weekly—one evening.) Microphone and interpretative techniques. Guided practice in staff announcing, interviews discussion, and audience participation. Prerequisite: CA 101, 102.

229 TV TECHNIQUES FOR BUSINESS AND TEACHERS. Three credit hours. Use of broadcast quality TV equipment as well as closed-circuit. Centers on the needs of the class. Techniques for improving TV production through the actual planning and execution of video taped programs.

Theatre

231 HISTORY OF THE THEATRE. Three credit hours. A history of theatrical practice in the Western World. Examination of theatres and staging technique showing the influence of acting, directing, and scenic styles. The western theatre from the Greek to current times. The course will be taught with the assistance of visual aids.

232 ACTING TECHNIQUES. Three credit hours. (One hour of lecture, two hours of lab weekly.) Elements of acting with emphasis on coordinating speech and movement. Pantomime, improvisation, and acting. Technique of rehearsal, grouping, movement, tempo, rhythm, and line reading. Laboratory scenes. Practice in make-up. Prerequisite: CA 102 or approval of chairman.
<table>
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<th>Course Code</th>
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<th>Credit Hours</th>
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<tr>
<td>233</td>
<td>PLAY DIRECTING</td>
<td>Three</td>
<td>Lecture-laboratory course covering basic aspects of play directing. Director's function in interpreting a play. Techniques involved in rendering this interpretation in oral and visible form in the theatre. Student participation in direction and stage management of productions.</td>
</tr>
<tr>
<td>234</td>
<td>STAGECRAFT: THEATRE, TV, FILM</td>
<td>Three</td>
<td>Lecture-laboratory course covering basic aspects of stagecraft for theatre, film, and television with emphasis upon the theory and practice of stage scenery, construction and painting. Laboratory projects coordinated with XU Players and student workshop productions.</td>
</tr>
<tr>
<td>235</td>
<td>PLAY PRODUCTION</td>
<td>Three</td>
<td>Lecture-laboratory course covering basic aspects of production. Study of organizational and technical problems of dramatic production through planning of complete amateur productions. Analysis and selection of plays. General technique of rehearsal. Basic elements of costume and make-up.</td>
</tr>
<tr>
<td>236</td>
<td>SCENIC DESIGN FOR PERFORMING ARTS</td>
<td>Three</td>
<td>Lecture-laboratory course covering basic aspects of scenic design. Examination of lighting instruments, control units, and color in the creation of aesthetic effects. Laboratory projects coordinated with XU Players and student workshop productions.</td>
</tr>
<tr>
<td>237</td>
<td>LIGHTING: THEATRE, TV, FILM</td>
<td>Three</td>
<td>Lecture-laboratory course covering basic aspects of lighting. Theories in the illumination of stage, film, and television productions. Examination of lighting instruments, control units, and color in the creation of aesthetic effects. Laboratory projects coordinated with XU Players and student workshop productions.</td>
</tr>
<tr>
<td>238</td>
<td>THEATRE APPRECIATION</td>
<td>Three</td>
<td>Introduction to theatre appreciation. Study of organizational and technical problems of dramatic production through planning of complete amateur productions. Analysis and selection of plays. General technique of rehearsal. Basic elements of costume and make-up.</td>
</tr>
<tr>
<td>239</td>
<td>THEATRE ARTS I</td>
<td>Three</td>
<td>Brief history of stage costume. Basic design elements, fabrics, and patterns. Study and application of principles, materials, and procedures for effective execution of theatrical makeup.</td>
</tr>
<tr>
<td>240</td>
<td>ACTING I</td>
<td>Three</td>
<td>Elements of acting. Creating a role and characterization. Scene rehearsals.</td>
</tr>
<tr>
<td>241</td>
<td>PRINCIPLES OF JOURNALISM</td>
<td>Two to three</td>
<td>Fundamentals of modern journalism, newspapers, radio, and television, and magazines. View of field of mass communication. Newspaper journalism: metropolitan and small-town dailies, weeklies, community papers, and trade publications. Required for all other journalism courses.</td>
</tr>
<tr>
<td>242</td>
<td>NEWS WRITING</td>
<td>Three</td>
<td>Methods of reporting and writing news, including feature and special stories. Operation of a newspaper, administration of news staff, news values. Exercises in writing news stories.</td>
</tr>
<tr>
<td>243</td>
<td>WRITING FOR MASS MEDIA</td>
<td>Three</td>
<td>Writing style and format used by mass media: radio and television, newspapers, and magazines. Application of these principles in practical exercises. Use of pictures and film by the media. Role of staff writer and free lance writer in mass media. Strengths and weaknesses of the media.</td>
</tr>
<tr>
<td>261</td>
<td>PERSUASION</td>
<td>Three</td>
<td>Principles and techniques of attention, suggestion, and emotional appeals. Bases of belief and action. Ethical responsibility of advocacy. Discussion methods are used to teach the course. Development of, and skill in, persuasion through careful analysis of theory insight and through practice in persuasive speaking. Prerequisite: CA 101, 102, 201, or approval of Chairman.</td>
</tr>
<tr>
<td>262</td>
<td>SOCIAL DYNAMICS OF COMMUNICATION</td>
<td>Three</td>
<td>The role and meaning of communication in human relations. The effects of attitudes, belief systems, and prejudices on both verbal and non-verbal interactions between people and among groups. Theoretical considerations and practical demonstrations. (Ps 262, So 262)</td>
</tr>
<tr>
<td></td>
<td>Practicums</td>
<td>One</td>
<td>Three hours of lab or private study, with approval of the Chairman and of instructor, carry one hour of credit, repeatable up to four hours. Prerequisites: a background of courses in a specific area.</td>
</tr>
<tr>
<td>271</td>
<td>PRACTICUM IN FILM</td>
<td>One</td>
<td>Individual work in such as the following: analysis and evaluation; criticism; a specific director; film production.</td>
</tr>
<tr>
<td>272</td>
<td>PRACTICUM IN RADIO-TELEVISION</td>
<td>One</td>
<td>Individual work in such as the following: programming, production, direction, writing.</td>
</tr>
<tr>
<td>273</td>
<td>PRACTICUM IN THEATRE</td>
<td>One</td>
<td>Individual work in such as the following: directing, acting, stage design, lighting, costuming, management.</td>
</tr>
</tbody>
</table>
PRACTICUM IN JOURNALISM. One credit hour. Individual work in such as the following: further research in methods of reporting and writing news, features, and stories; practical exercises in style and format used by mass media; appraisal of strengths and weakness of a specific medium.

PRACTICUM IN PUBLIC RELATIONS. One credit hour. Individual work in such as the following: public opinion study of a specific question; analysis of propaganda techniques in a specific study.

PRACTICUM IN SPEECH. One credit hour. Individual work in such as the following: critical analysis and evaluation of an effective speech; evaluation and analysis of a selection for oral interpretation; study of style in speaking.

Institutes and Workshops

281 Institute: ART OF THE FILM (summer Intersession only). Two credit hours. Lectures and film demonstrations (shorts and features) dealing with the evolution of the silent to the sound film. Grammar, technology, and business of film. Film as an art form.

282 Institute: FILM—FOREIGN DIRECTORS (summer Intersession only). Two credit hours. Lectures and film demonstrations dealing with theories, techniques, and artistic creation of such directors as Flaherty, Eisenstein, Bergman, Fellini, and others.


284 Workshop: ORAL COMMUNICATION FOR TEACHERS (summer). Three credit hours. Principles, performance, and practice to help the teacher's effectiveness in the classroom. Study of voice, diction, bodily action, development of ideas, speaking, oral interpretation, discussions, and conferences. (Ed 284)

285 Workshop: THEATRE CLASSICS (summer). Three credit hours. One hour of lecture, three hours of lab.) Study and practice in all aspects of production: selection of play, rehearsals, blocking, line-reading, directing, lighting, costuming. Emphasis on classical theatre. Arena theatre facilities.

286 Workshop: PLAY PRODUCTION (summer). Three credit hours. (one hour of lecture, three hours of lab.) Lecture-laboratory course covering basic aspects of production. Study of organizational and technical problems of dramatic production through planning of complete amateur productions. Analysis and selection of plays. General technique of rehearsal. Basic elements of costume and make-up. Emphasis on modern plays.

287 Institute: FILM—AMERICAN DIRECTORS (Summer Intersession only). Two credit hours. In-depth study of six directors: John Ford, Alfred Hitchcock, Howard Hawks, Elia Kazan, Nicholas Ray, and Arthur Penn. Films will be shown and discussed. Visiting lecturers.

Special Study

299 SPECIAL STUDY: Applicable to all programs.
Economics (Ec)

Staff: DR. MASTRIANNA, chairman; FR. BESSE, DR. H. BRYANT, DR. CLICKNER, MR. DENGES, DR. DONELLY, DR. GORDON, DR. HAILSTONES, DR. LINK, DR. RAMINENI, MR. ROTHWELL, DR. SCHULTZ, DR. WILLIAMS, DR. ZIMMERMAN.

Assisted by: MR. CISSELL, DR. FREIBERG, MR. GERACI, MR. MANLEY, MR. MARTIN, DR. THEMANN, DR. WEBB.

Lower Division Courses

101 PRINCIPLES OF ECONOMICS. Three credit hours. General economic activity including analysis of such areas as national income, employment, money and banking, business fluctuations, and economic stability. The economy as a whole is examined rather than individual economic units.

102 PRINCIPLES OF ECONOMICS. Three credit hours. Market forces of supply and demand in allocating the nation's resources and securing efficiency in their use. Economic behavior of consumers, firms, and resource owners.

110 SURVEY OF ECONOMICS. Three credit hours. Basic concepts and analytical tools of the economist. Designed for students other than majors in economics or business, particularly for those in other social sciences.

Upper Division Courses

200 MICROECONOMIC ANALYSIS. Three credit hours. An advanced study of economic principles including an analysis of such fundamental concepts as value and price, rent, interest, wages and profits and their relation to the current problems of production, distribution, and exchange. Prerequisite: Ec 102.

201 MACROECONOMIC ANALYSIS. Three credit hours. An analysis of the determinants of Gross National Product, employment levels, and rates of economic growth. The analysis is conducted within a framework of principles and relationships derived from the still developing body of modern macroeconomic theory. Prerequisite: Ec 101.

202 HISTORY OF ECONOMIC THOUGHT. Three credit hours. World economic movements. Analysis of literature in the field. Theories of economics advanced by Aristotle, Saint Thomas Aquinas, Adam Smith, Ricardo, Mills, Malthus, George, Clark, Bentham, Jevons, Keynes, and others. Prerequisite: Ec 101, 102.

210 HUMAN RESOURCES. Three credit hours. See Mg 210. Prerequisite: Ec 102 or 110. (Ir 210, Mg 210)

222 ECONOMETRICS. Three credit hours. Applications of economic theory, statistical methods, and the calculus to numerical economic data. Demand, cost, production, and other economic functions are analyzed in detail. Prerequisite: Mt 112.

232 MATHEMATICS FOR ECONOMISTS. Three credit hours. Functions of several variables. Maxima and minima of functions. Applications of series, differential equations, and difference equations to economic problems. Prerequisite: Mt 112.

235 ECONOMIC HISTORY OF THE UNITED STATES. Three credit hours. Development of the American economy from the period of colonization to the present. Traces the progress of population, agriculture, industry, domestic and foreign commerce, banking and finance, and transportation. Integrates the economic, social, and political development in the United States.

240 ECONOMIC GEOGRAPHY. Three credit hours. World geography and the economic implications of natural resources. Emphasis on production of goods in relation to the development of agriculture, commerce, and industry in the United States and foreign countries.

245 URBAN ECONOMICS. Three credit hours. Interdisciplinary. Tools for problem solving. Forces leading to urbanization and differing rates of growth in urban areas. Affluence, equity, and stability are investigated within the framework of our present day urban environment.

250 MONEY AND BANKING. Three credit hours. See Fi 250. Prerequisite: Ec 101 or 110.

300 LABOR RELATIONS. Three credit hours. See IR 300.

310 CURRENT LABOR PROBLEMS. Three credit hours. See IR 310.

311 HISTORY OF THE LABOR MOVEMENT. Three credit hours. See IR 311.

313 LABOR LEGISLATION. Three credit hours. See IR 313.

320 ECONOMIC THEORY AND SOCIAL ORDER. Three credit hours. Economics from the viewpoint of Christian ethics. The Encyclicals as they affect the science of economics and business. A course intended to help the future businessman plan and preserve a code of ethics founded on Christian principles. Prerequisite: Ec 100 or 110.

330 GOVERNMENT AND BUSINESS. Three credit hours. The structure of government in the United States with respect to government regulation of business. An analysis of the constitutional limitations: the due process of law regulations, the equal protection clause, privileges and immunities, and the extent of obligation of contract. (Po 330)

335 PUBLIC FINANCE AND TAXATION. Three credit hours. Analysis of the various forms of taxation; shifting and incidence of taxation; public borrowing; non-tax revenues; public expenditures; the effects of government revenue and expenditures on our economy. Prerequisite: Ec 101. (Po 335)

341 COMPARATIVE ECONOMIC SYSTEMS. Three credit hours. Origin and development of various economic systems; analysis of their operations and purposes; a comparison of the principal types—Socialism, Fascism, Communism—with Capitalism.

343 ECONOMICS OF THE COMMUNIST STATE. Three credit hours. The fundamental principles of Marxist Communism; their origins in the writings of Marx, Engels, Lenin, and Stalin; their relative importance; popular and orthodox communism; critical analysis of contemporary arguments against communism.
345 INTERNATIONAL TRADE. Three credit hours. The theory, policy, and practice of United States trade with the rest of the world. Theory is covered to gain a body of knowledge needed to understand the causal relationships that underlie international economic transactions. Policy is studied to discover the role of government in international trade as well as international agreements between private producers. Practice is studied to understand the conduct of international business. Prerequisite: Ec 200.

348 ECONOMICS OF TRANSPORTATION. Three credit hours.

360 CURRENT ECONOMIC PROBLEMS. Three credit hours. Current problems in labor, monetary, and fiscal policy, debt management, social security legislation, public regulation of business and agriculture form a basis of discussion and analysis. Prerequisite: Ec 101, 102 and six hours' upper-division courses.

397 TUTORIAL COURSE. Two or three credit hours. Special reading and study for advanced students.

Other courses are acceptable for a major in economics at the discretion of the Chairman or the student's advisor.

Graduate Courses

521 ADVANCED ECONOMIC THEORY I. Three credit hours. An advanced comprehensive study of the economic principles of price theory. Analyses are conducted within a framework of traditional and modern contributions in the field.

522 ADVANCED ECONOMIC THEORY II. Three credit hours. Analysis of theories of employment, including classical, Keynesian and modern, and the interrelationships implied in the determination of interest rates, the demand and supply for money, price levels, growth, and development. Monetary and fiscal policy are studied in light of these theories.

523 QUANTITATIVE TECHNIQUES IN ECONOMIC ANALYSIS. Three credit hours. Concepts and techniques of economic theory: elasticity, marginal analysis, linear programming, capital budgeting. Quantitative methods in solution of selected economic problems.

524 SEMINAR: DEVELOPMENT OF ECONOMIC THOUGHT. Three credit hours. The development of Neo-Classical and contemporary economic thought. It includes a study of the rise of marginalism; the theories of production, partial equilibrium, and general equilibrium; the growth of welfare economics.

530 MANAGERIAL ECONOMICS. Three credit hours. Economic analysis as applied to practical business operation. Tools of economic analysis; types of economic competition and their effect on individual firms and industries. Case study method of instruction is used.

532 BUSINESS FORECASTING. Three credit hours. (BA 532)

535 GOVERNMENT REGULATIONS OF BUSINESS. Three credit hours. See BA 535.

538 ECONOMICS OF LABOR. Three credit hours. Determinants of the competitiveness of labor markets; study of economic determinants of employment levels. Seminar method is used. (BA 538)

539 SEMINAR: CURRENT ECONOMIC PROBLEMS. Three credit hours. (BA 539)

542 ECONOMIC GROWTH AND DEVELOPMENT. Three credit hours.

544 INTERNATIONAL ECONOMIC PROBLEMS. Three credit hours.

546 LOCATION OF BUSINESS AND INDUSTRIAL ACTIVITY. Three credit hours. See BA 546.

548 TRANSPORTATION ECONOMICS. Three credit hours.

550 PROBLEMS IN BUSINESS FINANCE. Three credit hours. See BA 550.

552 INVESTMENT MANAGEMENT. Three credit hours. See BA 552.

556 MONETARY INSTITUTIONS AND POLICY. Three credit hours.

558 FISCAL POLICY AND PUBLIC FINANCE. Three credit hours.

612 SEMINAR: COLLECTIVE BARGAINING. Three credit hours. See BA 612.

690 BUSINESS AND SOCIETY. Three credit hours. (BA 690).

695 SPECIAL STUDY. Credit by arrangement.

697-698 RESEARCH SEMINAR. Six credit hours.

699 MASTER'S THESIS. Six credit hours.
Education

Upper Division Courses

201 SECONDARY METHODS. Three credit hours. Methodology applicable to high school teaching in general. Methods best suited to each of the major content fields. UNDERGRADUATE CREDIT ONLY.

202 SECONDARY CURRICULUM. Two credit hours. Functions of modern American secondary education; curricular experiences; new technology as applied to the curriculum. UNDERGRADUATE CREDIT ONLY.

203 STUDENT TEACHING (SECONDARY). Six credit hours. Laboratory experience in high school teaching under the supervision of a critic teacher for one semester. UNDERGRADUATE CREDIT ONLY.

204 STUDENT TEACHING (ELEMENTARY). Six credit hours. Laboratory experience in elementary school teaching under the supervision of a critic teacher for one semester. UNDERGRADUATE CREDIT ONLY.

206 PLANNED OBSERVATION AND PARTICIPATION. Three credit hours. A special course offered only to students preparing to be school psychologists. UNDERGRADUATE CREDIT ONLY.

207 TEACHING INTERNSHIP (SECONDARY). Six credit hours. A teaching internship open only to fully employed graduate students teaching on substandard certificates. The teacher is supervised by a clinical professor in the student's area of major competency. A 30-clock-hour seminar is part of the internship. Ed 548: Current Problems of Secondary Education, two credit hours, a professional problems seminar, must be taken as a supplement to the internship. UNDERGRADUATE CREDIT ONLY.

208 TEACHING INTERNSHIP (ELEMENTARY). Six credit hours. Description is the same as 207 except that Ed 547: Current Problems of Elementary Education, two credit hours, is the required supplemental course. UNDERGRADUATE CREDIT ONLY.

209 AUDIO-VISUAL COMMUNICATION. Two to four credit hours. See CA 209.

214 METHODS OF TEACHING READING. Three credit hours.

218 SOCIAL CASE WORK. Two or three credit hours. (So 218)

219 PROBLEMS OF MODERN STUDENTS. Two credit hours. (So 219)

226 CHILDREN'S LITERATURE. Three credit hours. Interpretative and critical study of literature, classic and contemporary, for children and/or adolescents. (En 226)

228 EDUCATIONAL TELEVISION. Two to four credit hours. (CA 228)

231 DEVELOPMENTAL PSYCHOLOGY. Three credit hours. See Ps 231.

232 CHILD PSYCHOLOGY. Two or three credit hours. See Ps 232.

233 ADOLESCENT PSYCHOLOGY. Two credit hours. See Ps 233.

235 DIFFERENTIAL PSYCHOLOGY. Two credit hours. See Ps 235.

237 PSYCHOLOGY OF LEARNING. Three credit hours. See Ps 237.

239 PSYCHOLOGY OF MOTIVATION. Three credit hours. See Ps 239.

261 SOCIAL PSYCHOLOGY. Two credit hours. See Ps 261. (So 261)

263, THEORIES OF PERSONALITY I, II. Four credit hours, two semesters. See Ps 263-264.

266 CRIME AND PERSONALITY. Three credit hours. See Ps 266. (Cr 266)

271 INTRODUCTION TO THE EMOTIONALLY DISTURBED CHILD. Two credit hours. (Ps 271)

272 GUIDING THE EMOTIONALLY DISTURBED CHILD. Two credit hours.

273 EDUCATING THE DISTURBED CHILD. Two credit hours.

274 MENTAL HYGIENE. Two credit hours. See Ps 274.

275 DYNAMIC PSYCHOLOGY. Two credit hours. See Ps 275.

276 PSYCHOLOGY OF DELINQUENCY. Two credit hours. See Ps 276.

277 ABNORMAL PSYCHOLOGY. Two or three credit hours. See Ps 277.

283 PRACTICUM IN PSYCHOLOGICAL TESTING. Two or three credit hours. See Ps 283.

284 ORAL COMMUNICATION: WORKSHOP FOR TEACHERS. Three credit hours. See Ca 284.

300 ELEMENTARY CURRICULUM. Three credit hours. UNDERGRADUATE CREDIT ONLY.

301, ELEMENTARY METHODS AND MATERIALS I, II. Six credit hours, two semesters. Prerequisite: Ed 300.

304 SEMINAR: PROFESSIONAL PROBLEMS IN ELEMENTARY EDUCATION. Two credit hours.

313 ART IN THE ELEMENTARY SCHOOL. One credit hour. Taken concurrently with Ed 301.

314 MUSIC IN THE ELEMENTARY SCHOOL. One credit hour. Taken concurrently with Ed 302.

315 NEW MATHEMATICS: ELEMENTARY SCHOOL TEACHERS. Three credit hours.

316 NEW MATHEMATICS: SECONDARY SCHOOL TEACHERS: ALGEBRA. Three credit hours. (May replace Ed 201 for teachers of Mathematics.)

318 LINGUISTICS FOR TEACHERS. Three credit hours.

320 NEW TRENDS SCIENCE TEACHING—ELEMENTARY. Three credit hours.

321 NEW TRENDS SCIENCE TEACHING—SECONDARY. Three credit hours.

325 TEACHING MODERN LANGUAGES. Three credit hours. Further command of the student's language with a view to teaching effectiveness and the psychology of language learning—motivation, evaluation, and testing. Special problems. May replace Ed 201 for teachers of Modern Languages. (ML 325)

326 FRENCH TEACHING: PRACTICUM AND CRITIQUE. Three credit hours. (Fr 326)

327 SEMINAR: GERMAN LANGUAGE CULTURE. Three credit hours. (Gr 327)

370 COACHING: WRESTLING. Two credit hours. Elective open to upper division students only.
371 COACHING: TUMBLING AND GYMNASTICS. Two credit hours. Elective open to upper division students only.
372 COACHING: FOOTBALL. Two credit hours.
373 COACHING: BASKETBALL. Two credit hours.
374 COACHING: BASEBALL. One credit hour.
375 COACHING: TRACK AND FIELD. One credit hour.
376 THEORY OF OFFICIATING. Two credit hours. Elective open to upper division students only.
377 ADMINISTRATION OF PHYSICAL EDUCATION. Three credit hours. The principles, organization, and administration of the physical education program and the development of the intramural athletic program. FOR UNDERGRADUATE CREDIT ONLY.
378 ADMINISTRATION OF HEALTH EDUCATION. Three credit hours. Methods and materials for teaching health. The selection of health materials, organizational techniques, and the administration of the school health program. FOR UNDERGRADUATE CREDIT ONLY.
379 PHYSICAL EDUCATION METHODS AND MATERIALS. Four credit hours, two semesters. The theory and practice of teaching physical education. Subject matter for use in teaching touch football, soccer and speedball, organized games, tumbling and apparatus, basketball, volleyball, conditioning, track and field, softball, physical education tactics and testing.
380 HEALTH AND HYGIENE. Four credit hours, two semesters. Ed 381 includes the American Red Cross standard and the Advanced First Aid course, and the prevention and treatment of athletic injuries. Ed 382 includes personal and community hygiene for use in teaching that subject.
381 RED CROSS LIFE SAVING. One credit hour. Prerequisite: Student must pass Red Cross Skill Test. FOR UNDERGRADUATE CREDIT ONLY.
382 LIFE SAVING AND WATER SAFETY. One credit hour. A combined course. Prerequisite: Red Cross Senior Life Saving Certificate. FOR UNDERGRADUATE CREDIT ONLY.
383 PHYSICAL EDUCATION IN THE ELEMENTARY SCHOOL. Two credit hours.
384 SPECIAL WORKSHOPS, SEMINARS, INSTITUTES. One to six credit hours as designated. Courses will be specified as to title when offered.
385 TUTORIAL COURSE. Two or three credit hours.
386 THEORY OF OFFICIATING. Two credit hours. Elective open to upper division students only.
377 ADMINISTRATION OF PHYSICAL EDUCATION. Three credit hours. The principles, organization, and administration of the physical education program and the development of the intramural athletic program. FOR UNDERGRADUATE CREDIT ONLY.
378 ADMINISTRATION OF HEALTH EDUCATION. Three credit hours. Methods and materials for teaching health. The selection of health materials, organizational techniques, and the administration of the school health program. FOR UNDERGRADUATE CREDIT ONLY.
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380 HEALTH AND HYGIENE. Four credit hours, two semesters. Ed 381 includes the American Red Cross standard and the Advanced First Aid course, and the prevention and treatment of athletic injuries. Ed 382 includes personal and community hygiene for use in teaching that subject.
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380 HEALTH AND HYGIENE. Four credit hours, two semesters. Ed 381 includes the American Red Cross standard and the Advanced First Aid course, and the prevention and treatment of athletic injuries. Ed 382 includes personal and community hygiene for use in teaching that subject.
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382 LIFE SAVING AND WATER SAFETY. One credit hour. A combined course. Prerequisite: Red Cross Senior Life Saving Certificate. FOR UNDERGRADUATE CREDIT ONLY.
383 PHYSICAL EDUCATION IN THE ELEMENTARY SCHOOL. Two credit hours.
384 SPECIAL WORKSHOPS, SEMINARS, INSTITUTES. One to six credit hours as designated. Courses will be specified as to title when offered.
385 TUTORIAL COURSE. Two or three credit hours.
386 THEORY OF OFFICIATING. Two credit hours. Elective open to upper division students only.

Graduate Courses

The Department of Education of the Graduate School is organized to offer the in-service teacher or school administrator opportunities for advanced professional training through individual courses or through balanced programs leading to the Master of Education degree.

Ed 501, 503, 505, 507 are required of all Candidates for M.Ed. Degree

501 PHILOSOPHY OF EDUCATION. Three credit hours. The historical development of educational philosophy and theories. Evaluation of major current philosophies.
503 EDUCATIONAL PSYCHOLOGY. Three credit hours. Major issues in the field of methods and educational psychology. The learning process. Factors influencing learning. The nature and extent of individual differences.
505 EDUCATIONAL ADMINISTRATION. Three credit hours. The role of the federal, state, and local governments. School management including an overview of instructional personnel, business management, research, community relations, and various responsibilities of the administrator.
507 EDUCATIONAL RESEARCH. Three credit hours (2/1). In this course two credit hours are devoted to major techniques and methods of educational research; comprehension of statistical terminology of research; and locating educational research on a given problem. The remaining credit hour is awarded on completion of an actual research project. A separate grade is given for each phase of the course.
510 STATISTICAL TECHNIQUES. Two or three credit hours. See Ps 210.
511 ADVANCED STATISTICS. Three credit hours. See Ps 511.
514 EDUCATIONAL SOCIOLOGY. Two credit hours. Discussions and seminars on current social problems in relation to education; e.g., poverty, race relations, population moves, social control of schools, religious tensions, etc.
517 TEACHING HIGH SCHOOL ENGLISH. Three credit hours. (May replace Ed 201 for teachers of English.)
523 SEMINAR: BUSINESS EDUCATION. Three credit hours.
524 PROGRAMS FOR THE DISADVANTAGED CHILD. Two credit hours.
530 LEARNING AND MOTIVATION. Two or three credit hours. See Ps 530.
531 COUNSELLING MINORITIES. Two credit hours. Theory, techniques and current research involved in the counselling activities with minority groups, such as blacks, Southern Appalachian migrants, etc. in the school and other agencies. (Ps 531)
532 EDUCATIONAL AND VOCATIONAL GUIDANCE. Two credit hours. The school's responsibility for moral, social, and vocational guidance. Essentials of an adequate guidance program. (Ps 533)
533 COUNSELLING PRINCIPLES AND TECHNIQUES. Two credit hours. Theory of counselling. Case method. Relationships to testing and to other sources of data. Interviewing. Place and value of records. Clinical procedures. (Ps 533)
534 ELEMENTARY SCHOOL GUIDANCE. Two credit hours. Principles, philosophy, administration, and organization of guidance services in the elementary school setting. Role and function of the elementary counsellor in counselling, consulting, and coordinating pupil personnel services.
535 OCCUPATIONAL INFORMATION AND JOB ANALYSIS. Two credit hours. (Ps 535)
536 GROUP GUIDANCE. Two credit hours. A laboratory course in group process. The roles of individual members of a group as well as interpersonal relations are experienced. Experiences are applicable for counsellors, teachers, administrators, or other persons involved in personnel work. (Ps 536)
539 GUIDANCE LABORATORY. Two credit hours. Study of individual pupils; collecting pertinent data, interviewing, recording, diagnosis, inter-agency collaboration. Practicum. Prerequisites: Ed 532, 533, 579.
540 ADMINISTRATION OF THE MIDDLE SCHOOL. Two credit hours.
541 **ELEMENTARY SCHOOL ADMINISTRATION.** Two credit hours. Criteria for an effective elementary school organization. Patterns of school organization. Administrative problems.

542 **SECONDARY SCHOOL ADMINISTRATION.** Two credit hours. Organization of secondary schools. Techniques of schedule-making. Administrative problems.

543 **SUPERVISION OF INSTRUCTION.** Two credit hours. Techniques of improving instruction through supervision.

544 **ELEMENTARY CURRICULUM.** Two credit hours. Aims of elementary education. Specific objectives of primary and upper-elementary divisions. Classroom techniques for realizing these objectives.

545 **SECONDARY CURRICULUM.** Two credit hours. Aims of secondary education. Specific objectives of curricular areas. Classroom techniques for realizing these objectives.

546 **CURRENT PROBLEMS OF ELEMENTARY EDUCATION.** One or two credit hours. A seminar.

547 **CURRENT PROBLEMS OF SECONDARY EDUCATION.** One or two credit hours. A seminar.

548 **ADMINISTRATION OF THE COMMUNITY SCHOOL.** Two credit hours.

549 **SCHOOL PUBLIC RELATIONS.** Two credit hours. Relations of school and community. Effective use of media of public relations—press, radio, television.


551 **ADMINISTRATION OF STAFF PERSONNEL.** Two credit hours.

552 **SCHOOL LAW.** Two credit hours. Legal framework within which schools operate. Federal and state precedents. State code. Legal provisions for school finance.

553 **SCHOOL FINANCE.** Two credit hours.

554 **SCHOOL BUILDINGS.** Two credit hours.

555 **ADMINISTRATIVE PRACTICUM.** Two credit hours.

556 **ADMINISTRATIVE INTERNSHIP.** Credit by arrangement.

557 **PSYCHOLOGICAL AND ACHIEVEMENT TESTS.** Two or three credit hours. Commonly used group tests; testing procedures and rationale underlying tests of intelligence, aptitude, achievement, interest, and personality. Selecting and evaluating specific group tests in these areas. (Ps 279)

558 **PSYCHOPATHOLOGY.** Two credit hours. (Ps 580)

559 **INDIVIDUAL TESTS OF INTELLIGENCE.** Four credit hours. Underlying theory, administration, scoring, interpretation, and reporting of the individual tests of intelligence. (Ps 582)

560 **ADMINISTRATION OF SCHOOL ATHLETICS.** Three credit hours. Investigation and discussion of current problems and policies pertinent to administration of school athletics.

561 **LEADERSHIP IN OUTDOOR EDUCATION.** Three credit hours. Consideration is given to settings for outdoor education, school camp functions, and administration. Emphasis on group and individual camping techniques.

562 **ADMINISTRATION OF INTRAMURAL ATHLETICS.** Three credit hours. Treatment of administrative problems, policies, and procedures involved in intramural athletics as applied to school systems.

563 **FACILITIES FOR PHYSICAL EDUCATION, HEALTH, AND RECREATION.** Three credit hours. A study of plan and facilities for physical education, health, and recreation program construction, use, maintenance, safety as related to the total school and community program.

564 **PHYSICAL EDUCATION FOR THE HANDICAPPED.** Three hours. Methods, materials, and programs for the organization and administration of physical education to meet the special needs of atypical individuals in schools and the community.

565 **ADMINISTRATION OF COMMUNITY RECREATION.** Three credit hours. Structure and principles as they are related to the organization and administration of school and community recreational programs.

566 **ADMINISTRATION OF PHYSICAL FITNESS PROGRAMS.** Three credit hours. Primary components of physical fitness. Recommendations for organizing and administering a functional physical fitness program for the various sports, physical education, and the individual.

567 **SPECIAL WORKSHOPS, INSTITUTES, SEMINARS.** One to six credit hours. Courses will be specified as to title when offered.

568 **SEMINAR: SELECTED ADMINISTRATIVE PROBLEMS.** Two credit hours.

569 **SEMINAR: ISSUES IN HIGHER EDUCATION.** Two credit hours.

570 **MOTIVATION AND BEHAVIOR IN ORGANIZATIONS.** Three credit hours. (Ps 644). See BA 614.

571 **ADVANCED DEVELOPMENTAL PSYCHOLOGY.** Three credit hours. (Ps 645)

572 **PSYCHOLOGY OF THE EXCEPTIONAL CHILD.** Three credit hours. Atypical child in regular and special classrooms. Methods of facilitating growth. Development of children who are crippled, retarded, hard of hearing, defective in vision, defective in speech, etc. (Ps 646)

573 **CLINICAL STUDIES: EMOTIONALLY DISTURBED CHILD.** Two credit hours. (Ps 647)

574 **PRACTICUM: TEACHING EMOTIONALLY DISTURBED CHILDREN.** Two or three credit hours. A minimum of 60 clock hours of work experience with emotionally disturbed children, under supervision. (Ps 648)

575 **MONTESSORI EDUCATION: PHILOSOPHICAL APPROACH.** Three credit hours. A seminar in Montessori: Emphasis is on philosophy, historical development, contemporary critique, current methodology, and classroom observation. A variety of resources is used and involvement of the student is expected.
Education

652 CURRENT THEORY AND RESEARCH IN CHILD DEVELOPMENT. Three credit hours. The developmental aspects of the pre-schooler. Current theory and research in the early development literature are related to Maria Montessori's concept of the child. (Ps 652)

653 EARLY COGNITIVE DEVELOPMENT. Three credit hours. Deals primarily with psychological research findings directly or indirectly related to childhood education. Three basic principles of Montessori education reviewed in detail: the importance of early enriched environment, critical periods for learning, and the role of the early activation drive for learning. Recent experimental findings in play theory, beauty, creativity, and development of self-esteem reviewed and related. (Ps 653)


655 MONTESSORI METHODS AND MATERIALS: ABSTRACT LEVEL. Three credit hours. Transition from concrete to abstract learning in natural sciences, social studies, arithmetic, language arts, music, dramatic activities, art. Techniques of observation and evaluation.

656 CURRICULUM DESIGN AND TEACHING STRATEGIES: PRIMARY GRADES. Three credit hours. Description same as Ed 660 with emphasis on the primary grades.

657 MONTESSORI INTERNSHIP I. Three credit hours.

658 MONTESSORI INTERNSHIP II. Three credit hours.

660 CURRICULUM DESIGN AND TEACHING STRATEGIES. Three credit hours. Application of instructional systems' concepts to curriculum design and teaching strategies in elementary and secondary schools. Development of plans to individualize instruction with team teaching, independent study, small and large group strategies. Preparation of necessary multi-media materials and development of plans for evaluating the results. A student may register for this course more than once for a total of six hours.

661 CURRICULUM DESIGN AND TEACHING STRATEGIES: ELEMENTARY. Three credit hours. Description same as 660 except limited to elementary teachers.

662, 663 CURRICULUM DESIGN: PRACTICUM I, II. Six credit hours, two semesters. Applications of instructional systems' concepts in an actual classroom or school situation. Identification of problems. Analysis of data. Revision of plans. Evaluation: all in consultation with a faculty team. (Prerequisites: Ed 510 or Ed 511, or the equivalent, and Ed 660 or 661.)

670 PSYCHOLOGY OF READING. Two credit hours. The perceptual nature of reading. Learning principles and reading process. Psychological basis of reading. Personality factors in reading. Motivation and reading interest. Scope of the reading process.

672 NEW THEORIES IN TEACHING READING. Two credit hours. Sociological, psychological, and educational analysis of new trends of beginning reading instruction. Trends in objectives, curriculum planning, organizational plans, and instructional materials. Inter-relationship of general reading skills and content-reading study skills.

673 SUPERVISION OF READING PROGRAMS. Two credit hours. The role of the Reading Supervisor at all levels. Curriculum design for planning reading programs at different levels and in content areas. Evaluation of reading programs and personnel.

678 DIAGNOSIS AND CORRECTION OF READING DISABILITIES. Three credit hours. A study of the major factors associated with reading problems; diagnostic tests and remedial procedures. Materials fee $10.00. Prerequisite: Ed 214. (Ps 678)

679 PRACTICUM IN READING. Three credit hours. Supervised practice in remedial and developmental reading. Laboratory fee $15.00. Prerequisite: Ed 678.

680 COMPUTER THEORY AND PROGRAMMING. Two credit hours.

681 DATA PROCESSING AND COMPUTER TECHNIQUES. Two credit hours.

685, 686 INTERNSHIP IN SCHOOL RESEARCH. Twelve credit hours, two semesters.

688 RESEARCH: HISTORY AND PHILOSOPHY OF EDUCATION. One or two credit hours. Individual research. Prerequisite: Ed 507.

689 RESEARCH: ADMINISTRATION. One or two credit hours. Individual research. Prerequisite: Ed 507.

690 RESEARCH: SECONDARY EDUCATION. One or two credit hours. Individual research. Prerequisite: Ed 507.

691 RESEARCH: ELEMENTARY EDUCATION. One or two credit hours. Individual research. Prerequisite: Ed 507.

692 RESEARCH: GUIDANCE. One or two credit hours. Individual research. Prerequisite: Ed 507.

693 RESEARCH: READING. One or two credit hours. Individual research. Prerequisite: Ed 507.

694 RESEARCH: PSYCHOLOGY. One or two credit hours. Individual research. Prerequisite: Ed 507.

695 RESEARCH: SPECIAL AREA. One or two credit hours. Individual research in any special area to be specified. Prerequisite: Ed 507.

698 SPECIAL STUDY: Two or three credit hours.

699 MASTER'S THESIS. Six credit hours. For students desiring a program leading to the degree of Master of Arts.

English (En)

Staff: FR. SAVAGE, chairman; MR. WESSLING, acting chairman; FR. CONNOLLY, DR. DOERING, MR. FELDHAUS, DR. FONTANA, MR. FRANCIS, MR. GETZ, MR. GLENN, MR. KORAL, DR. WENTERSDORF, DR. WILLER.

Assisted by: DR. KLEIN, MR. PERKO, S.J., MR. SCHWEIKERT.

Graduate Assistants: MR. HOLCOMB, MR. KUHN, MR. MULVEY, MR. OTTO.
Lower Division Courses

101 ENGLISH COMPOSITION. Three credit hours. Practice in effective writing.

113 RHETORIC AND LITERATURE. Three credit hours. Intensified instruction and practice in effective writing. Selected readings in British non-fictional prose. Required of English majors.

114 RHETORIC AND LITERATURE. Three credit hours. Complements En 113. Intensified instruction and practice in effective writing. Selected readings in British fiction. Required of English majors. Not open to students who have completed En 124.

121 STUDIES IN POETRY. Three credit hours, Study and critical evaluation of English and American poetry.

122 STUDIES IN DRAMA. Three credit hours. Nature of drama and the theater; evaluation of representative plays.

123 STUDIES IN PROSE AND CULTURE. Three credit hours. Cultural and stylistic study of selected English and American non-fictional prose texts (and the varieties of consciousness they express) from the Renaissance to the Twentieth Century.

124 STUDIES IN FICTION. Three credit hours. Critical evaluation of representative novels. Not open to students who have completed En 114.

125 STUDIES IN SATIRE. Three credit hours. The satirical mode of expression from ancient times to the Twentieth Century.

128 STUDIES IN AFRO-AMERICAN LITERATURE. Three credit hours. Writings by Afro-Americans from the beginnings to the present time. Not open to students who have taken or expect to take En 388 or En 389.

131 SURVEY OF BRITISH POETRY. Three credit hours. British poetry according to genre and within its historical context from Beowulf to the Twentieth Century. Required of all English majors. Not open to students who have completed En 121.

132 SURVEY OF BRITISH DRAMA. Three credit hours. British drama according to genre and within its historical context from the Middle Ages to the Twentieth Century. Required of all English majors. Not open to those who have completed En 122.

Upper Division

200 ADVANCED COMPOSITION FOR TEACHERS. Three credit hours. Instruction and practice in invention, organization, and style in the modes of writing appropriate to teachers of junior and senior high school English. For students preparing to teach English in the secondary school.

201 TEACHING ENGLISH: COMPOSITION. Three credit hours. Techniques and methods in teaching composition, especially exposition and argumentation. Open only to graduate assistants.

202 TEACHING ENGLISH: LITERATURE. Three credit hours. Techniques and methods in teaching the short story and the novel together with approaches to the critical essay. Open only to graduate assistants.

203 HISTORY OF THE ENGLISH LANGUAGE. Three credit hours. Origins and development of the English language between c. 450 and the present day, with special reference to etymology and vocabulary, syntax and grammar, semantics, and phonology.

206 LINGUISTICS. Three credit hours. Contemporary linguistic theory including phonetics, phonology, morphology, and syntax, with special emphasis upon transformational-generative grammar.

207 ADVANCED WRITING. Three credit hours.

209 CREATIVE WRITING. Three credit hours.

210 CONTEMPORARY PROSE COMPOSITION. Three credit hours.

226 CHILDREN'S LITERATURE. Three credit hours. (Ed 226)

241 GREEK LITERATURE IN TRANSLATION. Three credit hours. (Cl 241)

244 LATIN LITERATURE IN TRANSLATION. Three credit hours. (Cl 244)

248 CLASSICAL MYTHOLOGY. Three credit hours. By permission only. (Gk/ Lat 248)

260 AESTHETICS AND LITERARY CRITICISM. Three credit hours. Philosophical basis of aesthetics; elements of taste; critical standards.

261 HISTORY OF LITERARY CRITICISM. Three credit hours. Major critics of literature from Aristotle to T. S. Eliot.

280 THEOLOGICAL THEMES IN CONTEMPORARY LITERATURE. Three credit hours. The religious significance of themes found in contemporary poetry, fiction, and drama. (Th 280)

281 MAN, GOD, AND TRAGEDY. Three credit hours. (Th 281)

282 THEOLOGICAL THEMES IN AMERICAN LITERATURE. Three credit hours. Historical analysis of major theological patterns in American literature from Puritan theocracy to present. (Th 282)

288 SEVENTEENTH CENTURY ANGLOPHONE LITERATURE. An examination of a select number of continental religious and mystical works and their relationships to the ideas and structure of Seventeenth-Century English prose and poetry.

301 MAJOR BRITISH AUTHORS: CHAUCER-JOHNSON. Three credit hours. Approximately eleven authors per semester surveyed. Recommended for Evening College majors and for non-majors seeking teacher certification in English. Not applicable toward a Master of Arts in English.

302 MAJOR BRITISH AUTHORS. Three credit hours. Sequel to En 301.

306 OLD ENGLISH LITERATURE. Three credit hours. Old English literature exclusive of Beowulf, read in the original.

308 MEDIEVAL ENGLISH LITERATURE. Three credit hours. Nonlinguistic survey exclusive of Chaucer.

310 CHAUCER: THE CANTERBURY TALES. Three credit hours. Brief introduction to Middle English and a detailed study of Chaucer's Canterbury Tales, with some reference to Chaucer's life and literary career.

315 THE ENGLISH RENAISSANCE. Three credit hours. Tudor prose and poetry with emphasis on the prose of politics, religion, and the making of a gentleman, and on the poetry of Sidney and Spenser. The Italian Renaissance and its influence on the English writers of the period.
325 SHAKESPEARE. Three credit hours. About half of Shakespeare's plays with emphasis on the best. Representative plays of the four periods of his writing and plays of the four major types—tragedy, comedy, history, and tragi-comedy.

326 SHAKESPEARE: HISTORIES AND COMEDIES. Three credit hours. The nature and development of the Shakespearean "history" as a dramatic type and of Shakespearean comedy (farce, romantic comedy, high comedy, and problem comedy).

327 SHAKESPEARE: TRAGEDIES AND TRAGI-COMEDIES. Three credit hours. The nature and development of Shakespearean tragedy in the light of contemporary traditions and of the Aristotelian concept of tragedy, as well as a study of the Shakespearean "romance" or tragi-comedy as a dramatic type.

330 SEVENTEENTH CENTURY LITERATURE. Three credit hours. Milton is not included.

335 MILTON. Three credit hours. Milton's poetry and major prose studied for its art, its rhetoric, and its place in intellectual and literary history.

340 NEO-CLASSICAL LITERATURE. Three credit hours. Poetry and prose of the period from Dryden to the forerunners of Romanticism, including a brief treatment of the novel of the period.

344 THE ENGLISH NOVEL TO HARDY. Three credit hours. The development of the English novel from Richardson and Fielding to Thomas Hardy.

350 ROMANTIC LITERATURE. Three credit hours. English romantic poetry and selected prose from Thomson to Keats. Emphasis on Wordsworth, Coleridge, Byron, Shelley, Keats.

360 VICTORIAN POETRY. Three credit hours. Textual and critical study of selected works of Victorian poets from 1830 to 1910, with particular emphasis on Tennyson, Browning, Arnold, the Pre-Raphaelites, Hardy, Housman, and Hopkins.

361 VICTORIAN NON-FICTIONAL PROSE. Three credit hours. Non-fictional prose of the Victorian period according to the important issues of that historical era.

362 VICTORIAN LITERATURE TO 1860. Three credit hours. Poetry, non-fictional prose, and the novel of the early part of the Nineteenth Century.

363 VICTORIAN LITERATURE SINCE 1860. Three credit hours. Poetry, non-fictional prose, and the novel of the latter part of the Nineteenth Century.

370 MODERN BRITISH LITERATURE. Three credit hours. Twentieth Century British poetry, novel, and drama since 1914.

371 TWENTIETH CENTURY BRITISH POETRY. Three credit hours. Poetry from Hardy to Dylan Thomas with special emphasis on Hopkins, Yeats, Eliot, Auden, and Dylan Thomas.

372 MODERN DRAMA. Three credit hours. English and American drama. Development of the contemporary drama from Ibsen to Arthur Miller.

373 CONTEMPORARY DRAMA SINCE 1950. Three credit hours. Plays composed since 1950 with emphasis on trends in the theater of the second half of the Twentieth Century.

374 MODERN BRITISH NOVEL. Three credit hours. The British novel from Conrad to the present.

375 THE SHORT STORY. Three credit hours. Study, analysis, and evaluation of short stories—American, British, Irish, and Continental—in relation to the elements of the short story and to the over-all effect.

380 SURVEY OF AMERICAN LITERATURE TO 1865. Three credit hours. A comprehensive study of American poetry and prose from the beginning until 1865, with close critical analysis given to certain works. Required of English majors.

381 SURVEY OF AMERICAN LITERATURE SINCE 1865. Three credit hours. A comprehensive study of American poetry and prose from 1865 to 1960, with close critical analysis given to certain works. Required of English majors.

382 AMERICAN STUDIES: LITERATURE I. Three credit hours. Must be taken concurrently with Hs 382.

383 AMERICAN STUDIES: LITERATURE II. Three credit hours. Must be taken concurrently with Hs 383.

384 THE AMERICAN NOVEL TO 1920. Three credit hours. The development of the novel in American literature to Hemingway together with study of the themes and traditions specific novels represent.

385 THE AMERICAN NOVEL SINCE 1920. Three credit hours. The development of the novel in American literature from Hemingway to Bellow together with study of the themes and traditions specific novels represent.

387 MODERN AMERICAN POETRY. Three credit hours. Poetry from Whitman to Robert Lowell.

388 AFRO-AMERICAN LITERATURE: POETRY, DRAMA, AND THE ESSAY. Three credit hours. Works by Afro-American writers from the beginnings to present. Not open to students who have completed En 128.

389 AFRO-AMERICAN LITERATURE: FICTION AND AUTOBIOGRAPHY. Three credit hours. Works by Afro-American writers from the beginnings to present. Not open to students who have completed En 128.

399 SPECIAL STUDY. Credit by arrangement. Directed research. 

Graduate Courses

503 HISTORY OF THE ENGLISH LANGUAGE. Three credit hours. Directed research in linguistic problems arising from a study of the etymology, syntax, grammar, semantics, and phonology of the English language as it developed from c. 450 to the present day.

508 MEDIEVAL LITERATURE. Three credit hours. English literature from Anglo-Saxon times to the Fourteenth Century with special emphasis on the Pearl poet, Langland, and the mystical writers.

510 CHAUCER'S MAJOR WORKS. Three credit hours. The works of Chaucer as an interpreter of his times.

515 STUDIES IN THE RENAISSANCE. Three credit hours.
ENGLISH DRAMA TO 1642. Three credit hours. History of English drama from the mystery plays to the closing of the theaters, exclusive of Shakespeare.

STUDIES IN SEVENTEENTH CENTURY LITERATURE. Three credit hours.

STUDIES IN NEO-CLASSICAL LITERATURE. Three credit hours.

RESTORATION AND EIGHTEENTH CENTURY DRAMA. Three credit hours. Drama from Dryden to Sheridan with emphasis on the heroic tragedy, comedy of manners, and sentimental comedy.

ENGLISH NOVEL OF THE EIGHTEENTH CENTURY. Three credit hours. Historical and critical study of the English novel from Richardson and Fielding to the Gothic novel.

STUDIES IN ROMANTIC LITERATURE. Three credit hours.

STUDIES IN VICTORIAN POETS. Three credit hours.

STUDIES IN VICTORIAN NON-FICTIONAL PROSE. Three credit hours.

ENGLISH NOVEL OF THE NINETEENTH CENTURY I. Three credit hours. The novels of Scott, Austen, Thackeray, and Eliot.

ENGLISH NOVEL OF THE NINETEENTH CENTURY II. Three credit hours. The novels of Dickens, Hardy, Meredith, Wilde, and James.

AESTHETICS AND THE PHILOSOPHY OF ART. Three credit hours. (Pl 526)

STUDIES IN TWENTIETH CENTURY POETRY. Three credit hours.

ENGLISH NOVEL OF THE TWENTIETH CENTURY. Three credit hours. Development of the novel from Conrad and Joyce to Waugh and Greene.

STUDIES IN MODERN AMERICAN DRAMA. Three credit hours. O'Neill, Miller, Williams, and Albee against the background of American theatrical development during the Twentieth Century.

SEMINAR IN MEDIEVAL LITERATURE. Three credit hours.

SEMINAR IN CHAUCER. Three credit hours.

SEMINAR IN RENAISSANCE AUTHORS. Three credit hours.

SEMINAR IN SHAKESPEARE: HISTORIES AND COMEDIES. Three credit hours. Prerequisite: En 326 or its equivalent.

SEMINAR IN SHAKESPEARE: TRAGEDIES AND TRAGIC-COMEDIES. Three credit hours. Prerequisite: En 327 or its equivalent.

SEMINAR IN SEVENTEENTH CENTURY AUTHORS. Three credit hours.

SEMINAR IN MILTON. Three credit hours.

SEMINAR IN RESTORATION AND EIGHTEENTH CENTURY AUTHORS. Three credit hours.

SEMINAR IN ROMANTICISM. Three credit hours.

SEMINAR IN VICTORIAN AUTHORS. Three credit hours.

SEMINAR IN TWENTIETH CENTURY AUTHORS. Three credit hours.

SEMINAR IN AMERICAN ROMANTICISM. Three credit hours.

SEMINAR IN HAWTHORNE AND MELVILLE. Three credit hours.

SEMINAR IN AMERICAN REALISM. Three credit hours.

SEMINAR IN EMERSON AND POE. Three credit hours.

SEMINAR IN FAULKNER AND HEMINGWAY. Three credit hours.

MASTER'S THESIS. Six credit hours.

Fine Arts (FA)

Staff: MR. SORIANO, MRS. VASSAR.

The Department of Fine Arts is administered by the Dean of the College of Arts and Sciences.

201 HISTORY OF ART I. Three credit hours.

202 HISTORY OF ART II. Three credit hours.

251 HISTORY AND LITERATURE OF MUSIC I. Three credit hours.

252 HISTORY AND LITERATURE OF MUSIC II. Three credit hours.

Geography (Gg)

Staff: DR. LINK, MR. WILLIAMS.

The Department of Geography is administered by the Dean of the Evening College. Courses augment the student's background in economics, science, and education.

Lower Division Course

101 ELEMENTS OF GEOGRAPHY. Three credit hours.

Upper Division Courses

207 WORLD GEOGRAPHY. Three credit hours. Physical and cultural regions of the world. Human systems, patterns, and diffusions. Man-environmental relationships.

220 GEOGRAPHY OF EUROPE. Three credit hours.

240 ECONOMIC GEOGRAPHY. Three credit hours. Study of world geography and the economic implications of natural resources. Emphasis on production of goods in relation to the development of agriculture, commerce, and industry in the United States and foreign countries. Prerequisites: Ec 100, 101. (Ec 240)

260 GEOGRAPHY OF LATIN AMERICA. Two or three credit hours. Topical and regional. Location patterns and regional development.

375 POLITICAL GEOGRAPHY. Three credit hours. See Po 375.

History and Political Science

Staff: DR. SIMON, chairman; FR. BENNISH, DR. FORTIN, DR. GOODMAN, DR. GRUBER, MR. HEIGHBERGER, FR. JOHN-SON, FR. LINK, MR. MCVAY, DR. MOULTON, MR. SEHER.

Assisted by: MRS. BURKE, MISS SMITH, MR. ZINGRAFE.

Graduate Fellow: MR. TENHUNDFELD.
History (Hs)

Lower Division Courses

123 **WESTERN CIVILIZATION TO 1648.** Three credit hours. Surveys the growth of society and culture in the Western world.

124 **WESTERN CIVILIZATION SINCE 1648.** Three credit hours. A continuation of Hs 123.

Upper Division Courses

201 **CLASSICAL ARCHAEOLOGY.** Three credit hours. (Cl 201, Gk 201, Lt 201)

202 **HISTORY OF ANCIENT GREECE.** Three credit hours. The politics and society of old Greece. (Gk 202)

204 **CHRISTIAN ANTIQUITY.** Three credit hours. Early Christian society through the Patristic age.

206 **HISTORY OF ANCIENT ROME.** Three credit hours. The making of the foremost political creation of antiquity, its spread and its dissolution. Great Roman institutions and cultural monuments. (Lt 206, Cl 206)

207 **CONSTITUTIONAL HISTORY OF ROME.** Three credit hours. Development of the structure of law and justice. (Lt 207, Po 207)

211 **EARLY MIDDLE AGES, 300-1154.** Three credit hours. Social and cultural change from the Age of Constantine to the Twelfth Century Renaissance.

212 **THE HIGH MIDDLE AGES, 1154-1453.** Three credit hours. Social organization. Political and artistic achievements. Education, Secularism and decline.


216 **RELIGIOUS UPHEAVAL IN THE 1500's.** Three credit hours. Individualism supplanting social outlook. Factors that split Christianity and divided the Medieval Republic.

218, 219 **HISTORY OF THE SOCIETY OF JESUS.** Three credit hours. Historical study of the spirituality, constitutions, ministries, and apostolates, in the centuries since the founding of the Society.

220 **EUROPE, SEVENTEENTH CENTURY.** Three credit hours. The culture and politics of the Century of Expansion.

221 **EUROPE, EIGHTEENTH CENTURY.** Three credit hours.


225 **NINETEENTH CENTURY EUROPE.** Three credit hours.

226 **TWENTIETH CENTURY EUROPE.** Three credit hours.

228 **MODERN FRANCE.** Three credit hours. France since the Enlightenment, with attention to its unique role in Western society. (Po 228)

230 **MODERN GERMANY.** Three credit hours. The political, economic, social, and cultural forces which have shaped modern Germany, with special attention to the strong personalities who have guided Germany's destiny, and to Germany's role in world affairs. (Po 230)

232 **HISTORY OF SPAIN AND PORTUGAL.** Three credit hours. From earliest times to present. Their roles as the parent nations of Latin America.

233 **RUSSIA TO 1800.** Three credit hours. Origins of the Kievan state. Byzantine influence. Mongol domination. Rise and expansion of the Moscow state. Consolidation of absolutism under Peter I and Catherine II.

234 **NINETEENTH CENTURY RUSSIA.** Three credit hours. Impact of French Revolution and Napoleonic wars. Decembrist uprising. Socio-economic and cultural developments in Imperial Russia.

235 **SOVIET RUSSIA—TO THE PRESENT.** Three credit hours. World War I and the Russian Revolution. Stalin era and World War II. Soviet Union since 1945. (Po 235)

238 **TWENTIETH CENTURY EASTERN EUROPE.** Three credit hours. Cultural and political developments following World War I and II. (Po 238)

240 **ENGLAND TO 1603.** Three credit hours. England from primitive times through Roman and medieval cultural development.

241 **ENGLAND, 1603 TO 1815.** Three credit hours. Struggle for constitutional government. Overseas possessions. Industrial Revolution.

242 **ENGLAND, 1815 TO PRESENT.** Three credit hours. Political domination of the world. Industrial Revolution. Overseas possessions. Crises born of two wars.

245 **THE ATLANTIC COMMUNITY: THE INTERACTION OF EUROPE AND NORTH AMERICA.** Three credit hours. Non-diplomatic relationships (political, economic, intellectual, and social) among the member communities of the North Atlantic civilization. Emphasis on the period after U.S. independence. (Po 245)

249 **THE UNITED NATIONS.** Three credit hours. See Po 249.


254 **THE A.B.C. POWERS.** Three credit hours. Development of Argentina, Brazil, and Chile from the Age of Discovery to the present.

274 **SOUTHEAST ASIA TO WORLD WAR II.** Three credit hours. (Po 274)

275 **SOUTHEAST ASIA SINCE WORLD WAR II.** Three credit hours. (Po 275)
INDIA TO 1857. Three credit hours. (Po 278)

INDIA SINCE 1857 AND PAKISTAN. Three credit hours. (Po 279)

JAPAN TO 1868. Three credit hours. (Po 283)

JAPAN SINCE 1868. Three credit hours. (Po 284)

CHINA TO 1644. Three credit hours. (Po 285)

CHINA SINCE 1644. Three credit hours. (Po 286)

EUROPEAN INTELLECTUAL HISTORY TO THE EIGHTEENTH CENTURY. Three credit hours. Ideas and their influence from antiquity to the Enlightenment.

EUROPEAN INTELLECTUAL HISTORY IN THE NINETEENTH AND TWENTIETH CENTURIES. Three credit hours. Ideas and their influence from the French Revolution to the present.

NATIONALISM IN MODERN TIMES. Three credit hours. The principle of nationality and its relation to human nature and culture, biological heredity, and physical environment, followed by an exposition of the development of national consciousness and nationalist doctrines, and a survey of nationalist movements and their effects upon domestic and international politics. (Po 292)

HISTORICAL CRITICISM. Three credit hours. Undergraduate study of the canons of historical literature as found in its more notable productions. The problem of evidence. Truth in history. (Spring semester of senior class.)

SENIOR SEMINAR: EUROPE. Three credit hours.

SENIOR SEMINAR: ASIA. Three credit hours.

SENIOR SEMINAR: LATIN AMERICA. Three credit hours.

ADVANCED READING. Three credit hours. Tutorial course under staff direction.

EARLY COLONIAL HISTORY, 1607-1763. Three credit hours. England and America on the eve of colonization, the founding and development of the American colonies, with special attention to the differences in religion, culture, and politics.


THE NEW NATION, 1785-1825. Three credit hours. The Constitution, origins of the two-party system. Federalists and Democratic Republicans, War of 1812, and ideas which conceived the new nation.

THE AGE OF JACKSON, 1825-1861. Three credit hours. Development of the themes of sectionalism and attempted solutions, slavery problems leading to secession, with special attention to the Age of Jackson, constitutional discussion, rising Northern industry, growth of the West, and factors of unity and disunity.


AGE OF BIG BUSINESS, 1885-1920. Three credit hours. Economic surge with its social and political sequel.

UNITED STATES IN THE TWENTIETH CENTURY. Three credit hours. The United States since 1919. Social and political tensions found in America during these years.

SOCIAL UNREST IN RECENT AMERICA. Three credit hours. Major causes and effect of social unrest in post-World War II America.


CONSTITUTIONAL HISTORY OF THE UNITED STATES TO 1865. Three credit hours. Elements active in colonial times. Making the Constitution. Amendments and interpretations. (Po 348)

CONSTITUTIONAL HISTORY OF THE UNITED STATES SINCE 1865. Three credit hours. Amendments and interpretations. Changing attitudes, new conditions of life, fresh ideas. (Po 349)

INTELLECTUAL HISTORY OF THE UNITED STATES. Three credit hours. The roots of American thought and influences of Puritanism, political Revolutionary thought, American Renaissance, Social Darwinism, and pragmatism in American history.

URBAN AMERICA. Three credit hours. Emergence and importance of the city in socio-political America, particularly 1865-1915, but continuing to the 1960's. (Po 358)

AMERICAN POLITICAL PARTIES. Three credit hours. American political parties; their role in government and society and the contribution they have made to the development of the American system of government. Attention will be given to foreign party systems and American pressure groups. (Po 360)

HISTORY OF AMERICAN POLITICAL INSTITUTIONS. Three credit hours. The origin and development of the American political regime. Colonial Congresses, the Articles of Confederation, the Constitutional Convention, and the development of the legislative, executive, and judicial departments of the federal government. (Po 361)
364 **AFRICAN BACKGROUND OF THE AMERICAN NEGRO.** Three credit hours. The history and culture of the people of West Africa immediately preceding and at the time of the slave trade. (So 364)

365 **THE NEGRO IN AMERICA.** Three credit hours. The interaction of the Negro and American society beginning with African background, the slave trade, slavery, Civil War and Reconstruction, Jim Crowism, Harlem Renaissance, civil rights' revolution, and Black Power. (Po 365, So 365)

366 **A HISTORY OF RACIAL AND ETHNIC GROUPS IN AMERICA.** Three credit hours. The major racial and ethnic groups in America and their relationship to one another. Emphasis on slavery, immigration, and the assimilation of these groups into the American character.

367 **A HISTORY OF RACIAL AND ETHNIC GROUPS IN AMERICA.** Three credit hours. A continuation of Hs 366.

371 **INTER-AMERICAN RELATIONS TO 1903.** Three credit hours. United States interests in and association with other American states, and their own inter-relations. The Monroe Doctrine. The Panama Question. (Po 371)


373 **UNITED STATES FOREIGN RELATIONS TO 1900.** Three credit hours. America moves toward world status in interest and influence. (Po 373)

374 **UNITED STATES FOREIGN RELATIONS SINCE 1900.** Three credit hours. Toward world power and worldwide responsibility. (Po 374)


382 **AMERICAN STUDIES TO 1877.** Three credit hours. America from Puritan times through Reconstruction. Emphasis on the religious, political, and social influences in the formation of the American character. To be taken concurrently with En 382. History majors may take Hs 382 instead of Hs 341.

383 **AMERICAN STUDIES FROM 1877 TO THE PRESENT.** Three credit hours. The influence of Social Darwinism and Marxism in America and the effects of the conflict between isolationism and internationalism on the American character. To be taken concurrently with En 383. History majors may take Hs 383 instead of Hs 342.

395 **SENIOR SEMINAR: UNITED STATES.** Three credit hours.

398 **ADVANCED READING AND RESEARCH.** Three credit hours.

**Graduate Courses**

501 **HISTORICAL METHOD.** Three credit hours. Ordinarily prerequisite to and required in all cases for graduate students in history. Approach to research adapted to the Master of Arts in history and to seminar work for that degree.

502 **GREECE TO 480.** Three credit hours. (Gk 502)

503 **GREECE, THE FIFTH CENTURY.** Three credit hours. (Gk 503)

505 **ROMAN REPUBLIC.** Three credit hours. (Lt 505)

506 **EARLY ROMAN EMPIRE.** Three credit hours. (Lt 506)

525 **SEMINAR: EUROPE I.** Three credit hours. Research in the history of Western Europe or of Great Britain. Prerequisite: Upper division work in modern European or British history.

526 **SEMINAR: EUROPE II.** Three credit hours. Cf. Hs 525.

528 **SEMINAR: TWENTIETH CENTURY EASTERN EUROPE.** Three credit hours.

546 **SEMINAR: AMERICAN GOVERNMENT.** Three credit hours. (Po 546)

551 **SEMINAR: COLONIAL LATIN AMERICA.** Three credit hours. (Po 551)

552 **SEMINAR: CONTEMPORARY LATIN AMERICA.** Three credit hours. (Po 552)

572 **SEMINAR: SOUTHEAST ASIA TO WORLD WAR II.** Three credit hours. (Po 572)

573 **SEMINAR: SOUTHEAST ASIA SINCE WORLD WAR II.** Three credit hours. (Po 573)

576 **SEMINAR: INDIA TO 1857.** Three credit hours. (Po 576)

577 **SEMINAR: INDIA SINCE 1857 AND PAKISTAN.** Three credit hours. (Po 577)

583 **SEMINAR: JAPAN TO 1868.** Three credit hours. (Po 583)

584 **SEMINAR: JAPAN SINCE 1868.** Three credit hours. (Po 584)

585 **SEMINAR: CHINA TO 1644.** Three credit hours. (Po 585)

586 **SEMINAR: CHINA SINCE 1644.** Three credit hours. (Po 586)

602 **SEMINAR: COLONIAL UNITED STATES.** Three credit hours.

603 **SEMINAR: EARLY NATIONAL PERIOD.** Three credit hours.

611 **SEMINAR: THE AGE OF BIG BUSINESS.** Three credit hours.

612 **SEMINAR: THE UNITED STATES IN THE TWENTIETH CENTURY.** Three credit hours.

630 **SEMINAR: THE WEST TO 1783.** Three credit hours.

631 **SEMINAR: THE WEST SINCE 1783.** Three credit hours.

648 **SEMINAR: CONSTITUTIONAL HISTORY OF THE UNITED STATES.** Three credit hours.

650 **SEMINAR: UNITED STATES' INTELLECTUAL HISTORY.** Three credit hours.

658 **SEMINAR: URBAN AMERICA.** Three credit hours.

674 **SEMINAR: UNITED STATES' FOREIGN RELATIONS.** Three credit hours. (Po 674)

695 **SPECIAL STUDIES.** Three credit hours.

699 **MASTER'S THESIS.** Six credit hours.
Political Science (Po)

Lower Division Courses

101 GOVERNMENT IN SOCIETY. Three credit hours.
102 AMERICAN GOVERNMENT. Three credit hours.
131 ANCIENT AND MEDIEVAL POLITICAL PHILOSOPHY. Three credit hours. Early theories of government; growth of kingship, parliamentary ideas, English liberties; continental tendencies; canon law; secularism. Prerequisite: Junior standing.
132 MODERN POLITICAL PHILOSOPHY. Three credit hours. Rise of absolutism; modern democratic thought; international law; force doctrines; materialistic theories; Papal pronouncements. Prerequisite: Po 131.

Upper Division Courses

200 RESEARCH METHODS. Three credit hours. Modern research methodology. Read, critically analyze, and generally use results of modern social science research.
207 CONSTITUTIONAL HISTORY OF ROME. Three credit hours. See Hs 207. (Lt 207)
221 COMPARATIVE GOVERNMENT I. (Britain and France) Three credit hours. An introduction to comparative government concentrating on the constitutional history of Great Britain and France. The course also deals with types of governments, parties, electoral systems, and problems of stability and democracy.
222 COMPARATIVE GOVERNMENT II. (Politics of Germany) Three credit hours. The political institutions and the constitutional development of Germany since 1918.
228 MODERN FRANCE. Three credit hours. See Hs 228.
230 MODERN GERMANY. Three credit hours. See Hs 230.
235 SOVIET RUSSIA—TO THE PRESENT. Three credit hours. See Hs 235.
236 COMMUNISM. Nature, objectives, strategy, tactics. Three credit hours.
238 TWENTIETH CENTURY EASTERN EUROPE. Three credit hours. See Hs 238.
245 THE ATLANTIC COMMUNITY. Three credit hours. See Hs 245.
249 THE UNITED NATIONS. Three credit hours. From the League of Nations to the United Nations. Purposes and principles, politics and law in the U.N. basic structure, voting procedures, and political transformations of the U.N. Major U.N. cases. (Hs 249)
274 SOUTHEAST ASIA TO WORLD WAR II. Three credit hours. (Hs 274)
275 SOUTHEAST ASIA SINCE WORLD WAR II. Three credit hours. (Hs 275)
278 INDIAN TO 1857. Three credit hours. (Hs 278)
INTER-AMERICAN RELATIONS SINCE 1903. Three credit hours. See Hs 372.

UNITED STATES FOREIGN RELATIONS TO 1900. Three credit hours. See Hs 373.

UNITED STATES FOREIGN RELATIONS SINCE 1900. Three credit hours. See Hs 374.

POLITICAL GEOGRAPHY. Three credit hours. The geographical basis of national life. Location, raw materials, population, groupings of interest. Rejection of geopolitical determinism.

INTERNATIONAL RELATIONS. Three credit hours. See Hs 377.

SEMINAR: AMERICAN GOVERNMENT. Three credit hours. The national political system. Designed to meet the needs of teachers in service as well as students doing advanced work in history and political science. (Hs 546)

SEMINAR: SOUTHEAST ASIA TO WORLD WAR II. Three credit hours. (Hs 572)

SEMINAR: SOUTHEAST ASIA SINCE WORLD WAR II. Three credit hours. (Hs 573)

SEMINAR: INDIA TO 1857. Three credit hours. (Hs 576)

SEMINAR: INDIA SINCE 1857 AND PAKISTAN. Three credit hours. (Hs 577)

SEMINAR: JAPAN TO 1868. Three credit hours. (Hs 583)

SEMINAR: JAPAN SINCE 1868. Three credit hours. (Hs 584)

SEMINAR: CHINA TO 1644. Three credit hours. (Hs 585)

SEMINAR: CHINA SINCE 1644. Three credit hours. (Hs 586)

SEMINAR: UNITED STATES FOREIGN RELATIONS. Three credit hours. (Hs 574)

MASTER'S THESIS. Six credit hours.

Mathematics (Mt)

Stuff: DR. LARKIN, chairman; MR. DELANEY, acting chairman; MR. BRUGGMAN, MR. CISSELL, MR. COWENS, MRS. DAVIDOFF, MR. DYDO, FR. ISENECKER, MR. STRUNK, MR. TRUKNELL.

Assisted by: MR. BROWN, MR. CHARRIER, MR. COLLINS, MR. CUMMINGS, MR. DEVANNEY, MISS DRACH, DR. FOX, DR. GRACE, MR. GREATHOUSE, DR. HERBOLD, DR. HUTCHINSON, MR. KLEE, MR. LUDMAN, DR. MORENO.

Graduate Assistants: MR. KAY, MRS. RUWE.

Lower Division Courses

The Xavier University admission requirement of two units of high school mathematics is assumed for all mathematics courses. Students deficient in arithmetic and basic algebra may require remedial work before taking any college mathematics courses.

REFRESHER MATHEMATICS. No credit.
132 **COBOL PROGRAMMING.** Three credit hours. COBOL computer programming language. Writing effective COBOL programs. Computer experience. Solving problems in business data processing. Prerequisite: Elementary mathematics ability.

197 **TUTORIAL STUDY.** Credit by arrangement.

**Upper Division Courses**

201 **MATHEMATICAL STATISTICS I.** Three credit hours. Probability, probability distributions (discrete, continuous, univariate, multivariate), characteristics of distributions, sampling, estimation. Prerequisite: Mt 220.

210 **INTRODUCTION TO INFINITE SERIES.** Three credit hours. Limit of sequence and series of real numbers, comparison, ratio and root tests, sequences and series of functions, L'Hospital's Rule, definition and properties of power series, Taylor's series, series solutions of differential equations, Fourier Series. Prerequisite: Mt 130.

211 **MATHEMATICAL STATISTICS II.** Three credit hours. Hypothesis testing, confidence methods, regression analysis, factorial designs, experimental design, sampling inspection, non-parametric methods. Prerequisite: Mt 201.

213 **COMPUTATIONAL MATHEMATICS.** Three credit hours. Computer oriented solutions of algebraic equations, matrix algebra, least squares curve fitting, numerical integration, polynomial interpolation. Prerequisite: Computer Programming, Mt 130.

220 **ADVANCED CALCULUS I.** Three credit hours. Functions of several variables, partial differentiation, exact differentials, exact differential equations, integrating factors, vector calculus, multiple integrals. Prerequisites: Mt 110, 130.

222 **ECONOMETRICS.** Three credit hours. Applications of economic theory, statistical methods, and the calculus to numerical economic data. Demand, cost, production, and other economic functions are analyzed in detail. Prerequisite: Mt 122. (Ec 222)

230 **ADVANCED CALCULUS II.** Three credit hours. Line and surface integrals, transformation of coordinates, integral theorems, hyperbolic functions, Laplace Transforms, systems of differential equations, partial differential equations. Prerequisite: Mt 220.

322 **MATHEMATICS FOR ECONOMISTS.** Three credit hours. Functions of several variables. Maxima and minima of functions. Applications of series, differential equations, and difference equations to economic problems. Prerequisite: Mt 122. (Ec 232)

234 **TOPICS IN COMPUTER MATHEMATICS.** Three credit hours. Credit may be applied toward M.Ed. degree only.

235 **TOPICS IN COMPUTERS AND LANGUAGES.** Three credit hours. Credit may be applied toward M.Ed. degree only.

236 **TOPICS IN CALCULUS AND GEOMETRY FOR TEACHERS.** Six credit hours. The rate of change of a function, derivatives of algebraic functions, plane analytic geometry, integration, vectors, and parametric equations. Credit may be applied only toward M.Ed. degree.

237 **TOPICS IN LOGIC AND MODERN ALGEBRA.** Six credit hours. Credit may be applied only toward M.Ed. degree.

238 **TOPICS IN GEOMETRY AND STATISTICS.** Six credit hours. Credit may be applied only toward M.Ed. degree.

240 **MATRICES AND VECTOR SPACES.** Three credit hours. Algebra of matrices, determinants, inverses, groups of transformations, vector spaces, linear and bilinear mappings, introduction to algebraic structures, and eigenvalues. Prerequisite: Mt 130.

250 **INTRODUCTION TO MODERN ALGEBRA.** Three credit hours. Groups, isomorphism, homomorphism, rings, ideals, fields, linear congruences, real numbers. Prerequisite: Mt 240.

260 **ELEMENTARY TOPOLOGY.** Three credit hours. Topology of metric spaces, limits, continuity, compactness, and connectedness. Prerequisite: Mt 220.

270 **INTERMEDIATE ANALYSIS.** Three credit hours. Elements of set theory, numerical sequences and series, continuity, differentiation. Sequences and series of functions, and Riemann-Stieljes integral. Prerequisite: Mt 210, 260.

280 **INTRODUCTION TO COMPLEX VARIABLE.** Three credit hours. Complex numbers, sequences and series of numbers and functions, analytic functions. Cauchy integral theorem, power series, residues. Prerequisite: Mt 230.

302 **OPERATIONS RESEARCH.** Three credit hours. Mathematical models and associated operations research methodology. Inventory models, linear programming, queuing theory, simulation, game theory, computational methods. Prerequisite: Mt 201.

303 **NUMERICAL ANALYSIS I.** Three credit hours. Methods for solving mathematical problems on automatic digital computers. Interpolation, error analysis, numerical differentiation and integration, solution of linear equations, approximation of functions by polynomials. Prerequisite: Mt 220 and Computer Programming.

310 **PROJECTIVE GEOMETRY.** Three credit hours.

314 **ADVANCED ORDINARY DIFFERENTIAL EQUATIONS I.** Three credit hours. Existence and uniqueness, phase-plane concepts, elementary critical points and stability theory, second order linear equations with variable coefficients, forced oscillations of linear systems, and Sturm-Liouville systems. Prerequisite: Consent of instructor.

320 **MATHEMATICAL LOGIC.** Three credit hours. Model and proof theoretic investigation of the propositional and predicate calculi. Paradoxes, formal systems, Godel's theorems. Prerequisite: Certain mathematical maturity.

324 **ORTHOGONAL FUNCTIONS.** Three credit hours.

330 **THEORY OF NUMBERS.** Three credit hours.

334 **ELLIPTIC AND HYPERBOLIC FUNCTIONS.** Three credit hours.

340 **SEMIGROUP THEORY.** Three credit hours. Basic topics, ideals, translational hull ideal extensions and decompositions. Prerequisite: Mt 250.

342 **LINEAR PROGRAMMING.** Three credit hours. The assignment problem, transportation problem, the simplex method, duality. Emphasis is on computer methods. Prerequisite: Mt 220, 240.
341 NUMERICAL LINEAR ALGEBRA. Three credit hours. Computational methods in linear algebra. Solution of systems of linear equations. The algebraic eigenvalue problem. Analysis of errors and the machine testing of various direct and iterative methods. Prerequisites: Mt 220, Mt 240, and Computer Programming.

344 VECTOR AND TENSOR ANALYSIS I. Three credit hours. Fundamental operations, differentiation and integration of tensor fields, integral theorems, tensors in Cartesian orthogonal coordinates, and applications. Prerequisites: Mt 230, 240.

350 FOUNDATIONS OF MATHEMATICS. Three credit hours.

397 SPECIAL READING AND STUDY FOR ADVANCED STUDENTS. Credit by arrangement.

Graduate Courses

Advanced Calculus is assumed as prerequisite for all graduate courses.

Mt 500, 501, 502, 503, 504 are offered only in the summer.

500 TOPOLOGY. Three credit hours.

501 REAL ANALYSIS. Three credit hours.

502 THEORY OF INTEGRATION. Three credit hours.

503 COMPLEX ANALYSIS. Three credit hours.

504 MODERN ALGEBRA. Three credit hours.

510 GENERAL TOPOLOGY I. Three credit hours. Ordinals and Cardinals, topological spaces, connectedness, separation axioms, and covering axioms.

520 GENERAL TOPOLOGY II. Three credit hours. Metric spaces, convergence, compactness, function spaces, complete spaces, homotopy. Prerequisite: Mt 510.

530 MEASURE THEORY AND INTEGRATION. Three credit hours. Linear spaces, additive classes and Borel sets, outer measures, Lebesgue-Stieltjes Measure, measurable functions, integration, convergence theorems, differentiation.

540 ABSTRACT ALGEBRA I. Three credit hours. Groupoids, semigroups and groups, ring and fields, subgroups and subrings, isomorphism and embedding, normal subgroups and ideals. Prerequisite: Mt 540.

550 ABSTRACT ALGEBRA II. Three credit hours. Universal Algebras, homomorphism, groups with multioperators, automorphisms and endomorphisms, normal and composition series, abelian, nilpotent and solvable groups. Prerequisite: Mt 540.

560 REAL ANALYSIS I. Three credit hours. Functions spaces, category, compactness and continuity. Hahn-Banach Theorem, dual space, Lebesgue measure. Prerequisites: Mt 240, 260, 270.

570 REAL ANALYSIS II. Three credit hours. Hilbert space, orthonormal sets, Mean Ergodic Theorem, Banach Algebra, Haar measure. Prerequisite: Mt 560.

580 FUNCTIONS OF A COMPLEX VARIABLE I. Three credit hours. Number systems, complex plane, Mobius transformations, powers and roots, holomorphic functions, and infinite series. Prerequisites: Mt 260, 270.

590 FUNCTIONS OF A COMPLEX VARIABLE II. Three credit hours. Complex integration, analytic continuation, Laurent expansion, meromorphic functions, and calculus of residues. Prerequisite: Mt 580.

600 SEMINAR IN ALGEBRA. Three credit hours.

602 ADVANCED OPERATIONS RESEARCH I. Three credit hours. Stochastic processes, queuing theory and its applications, statistical estimation of parameters. Prerequisites: Mt 211 or 302, and Mt 240.

604 ADVANCED PARTIAL DIFFERENTIAL EQUATIONS. Three credit hours. Continuation of Mt 304. Numerical methods, existence and uniqueness, transform methods, and special functions. Prerequisites: Consent of instructor.

611 DESIGN OF EXPERIMENTS. Three credit hours. Design and analysis of single-factor experiments with repeated measures on the same elements, design and analysis of factorial experiments, multifactor experiments with repeated measure on the same elements, latin squares and related designs, and analysis of covariance. Prerequisite: Mt 211.

612 ADVANCED OPERATIONS RESEARCH II. Three credit hours. Reliability models, inventory theory, game theory, and simulation techniques. Prerequisite: Mt 602.

613 NUMERICAL ANALYSIS II. Three credit hours. Extension of Mt 303. Solution of ordinary and partial differential equations, non-linear systems of equations, non-polynomial approximation of functions, Fourier series, eigenvalues and eigenvectors of matrices. Prerequisite: Mt 303.

614 ADVANCED ORDINARY DIFFERENTIAL EQUATIONS II. Three credit hours. Continuation of Mt 314. Laplace and Fourier transform theory as applied to ordinary and partial differential equations, and engineering and physics applications. Prerequisite: Mt 314.

621 APPLIED REGRESSION ANALYSIS. Three credit hours. Fitting a straight line by least squares, the matrix approach to linear regression, the examination of residuals, two independent variables, polynomials and other models, selecting the best regression equation, multiple regression, and mathematical model building. Prerequisite: Mt 211.

624 INTEGRAL EQUATIONS. Three credit hours. Classical equations of Fredholm and Volterra; relationship to the linear differential equations initial value problem; special kernels; application to boundary value problems; and approximate methods of solution. Prerequisite: Consent of instructor.

631 STOCHASTIC PROCESSES. Three credit hours. Random variables and stochastic processes, conditional probability and conditional expectation, normal processes and covariance stationary processes, counting processes and Poisson processes, renewal counting processes, and Markov Chains. Prerequisite: Mt 211.

634 CALCULUS OF VARIATIONS. Three credit hours. Necessary and sufficient conditions for an extremum, the Euler equations, variational problems with movable boundaries, constrained extrema, Hamilton's principle, and direct methods for solving variational problems. Prerequisite: Consent of instructor.
Military Science (MS)

The Reserve Officers' Training Corps

Staff: COL. WHISTLER, chairman; MAJ. DRENNAN, MAJ. HAL-LAUER, MAJ. STEWART, CAPT. MURPHY.
Assisted by: MSG MILLS, SFC McDONALD, SSG ROCHELLE.

A senior unit of the Reserve Officers' Training Corps is maintained at the University by the Department of the Army.

The Department of Military Science provides an opportunity for the study of subjects of recognized military and educational value to assist the student in laying the foundations of intelligent citizenship. The primary mission is to produce junior officers who have qualities and attributes essential to their progressive and continued development as officers in the Army of the United States (United States Army Reserve), and the Regular Army.

The Army annually provides scholarships to selected students. These scholarships provide payment of tuition fees, book costs, laboratory expenses, and $50.00 subsistence per month. The maximum term of scholarships is four years.

Students accepted for admission to the advanced corps qualify for draft exemption.

All advanced course students attending the required six weeks summer training will be paid travel allowance to and from the training installation at the rate of six cents per mile. Pay during the training period will be $208.80 per month or approximately $312.00 for the entire period.

All cadets not on scholarship but participating in the advanced program will receive retainer pay of $50.00 per month for the period of enrollment.

All newly commissioned officers going on active duty will receive $300.00 uniform allowance.

Individuals who are granted scholarships must enlist in the Enlisted Reserve Unit at Xavier and sign a formal contract agreeing to accept a commission if offered and to serve on active duty for four years.

Individuals completing the voluntary advanced program must complete the same agreements as scholarship students, except the active duty agreement is for only two years.

The complete program of instruction comprises four sessions of lower division or basic courses and four sessions of upper division or advanced courses.

The basic courses are designed to give the student military and citizenship training which will benefit him as an individual whether or not he enters military service.

The advanced courses qualify a limited number of selected students for commissions in the United States Army Reserve and the Regular Army. Admission to MS 201 will depend upon the fulfillment of the following conditions:

1. The filing of a formal request with the Chairman of the Military Department within the dates annually announced.
2. The completion of MS 101, 102, 103, and 104 (or Basic ROTC camp—see 7 below). Equivalence of basic courses completed in service (for veterans) or in some other Reserve Officers' Training Corps unit will be determined by the Chairman of the Military Department, who should be informed of the training completed, preferably in writing, thirty days prior to registration.
3. The demonstration of exceptional qualities of leadership and scholarship.
4. An agreement to complete the course and to perform six summer weeks of practical work at camp after the completion of MS 201 and 202. This work must be done under designated military supervision at a Regular Army installation.
5. Successful passing of the prescribed physical examination.
6. Attainment of a prescribed minimum score on a Department of the Army special aptitude test administered by the Department of Military Science at the University.
Military Science

7. Students who have not completed basic military science (nor had prior military service) may enter the advanced course upon fulfillment of the above conditions and upon successful completion of the Basic ROTC camp. Admission to this camp must be arranged through the Professor of Military Science. Students in this program are not eligible to receive Department of Army scholarships.

Credit for ROTC will be given on the same basis as for other courses offered in the University. Where non-directed electives are required, advanced ROTC may be used to meet these requirements.

Lower Division Courses

101 FIRST YEAR BASIC COURSE. One credit hour. Discussion focuses on the organization of the US Army and ROTC; instruction and practice in marksmanship, weapons safety, and maintenance supervision; leadership laboratory, to include personal appearance, drill, and exercise of command.

102 FIRST YEAR BASIC COURSE. One credit hour. An introduction to military science, which includes a study of the US Defense Organization with emphasis placed on the role of the US Army in national security; leadership laboratory to include personal appearance, drill, and exercise of command.

103 SECOND YEAR BASIC COURSE. Two credit hours. Instruction in American military history from the Colonial Period to the present. Emphasis on an analysis of the leadership principles used by national leaders; leadership development to include personal appearance, drill, and exercise of command.

104 SECOND YEAR BASIC COURSE. Two credit hours. Instruction and practical application of military geography and map and aerial photograph reading; introduction to field artillery tactics and techniques to include its mission, organization, capabilities, material, communications, and a survey of the organization and tactical employment of missiles; leadership development to include personal appearance, drill, and exercise of command.

Upper Division Courses

201 FIRST YEAR ADVANCED COURSE. Two credit hours. The theory and application of military leadership with emphasis on the case study method; military teaching methods to include practical application of techniques; development of leadership potential through drill and the exercise of command. Additional course credit is granted for study in academic fields as agreed between the PMS and the Dean.

202 FIRST YEAR ADVANCED COURSE. Three credit hours. Introduction to Infantry tactics; small unit tactics and communications; squad combat formations with practical exercises. Instruction in counterinsurgency. Instruction and practice in leadership development continue. Attendance at a six-week summer camp at a Regular Army establishment is normally scheduled following the First Year of Advanced ROTC training. This summer camp will normally be conducted at Indiantown Gap Military Reservation, Annville, Pennsylvania (approximately 20 miles NE of Harrisburg, Pennsylvania). The mission of an ROTC Advanced Camp is to supplement campus instruction by providing the cadet with practical experience and instruction in tactical and technical subjects with specific emphasis on leadership development.

203 SECOND YEAR ADVANCED COURSE. Three credit hours. Field Artillery tactics and techniques to include: artillery survey; duties of firing battery personnel; procedures in adjusting artillery fires both as a forward observer and in the fire direction center; operation of a Field Artillery Battery and the tactical employment of artillery. Instruction and research in the role of the United States in world affairs. Leadership training through drill is continued with all students performing officer's duties at drill. Scholarships valued at $600 for pilot training are granted to qualifying seniors in the ROTC program who volunteer and are selected by the Chairman of the Military Department for the flight training offered by the Army ROTC at a Federal Aviation Administration (FAA) approved flying school.

204 SECOND YEAR ADVANCED COURSE. Two credit hours. Continuation of instruction necessary to success as a junior officer in: military law to include Courts-Martial, pre-trial investigations, and the Articles of the Uniform Code of Military Justice; orientation on the military service to include social and official customs, retirement benefits, pay scales, and a review of the military obligations incurred by ROTC graduates. Leadership development is concluded with the students' serving in positions of the more senior officers. Additional course credit is granted for study in academic fields as agreed between the PMS and the Dean.

Modern Languages

Staff: DR. BOURGEOIS, chairman; DR. BEIGEL, DR. BURBRIDGE, MR. EICK, MR. LEONARD, MR. RENGERING, MR. RIESELMAN, MRS. TROEGER, DR. VEGA.

Assisted by: FR. KENNEALY, MR. PLAGEMAN, FR. TRUMMER, DR. ZINAM.

Students who present two or more high school units of a modern language and who pass the Proficiency Test of the Modern Language Department may complete French, German, Russian, or Spanish 101 to fulfill their modern language requirement. This test is required of all incoming freshmen.

Normally, the successful completion of ML 101 is a prerequisite for enrollment in upper division courses.

1. Students electing a major in one of the modern languages must complete certain upper division course requirements.

- French majors must complete Fr 200 and Fr 202 as a prerequisite to all other French upper division courses, and must complete Fr 235.
- German majors must complete Ge 200, 232, and 233.
- Spanish majors must complete Sp 200, 202, and 204.

French (Fr)

Lower Division Courses

100 FRENCH I. Five credit hours. Introduction to the French language. Designed to teach the mechanics of speaking, reading, and writing basic French.

101 FRENCH II. Five credit hours. A more advanced study of the French language. Designed to further facility in reading and conversation. Prerequisite: Fr 100 or equivalent.
French

Upper Division Courses

200 ORAL COMMUNICATION IN FRENCH. Three credit hours. Required of all French majors. Majors must take Fr 202 concurrently. A prerequisite for majors to all other upper division French courses. Prerequisite: Fr 101 or equivalent.

202 COMPOSITION-EXPLICATION-DISSERTATION. Three credit hours. Required of all French majors. A prerequisite for majors to all other upper division French courses. Prerequisite: Fr 101 or equivalent.

207 FRENCH STYLISTICS. Three credit hours. Oral drill in advanced structural patterns, vocabulary enrichment and expansion through analysis of selected French texts. Emphasis on grammatical and syntactical difficulties. Recommended for prospective teachers and teachers-in-service.

209 FRENCH PHONETICS. Three credit hours. A practical approach to the pronunciation of contemporary French with some notions of linguistic science, Old French, and the development of the French language.

210 THEME ET VERSION. Three credit hours. Comparative study of French and English stylistics. Intensive work in translation from English to French.

220 INTRODUCTION TO FRENCH CIVILIZATION. Three credit hours. A comprehensive examination of France, its political, economic, social, and cultural institutions, together with its geography and demography.

235 SURVEY OF FRENCH CULTURE. Three credit hours. Required of all French majors in final semester. Systematic survey of French history, art, and literature. Reading and discussion in literature are arranged individually to complement student's prior preparation.

236 THE FRENCH NOVEL. Three credit hours.

237 FRENCH POETRY. Three credit hours.

238 FRENCH EXPOSITORY PROSE. Three credit hours.

239 FRENCH THEATER. Three credit hours.

245 MEDIEVAL AND RENAISSANCE FRENCH LITERATURE. Three credit hours.

255 SEVENTEENTH AND EIGHTEENTH CENTURY FRENCH LITERATURE. Three credit hours.

277 NINETEENTH CENTURY FRENCH LITERATURE. Three credit hours.

281 TWENTIETH CENTURY FRENCH LITERATURE. Three credit hours.

294 SELECTED READINGS IN FRENCH. Credit by arrangement. A program created for independent readings and individual study of specific works of French literature under the supervision of a faculty member.

298 FREDIN SUMMER PROGRAM OF FRENCH STUDIES IN FRANCE. Credit by arrangement. A special memorial program for studies in French language and civilization in French institutions of learning. Prerequisite for participation in the program is Fr 100, 101 or the equivalent. A number of partial grants-in-aid are available through the FREDIN Memorial Scholarships Fund, established through the bequest of Mademoiselle Aline FREDIN.
German

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Course Title</th>
<th>Credits</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>266</td>
<td>NINETEENTH CENTURY GERMAN LITERATURE II.</td>
<td>3</td>
<td>Three credit hours. A continuation of Gr 265.</td>
</tr>
<tr>
<td>270</td>
<td>THE MODERN SHORT STORY.</td>
<td>3</td>
<td>Three credit hours. The literary development of the period since 1880 and readings from representative authors including Arthur Schnitzler, Rainer, Maria Rilke, Paul Ernst, Thomas Mann and others.</td>
</tr>
<tr>
<td>271</td>
<td>THE MODERN DRAMA.</td>
<td>3</td>
<td>Three credit hours. Principal trends in the drama since 1880 and readings from Hauptmann, Hoffmannsthal and others.</td>
</tr>
<tr>
<td>272</td>
<td>MODERN POETRY.</td>
<td>3</td>
<td>Three credit hours. Representative German poets from Rilke to the present time.</td>
</tr>
<tr>
<td>273</td>
<td>READINGS IN CONTEMPORARY GERMAN LITERATURE—EAST AND WEST.</td>
<td>3</td>
<td>Three credit hours. Present day authors in East and West Germany. Analysis of the works of Grass, Boell, Johnson, Walser, Hildesheimer, Seghers and others.</td>
</tr>
<tr>
<td>280</td>
<td>MODERN LITERATURE I.</td>
<td>3</td>
<td>Three credit hours. Principal trends in German literature since 1880. Readings from Hauptmann, Nietzsche, Schnitzler, Mann, Kafka, and others.</td>
</tr>
<tr>
<td>281</td>
<td>MODERN LITERATURE II.</td>
<td>3</td>
<td>Three credit hours. A continuation of Gr 280.</td>
</tr>
<tr>
<td>282</td>
<td>THE GERMAN HOERSPIEL.</td>
<td>3</td>
<td>Three credit hours. Structure and history of the radio play. Lectures and assigned readings.</td>
</tr>
<tr>
<td>294</td>
<td>SELECTED READINGS.</td>
<td></td>
<td>Credit to be arranged. Directed reading and study for summer and special students. Course offered by arrangement with Chairman of the Department.</td>
</tr>
<tr>
<td>325</td>
<td>TEACHING MODERN LANGUAGES.</td>
<td>3</td>
<td>Three credit hours. See Ed 325.</td>
</tr>
<tr>
<td>327</td>
<td>SEMINAR: GERMAN LANGUAGE AND CULTURE.</td>
<td>3</td>
<td>Three credit hours. For high school teachers of German and those seeking certification. Phonetics, principles of grammar, syntax, and style. Oral and written communication. German contemporary scene in politics, arts, philosophy, and literature.</td>
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<tr>
<td>343</td>
<td>TWENTIETH CENTURY GERMAN NOVEL IN TRANSLATION.</td>
<td>3</td>
<td>Three credit hours. Main trends in the novel of the period. Analysis of selected works of Mann, Hesse, Kafka, Juenger, Boell, and Grass. Not applicable for German major.</td>
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Spanish (Sp)

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<tr>
<th>Course Number</th>
<th>Course Title</th>
<th>Credits</th>
<th>Description</th>
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<tr>
<td>100</td>
<td>SPANISH I.</td>
<td>5</td>
<td>Five credit hours. Introduction to the Spanish language. Designed to teach the mechanics of speaking, reading, and writing basic Spanish.</td>
</tr>
<tr>
<td>101</td>
<td>SPANISH II.</td>
<td>5</td>
<td>Five credit hours. A more advanced study of the Spanish language. Designed to further facility in reading and conversation. Prerequisite: Ru 100 or equivalent.</td>
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Spanish (Sp)

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<tr>
<th>Course Title</th>
<th>Credits</th>
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<td>200</td>
<td>SPANISH CONVERSATION.</td>
<td>3</td>
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<td>202</td>
<td>SPANISH COMPOSITION.</td>
<td>3</td>
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<td>204</td>
<td>INTRODUCTION TO SPANISH LITERATURE.</td>
<td>3</td>
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<td>220</td>
<td>SPANISH CIVILIZATION.</td>
<td>3</td>
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<td>224</td>
<td>LATIN-AMERICAN CIVILIZATION.</td>
<td>3</td>
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<tr>
<td>232</td>
<td>SPANISH AUTHORS I.</td>
<td>3</td>
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<tr>
<td>233</td>
<td>SPANISH AUTHORS II.</td>
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<td>234</td>
<td>LATIN AMERICAN LITERATURE I.</td>
<td>3</td>
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<tr>
<td>235</td>
<td>LATIN AMERICAN LITERATURE II.</td>
<td>3</td>
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<tr>
<td>242</td>
<td>EPIC POETRY.</td>
<td>3</td>
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<td>246</td>
<td>SPANISH NOVEL OF THE RENAISSANCE.</td>
<td>3</td>
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<td>249</td>
<td>SPANISH MYSTICS.</td>
<td>3</td>
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<td>250</td>
<td>THE NOVEL OF THE GOLDEN CENTURY.</td>
<td>3</td>
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<td>252</td>
<td>CERVANTES.</td>
<td>3</td>
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<td>257</td>
<td>LOPE DE VEGA.</td>
<td>3</td>
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<td>259</td>
<td>CALDERON.</td>
<td>3</td>
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<tr>
<td>260</td>
<td>HISTORY OF THE SPANISH LANGUAGE.</td>
<td>3</td>
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271 **THE PROSE OF THE NINETEENTH CENTURY.** Three credit hours. Literary movements. The *costumbrista* writers. Emphasis on Pereda and Galdos.

273 **THE POETRY OF THE NINETEENTH CENTURY.** Three credit hours. Foreign influences and the national tradition. Analysis of poems of Rivas, Espronceda, Becquer, Campoamor, and others.

275 **THE DRAMA OF THE NINETEENTH CENTURY.** Three credit hours. The main dramatists. Reading and discussion of plays by Moratin, Zorrilla, Tamayo y Baus, and Echegaray. The role of Galdos.

283 **THE DRAMA OF THE TWENTIETH CENTURY.** Three credit hours. Main trends and developments. The art of Benavente and Lorca. The *genero chico* and the Quintero brothers.

285 **"MODERNISM" AND THE GENERATION OF 1898.** Three credit hours. Parallel movements with emphasis upon Unamuno, Baroja, Ortega, Darío, and Nervo.

286 **CONTEMPORARY LATIN-AMERICAN NOVEL.** Three credit hours. Development of this genre with emphasis upon Gallegos, Azuela, and Ciro Alegría.

287 **CONTEMPORARY LATIN-AMERICAN THEATRE.** Three credit hours. Emphasis on the period since 1940.

289 **PRESENT-DAY LITERARY TRENDS.** Three credit hours. Various literary trends in Spain and in Latin America from the mid-20's to the present.

294 **SELECTED READINGS.** Credit by arrangement. A program created for independent readings and individual study of specific works of Hispanic literature under the supervision of a faculty member.

325 **TEACHING MODERN LANGUAGES.** Three credit hours. See Ed 325.

374 **MASTERPIECES OF SPANISH LITERATURE IN TRANSLATION.** Three credit hours. Readings from the outstanding authors of various periods in Spanish literature. Not applicable for Spanish major.

**Philosophy (Pl)**

*Staff:* FR. SCHMIDT, chairman; MRS. BLAIR, FR. CURRAN, DR. DUMONT, MR. FOTINIS, DR. GENDREAU, DR. JONES, MR. MARRERO, MR. McCABE, MR. MOONEY, FR. OPPENHEIM, FR. TILLMAN, FR. TRACY, FR. VIRAGH, FR. WUELLNER.

*Assisted by:* FR. FOLEY, FR. PEDROTTI.

**Upper Division Courses**

200 **ORIGINS OF PHILOSOPHY.** Three credit hours. The nature of philosophical inquiry; a survey of ancient philosophy; the essentials of Aristotelian logic and cosmology. Reserved to HAB students.

210 **LOGIC.** Three credit hours. The theory and rules of valid reasoning, chiefly deductive.

220 **PHILOSOPHY OF MAN.** Three credit hours. A philosophical study of man, his distinctive operations, his powers, his freedom, his nature, his complex unity; the soul and its properties; man as a person and as social. Prerequisite to all the following courses in philosophy.

230 **METAPHYSICS.** Three credit hours. A fundamental study of being as such; plurality and unity in being; change, contingency, and limitation; constituent principles, causes, and properties of being; substance and relation. Prerequisite to all the following courses in philosophy.

232 **PHILOSOPHY OF GOD.** Three credit hours. A philosophical inquiry by natural reason into the source of finite and contingent beings; God, His knowability, existence, nature, and attributes. Prerequisite: PI 220, 230.

235 **THEORY OF KNOWLEDGE.** Three credit hours. Human knowledge from the viewpoint of its truth and certitude; error; judgment and the evidence that grounds it. Prerequisite: PI 220, 230.

237 **THE MATERIAL WORLD.** Three credit hours. A philosophical analysis of material being, its constitution and its properties; change, place, space, and time; the relations of the philosophy of nature to natural science. Prerequisite: PI 220, 230.

240 **PRINCIPLES OF ETHICS.** Three credit hours. A philosophical exposition of the first principles of right human action and human goodness; the purpose of human life; the human act; morality and its essential norm; the general theory of law and rights; conscience; virtue; variant ethical systems. Prerequisite: PI 220, 230.

241 **CURRENT MORAL PROBLEMS.** Three credit hours. A philosophical exposition of the grounds of particular human rights and duties; the right to physical integrity (medical ethics); marriage and the family; problems relating to truth in communication; secrecy; ethics in economic life; political rights; society; community; international society; war and peace. Prerequisite: PI 240.

243 **PRINCIPLES OF POLITICAL PHILOSOPHY.** Three credit hours. The need for political society and its nature; its end and the means to achieve it; the role and origin of authority; the special characteristics of the state; sovereignty; relations of state and citizens; relations to other societies. Prerequisite: PI 241.

244 **MEDICAL ETHICS.** Three credit hours. Rights and duties of physicians; rights of patients to life, health, and integrity of body; euthanasia, sterilization, abortion; problems of pregnancy and birth; contraception; abortion; socialized medicine; professional conduct. Prerequisite: PI 241.

246 **BUSINESS ETHICS.** Three credit hours. Problems of rights, justice, and law in economic life; private enterprise; competition; buying and selling, prices, wages, labor relations, unions; role of government in business. Prerequisite: PI 241.

250 **HISTORY OF ANCIENT PHILOSOPHY.** Three credit hours. Greek philosophy from its beginning to Neoplatonism, with special emphasis on Plato and Aristotle. Offered in the fall of even-numbered years.

255 **HISTORY OF ANCIENT AND MEDIEVAL PHILOSOPHY.** Three credit hours. Philosophy from its beginning to the Fourteenth Century in the West.

260 **HISTORY OF MEDIEVAL PHILOSOPHY.** Three credit hours. Philosophy in the West from Augustine to the Fourteenth Century, including Islamic and Jewish philosophy as they affected the West. Offered in the fall of odd-numbered years.
Philosophy

270 HISTORY OF MODERN PHILOSOPHY. Three credit hours. Philosophy in Europe from the Seventeenth to the Nineteenth Century, especially rationalism, empiricism, critical philosophy, and idealism. Offered in the spring semester only.

280 HISTORY OF CONTEMPORARY PHILOSOPHY. Three credit hours. The principal philosophies of the Twentieth Century, especially those currently influential in Continental Europe, Britain, and America. Offered in the spring semester only.

310 SYMBOLIC LOGIC. Three credit hours. Modern theories, procedures, and symbolic systems in logic; the calculus of propositions and of classes.

322 PHILOSOPHY OF THE VIRTUES. Three credit hours. Dispositions and habits in man; simple and complex habits; virtues and vices; the cardinal virtues.

324 PHILOSOPHY OF HISTORY. Three credit hours. The nature and sources of history; human temporality and diverse aspects of human existence; historical evidence and its types; auxiliary arts; evaluation and interpretation; interpretative theories; objectivity and certainty; types of history; uses and values of history.

326 PHILOSOPHY OF ART. Three credit hours. Artificial being and human creativity; practical knowledge and affectivity; beauty; aesthetic enjoyment; art appreciation.

333 PHILOSOPHICAL ROOTS OF CONTEMPORARY ATHEISM. Three credit hours.

338 PHILOSOPHY OF SCIENCE. Three credit hours. The nature of scientific knowledge, investigation, and theory; the relations of science and philosophy; problems for philosophy raised by science.

381 CONTEMPORARY CONTINENTAL EUROPEAN PHILOSOPHY. Three credit hours. One or more philosophies flourishing on the European Continent: phenomenology, existentialism, personalism, philosophy of spirit, logical positivism, Marxism, etc.; especially their method of philosophizing. Offered in fall semester only.

383 CONTEMPORARY BRITISH AND AMERICAN PHILOSOPHY. Three credit hours. One or more philosophies current or recently flourishing in Britain or America; linguistic analysis, logical positivism, naturalism, pragmatism, instrumentalism, new realism, etc., especially their method of philosophizing. Offered in the spring semester only.

388 CURRENT PROBLEMS IN CATHOLIC PHILOSOPHY. Three credit hours. The response of Catholic philosophers to the impetus of existentialism, phenomenology, and linguistic analysis; varieties of Christian personalism.

523 THE MIND-BODY PROBLEM. Three credit hours.

526 PHILOSOPHY OF AESTHETICS. Three credit hours. (En 566)
104. COLLEGE PHYSICS. Three credit hours each semester. A general physics course for pre-med, pre-dent, and other students who need a knowledge of mechanics, heat, sound, electromagnetism, optics, and modern physics. Co-requisite: Ph 105 and Ph 107 laboratory. Pre-requisite: Algebra.

105. COLLEGE PHYSICS LABORATORY. One credit hour each semester. These laboratories accompany the Ph 104 and Ph 106 lectures respectively.


107. UNIVERSITY PHYSICS LABORATORY. One credit hour laboratory to accompany Ph 108.


109. UNIVERSITY PHYSICS LABORATORY. One credit hour laboratory to accompany Ph 110.

110. INTRODUCTION TO PHYSICAL SCIENCES. Three credit hours.

111. INTRODUCTION TO PHYSICAL SCIENCES LABORATORY. One credit hour.

112. THE EARTH AND ITS ENVIRONMENT. Two credit hours each semester.


114. EARTH LABORATORY. One credit hour laboratory to accompany Ph 116, 118 respectively.

Upper Division Courses

Ph 200 to 207 are not limited to, but are intended for, teachers and prospective teachers who wish to obtain a concentration in physics. Courses may be taken in any order. Prerequisite: Ph 104-106 or equivalent.

200. BASIC MECHANICS. Three credit hours. Mechanics beyond that normally covered in General Physics. Vector resolution, Newton's laws, impulse and momentum, angular momentum, harmonic motion, and conservation principles.

201. BASIC OPTICS. Three credit hours. Geometrical and physical optics with emphasis on the latter. Reflection and refraction, lenses, polarization, interference, diffraction, and line spectra.

202. BASIC ELECTRICITY AND MAGNETISM. Three credit hours. Electric fields, potential, dielectrics, capacitance, magnetic field, induced EMF, inductance, and ferromagnetism.

203. PHYSICS OF THE ATOM. Three credit hours. The principles of modern physics for people whose profession is other than that of a research physicist. Topics include relativity, quantum mechanics, atomic and nuclear physics, and the relations between these topics and modern philosophy. Since the course is as rigorous as ordinary language will allow, even the physics student can expect to obtain a more profound respect for the conciseness of mathematical equations.

204. ANALOG COMPUTER WORKSHOP IN PHYSICS. Three credit hours. Introducing a unique teaching machine—the analog computer. A survey of differential calculus, integral calculus, and some elementary differential equations as they apply to certain problems in physics. A review of electrical circuits on the level of a general physics course as the background for understanding the analog computer. Thereafter, all students will be given the opportunity to study various properties of functions by programming them on the computer.

205. TIME-SHARING COMPUTER WORKSHOP. Three credit hours. (Possible lab fee.) Uses of a new and unique learning machine are developed through working physics problems. Students learn the BASIC language, developed especially for time-sharing. Simultaneously using convenient remote teletype terminals, students converse with and program a large distant computer, each at his own personal pace. Treated are secondary school applications where joining the inquiring student with a T/S terminal engenders creative extension of the intellect.

206. ADVANCED STUDY OF BASIC PHYSICS I, II. Three credit hours each semester. The broad implications of the fundamental principles of general physics. Proper pedagogical exposition of basic principles as they should be related to beginning students; hence, this course should benefit current and prospective high school teachers. Prerequisite: General Physics or the equivalent.

207. ELECTRICAL CIRCUITS. Two credit hours of lecture. Direct-current circuit problems; transient and steady state solutions for some RLC circuits; series and parallel resonance, Kirchhoff's Laws in complex form; alternating current networks. Complex-number vector methods and matrices are used.

208. ELECTRICAL LABORATORY. One credit hour to accompany Ph 230.

210. ELECTRONICS. Three credit hours. Basic electronic circuits including power supplies, amplifiers, oscillators, and switching circuits, using both vacuum tubes and transistors. Impedance relations and electronic filters. Theory of electronic measurements.

211. ELECTRONICS LABORATORY. One credit hour laboratory to accompany Ph 242, 244 respectively.

212. MATH-PHYSICS. Two credit hours of lecture. Theory and use of analog computer. Solution of elementary math-physics problems on both analog and time-sharing computers. Introduction to Basic Language. Use of time-sharing computer in analog mode.

213. COMPUTER LABORATORY. One credit hour laboratory to accompany Ph 247.

214. THEORETICAL MECHANICS I. Three credit hours. Calculus of vectors, conservative forces, nonlinear oscillator, forced oscillations with damping, electrical and acoustical analogues, planetary motion and the general laws of alpha-particle scattering, conservation of linear and angular momentum, coupled oscillators, and normal coordinates.

215. MECHANICS LABORATORY. Two credit hours. More advanced counter-parts of the University physics laboratory. Analog and digital computer techniques. Experiments on ellipsoids of inertia, Kater's pendulum, gyroscope precession and mutation, and forced harmonic oscillations.
352 ELECTROMAGNETISM I. Three credit hours. Coulomb's law, Ampere's law, Faraday's law, Maxwell's electromagnetic equations in free space and material media. Course is given in vector notation.

354 PHYSICAL OPTICS. Three credit hours. Electromagnetic wave theory is used to derive the laws of optics; reflection, refraction, diffraction, Fresnel integrals, and theory of dispersion.

355 OPTICS LABORATORY. Two credit hours. Experiments in Physical Optics, including diffraction, Michelson's interferometer, multiple beam interference, polarization, measurement of the speed of light, and various experiments on the prism spectograph.

356 ATOMIC PHYSICS. Three credit hours. The atomic view of matter, electricity, and radiation; the atomic models of Rutherford and Bohr, relativity, X-rays, and introduction to quantum mechanics.

370 PHYSICAL IDEAS IN ADVANCING HUMAN THOUGHT. One credit hour each semester. Selected ideas of Archimedes, Galileo, Newton, Einstein, and Bohr that have led to extending experience and refining thought. Lectures and seminars examine how these ideas—through the interplay of mathematics, physics, and philosophy—liberate the individual free mind for fresh exploratory adventure. Certain contemporary theoretical concepts are treated as outposts on the frontier of human knowledge. No prerequisites: open to all students regardless of class or major.

372 ELECTROMAGNETISM II. Three credit hours. Continuation of Ph 352, including Maxwell's equations, magnetic vector potential.

374 NUCLEAR PHYSICS. Three credit hours. Natural and artificial radioactivity, nuclear reactions, high-energy physics, and fundamental particles. Prerequisite: Ph 366.

375 ATOMIC PHYSICS LABORATORY. One credit hour. Photoelectric effect, Millikan oil drop experiment, e/m for electrons, black body radiation, vacuum and glass work techniques, ionization potentials, Bragg diffraction, atomic spectra.

376 INTRODUCTION TO QUANTUM MECHANICS. Three credit hours. The mathematical formalism of quantum mechanics and its physical interpretation. Wave mechanical concepts, eigenfunctions and eigenvalues, Schrödinger's equation, the hydrogen atom, matrix mechanics, perturbation theory, and collision processes. Prerequisite: Ph 366.

378 SENIOR COMPREHENSIVE REVIEW. One credit hour.

380 THEORETICAL MECHANICS II. Three credit hours. Rigid body motion, moments of inertia, principal axes, Euler's equations, rotation about fixed axis, energy equation, Lagrange's equations, Hamilton's equations, principles of least action.

381 NUCLEAR PHYSICS LABORATORY. One credit hour. Experiments in radioisotope techniques, nuclear particle counting, and instrumentation.

382 THERMODYNAMICS. Three credit hours. Thermodynamic variables and processes, internal energy of a system, first and second laws of thermodynamics, Carnot cycle, entropy and irreversibility, Gibb's functions and Maxwell's relations, Clausius-Clapeyron and Gibbs-Heimholtz equations, van der Waals gas, phase rule, Boltzmann's distribution law, Maxwell's distribution law, Bose-Einstein statistics, Fermi-Dirac statistics.

384 SENIOR COMPREHENSIVE REVIEW. One credit hour.

386 (GEOPHYSICS.) ELEMENTARY SEISMOLOGY. Three credit hours. The nature of earthquakes, fundamental seismograph theory, and the location of earthquakes. Introduces the student to some of the basic concepts of elastic wave theory.

397 SPECIAL READINGS. Area to be specified. One to three credit hours.

Graduate Courses

501, CLASSICAL MECHANICS. Three credit hours each semester. Variational principles and Lagrange's equations, the two-body central force problem, rigid body motion, Hamilton's equations, and small oscillations.

511, RELATIVISTIC ELECTRODYNAMICS. Three credit hours each semester. Relativistic Electrodynamics as an example of a theory. The nature of a theory, general principles underlying both Newtonian mechanics and special theory of relativity. The assumption of superposition, the full theory of Electrodynamics, and the Maxwell-Lorentz equations. Difficulties resulting from the fact of existence of electrons.

521, QUANTUM MECHANICS. Three credit hours each semester. Some fundamental experiments of atomic physics. DeBroglie waves and properties of wave packets. Uncertainty relation. Schroedinger's equation applied to the hydrogen atom and the harmonic oscillator. Quantum Mechanical operators in Hilbert space, matrix formulation of Q.M., perturbation theory, theory of measuring process, angular momentum and spin, Dirac's electron.

525 QUANTUM BEHAVIOR OF SYSTEMS. Three credit hours. Classical concepts demanded by the quantum theory as a rational generalization of classical physics. A contemporary approach to the quantum, based upon recent experiments such as the ESAB effect, optical pumping, and superconductivity. Subtleties of quantum wholeness, such as the Einstein-Podolsky-Rosen effect, explained through quantum behavior in the configuration space of a system. Quantum implications for the theory of knowledge, with particular emphasis on Bohr's account of his discussions with Einstein.

526 SEMINAR: PHYSICAL INTERACTION. Three credit hours. A sequel to Quantum Behavior of Systems. Further exploration into the extensive emendations of Newtonian mechanics involved in relativistic electrodynamics and quantum mechanics. The central role of interaction in questions of measurement, separability, wholeness, and extension of behavior. Reports and discussions of current investigation into nuclear, electromagnetic, Fermi, and gravitational interactions.

531, PHYSICAL OPTICS. Three credit hours each semester. Electromagnetic character of light, Maxwell's equations, coherence and interference, diffraction, polarization, amplification of light, lasers.

541, ELECTRONICS FOR SCIENTISTS. Three credit hours each semester. Lecture and laboratory course for the scientist or prospective scientist who needs a working knowledge of electronics. Analysis and design of power supplies, amplifiers, oscillators, switching circuits, and filters.

543, PROCEDURES IN EXPERIMENTAL PHYSICS. Three credit hours each semester. Lecture and laboratory course treating such topics as high vacuum techniques, laboratory glass blowing, coating of surfaces by evaporation and sputtering, light sources and detectors, charged particle detectors, and machine shop practices.
MODERN COMPUTER WORKSHOP. Three credit hours. Use and operation electronic analog, time sharing, and regular digital computers to solve problems in mathematics and physics.

THEORY OF OSCILLATIONS. Three credit hours. Forced oscillations with damping, acoustical-electrical-mechanical analogies, impedance matching, wave motion.

ASTRONOMY. Three credit hours each semester. Universal gravitation, the origin and evolution of the stars, the sun, the planets, nuclear processes in stars, the dynamics of the galaxy.

INTRODUCTION TO GEOPHYSICS. Three credit hours. Geophysical tools available for our knowledge of the earth’s mantle. Seismological, thermal, gravitational, magnetic, and electrical evidence. The theories of continental drift, and sea floor spreading.

INTRODUCTORY SOLID STATE PHYSICS. Three credit hours each semester. Crystal structure and its measurement by X-ray techniques; crystal lattice, elastic constants of crystals, thermal and dielectric properties, band structure, and applications to semi-conductors. Specific examples from recent literature will be discussed as time permits.

METHODS OF MATHEMATICAL PHYSICS. Three credit hours each semester. Matrix and vector algebra, complex variables, integral transforms, and linear and partial differential equations. In all cases emphasis is placed on the physical application of the theory.

SPECIAL TOPICS: (TOPICS TO BE SPECIFIED). Three credit hours. Special topics such as Statistical Mechanics, Nuclear Physics, Relativity, Astrophysics, and Atomic Physics.

INDEPENDENT STUDY. Credit by arrangement. Interdisciplinary graduate study and research. This work may call for the student to attend, from time to time and with faculty permission, classes given in various departments. This course provides explicitly for such attendance, and in regularly scheduled conferences with a faculty advisor the student reports in detail on these classes.

SPECIAL READINGS: (AREA TO BE SPECIFIED). One to three credit hours.

RESEARCH IN: (AREA TO BE SPECIFIED). One to three credit hours.

MASTER’S THESIS. Six credit hours.

Psychology (Ps)

Staff: DR. BIELIAUSKAS, chairman; DR. QUATMAN, executive officer; DR. BERG, DR. CERBUS, DR. CLARKE, DR. COS- GROVE, DR. ELLIOTT, DR. FEDORAVICIUS, DR. FEUSS, FR. FOLEY, DR. HELLKAMP, DR. KATKIN, DR. KRONENBERGER, MR. LaGRANGE, DR. MALLICK, DR. McCRYSTAL, DR. SCHMIDT.

Assisted by: MR. BRINKER, DR. COHEN, MRS. COHEN, MR. DINNERMAN, SR. JUDD, DR. LIPPERT, MR. MILLER, SR. JOHN BOSCO RYAN, MR. SETA, DR. WOLLACK.

Graduate Assistants: MR. BELL, MR. BOSSE, MR. GEIL, MR. KAJDAN, MR. MARGRETT, SR. MEYER, MR. SCHMIDT.
EXPERIMENTAL PSYCHOLOGY II. Three credit hours. Directed experiments on animal and human subjects, emphasizing planning, instrumentation, controls, and logical analysis of results. Experiments deal with learning, emotion, motivation, and social behavior. One lecture and four hours laboratory per week. Prerequisite: Ps 221.

EXPERIMENTAL PSYCHOLOGY. Five credit hours. Summers only.


THE BIOLOGICAL BASIS OF ANIMAL BEHAVIOR. Four credit hours. See BI 340, 341.

DEVELOPMENTAL PSYCHOLOGY. Three credit hours. Factors which significantly influence the life span of man from childhood to old age, with application to the stages of physiological maturation, developmental tasks, social learning, and personality integration. (Ed 231)

CHILD PSYCHOLOGY. Two credit hours. The genetic study of growth and development; hereditary and environmental factors; early and later childhood to puberty. (Ed 234)

adolescent psychology. Two credit hours. Interrelated physical, physiological, and mental changes associated with adolescence. (Ed 233)

Differential Psychology. Two credit hours. The existence, extent, and significance of individual differences in human traits. The role of heredity and environment in producing individual differences. Psychological analysis of sex, racial, national, and other group differences. (Ed 235)

PSYCHOLOGY OF LEARNING. Three credit hours. Experimental study of human and animal learning, including transfer, mediation, retention, verbal and concept learning. Prerequisite: Ps 101. (Ed 237)

PSYCHOLOGY OF MOTIVATION. Three credit hours. Theoretical and experimental approaches to the understanding of processes that determine the strength and direction of behavior. Prerequisite: Ps 301. (Ed 239)

INDUSTRIAL PSYCHOLOGY. Two or three credit hours. Principles of sound psychological procedure as applied to personnel in commerce and industry. Concentration upon the human element in American industry. (IR 330)

SOCIAL PSYCHOLOGY. Two credit hours. The individual’s personality, attitudes, and behavior in multi-individual situations. (Ed 261, So 261)

SOCIAL DYNAMICS OF COMMUNICATION. Three credit hours. See CA 262. (So 262)

THEORIES OF PERSONALITY I. Two credit hours. Meaning and application of different concepts in description of personality dynamics. Emotions, their expressions, their mutual interrelationships, and their meaning. Sources of personality development. (Ed 263)

THEORIES OF PERSONALITY II. Two credit hours. Description and evaluation of current personality theories. Continuation of Ps 263. (Ed 264)

CRIME AND PERSONALITY. Three credit hours. The interrelationship between personality characteristics and criminal behavior. Root causes of crime in the individual and its culture. Consideration of personality dynamics and possible treatment approaches. (Cr 266, Ed 266)

INTRODUCTION TO THE EMOTIONALLY DISTURBED CHILD. Two credit hours. (Ed 271)

MENTAL HYGIENE. Two credit hours. Progressive stages of development in emotional growth. Factors of adjustment and maladjustment in education, social relations, and occupations. (Ed 274)

DYNAMIC PSYCHOLOGY. Two credit hours. Personality concepts and methodology of various psycho-therapeutic schools. While special attention is given to Freud’s contribution, other schools considered are Adlerian, Jungian, Rankian, Existential Therapy, and Client-Centered therapy. (Ed 275)

PSYCHOLOGY OF DELINQUENCY. Two credit hours. Types and causes of juvenile delinquency together with brief case histories. (Ed 276)

ABNORMAL PSYCHOLOGY. Two or three credit hours. Dynamics of a disturbed personality; symptoms, causes, and treatment of psychoneuroses, psychoses, and deviant personalities. Theoretical descriptions are illustrated through visual aids and field trips. (Ed 277)

PSYCHOLOGICAL AND ACHIEVEMENT TESTS. Two or three credit hours. See Ed 579.

INTRODUCTION TO PROJECTIVE TECHNIQUES. Two or three credit hours. Theory and rationale of projective techniques. Introduction to the Rorschach technique, Thematic Apperception test, Sondi Test, visual-motor tests, drawing techniques, and word association tests. Tests are described and clinical illustrations are presented with case histories.

READINGS IN PSYCHOLOGY. Either semester: one, two, or three credit hours. The student undertakes a library research project which he performs with the assistance of and under supervision of one staff member. He is to write a paper and pass an oral examination at the end of the semester. For seniors and graduate students only.

PRACTICUM IN PSYCHOLOGICAL TESTING. Two or three credit hours. Practical experience in administering of group tests; scoring and interpretation. Prerequisite: Ps 279 and instructor’s approval. (Ed 283)

THE PSYCHOLOGY OF RELIGION. Three credit hours. (Th 285)

SENIOR COMPREHENSIVE REVIEW. Two credit hours. Required of all majors in their senior year. An original research project may be substituted for this requirement upon approval of the Chairman of the Department. Prerequisite: Senior standing and instructor’s approval.

Graduate Courses

The following courses are required of all graduate students: 263, 264, 501, 502, 505.

CONTEMPORARY THEORIES IN PSYCHOLOGY. Three credit hours. An evaluative review of the concepts basic to current theory, research, and practice in psychology and its major divisions.
502 PHILOSOPHICAL ISSUES IN PSYCHOLOGY. Three credit hours. Historical development of basic psychological concepts from Aristotle to the present. Interrelations between science, psychology, and philosophy.

503 ADVANCED EDUCATIONAL PSYCHOLOGY. Three credit hours. See Ed 503.

505 PROFESSIONAL PROBLEMS IN PSYCHOLOGY. One credit hour. Basic principles of ethics and their application to psychological theory, research, and practice. Case studies.

507 ROLE AND FUNCTION OF SCHOOL PSYCHOLOGIST. Two credit hours.

511 ADVANCED STATISTICS. Two or three credit hours. Review of elementary correlation. Serial correlation and other correlation and methods. Use of multiple regression and discriminant analysis with psychological data. Simple analysis of variance. Basic statistical considerations in dealing with small samples. Prerequisite: Ps 210 or equivalent. (Ed 511)

521 ADVANCED EXPERIMENTAL PSYCHOLOGY. Three credit hours. Intensive survey of experimental procedures and findings; utilization of laboratory equipment; introduction to individual laboratory research.

530 LEARNING AND MOTIVATION. Three credit hours. Theories of learning, including concepts of drive, reinforcement, generalization, and discrimination, transfer of training, retention and forgetting. Prerequisites: Ps 101 and instructor's approval. (Ed 530)

532 VOCATIONAL AND EDUCATIONAL GUIDANCE. Two credit hours. See Ed 532.

533 COUNSELING PRINCIPLES AND TECHNIQUES. Two credit hours. See Ed 533.

535 OCCUPATIONAL INFORMATION AND JOB ANALYSIS. Two credit hours. (Ed 535)

536 GROUP GUIDANCE. Two credit hours. See Ed 536.

538 DESIGN OF EXPERIMENTS. Three credit hours.

552 PERSONAL SELECTION AND EVALUATION TECHNIQUES. Three credit hours.

553 MARKETING RESEARCH. Three credit hours. (BA 562)

580 PSYCHOPATHOLOGY. Two credit hours. (Ed 580)

582 INDIVIDUAL TESTS OF INTELLIGENCE. Two to four credit hours. See Ed 582.

584 PROJECTIVE TECHNIQUES I. Three credit hours.

585 PROJECTIVE TECHNIQUES II. Three credit hours. Prerequisite: Ps 584.

589 COUNSELING AND PSYCHOTHERAPY. Three credit hours.

590 PRACTICUM: EXPERIMENTAL PSYCHOLOGY. Three to six credit hours.

591 PRACTICUM: CLINICAL PSYCHOLOGY. Three to six credit hours.

592 PRACTICUM: COUNSELING PSYCHOLOGY. Three to six credit hours.

593 PRACTICUM: INDUSTRIAL PSYCHOLOGY. Three to six credit hours.

Sociology

600- WORKSHOPS AND INSTITUTES. Titles and credit hours will be announced in each individual case.

629 MOTIVATION AND BEHAVIOR IN ORGANIZATIONS. Three credit hours. See BA 614. (Ed 644)

645 ADVANCED DEVELOPMENTAL PSYCHOLOGY. Three credit hours. (Ed 645)

646 PSYCHOLOGY OF THE EXCEPTIONAL CHILD. Three credit hours. (Ed 646)

647 CLINICAL STUDIES: EMOTIONALLY DISTURBED CHILD. Two credit hours. (Ed 647)

648 PRACTICUM: TEACHING EMOTIONALLY DISTURBED CHILDREN. (Ed 648)

651 MONTESSORI EDUCATION: PHILOSOPHICAL ASPECTS. See Ed 651.

652 CURRENT THEORY AND RESEARCH IN CHILD DEVELOPMENT. Three credit hours. See Ed 652.

653 EARLY COGNITIVE DEVELOPMENT. Three credit hours. See Ed 653.

670 PSYCHOLOGY OF READING. Two credit hours. (Ed 670)

678 DIAGNOSIS AND CORRECTION OF READING DISABILITIES. Three credit hours. (Ed 678)

689 RESEARCH IN PSYCHOLOGY. Titles to be specified. Three credit hours.

690 INTERNSHIP IN SCHOOL PSYCHOLOGY. A year's course: six credit hours per semester.

699 MASTER'S THESIS. Six credit hours.

Sociology (So) and Anthropology (An)

Staff: MR. WEIR, acting chairman.

Assisted by: DR. BROWNING, MR. COVER, MISS DWYER, DR. FOSTER.

Lower Division Courses

101 INTRODUCTION TO SOCIOLOGY. Three credit hours. Social behavior within the context of group structure, society, and culture. Basic sociological terminology and methodology.

121 CONTEMPORARY SOCIAL PROBLEMS. Three credit hours. The function of cultural values and social structures in defining social problems and proposing solutions. Problems are considered in terms of their origin, extent, and treatment.

Upper Division Courses

219 PROBLEMS OF MODERN STUDENTS. Two credit hours. (Ed 219)

220 INTRODUCTION TO SOCIAL WORK. Three credit hours. Concepts of social work. Social service in various aspects of sociology.
222 PRINCIPLES OF SOCIAL CASE WORK. Three credit hours. Behavior, attitudes, and relationships involved in contacts of case workers and clients. Casework practices in community agencies.

242 URBAN SOCIOLOGY. Three credit hours. Historical development and demographic patterns of the city and its environs. Urban and rural life are considered with ecological precepts and change.

245 APPALACHIAN IN URBAN LIFE. Three credit hours. Subcultural contact with the modern urban community. Social and economic adjustment problems of this group.

250 RACIAL AND ETHNIC MINORITIES. Three credit hours. Minority groups in contemporary United States. Social processes involved in dominant minority relations.

254 MINORITY GROUPS IN SCHOOL AND COMMUNITY. Three credit hours. Adjustment of minorities to the community. Problems related to the school.

257 RACIAL-CULTURAL TENSIONS AND THE COMMUNITY. Three credit hours. Racial and cultural relations in the community. Tensions and conflict arising from racial-cultural relations.

261 SOCIAL PSYCHOLOGY. Two credit hours. See Ps 261. (Ed 261)

262 SOCIAL DYNAMICS OF COMMUNICATION. Three credit hours. See CA 262. (Ps 262)

265 SOCIAL STRATIFICATION. Three credit hours. Class, status, and power in various social stratification systems. Relationships to social, institutional, and personality structure.

270 INDUSTRIAL SOCIOLOGY. Three credit hours. Industry as a social system and its relationship to the community. Structure, function, and strain of industrial roles.

280 CULTURAL ANTHROPOLOGY. Three credit hours. Concepts and materials of culture from the fields of ethnography, ethology, and archaeology. Origin, development, universals, and variations of culture through cross-cultural analysis.

282 ETHNOGRAPHY OF THE AMERICAN INDIAN. Three credit hours. Prehistory and development of Indian culture in North America. Similarities and differences by cultural area.


292 JUVENILE DELINQUENCY. Three credit hours. Multiple factors involved in delinquent behavior. Definition, extent, causation, and treatment.

300 SOCIOLOGICAL THEORIES. Three credit hours. European and American theorists. Origin, growth, and change of social order and the individual's place in society.

310 MARRIAGE AND THE FAMILY. Three credit hours. (Th 310)

330 SEMINAR IN SOCIOLOGY. Three credit hours. Selected topics and readings for senior sociology majors. (Others with permission of instructor.)

360 METHODS OF SOCIAL RESEARCH. Three credit hours. Methodology in social research.

211 AFRICAN BACKGROUND OF THE AMERICAN NEGRO. Three credit hours. See Hs 364.

215 THE NEGRO IN AMERICA. Three credit hours. See Hs 365. (Po 365)

Theology (Th)

Staff: FR. BRUEGGEMAN, chairman; FR. CARTER, DR. EBERHARD, FR. GORDON, FR. KLEIN, FR. McSWEENEY, FR. E. O'CONNOR, FR. SCHWIND, FR. SEHER, FR. TOPMOELLER, FR. TREACY, FR. WHEELE.

Assisted by: FR. BISCHOFF, RABBI GOLDMAN, FR. PETROVICH.

Lower Division Courses

100 FOUNDATIONS OF NATURAL RELIGION. Three credit hours. For non-Catholic students.

101 REVELATION AND CHRISTOLOGY. Three credit hours. God's revelation of Himself in Scripture and in the Christ-Event, as incarnating the message of divine truth. Explanation of the Constitution on Divine Revelation of Vatican II. Man's personal response to Christ in faith, traced to its origins in history.

102 CHRISTIAN LIFE WITHIN THE CHURCH. Three credit hours. Nature of the church as the People of God. Its structured organism (Vatican II decree). Deification of the Christian and others by their share in divine life, coming to them principally through the liturgy as centered in the Eucharistic sacrifice and in the sacraments.

Upper Division Courses


206 CONTEMPORARY THEOLOGY OF THE PEOPLE OF GOD. Three credit hours. The Church as MYSTERY. The pilgrim Church. The Church in salvation history as studied in documents of Vatican II, and in modern theologians interpreting those decrees: Baum, Kung, etc.

208 ADVANCED CHRISTOLOGY. Three credit hours. Christ's nature and person. Historical theological developments. The human knowledge and consciousness of Christ.

209 THE INCARNATION IN HUMAN LIFE. Three credit hours. Orientation to contemporary theological-anthropological thought.

213 MODERN MARIOLOGY. Three credit hours. Modern theories of Mary's role in the church. Her "divine" prerogatives.


216 THE THEOLOGY OF HOPE. Three credit hours. A modern approach to Christian eschatology. The classical theology of hope versus the contemporary approach, as in Moltmann's The Theology of Hope.
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<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>219</td>
<td>CHRISTIAN ESCHATOLOGY. Three credit hours. An in-depth consideration of man's last end, passage through death, and a re-evaluation of the meaning of the present. Life-after-death as an accomplishment, a total realization. The role that man's actions and attitudes play in this life as preparation for the life after death.</td>
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<tr>
<td>223</td>
<td>SACRAMENTAL ENCOUNTER WITH CHRIST. Three credit hours. An in-depth view of the sacraments as seen through the eyes of Vatican II.</td>
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<tr>
<td>224</td>
<td>FUNCTION OF THE SACRAMENTS IN THE DEVELOPMENT OF THE CHRISTIAN PERSON. Three credit hours. The basic structure of Christian sacramental living. Its connection with the mysteries of Christian priesthood and sanctifying grace. Function of the sacraments in the actual living of Christianity and in the development of the Christian person.</td>
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<tr>
<td>226</td>
<td>POST-VATICAN II EUCHARISTIC THEOLOGY. Three credit hours. Historical developments up to modern day. Contemporary questions. Transfinalization, Transsignification, etc.</td>
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<tr>
<td>236</td>
<td>CHRISTIAN SECULARITY. Three credit hours.</td>
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<tr>
<td>240</td>
<td>THE THEOLOGY OF KARL RAHNER. Three credit hours. Selections of his writings which have particular import to the church in the United States. The DIASPORA THEORY. The Church and Politics. Freedom in the Church. The FEMINIZATION of the Church. Individualism.</td>
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<tr>
<td>245</td>
<td>THEOLOGY OF PAUL TILICH. Three credit hours.</td>
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<tr>
<td>251</td>
<td>BIBLICAL THEMES OF THE OLD TESTAMENT. Three credit hours.</td>
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<td>255</td>
<td>EXILIC AND POST-EXILIC JUDAIC THEOLOGY. Three credit hours. Judaic thought from 638 B.C. to Christ.</td>
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<tr>
<td>261</td>
<td>THE THEOLOGY OF ST. PAUL. Three credit hours. An introduction to the principal ideas of the Pauline Epistles, with special stress on the distinctive contribution of Paul to Christian theology.</td>
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<tr>
<td>262</td>
<td>JOHANNINE LITERATURE. Three credit hours. Comprehensive examination of the Fourth Gospel, of the Apocalypse, and of St. John's Epistles.</td>
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<tr>
<td>263</td>
<td>STUDIES OF SYNOPTIC TRADITIONS. Three credit hours.</td>
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<td>275</td>
<td>INTERTESTAMENTAL (OLD AND NEW) HISTORY AND LITERATURE. Three credit hours.</td>
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<td>280</td>
<td>THEOLOGICAL THEMES IN CONTEMPORARY LITERATURE. Three credit hours. (En 280)</td>
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<td>281</td>
<td>MAN, GOD, AND TRAGEDY. Three credit hours. (En 281)</td>
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<tr>
<td>282</td>
<td>THEOLOGICAL THEMES IN AMERICAN LITERATURE. Three credit hours. See En 282.</td>
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<tr>
<td>285</td>
<td>THE PSYCHOLOGY OF RELIGION. Three credit hours. (Ps 285)</td>
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<td>288</td>
<td>SEVENTEENTH CENTURY ANGLICAN LITERATURE. Three credit hours. See En 288.</td>
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<tr>
<td>300</td>
<td>DYNAMICS OF CHRISTIAN EXISTENCE. Three credit hours. Morals and Ethics. Consideration of the various modern approaches to morality. Primacy of Love, etc.</td>
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<td>301</td>
<td>CHRISTIAN EXISTENCE AND RELIGIOUS LIFE. Three credit hours.</td>
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<td>305</td>
<td>SITUATION ETHICS: NEW MORALITY, CHRISTIAN ETHICS, AND CATHOLIC THEOLOGY. Three credit hours.</td>
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<td>310</td>
<td>MARRIAGE AND THE FAMILY. Three credit hours. (So 310)</td>
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<td>315</td>
<td>AUTHORITY IN THE MODERN CHURCH. Three credit hours. Scriptural notion of authority and power in the New Testament. An historical study of ecclesiastical authority as it developed especially in the west.</td>
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<td>321</td>
<td>THEOLOGY OF PRESENT-DAY SPIRITUALITY. Three credit hours. Characteristics of contemporary spirituality. Contemporary spiritual writers.</td>
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<td>323</td>
<td>THEOLOGY OF THE LAYMAN. Three credit hours. The layman's priestly role in the salvation of the world. The emerging layman as seen in the various decrees of Vatican II.</td>
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<tr>
<td>328</td>
<td>LITURGY AND THE CHRISTIAN LIFE. Three credit hours.</td>
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<td>330</td>
<td>FORM AND TECHNIQUE IN THE RELIGION CLASS. Three credit hours.</td>
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<td>331</td>
<td>THEOLOGY IN THE ELEMENTARY SCHOOLS. Three credit hours.</td>
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<td>332</td>
<td>THEOLOGY IN THE SECONDARY SCHOOLS. Three credit hours.</td>
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<tr>
<td>333</td>
<td>MORAL CATECHESIS. Three credit hours.</td>
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<td>334</td>
<td>CONTEMPORARY CATECHETICAL METHODS. Three credit hours.</td>
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<tr>
<td>340</td>
<td>INTRODUCTION TO THE HISTORY OF RELIGIONS. Three credit hours.</td>
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<td>345</td>
<td>INTRODUCTION TO THE CHURCH FATHERS. Three credit hours. (Cl 345)</td>
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<tr>
<td>350</td>
<td>HISTORY OF THE JEWISH PEOPLE. Three credit hours.</td>
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<td>351</td>
<td>JUDAIC THOUGHT IN SCRIPTURE AND RABBINICAL SOURCES. Three credit hours.</td>
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<tr>
<td>352</td>
<td>CULTURE OF THE JEW FROM TALMUDIC AND POST-BIBLICAL TO MODERN TIMES. Three credit hours.</td>
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<tr>
<td>353</td>
<td>GREAT BOOKS OF JUDAISM. Three credit hours.</td>
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Theology

354 THE INTELLECTUAL DEVELOPMENT OF JUDAISM. Three credit hours.

355 BASIC IDEAS OF THE OLD TESTAMENT. Three credit hours.

360 HISTORICAL ROAD OF EASTERN ORTHODOXY. Three credit hours.

361 EASTERN ORTHODOXY, THEN AND NOW. Three credit hours.

365 REFORMATION THEOLOGY. Three credit hours. Survey of the history of reform in the church. The factors leading to the Reformation. Comprehensive treatment of Luther and his teaching.

370 PROTESTANT CHURCHES IN THE UNITED STATES. Three credit hours. A study of doctrine, ritual, and organization of each denomination. The course is meant to be expositional rather than controversial. Its purpose is to give a student a better understanding of the various Protestant sects.

375 THEOLOGY AND HISTORY OF THE GENERAL COUNCILS. Three credit hours. Contributions of the general Councils of the Church to the development of dogma. Historical circumstances affecting the course of the councils.


380 MODERN THEOLOGY OF ECUMENISM. Three credit hours. Development of the ecumenical movement in modern times. Vatican II and its impact on Protestant-Catholic relations.

385 MODERNISM IN THE TWENTIETH CENTURY. Three credit hours. Its growth in France, England, and Italy. Their ideas of religion, revelation, tradition, dogma, church, biblical criticism, etc. Pius X and his decrees Lamentabili, Pascendi, etc. The meaning of MODERNISM today.
Departments—
The College of Business Administration

Accounting (Ac)

Staff: MR. MALY, chairman; MR. BEHLER, MR. SCHUTZMAN, MR. SCHWEITZER, MR. SMITH, MR. WILZ.

Assisted by: MR. BURCH, MR. HARDY, MR. GRATHWOHL, MR. GRATTON, MR. N. O’CONNOR, MR. RUNK, MR. VONDERBRINK, MR. WOOD.

Lower Division Courses

100 PRINCIPLES OF ACCOUNTING. Three credit hours. Elementary principles and procedures supplemented with practical problems and practice sets.

101 PRINCIPLES OF ACCOUNTING. Three credit hours. A continuation of Ac 100 which is also prerequisite.

Upper Division Courses

200 INTERMEDIATE ACCOUNTING. Three credit hours. A broad background of theory coordinated with practical problems. Prerequisite: Ac 101.

201 INTERMEDIATE ACCOUNTING. Three credit hours. A continuation of Ac 200 which is also prerequisite.

210 ADVANCED ACCOUNTING PROBLEMS. Three credit hours. Advanced study in accounting theory and related problems applicable to partnership, special sales procedures, insurance, and fiduciaries. Prerequisite: Ac 201.

211 ADVANCED ACCOUNTING PROBLEMS. Three credit hours. A continuation of Ac 210 with emphasis on parent company, subsidiary accounting, foreign exchange, and public accounts. Prerequisite: Ac 201.

220 MANAGERIAL COST ACCOUNTING. Three credit hours. Study of elements involved in industrial production with special emphasis on costs and reports. Prerequisite: Ac 201.

221 MANAGERIAL COST ACCOUNTING. Three credit hours. A continuation of Ac 220 which is also prerequisite.

230 TAXATION. Three credit hours. Intensive study of tax laws in relation to their underlying principles.

231 ADVANCED TAXATION. Three credit hours.

240 AUDITING PRINCIPLES. Three credit hours. A comprehensive study of the fundamental principles of auditing. Prerequisite: Ac 201.

241 ADVANCED AUDITING PRINCIPLES. Two or three credit hours. Prerequisite: Ac 201.

250 C.P.A. REVIEW. Three credit hours. An intensive review of theory, auditing, accounting practice, and business law based on recent examinations by the state boards and prepared by the American Institute of Certified Public Accountants. Prerequisite: Courses required for a major in accounting.

251 C.P.A. REVIEW. Three credit hours. A continuation of Ac 250.

260 ANALYSIS OF FINANCIAL STATEMENTS. Three credit hours. A study of the significance, development, and technique of financial statement analyses of business enterprises.

270 CASES AND PROBLEMS IN ACCOUNTING. Two or three credit hours. Basic principles of accounting and their application to accounting theory, research, and practice.

290 SURVEY OF ACCOUNTING. Three credit hours. Geared to acquaint the non-accountant with the functions that underwrite the creation of financial statements. The proper presentation of all items on the statement. Their use as tools by management in planning present and future business activity.

297 TUTORIAL COURSE. Two or three credit hours. Special reading and study for advanced students.

340 PRINCIPLES OF DATA PROCESSING. Three credit hours. See Mg 340.

341 SYSTEMS: METHODS AND PROCEDURES. Three credit hours. See Mg 341.

342 MANAGERIAL ASPECTS OF DATA PROCESSING. Three credit hours. See Mg 342.

For graduate courses in accounting see Business Administration: Graduate Division.

For the M.B.A. degree with a concentration in accounting see Graduate School: the Master of Business Administration.

Business Administration (BA)

The following are general business service courses in Business Administration. Professors are assigned to these courses by the other departments in the College of Business Administration.

270 BUSINESS STATISTICS. Three credit hours. Techniques used in analysis. Presentation of descriptive statistics and statistical inference. Topics include frequency distributions, measures of central tendency and dispersion, elements of mathematical probability, sampling, estimation of parameters, test of hypotheses, and simple linear correlation.


280 LEGAL ENVIRONMENT. Three credit hours. To give the student a background of law, which will serve in a business environment and provide a means by which he may critically evaluate the development of the law and the purposes which the law is intended to serve.


**Uniform Commercial Code.** Three credit hours. Designed to prepare candidates for the C.P.A. exam. The topics covered include contracts, sales, suretyship, negotiable instruments, agency, partnerships, corporations, bailments, property, insurance, bankruptcy, estates and trusts.

**Business Administration Problems.** Three credit hours. A case study approach. Material to afford opportunities for students to develop their decision-making skills and to utilize their imagination in devising feasible programs of action. Some descriptive material is presented to make case studies meaningful. Recommended only for seniors.

**Graduate Courses**

Students selecting courses for the degree of Master of Business Administration must include the five core courses—BA 511, 512, 513, 514, and 515—in their concentration. They will include appropriate courses from the offerings for their area of concentration. As a climax to their work they will take BA 699, a seminar dealing with practical problems.

**Basic Economics.** Four credit hours. An accelerated course in the principles of economics for MBA students without previous course work in economics.

**Introduction to Quantitative Methods.** Two credit hours. Mathematical concepts and techniques applied to business and economics. Topics include linear programming, flow diagrams, maxima and minima of functions, game theory, matrices, and other mathematical concepts relevant to management of economic enterprises.

**Basic Accounting.** Four credit hours.

**Basic Marketing.** Two credit hours. The distribution system that operates within the institutional and functional point of view. Marketing policies within the existing governmental framework.

**Basic Statistics.** Two credit hours. Techniques used in analysis. Presentation of descriptive statistics and statistical inference with emphasis on their application in the decision-making process. Topics include frequency distributions, measures of central tendency and dispersion, elements of mathematical probability, sampling, estimation of parameters, tests of hypotheses, linear correlation, and regression analysis.

**Basic Finance.** Two credit hours. The various types of American enterprises with special emphasis on the corporation—its organization, management, financing, and budgeting.

**Economics of Business.** Three credit hours. Introduction to major areas of economics judged most useful to the business executive. Functions of government, business fluctuations, forecasting, government Prerequisite: BA 501 or equivalent.

**Quantitative Business Methods.** Three credit hours. Basic mathematical models: probability, decision making under uncertainty, PERT, optimizing, dynamic programming, game theory, Markov Analysis, queuing simulation, and heuristic programming. Prerequisite: BA 502 or equivalent.

**Managerial Accounting.** Three credit hours. The contribution of accounting to efficient business administration. Basic concepts; budgeting; the operation of an accounting system; cost analysis; cost-standard; financial statements. Prerequisite: BA 503 or equivalent.

**Administrative Operation.** Three credit hours. Techniques of planning, organizing, directing, and control in business with emphasis on the behavioral aspects. Environmental factors: dynamics of human relations, functions, and structure.

**Marketing Strategy.** Three credit hours. The course is designed to apply marketing principles and policies. Case studies are employed to develop an understanding of the nature and scope of marketing problems and how to develop workable solutions. Prerequisite: BA 505 or equivalent.

**Managerial Economics.** Three credit hours. Economic analysis as applied to practical business operation. Tools of economic analysis; types of economic competition and their effect on individual firms and industries. Case study method of instruction used.

**Business Forecasting.** Three credit hours. (Ec 532)

**Government Regulation of Business.** Three credit hours. The interaction of government and business in the United States compared with other countries. Practical problems confronting the businessman. Apparent trends in regulation. Decision-making as caused, affected, and limited by regulation.

**Economics of Labor.** Three credit hours. See Ec 538.

**Seminar: Current Economic Problems.** Three credit hours. (Ec 539)

**Location of Business and Industrial Activity.** Three credit hours. Factors that influence the location of productive facilities, and the marketing of the finished product. Interrelationship of source of supply, location of productive facilities, and the market area. (Ec 546)

**Problems in Business Finance.** Three credit hours. Principles learned in Business Finance are utilized. Financing current operations, policies, promotion, expansion, combination and selected comprehensive problems involving financial analysis and planning of capital structures. Case study method is used. Prerequisite: BA 507, 513. (Ec 540)

**Investment Management.** Three credit hours. Selection and management of a portfolio, based on carefully evaluated probabilities and sound techniques of security analysis. Prime emphasis is on reasoning and interpretation rather than on description. Prerequisite: BA 507 or equivalent. (Ec 552)

**Financial Planning.** Three credit hours. Individual, family, executive, business, corporate, national and international financial planning. Prerequisite: BA 513 or equivalent.

**Controllership.** Three credit hours. The duties and responsibilities of the controller. New and advanced techniques in taxes and accounting. Prerequisite: BA 513.

**Marketing Management.** Three credit hours. New developments in marketing, with a review of the position of marketing manager and its requirements. Individual reports on significant articles. Case studies employed for practical demonstration of theory application. Prior marketing courses recommended. Prerequisite: BA 515.

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219
MARKETING RESEARCH. Three credit hours. Methods and techniques of marketing research; its use as a tool of management; cases in marketing research.

INDUSTRIAL MARKETING. Three credit hours. Problems of marketing industrial products, including the management of the marketing channels and the pricing of the products. Also covered is the area of selling and distribution of the products.

CONSUMER BEHAVIOR THEORY. Three credit hours. Objectives: to explore and evaluate research findings from behavioral sciences; to advance generalization from this evidence concerning the predictability of consumer behavior; to relate such generalizations to managerial decisions.

ADVERTISING: THEORY AND PRACTICE. Three credit hours. The role of advertising in the marketing process is examined for ways in which it can be profitably employed. The advertising campaign and its creative and media components are studied to develop an understanding of the decision processes involved. Case method is used. Prerequisite: BA 515.

MARKETING AND THE LAW. Three credit hours. Statutory and case law as each affects marketing decision making. Major areas: the sales contract, warranties, transfer of the title to goods, remedies of buyer and seller under U.C.C., documentary transactions, Robinson-Patman Act Problems, Truth in Packaging, and Truth in Lending applications.

MARKETING THEORY. Three credit hours. Advanced study of marketing principles. The state of current marketing theory and means of augmenting it. Marketing theory as an aid to making sound business decisions and as a frame of reference for understanding the marketing function.

SEMINAR: CONTEMPORARY MARKETING ISSUES. Three credit hours. New developments in marketing including topics of special interest to the group. Issues impinging at the interface between marketing and society. Specific problems vary from one semester to another, but include product safety, franchising, credit systems, ethnic markets, promotional devices, and the role of regulatory agencies. The student will research the literature on a current issue, organize pertinent material, and present a defensible solution to the group. Prerequisite: Twelve credit hours including BA 515.

EXECUTIVE PRACTICES. Three credit hours. The techniques available for handling complicated human relations situations. The discussion centers around psychological (behavioral) and sociological readings and their application to actual case situations. Prerequisites BA 514.

MANAGEMENT PLANNING. Three credit hours. The planning function of management. Intermediate and long-range planning. Prerequisite: BA 514.

MANAGEMENT INFORMATION SYSTEMS. Three credit hours. Management information systems, in particular real-time MIS and data processed MIS. Prerequisite: Ac/Mg 340 or equivalent.

MATERIALS MANAGEMENT. Three credit hours. Consideration of the materials function in an industrial organization as an integrated activity. Inventory, purchasing, and traffic operations, with a discussion of objectives and measurements. Lecture, class participation, and cases.

PRODUCTION CONTROL. Three credit hours. Designed to introduce students to current and advanced production and inventory control concepts and methods, emphasizing the functions that inventories serve and the pressures and costs bearing upon inventory and production decisions. Recommended prerequisite: BA 506 or equivalent.

QUALITY CONTROL. Three credit hours. A body of technical, analytical, and managerial knowledge. The quality function not only in a statistical context but also in its effect upon the economics of cost, organizational impact, and the engineering function. Recommended prerequisite: BA 506 or equivalent.

SMALL BUSINESS OPERATION. Three credit hours. Designed primarily for students who work in small businesses or own businesses. Organization, location, management, finance, production, and marketing problems are studied. Lecture and case method.

SEMINAR: APPLIED INDUSTRIAL MANAGEMENT TECHNIQUES. Three credit hours. Interdisciplinary. Solution of industrial management problems. Prerequisite: BA 604 or equivalent.

ADVANCED MANAGEMENT INFORMATION SYSTEM. Three credit hours. Designing sub-system modules for real-time information system, operating in a quantitative methods (mathematical models) environment. Prerequisite: Ac/Mg 340 or equivalent.

PROBLEMS OF LABOR. Three credit hours. An analysis of labor-management problems through the use of the "Incident Process."

ADVANCED PERSONNEL MANAGEMENT. Three credit hours. A case method approach to complex personnel problems at the management level.

SEMINAR: COLLECTIVE BARGAINING. Three credit hours. Designed to give a broad background in the historical development of collective bargaining and some of the problems that arise in the day-to-day administration of the labor-management agreement. Students will approach a particular problem in an area of their choice to develop their methodological skills in gathering, analyzing, and presenting data pertaining to it.

PERSONNEL AND THE LAW. Three credit hours. State and federal legislation pertaining to the employee. The historical development, current status, and economic implications of laws enacted by various levels of government to protect the worker's basic needs in our society. A seminar approach is used.

MOTIVATION AND BEHAVIOR IN ORGANIZATIONS. Three credit hours. The role of motivation in performance within organizations. Various concepts of motivation are studied, with emphasis on research findings. (Ed 644, Ps 644)

PERSONNEL SELECTION AND DEVELOPMENT. Three credit hours. Principles underlying sound practices in personnel selection, training, and development. The development of programs in these areas. Consideration of particular approaches and techniques.

QUANTITATIVE DECISION-MAKING. Three credit hours. The statistical, psychological, and social aspects of managerial decision-making from a quantitative, decision-theoretic viewpoint. Strategies of decision-making, cost of information, revision of decisions in light of sample data, decision trees, theory of utility, and evaluation of competing alternatives. Prerequisite: BA 512.
621 **OPERATIONS RESEARCH: SIMULATION.** Three credit hours. Concepts of simulation for the manager. Techniques by which the concepts are applied in business situations. Planning computer simulation of queueing and scheduling problems, Monte Carlo simulation, and simulation languages. Prerequisites: BA 511, 512.

622 **OPERATIONS RESEARCH: OPTIMIZATION.** Three credit hours. Advanced use of quantitative techniques in making optimal business decisions. Both manual and computer techniques are developed and applied to business problems. Game theory, integer programming, dynamic programming, non-linear programming, and other advanced OR techniques. Prerequisite: BA 512.

623 **STATISTICAL DECISION THEORY.** Three credit hours. Decision theory, covering games, values, and optimal strategies in games; general structure of statistical games; utility and principles of choice; classes of optimal strategies; sequential games; Bayes and Minimax sequential procedures, sufficient statistics, and the invariance principle in statistical games. Prerequisite: BA 512. (Mt 641)

624 **SURVEY RESEARCH IN BUSINESS.** Three credit hours. Phases involved in survey research. Student project.

640 **PSYCHOLOGY OF EXECUTIVE BEHAVIOR.** Three credit hours. Examination of the assumptions underlying the behavioral school of management thought. Individual and group behavioral patterns in organizations.

690 **BUSINESS AND SOCIETY.** Three credit hours. (Ec 690)

692 **BUSINESS ORGANIZATION AND THE LAW.** Three credit hours. Conceptual framework of the nature of the partnership and the corporation and of the jurisprudential problems they face and solve. Law concerning the rights and powers of managers and the limits of their discretion. Duties and responsibilities of managers to their organizations, to investors, to creditors, to the state, and to the general public.

695 **INDIVIDUAL READINGS AND RESEARCH.** Two or three credit hours. Open to especially qualified students with the consent of the chairman of the appropriate department.

699 **BUSINESS ADMINISTRATION PROBLEMS.** Three credit hours. Opportunity for the student to integrate his core and concentration background with that of other graduate students through the use of selected cases. Emphasis is placed on environment, internal management process, and performance. Prerequisites: BA 511, 512, 513, 514, and 515.

These courses in economics are also available to M.B.A. students: Ec 521: Advanced Economic Theory I; Ec 522: Advanced Economic Theory II; Ec 524: Seminar: Development of Economic Thought; Ec 542: Economic Growth and Development; Ec 544: International Economics; Ec 546: Transportation Economics.

**Concentration in Hospital and Health Administration (HA)**

Staff: M. ARLINGHAUS, director; MR. AUSTIN, MR. GRAY.

Assisted by: MRS. STRAUSS, MR. TOMLIN, MR. ZUCKERMAN.

631 **HOSPITAL SYSTEMS MANAGEMENT.** Three credit hours. The many systems within the hospital. Electronic data processing, planning and control, distribution systems, information systems, systems research and education, etc. Industrial engineering concepts.

632 **COMPREHENSIVE HEALTH PLANNING.** Three credit hours. Planning health care facilities on the community, state, federal, and world levels. Designed to give perspective to the various considerations and laws in health planning.

633 **HOSPITAL FINANCIAL MANAGEMENT.** Three credit hours. Basic managerial hospital accounting and finance. Includes a review and analysis of balance sheets, working capital requirements, credits and collections, preparation of budgets, fund raising, departmental cost accounting, third party agreements, and communication of financial information.

634 **HOSPITAL LEGAL ASPECTS.** Three credit hours. Various aspects of law as it relates to hospitals. Liability, contracts, torts, medical records, the law suit, consent, and other legal aspects.


636 **HOSPITAL PERSONNEL ADMINISTRATION.** Three credit hours. Practical personnel administration policies, procedures, and techniques as they affect hospital administration. Personnel functions; employment and records, wage and salary administration, personnel development, employee benefits and services, communications, labor relations, safety and security, and business research.

637 **SEMINAR: HEALTH CARE ADMINISTRATION.** Three credit hours. Hospital administration problems. Health planning, the board of trustees, medical staff, administrative organization, personnel administration, financial planning, administrative operations, purchasing, public relations, patient care, establishing a new hospital or facility, and the changing environment in hospitals. Case and incident methods are used.

638 **PUBLIC HEALTH ADMINISTRATION.** Three credit hours. Aspects of community health—health clinics, incidence of illness, control of diseases, etc. The total health environment in a community.

639 **MEDICAL CARE ORGANIZATION.** Three credit hours. Cost of medical care, medical personnel, third party payers, supply and distribution of hospital beds, etc. Medical-economic considerations of health care.

640 **PSYCHOLOGY OF EXECUTIVE BEHAVIOR.** Three credit hours. The techniques available for handling complicated human relations situations. Psychological (behavioral) and sociological readings and their application to actual case situations.

641 **RESEARCH IN HOSPITAL ADMINISTRATION.** Three credit hours. Understanding and skills necessary to the intelligent use of research in hospital administration. In this course two credit hours are devoted to research techniques and procedures, including experimental design and statistical inference. The remaining credit hour is awarded on completion of an actual research paper. A separate grade is given for each phase of the course.

648 **MASTER'S THESIS.** Credit to be arranged.

649 **ADMINISTRATIVE RESIDENCY** ( Twelve months). Nine credit hours.
Economics (Ec)

Staff: DR. MASTRIANNA, chairman; FR. BESSE, DR. BRYANT, DR. CLICKNER, DR. DONNELLY, DR. GORDON, DR. HAILSTONES, DR. LINK, DR. RAMINENI, MR. ROTHWELL, DR. SCHULTZ, DR. WILLIAMS, DR. ZIMMERMAN. Assisted by: MR. CISSELL, DR. FREIBERG, MR. GERACI, MR. MANLEY, MR. MARTIN, DR. THIEMAN, DR. WEBB.

Lower Division Courses

101 PRINCIPLES OF ECONOMICS. Three credit hours. General economic activity including analysis of such areas as national income, employment, money and banking, business fluctuations, and economic stability. The economy as a whole is examined rather than individual economic units.

102 PRINCIPLES OF ECONOMICS. Three credit hours. Market forces of supply and demand in allocating the nation's resources and securing efficiency in their use. Economic behavior of consumers, firms, and resource owners.

110 SURVEY OF ECONOMICS. Three credit hours. Basic concepts and analytical tools of the economist. Designed for students other than majors in economics or business, particularly for those in other social sciences.

Upper Division Courses

200 MICROECONOMIC ANALYSIS. Three credit hours. An advanced study of economic principles including an analysis of such fundamental concepts as value and price, rent, interest, wages and profits and their relation to the current problems of production, distribution, and exchange. Prerequisite: Ec 102.

201 MACROECONOMIC ANALYSIS. Three credit hours. An analysis of the determinants of Gross National Product, employment levels, and rates of economic growth. The analysis is conducted within a framework of principles and relationships derived from the still developing body of modern macroeconomic theory. Prerequisite: Ec 101.

202 HISTORY OF ECONOMIC THOUGHT. Three credit hours. World economic movements. Analysis of literature in the field. Theories of economics advanced by Aristotle, Saint Thomas Aquinas, Adam Smith, Ricardo, Mills, Malthus, George, Clark, Bentham, Jevons, Keynes, and others. Prerequisite: Ec 101.

210 HUMAN RESOURCES. Three credit hours. See Mg 210. Prerequisite: Ec 102 or 110. (IR 210, Mg 210)

220 ECONOMETRICS. Three credit hours. Applications of economic theory, statistical methods, and the calculus to numerical economic data. Demand, cost, production, and other economic functions are analyzed in detail. Prerequisite: Mt 112.

230 MATHEMATICS FOR ECONOMISTS. Three credit hours. Functions of several variables. Maxima and minima of functions. Applications of series, differential equations, and difference equations to economic problems. Prerequisite: Mt 122.

235 ECONOMIC HISTORY OF THE UNITED STATES. Three credit hours. Development of the American economy from the period of colonization to the present. Traces the progress of population, agriculture, industry, domestic and foreign commerce, banking and finance, and transportation. Integrates the economic, social, and political development in the United States.
CURRENT ECONOMIC PROBLEMS. Three credit hours. Current problems in labor, monetary, and fiscal policy, debt management, social security legislation, public regulation of business and agriculture form a basis of discussion and analysis. Prerequisite: Ec 101, 102 and six hours upper-division courses.

TUTORIAL COURSE. Two or three credit hours. Special reading and study for advanced students. Other courses are acceptable for a major in economics at the discretion of the Chairman or the student's advisor.

Graduate Courses

ADVANCED ECONOMIC THEORY I. Three credit hours. An advanced comprehensive study of the economic principles of price theory. Analyses are conducted within a framework of traditional and modern contributions in the field.

ADVANCED ECONOMIC THEORY II. Three credit hours. Analysis of theories of employment, including classical, Keynesian, and modern, and the interrelationships implied in the determination of interest rates, the demand and supply for money, price levels, growth, and development. Monetary and fiscal policy are studied in light of these theories.

QUANTITATIVE TECHNIQUES IN ECONOMIC ANALYSIS. Three credit hours. Concepts and techniques of economic theory: elasticity, marginal analysis, linear programming, capital budgeting. Quantitative methods in solution of selected economic problems.

SEMINAR: DEVELOPMENT OF ECONOMIC THOUGHT. Three credit hours. The development of Neo-Classical and contemporary economic thought. It includes a study of the rise of marginalism; the theories of production, partial equilibrium, and general equilibrium; the growth of welfare economics.

MANAGERIAL ECONOMICS. Three credit hours. Economic analysis as applied to practical business operation. Tools of economic analysis; types of economic competition and their effect on individual firms and industries. Case study method of instruction is used.

BUSINESS FORECASTING. Three credit hours. (BA 532)

GOVERNMENT REGULATIONS OF BUSINESS. Three credit hours. See BA 535.

ECONOMICS OF LABOR. Three credit hours. Determinants of the competitiveness of labor markets; study of economic determinants of employment levels. Seminar method is used. (BA 538)

SEMINAR: CURRENT ECONOMIC PROBLEMS. Three credit hours. (BA 539)

ECONOMIC GROWTH AND DEVELOPMENT. Three credit hours.

INTERNATIONAL ECONOMIC PROBLEMS. Three credit hours.

LOCATION OF BUSINESS AND INDUSTRIAL ACTIVITY. Three credit hours. See BA 546.

TRANSPORTATION ECONOMICS. Three credit hours.

PROBLEMS IN BUSINESS FINANCE. Three credit hours. See BA 550.

INVESTMENT MANAGEMENT. Three credit hours. See BA 552.

MONETARY INSTITUTIONS AND POLICY. Three credit hours.

FISCAL POLICY AND POLICY. Three credit hours.

SEMINAR: COLLECTIVE BARGAINING. Three credit hours.

BUSINESS AND SOCIETY. Three credit hours. (BA 690).

SPECIAL STUDY. Credit by arrangement.

RESEARCH SEMINAR. Six credit hours.

MASTER'S THESIS. Six credit hours.

Finance (Fi)

Staff: DR. MASTRIANNA, chair; DR. CLICKNER, MR. MARTIN, DR. RAMINE; MR. ROTHWELL, DR. SCHULTZ, DR. ZIMMERMAN.

Upper Division Courses

CREDITS MANAGEMENT. Three credit hours. See Mk 240.

MONEY AND BANKING. Three credit hours. Structure and operation of the present money and banking system; theory of money; credit and commercial banking; international financial relationships; Federal Reserve System. Prerequisite: Ec 101. (Ec 250)

BUSINESS FINANCE. Three credit hours. The various types of American enterprises with special emphasis on the corporation—its organization, management, financing, and budgeting.

ANALYSIS OF FINANCIAL STATEMENTS. Three credit hours. A study of the significance, development, and technique of financial statement analyses of business enterprises. Prerequisite: Ac 100.

INVESTMENTS. Three credit hours. Survey of the economic bases of investment practice; techniques of security analysis and portfolio management. Prerequisite: Fi 255.

FINANCIAL INSTITUTIONS. Three credit hours. A survey of all financial institutions including banking and monetary institutions, business finance, financial intermediaries, saving and consumer finance, and public finance and monetary policy.

STOCK MARKETS. Three credit hours. A study of securities, the method and manner of their exchange, the functions of security markets, and the factors promoting changes in security prices.

FINANCIAL MANAGEMENT. Three credit hours. A continuation of basic theory of business finance. Major problems and methods used in financing business enterprises are studied primarily from the viewpoint of business management. Prerequisite: Fi 235. (Mg 301)

INSURANCE. Three credit hours. The principles and practices of life and property insurance. Ways in which it may be employed in the interest of personal, family, and business welfare.
320 REAL ESTATE PRINCIPLES AND FINANCE. Three credit hours.

335 PUBLIC FINANCE AND TAXATION. Three credit hours. See Ec 335.

380 CASES AND PROBLEMS IN FINANCE. Three credit hours. A case method study of a wide variety of contemporary financial problems and business situations that usually pose debatable alternatives of action. The process of decision-making requires appropriate use of theory as well as the need for proficiency in a number of analytical techniques useful in handling the quantitative aspects of cases. Prerequisite: Fi 255. Recommended prerequisite: Fi 260.

385 RESEARCH IN FINANCE. Three credit hours. Directed study in a selected field by advanced majors in finance. Projects must have the approval of the Chairman.

390 SEMINAR IN FINANCE. Three credit hours. Management of fixed and circulating capital. Planning of short term and long term needs and sources. Lectures and case studies are used. Students in groups analyze simplified cases. Prerequisite: Fi 255.

397 TUTORIAL COURSE. Two or three credit hours. Special reading and directed study for advanced students.

Approved electives: Ac 200, 201, 230, 231, and other courses upon consultation with, and agreement of, the Department.

**Management and Industrial Relations**

**Staff:** DR. R. THIERAUF, chairman; DR. BRYSKI, MR. GEEDING, DR. J. GROSSE, DR. HAYES, MR. KLEKAMP, DR. H. KLINGMAN, MR. LUTTENEGGER, MR. MARMO.

Assisted by: MR. ARLINGHAUS, MR. BREYER, MR. CENTER, DR. COSGROVE, DR. DONNELLY, MR. GARLAND, MR. HESS, MR. KLEE, DR. J. KLINGMAN, MR. KUMPF, MR. MUETHING, MR. O'CONNELL, DR. PETROF, DR. QUATMAN, MR. SETTELMAIER, MR. M. THIERAUF, MR. TUDOR.

**Management (Mg)**

**Lower Division Course**

100 PRINCIPLES OF MANAGEMENT. Three credit hours. Designed to prepare students in the fundamental process which is applicable to all forms of business organization. Organizational and managerial concepts considered essential for business decision-making. Essentials of the production function.

**Upper Division Courses**

204 MARKETING MANAGEMENT. Three credit hours. See Mk 204. Prerequisite: Mg 100.

210 HUMAN RESOURCES. Three credit hours. A survey of labor and labor law; examination of wage determinants and wage theory; examination of cause and remedies of unemployment. Prerequisites: Ec 100, 101 (IR 210, Ec 210)

300 LABOR RELATIONS. Three credit hours. See IR 300.

301 FINANCIAL MANAGEMENT. Three credit hours. A continuation of basic theory of business finance. Major problems and methods used in financing business enterprise and studied primarily from the viewpoint of business management. Prerequisites: Fi 255, Mg 100.

302 PRODUCTION MANAGEMENT. Three credit hours. Production management is the process by which resources are allocated within the firm for the creation of goods and services. Decision-making related to such resource allocation to provide students with analytical tools to optimize the results of factor allocation. Prerequisite: Mg 100.

303 OFFICE MANAGEMENT. Three credit hours. A study of the principles of management and their application to office management. Duties and responsibilities of the office manager. The important office management functions in today's business. The class will include lecture and case discussion. Prerequisite: Mg 100.

310 HUMAN RELATIONS AND MOTIVATION. Three credit hours. Current concepts of human behavior as applied to the business organization. The disciplines of psychology and sociology are utilized to aid in establishing a basis for the analysis and solution of the human aspects of business decision. Prerequisite: Mg 100.

311 RESEARCH IN MANAGEMENT. Three credit hours. Application of research methods to selected managerial problems. Acquiring familiarity with the sources of information value to the business manager and on the interpretation and presentation of research results. Prerequisite: Mg 100.

312 CONTEMPORARY MANAGEMENT PROBLEMS. Three credit hours. Important problems in the area of administrative management. Specific problems vary from one semester to another. Examples of subjects to be discussed: managerial authority, business ethics, management and society, patterns of management, philosophy of management. Prerequisite: Mg 100.

313 MANAGERIAL METHODS ANALYSIS. Three credit hours. Important managerial techniques available for optimum effectiveness from the methods and procedures used in the business organization. Process charting, work and time measurement, performance rating, work sampling, and paperwork procedures. Prerequisite: Mg 100.

314 MANAGERIAL POLICY FORMULATION. Three credit hours. Cases designed to reinforce knowledge of the mechanics of the management process and the development of business policies through the study and resolution of actual management situations. Prerequisite: Mg 100.

315 ORGANIZATIONAL THEORY OF MANAGEMENT. Three credit hours. Theory of organizational structures as applied to business firm. Prerequisite: Mg 100.

320 PERSONNEL ADMINISTRATION. Three credit hours. Principles and practices in the administration of human relations in the industrial and commercial world. Use of scientific techniques and devices in the development of a well-rounded personnel program. (IR 320)

330 INTRODUCTION TO QUANTITATIVE METHODS. Three credit hours. See BA 502.
331 **APPLIED QUANTITATIVE METHODS FOR BUSINESS.** Three credit hours. Application of higher mathematics to recurring business problems. Basic operations research techniques is covered and applied to business problems. Prerequisite: Mt. 112, 122.


341 **SYSTEMS ANALYSIS AND DESIGN.** Three credit hours. EDP systems analysis and design. Work simplification for improved data processing methods and procedures. Prerequisite: Mg 340 or equivalent. (Ac 341)

342 **MANAGERIAL ASPECTS OF DATA PROCESSING.** Three credit hours. Electronic data processing systems in business and their effect on management organization and control. The phases of planning for and evaluating the feasibility of EDP systems are also covered. Prerequisite: Mg 340 or its equivalent. (Ac 342)

343 **FORTRAN PROGRAMMING.** Three credit hours. FORTRAN II and IV programming languages for scientific problems.

344 **COBOL PROGRAMMING.** Three credit hours. COBOL programming language for business problems.

345 **DATA PROCESSING INFORMATION SYSTEMS.** Three credit hours. Data processing systems, with emphasis on real-time management information systems.

349 **CASES AND PROBLEMS IN MANAGEMENT.** Three credit hours. Case studies of selected management problems with emphasis on the application of statistical techniques for analysis and solution.

397 **TUTORIAL COURSE.** Two or three credit hours. Contents to be determined according to the needs of the student.

Approved Electives: Upon consultation with, and approval of, the Department.

Industrial Relations (IR)

**Upper Division Courses**

210 **HUMAN RESOURCES.** Three credit hours. See Mg 210. Prerequisite: Ec 100, 101. (Ec 210, Mg 210)

300 **LABOR RELATIONS.** Three credit hours. Issues and problems involved in union-management relations; an evaluation of collective bargaining as a method for resolving labor disputes in our economic system; case studies of labor disputes. (Ec 300)

310 **CURRENT LABOR PROBLEMS.** Three credit hours. Various normative and analytical frameworks for examining labor problems; application of these frameworks to several important problems facing the labor movement today. Prerequisite: IR 210. (Ec 310)

Marketing (Mk)

**Staff:** DR. McDAVID, chairman; DR. CARUSONE, DR. J. KLININGMAN, MR. KUMP, MR. PARKER, DR. PETROF, DR. WEBB.

**Assisted by:** MR. FOGG, MR. LOHAUS, MR. McMULLIN.

Lower Division Course

100 **PRINCIPLES OF MARKETING.** Three credit hours. This course contains an overview of the distribution system of the United States economy from both the institutional and functional point of view. A survey and an evaluation of current institutions for the distribution of industrial and consumer goods (wholesaling and retailing) serve as the background for the study of the functions in distribution such as selling (advertising, personal sales, and sales promotion), buying, storage, transportation, and marketing information. Marketing policies are discussed within the existing governmental framework.

Upper Division Courses

201 **MARKETING POLICY.** Three credit hours. This course increases the problem-solving ability of students by requiring their continuous participation in a series of case-studies. These deal with marketing strategy and policy, and problems will be examined, analyzed, and discussed in depth. The effects of the proposed marketing actions will be projected from the viewpoint of management. Mk 201 is a prerequisite for other upper division courses.
202 **MARKETING RESEARCH.** Three credit hours. The place of marketing research as a major management tool will be examined. Applications of marketing research will be discussed: determination of the needs of consumers and of marketing intermediaries; measurement of potential markets; sales forecasting; effectiveness of advertising; use of motivation research. Special attention will be given to test-marketing and the use of panels. Prerequisite: BA 270.

204 **MARKETING MANAGEMENT.** Three credit hours. The need for marketing planning. Changes in the economy over a period of time. The need for new products to replace existing products for new marketing techniques. The management of personal selling. The coordination of advertising with all other aspects of marketing. The development of policy toward changing the items comprising the present product-lines. Prerequisite: Nine hours of upper division courses in Marketing. (Mg 204)


212 **PURCHASING.** Three credit hours. Grounding in the principles and practices of purchasing. Emphasis is placed on the techniques involved in making decisions on the right quality and quantity at the right prices, price policies, sources of supplies, and standards of performance.

220 **INTERNATIONAL MARKETING.** Three credit hours. Conditions peculiar to international distribution of United States goods and services and the effects of this distribution on the national welfare are the bases for the study of international marketing organizations and methods. Technical and financial complexities, such as pricing, foreign collections, foreign exchange, and international banking facilities, are explained.

230 **RETAILING MANAGEMENT.** Three credit hours. Fundamental principles and policy considerations for the successful management of modern-day retailing organizations. It develops analytical skills and problem-solving ability applied to the planning, organizing, and controlling of retail establishments. Emphasis is placed on aspects of retailing geography, merchandising, and pricing.

240 **CREDITS MANAGEMENT.** Three credit hours. Nature, instruments, and place of credit in the economy. Management of consumer, mercantile, and bank credit. Analysis of credit risk. Management of collection and credit control. (Fi 240)

250 **ADVERTISING MANAGEMENT.** Three credit hours. A study of the creative and institutional aspects of advertising and their relationship to market and product attributes provides the framework for successful management of advertising campaigns. Emphasis on creative strategy, media strategy, and evaluation strategy as these relate to planning, organizing, and controlling the advertising effort. The effects of legal and social environment are analyzed.

260 **SALES MANAGEMENT.** Three credit hours. The role of personal selling in marketing. The selection, training, and assignment of the sales force. Motivation, compensation, and promotion of it. Advantages and disadvantages of the commission plan of compensation. Continuous training of the sales force.

262 **SALESMANSHIP.** Two or three credit hours. The stress is on the understanding of selling—analyzing the dynamics of a sale. It offers the student an opportunity to understand the function of persuasive leadership as it relates to commerce and to other business relationships. The techniques of persuasive leadership as it applies to the buying of goods and services are studied and practiced.

270 **UNDERSTANDING THE CONSUMER.** Three credit hours. Understanding consumer behavior by drawing on available knowledge from various disciplines such as anthropology, economics, psychology, sociology, etc. Relating such knowledge to the decision-making process of a business firm.

272 **ETHNIC MARKETING.** Three credit hours. Marketing implications of cultural and ethnic differences in American society. Conditions peculiar to subcultures and their role in creating problems and opportunities for business firms. Relating ethnic and cultural differences to marketing strategies to enhance consumer satisfaction and business profits in serving ethnic markets.

280 **PHYSICAL DISTRIBUTION ANALYSIS.** Three credit hours. The logistics problems of the firm will be examined as a part of the overall distribution process. Emphasis will be on an evaluation of the physical movement functions of marketing, such as transportation, storage, and optimum allocation of products to various geographical locations. The quantitative approach is stressed and inventory control, product flow, and plant location factors are all analyzed.

290 **CASES AND PROBLEMS IN MARKETING.** Three credit hours. In-depth study and discussion of contemporary marketing developments. Subjects will vary from semester to semester in order to advance the knowledge of the marketing student in specialized marketing areas. Prerequisite: Nine hours of upper division marketing courses.

295 **TUTORIAL COURSE.** Two or three credit hours. Research, meetings, and attendance at scheduled lectures as determined by the advisor. Prerequisite: Permission of the chairman.
The Graduate School

Administrative Officers

RAYMOND F. McCoy, Ed.D.
Dean

THOMAS H. HANNA, Ed.D.
Associate Dean

THOMAS J. HAILSTONES, Ph.D.
Director, Master of Business Administration Program; Dean, College of Business Administration

JAMES GAFFNEY, M.Ed.
Assistant to the Dean

JOHN C. ROTHWELL, M.B.A.
Assistant to the Dean

The Graduate Council

RAYMOND F. McCoy, Ed.D.
(Chairman) Dean, Graduate School

VYTAUTAS J. BIELIAUSKAS, Ph.D.
Chairman, Department of Psychology

FRANK MASTRIANNA, Ph.D.
Chairman, Department of Economics

THOMAS J. HAILSTONES, Ph.D.
Director, Master of Business Administration Program; Dean, College of Business Administration

THOMAS H. HANNA, Ed.D.
Associate Dean, Graduate School

ROBERT J. MURRAY, Ph.D.
Chairman, Department of Classical Languages

JOHN B. HART, M.S.
Chairman, Department of Physics

ROBERT G. JOHNSON, Ph.D.
Chairman, Department of Chemistry

KENNETH F. SCHEURER, M.Ed.
Acting Chairman, Department of Education

REV. ROBERT W. SCHMIDT, S.J., Ph.D.
Chairman, Department of Philosophy

JAMES A. DELANEY, M.S.
Acting Chairman, Department of Mathematics

JOSEPH H. WESSLING, M.A.
Acting Chairman, Department of English

PAUL L. SIMON, Ph.D.
Chairman, Department of History

Admission and Probation Committee

The Committee consists of the Chairman of the Department which the student seeks to enter, the Dean of the Graduate School, and the Associate Dean.

Scope and General Requirements

The Graduate School opened in 1946 under the direction of its present Dean. Its first graduate degrees were awarded in 1947. In 1952 the Master of Business Administration program was added. These degree programs are offered: the Master of Arts in economics, English, history-political science, psychology, and, in summers only, classics and philosophy; the Master of Science in chemistry, mathematics, physics, and corrections; the Master of Education; the Master of Business Administration; and the Master of Business Administration (Hospital Administration).

The Graduate Council encourages the registration of special students as well as of degree students. With the approval of the chairman of the concerned department, special students register for courses which they desire to pursue with profit but without regard for degree requirements. Degree students register with the express intention of following a degree program.

The Graduate School has always been coeducational.

Academic Calendar

The Graduate School Academic Calendar is integrated with the total University Calendar, which may be found at the front of this Catalogue.

Admission

Application for admission to graduate studies is made in form. Application forms can be obtained upon request. Applications should be followed promptly by a transcript of the applicant's credits.

Students electing graduate work leading to a master's degree must present evidence of having a bachelor's degree from an accredited institution, and also present official transcripts from each college in which credit was obtained. Others will be registered conditionally.

An applicant with a bachelor's degree from a non-accredited institution is not admitted to full graduate standing until he has successfully completed at least six hours of graduate work with the required grades, and has been accepted by the department which controls his program. Certain colleges and/or departments within the University do not accept students from regionally non-accredited institutions.

Since graduate work is work done under direction, the chairman of the department of the student's major subject must decide on the student's preparation for graduate study in that department; and the chairman or one appointed by him will be the student's advisor throughout. The general prerequisites for graduate work in any department must be the equivalent of an undergraduate major at Xavier University.

Seniors of satisfactory academic standing who are within nine hours of completing their undergraduate requirements for the bachelor's degree may, in their last semester, register for graduate work.

Official acceptance for graduate study is good for a two-year period from the time of acceptance. If a student does not honor his acceptance within this period of
time, his application and documents are destroyed unless he requests that the documents be returned or sent to another university.

Admission—Foreign Students

International students must apply on special application forms available through the Graduate Office and must comply with all requirements for admission before formal acceptance will be granted and an I-20 form issued.

Because of the extensive processing required of applicants from foreign countries, no application for an academic school year beginning in September will be accepted from an international student not within the United States after May 15 for the ensuing academic school year.

International students within the United States attending other accredited institutions of higher learning must apply and submit all documents and other requirements prior to June 15 if they wish acceptance for the academic school year beginning in September. Such students may be accepted for a subsequent spring semester or summer session if they apply after June 15.

Academic Contract

Completion of the registration process on the part of the applicant or student and the University constitutes the formation of an Academic Contract binding on both parties. The terms of such contract include the express provisions, regulations, and academic and financial requirements contained in the University catalogue in effect at the time of registration and all the provisions, regulations, and requirements that can reasonably be implied from such express catalogue provisions. Continuation as a student in good standing is a condition of compliance with the terms of the Academic Contract.

Miller Analogies Test

All applicants for admission to the Graduate School (other than those seeking the M.B.A.) will be required to take the Miller Analogies Test at Xavier University, or to bring with them an official report of their scores. Scores will aid the faculty in the guidance of the student. M.B.A. applicants will be required to take the Admission Test for Graduate Study in Business, or to have official test scores forwarded to the Graduate School.

Candidacy

Candidacy shall begin when, after the student’s completion of six hours of graduate work, his application shall have been passed by the Graduate Council. Every student must make such application after completing six hours of work at Xavier. Those thought unfit will be advised to discontinue their course.

No more than five years may elapse between candidacy and completion of work for the degree.

A student who attends only summer sessions may be granted a graduate degree provided he is engaged in work related to his major subject.

Requirements

A minimum of thirty semester hours of graduate work is demanded for the Master’s degree. The M.A. (Psychology) requires thirty-six hours, and the M.B.A. (Hospital Administration) requires forty-two hours.

Specific requirements of the Masters’ programs are presented later in this section.

Distribution of the course requirements must be approved by the chairman of the department of the major subject. At least one-half of the courses must be in that department. Candidates, however, for the Master of Arts and Master of Science degrees are advised to take all their work in their major department.

Character of the courses required is subject to the decision of the advisor. At least one-half of the hours of credit in the major subject and one-half the total number of hours toward the degree must be obtained in courses numbered 500 to 699, distinctly graduate courses.

Course Numbers

This is the new system of numbering courses:

- 100 to 199 Lower division courses
- 200 to 399 Upper division courses, open to graduate students for graduate credit except where specified as for undergraduate credit only
- 400 to 499 Administrative use only
- 500 to 699 Courses for graduate credit only, open to graduate students only

Examinations

Candidates for graduate degrees shall be required to pass a final comprehensive examination, oral or written. This examination is oral in all programs requiring a thesis. It shall be the policy of the Graduate School to give these examinations three weeks prior to the end of the final semester. The chairman of the major department or one appointed by him shall be chairman of the examining committee and be responsible for giving the examination. A student must pass other examinations required by his major department.

The matter for the examination shall be based primarily on the student’s courses and, if he is a candidate for the Master of Arts or Master of Science degree, on his thesis if a thesis is required in his program. It is understood, however, that a candidate’s general knowledge of his field must be found satisfactory by his examiners.

Thesis

The thesis required for the Master of Arts or Master of Science degree should embody the results of the applicant’s research in some problem of his major subject, and must at each stage be under the direction of the chairman of the department or of one appointed by him.

Before beginning work on the thesis, the student should secure from the Graduate Office the form, Approval of Thesis Project, and also the instruction, Form and Mechanics for Writing Theses.

The student must submit three typed copies of his thesis after it has been formally approved.

Application for Degree

All students planning to complete requirements for graduate degrees must complete application forms for the Graduate Office within the first month of their final semester of work—summers, during the first two weeks. When the degree is not obtained at the time specified on the application, the student must reapply for the new date.
Non-Academic Requirements for the Degree

Candidates for a graduate degree must have discharged all financial obligations to the University.

Graduate Grading System

The following symbols are used in the evaluation of course work: A—indicative not only of high achievement, but also of an unusual degree of intellectual ability and initiative; B—above average attainment; C—work of minimum or average attainment; D—inferior, no graduate credit; F—failure. To obtain credit, graduate students must do work of B quality in courses numbered 200 to 399, and of C quality in courses numbered 500 or higher.

Probation

One unsatisfactory grade (below C in courses in the 500-699-series, below B in courses in the 200-399-series) places a graduate student on probation; two such grades make him ineligible to reregister in a degree program.

Clearance of Incompletes

Grades of I (incomplete) must be cleared by a student within thirty days after the last day of the semester, unless the professor concerned specifies another date. After thirty days, the grade becomes a permanent I.

Class Attendance

Reasonable attendance at all class meetings of courses for which a student has registered, except tutorial and special study courses, is expected of students as a condition for the granting of academic credit. Lack of reasonable attendance as determined by the Graduate Council, Graduate Dean, and faculty members concerned is reason for denial of credit for a course and possible course failure.

Dismissal

The Graduate School reserves the right to dismiss from any graduate degree program any student whose quality of classwork is beneath the standard set by the Graduate Council of the University.

Advanced Standing from Other Universities

Six semester hours (or the equivalent) of graduate work completed at another accredited graduate school prior to initial admission to Xavier University may be transferred as Advanced Standing toward the M.A., M.S., M.B.A., or M.Ed. degree. The permission of the department chairman concerned and the approval of the Graduate Dean, assuming the credits are applicable to the student's degree objective, is necessary. Only grades of A or B are acceptable for Advanced Standing, and the course must have been completed on the student's university's main campus. Extension work and work done by correspondence are not acceptable for Advanced Standing.

Graduate Credit Transferable

Ordinarily no graduate credit completed at another university is transferable toward a graduate degree at Xavier once the student has begun his graduate program at Xavier.

Semester Hour Load in Summer Sessions

While six semester hours each summer session is ordinarily the maximum student load permitted, any student who wishes may take seven hours in a summer session without special permission.

No student may take more than seven hours unless there are extremely extenuating circumstances, e.g., completing the master's degree during either of the sessions. A student may not overload in both sessions in order to graduate as of the second session, however. Permission to take more than seven hours must be obtained from one of the Deans.

Health Service

Full-time graduate students may choose to avail themselves of the University's Student Health Service at the student fee of $10.00 per semester (fall and spring semesters only).

A student accident, sickness, and hospital insurance plan is available to full-time graduate students at a reasonable rate. Family policies are available to married students attending on a full-time basis.

Housing Arrangements

Graduate students usually make their own arrangements for obtaining housing accommodations. Dormitory accommodations are available to a limited number of male and female graduate students each semester, and generally available to all single graduate students, male and female, during the summer sessions. Assistance in obtaining off-campus accommodations may be obtained by writing the Director of Student Housing, Office of the Dean of Students.

College Parking

A limited amount of parking is available to graduate students on campus without charge. The Graduate School cannot guarantee a parking place as a condition of enrollment. Parking stickers, available without charge to graduate students who attend classes after 4 p.m. daily or on Saturday mornings, are required on cars parked on campus.

Facilities for Study and Research

Computer Center: The University Computer Center operates an L.B.M. 360/30 type computer which is available to all faculty and students of the University for either classroom work or research involving statistical or mathematical analyses.
Members of the Computer Center also provide consultation and advisory assistance to those wishing to use it in their work.

Library: The University Library has a rapidly growing collection of more than 174,693 volumes which is selected to serve as well as supplement the education and research programs of the University. To bring the major areas of knowledge in close proximity, the divisional library plan has been established. The divisions are Humanities, Social Science, and Science and Business. Each area is staffed by librarians who are specialists in their fields. Within these divisions the volumes are arranged by subject on open shelves so that the intellectually curious student may browse among them, unhampered by intervening walls and artificial barriers.

Numerous departments of the University maintain departmental collections within their own buildings. Graduate students wishing to keep books in the library may obtain a locker on an assigned basis.

Center for Human Development: The newly created Center for Human Development is engaged in research studies in the areas of guidance, reading improvement, and Montessori education as well as other areas within the Departments of Psychology and of Education.

Veterans' Education

The Graduate School has been approved by the Veterans' Administration for educational training under all existing public laws. Requests for information should be addressed to The Director, Veterans' Education.

Foreign Student Advisor

The Graduate School's Foreign Student Advisor will assist international students with such problems as adjustment to University life, requirements of the Immigration Service, and social matters. The department chairman handles the student's academic counselling.

American Association of University Women

Xavier University is a member of the American Association of University Women which is open to all women who hold baccalaureate or higher degrees. Information about membership is available from the Graduate Office.

Scholarships: Graduate School

Xavier University annually offers scholarships in all departments in which graduate programs are offered. These departments are business administration, classics, chemistry, economics, education, English, history-political science, mathematics, philosophy, physics, and psychology. A number of scholarships may be awarded in each department by the Graduate Scholarship Committee on recommendation of the chairman of the department concerned. Scholarships will be awarded only to those who have demonstrated real academic excellence in their undergraduate work. Scholarships cover tuition only and are valued at $1,410 each.

Awards will be subject to the following requirements and procedures:

1. Scholarships will be awarded only to students prepared to do full-time graduate study (usually 12 semester hours minimum per regular semester, 6 hours during a summer session, or as determined by the department chairman in certain departments). Students may not work at any job on a full-time basis while on scholarship status.

2. Only students who meet fully departmental requirements as outlined in the University Catalogue should apply.

3. Applications should be made by letter addressed to the Dean of the Graduate School, Xavier University.

4. Transcripts of all previous college work should be forwarded to the Dean of the Graduate School (one from each college attended).

5. At least two letters from educators who can evaluate the academic qualifications of the applicant should be forwarded directly to the Dean of the Graduate School by the writers.

6. Applications, letters, and transcripts for scholarships must be in the Graduate Office not later than April 1 and applicants will be notified of the decision of the Graduate Scholarship Committee during the latter part of April of the academic year prior to the award.

Assistantships

The Walter A. and George McDonald Fund, established in honor of Mr. and Mrs. Andrew J. McDonald, provides income from a gift of $50,000 for a graduate assistant in the Department of Chemistry. Graduate assistantships are awarded annually in the Departments of Business Administration, Chemistry, Education, English, History, Mathematics, Physics, and Psychology. Assistants are expected to devote about half-time to graduate studies and about half-time to service in the department. Letters of application should be addressed to the chairman of the department concerned. A complete transcript of the applicant's undergraduate record and letters of recommendation from the chairman of the applicant's undergraduate department and one other professor should be sent directly to the chairmen of the department at Xavier University.

All letters of application, recommendation, and transcripts should be in the hands of the chairman concerned not later than April 1, and successful applicants will be notified ordinarily in April by the chairman concerned.

Tuition and Fees

<table>
<thead>
<tr>
<th>Fee Item</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Matriculation (payable once)</td>
<td>$10.00</td>
</tr>
<tr>
<td>Tuition (per credit hour—graduate)</td>
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</tr>
<tr>
<td>Teachers and school administrators receive a special rate of</td>
<td>40.00</td>
</tr>
<tr>
<td>Laboratory science fee (per course per semester, for biology, chemistry, physics, Experimental Psychology, Physiological Psychology, and Statistical Techniques)</td>
<td>20.00</td>
</tr>
<tr>
<td>Laboratory science deposit (per course per semester—partially refundable)</td>
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</tr>
<tr>
<td>Laboratory materials deposit for physical science thesis (payable one—partially refundable)</td>
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<tr>
<td>Reading Laboratory Fee (Ed 679)</td>
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<tr>
<td>Reading Materials Fee (Ed 678)</td>
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</tr>
<tr>
<td>Miller Analogies Test (taken in group sessions)</td>
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<tr>
<td>(Administered Individually)</td>
<td>6.00</td>
</tr>
<tr>
<td>Binding of thesis</td>
<td>4.00</td>
</tr>
<tr>
<td>Graduation fee</td>
<td>30.00</td>
</tr>
</tbody>
</table>

The Graduation Fee must be paid by May 1 of the year in which the student graduates along with all other financial obligations or the student will not be granted a diploma. This fee must be paid by every student who graduates, whether in person or in absentia (with permission).
Graduate School

Contingent Fees
Duplicate Transcript ........................................ 1.00
Special Examination ........................................ 5.00

Financial arrangements should be settled on the day of registration. Attendance at classes will not be permitted until financial arrangements have been made with the Bursar. A time payment plan is available. Consult the Bursar.

A service charge will be added to all accounts not completely settled at registration as follows: $1.00 on all unpaid balances of $50.00 or less; $3.00 on all unpaid balances of more than $200.00, but less than $200.00; $5.00 on all unpaid balances of more than $200.00.

Withdrawal

Students who have officially registered for a class but decide to discontinue attendance, or students who wish to cancel registration before they have entered class must withdraw officially by completing a withdrawal slip in the Graduate School office or by informing the office in writing of their intent.

The same procedure applies when a student decides to drop one class to enter another.

The date appearing on the withdrawal slip or other written notice is used by the Graduate School to determine possible tuition charges or refunds. No refunds may be granted without official withdrawal through the Graduate School office. Cessing to attend class or informing a professor of the intent to withdraw does not constitute official withdrawal.

Refunds

The following is the official interpretation of University refund policy as applied to students of the Graduate School:

1. A refund of tuition (fees are not refundable) may be claimed in the case of withdrawal or dismissal in the first weeks of a semester according to the schedule detailed below.

2. Computation of refunds will be based upon the official date of withdrawal, not the last class attended.

3. The official date of withdrawal is the date upon which the student notifies the Graduate Office of his withdrawal in writing.

4. Withdrawal of a student who has been permitted to make only a partial payment at registration is handled precisely as it would have been had he completed payment; thus he may owe a balance even though he has withdrawn.

5. Students who do not withdraw officially through the Graduate School office when they stop attending classes are liable for the total tuition and fee charges for the semester or session. Those who register, decide not to start to class, but do not withdraw officially through the Graduate School office are also liable for the total tuition and fee charges for the semester or session.

6. A student is subject to the schedule of refunds even though he does not complete the course or courses for which he is registered or even though he does not attend any of the classes in those courses. Passing or failing the course does not alter the financial obligation.

Graduate School

Schedule of Refunds, Academic Year

| Before student's first class meets | 100% |
| In first or second week from first day of semester | 90% |
| In third or fourth week from first day of semester | 60% |
| In fifth or sixth week from first day of semester | 40% |
| In seventh or eighth week from first day of semester | 20% |
| After eight weeks from first day of semester | None |

Schedule of Refunds, Summer Sessions

For summer refund schedule, substitute "day" for "week" in the schedule for the academic year. For refund purposes one summer evening class equates with two summer day classes (e.g., withdrawal after the second evening class places the student within the "third or fourth day from the first day of the semester" category on the day Summer Sessions refund schedule and allows an 80% refund). No refund for evening classes is given after five class meetings.

Catalogue Modification

The University reserves the right to modify both the academic and financial provisions, regulations, and requirements in the University Catalogue from year to year so that the terms of the Academic Contract in effect at the time of the student's initial registration date are not fixed and irrevocable as to subsequent Academic Contracts.

THE MASTER OF ARTS

THE MASTER OF SCIENCE

The final goal of the M.A. and the M.S. programs is that the student may come to possess a specialized knowledge of his chosen field and an intelligent appreciation of its place in the wide panorama of human thought.

The degree of M.A. or M.S. is awarded to the candidate who has demonstrated a capacity for further study or teaching by satisfactorily completing a program of graduate work designed to give him these characteristics:

1. An understanding of the relations of his subject to allied subjects and to the synthesis of Christian culture, which is the basis of Western civilization.
2. A comprehensive knowledge of the broad field of learning in which the degree is conferred.
3. A specialized knowledge of a portion of that field.
4. Proven ability to do research in the special field of study.

General Requirements

In accordance with the above objectives the general requirements for the degrees are respectively:

1. Completion of such undergraduate prerequisites as will give assurance of the candidate's general educational background. Satisfactory completion of the Miller Analogies Test.
2. A reading knowledge of a foreign language or approved substitute.
3. Completion of a program consisting of at least twenty-four hours of integrated classroom study within the student's chosen field, an acceptable thesis of a research character for which six graduate credit hours are registered for and awarded, and a reading knowledge of a foreign language; or at least thirty hours of integrated classroom study, a substantial research paper spe-
specifically accepted by the department to satisfy this requirement and, depending upon the specific department's requirement, a reading knowledge of a foreign language or approved substitute.

4. Completion of a final oral comprehensive examination, if a thesis is written, or a written examination if a thesis is not included in the program.

Specific Departmental Requirements

Within the general requirements, departments administering programs may add specific regulations. Candidates for degrees are urged to maintain close relationship with the chairman of their particular departments.

THE MASTER OF ARTS—ECONOMICS

Normally, the applicant will be expected to have had the following: six hours in Principles of Economics, three hours in Money and Banking or in monetary and fiscal theory, three hours in an intermediate theory course, and three hours of electives from the fields of labor, econometrics, and theoretical analysis, a total of fifteen hours of undergraduate prerequisites. If the applicant has not had these undergraduate courses, and yet gives evidence that he is qualified to pursue graduate study in economics, the Department of Economics at its discretion may allow the applicant to take these or equivalent courses at Xavier University or at some other accredited institution. In exceptional instances some of these prerequisites may be waived.

All applicants are required to take the Graduate Record Examination before being admitted to graduate studies in the Department of Economics. If the applicant has taken this examination prior to his application to the Graduate School of Xavier University, he must provide the Department of Economics with an official report of his score.

Thirty semester hours of graduate work are required of the applicant. Twenty-four of these hours are devoted to fulfilling course requirements, and the remaining six hours either to thesis requirements or to research seminars. Students may transfer up to six graduate credits from other institutions with approval of the department. With approval, students may take one or two upper-division undergraduate courses for graduate credit, provided they earn at least a grade of B and perform whatever added course requirements are assigned by the instructor. Certain graduate courses from other disciplines may be taken with the approval of the department.

Candidates for the Master of Arts in economics must either demonstrate a reading knowledge of a foreign language or pass an examination in the essentials of statistics and basic mathematics for economists. The candidate's choice must be approved by the department.

Courses in economics and in other disciplines provide the following concentrations: Financial Economics, Industrial Economics, Quantitative Methods, Labor Economics, Public Economics, and Regional-International Economics.

THE MASTER OF ARTS—ENGLISH

The candidate for the Master of Arts degree in English must give substantial proof of his proficiency in literary criticism and textual analysis. He must show an ability to do research and a thorough factual knowledge of the history of English and American literature. The Department of English expects that all candidates for the Master of Arts degree in English will spend considerable time on individual study, literary and textual analysis, and research in addition to the actual course work. The knowledge of an undergraduate English major is presumed to be had by every candidate for the Master of Arts in English. In addition, the ability to express oneself with mechanical accuracy and precision of idiom is demanded.

All candidates are urged to include a course in the history of the English language. Courses selected in the 200 to 399 level ought to complement their undergraduate work. Courses and seminars selected on the 500 to 699 level should build upon the undergraduate work that they have completed in English. Since backgrounds on the undergraduate level may vary, each applicant should work out a program with the Chairman of the Department before beginning his graduate work.

Students who envision the Master of Arts in English as a terminal degree are advised to elect a program consisting of thirty credit hours of course work and the writing of a thesis. At least one-half of the hours must be in courses numbered 500 or higher, and at least two of the courses must be seminars. The subject of the thesis must be approved by the Department's committee for the graduate program. The thesis, for which six hours of credit are awarded, must be written under the guidance of a member of the faculty and must demonstrate the student's ability to do scholarly research of high quality. This thesis must be read and approved by the director of the thesis and two other readers from the faculty.

Students must pass an examination in a modern foreign language before completion of the six hours in the history of the English language are highly recommended. In case the applicant does not include the survey of English literature from the Old English Period to the Twentieth Century; the survey of American Literature; at least one course in Shakespeare. Courses in aesthetics and literary criticism and in history of the English language are highly recommended. In case the applicant does not meet these requirements, he may be admitted as a special student until he makes up the necessary hours.

3. Recommendations from members of the Department of English in the college or university where he did his undergraduate work. One of these recommendations should come from the chairman of the Department of English where the undergraduate work was completed.

Any student applying for admission to the program leading to the Master of Arts in English must complete the following procedures before registration:

Admission

1. A 3.0 average in all English courses on the undergraduate level.
2. A minimum of thirty-six undergraduate credit hours in English which should include the survey of English literature from the Old English Period to the Twentieth Century; the survey of American Literature; at least one course in Shakespeare. Courses in aesthetics and literary criticism and in history of the English language are highly recommended. In case the applicant does not meet these requirements, he may be admitted as a special student until he makes up the necessary hours.
3. Recommendations from members of the Department of English in the college or university where he did his undergraduate work. One of these recommendations should come from the chairman of the Department of English where the undergraduate work was completed.

Any student applying for admission to the program leading to the Master of Arts in English must complete the following procedures before registration:
1. Submit to the Graduate School the completed application form for admission to the Graduate School.
2. Submit to the Chairman, Department of English, the completed application for admission to the graduate program in English.
3. Arrange for transcript of previous college work to be sent to the Graduate School.
4. Submit to the Graduate School and to the Chairman, Department of English, his score on the Graduate Record Examination in Literature.
5. Arrange with the Chairman, Department of English, for a personal interview.

Part-time students may be admitted for their first semester of work prior to their personal interview. All admission procedures, however, must have been completed before the second registration.

THE MASTER OF ARTS—PHILOSOPHY

The Master's program in philosophy at Xavier is designed to meet the needs of two types of students. First, the research M.A., with its emphasis on historiography and technique, gives the student who plans to work toward the Ph.D. the background that he should have. The second type, the non-research M.A., is planned for the secondary or the elementary school teacher who desires to earn the Master of Arts degree. It emphasizes content courses and factual material. The non-research program will ordinarily not prevent the student from further studies, should he decide at a later date to do so.

Requirements:
1. All students must complete half their work in courses numbered 500 to 699 including Hs 501: Historical Methodology.
2. Those who elect the degree with thesis must present twenty-four hours of class work. Six additional hours will be granted for the thesis when it is accepted.
3. Those who elect the degree without thesis must complete two to five courses in one of the following areas of concentration: The United States, Europe, Ancient (Classical), Latin America, or Asia. They must also write an extended research paper, on a subject having Departmental approval, in the area of concentration, and pass an extended written examination in that area.
4. Further instructions are available from the Department.

THE MASTER OF ARTS—HISTORY

The Master's program in history at Xavier is designed to meet the needs of two types of students. First, the research M.A., with its emphasis on historiography and technique, gives the student who plans to work toward the Ph.D. the background that he should have. The second type, the non-research M.A., is planned for the secondary or the elementary school teacher who desires to earn the Master of Arts degree. It emphasizes content courses and factual material. The non-research program will ordinarily not prevent the student from further studies, should he decide at a later date to do so.

Requirements:
1. All students must complete half their work in courses numbered 500 to 699 including Hs 501: Historical Methodology.
2. Those who elect the degree with thesis must present twenty-four hours of class work. Six additional hours will be granted for the thesis when it is accepted.
3. Those who elect the degree without thesis must complete two to five courses in one of the following areas of concentration: The United States, Europe, Ancient (Classical), Latin America, or Asia. They must also write an extended research paper, on a subject having Departmental approval, in the area of concentration, and pass an extended written examination in that area.
4. Further instructions are available from the Department.

THE MASTER OF ARTS—PSYCHOLOGY

To insure comprehensiveness, all candidates must include in their program each of the following courses designed in their whole to provide integrated coverage of the graduate field of psychology. For description of courses see listings under the Department of Psychology.

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THE MASTER OF ARTS—PSYCHOLOGY

To insure comprehensiveness, all candidates must include in their program each of the following courses designed in their whole to provide integrated coverage of the graduate field of psychology. For description of courses see listings under the Department of Psychology.

263, THEORIES OF PERSONALITY I AND II. Four credit hours, two each semester.
501 CONTEMPORARY THEORY IN PSYCHOLOGY. Three credit hours.
502 PHILOSOPHICAL ISSUES IN PSYCHOLOGY. Three credit hours.
505 PROFESSIONAL PROBLEMS IN PSYCHOLOGY. One credit hour.
511 ADVANCED STATISTICS. Three credit hours.
521 ADVANCED EXPERIMENTAL PSYCHOLOGY. Three credit hours.

To insure the attainment of his particular objective in graduate study in psychology, the student must include a concentration in one of the following areas of concentration:

General-Experimental Psychology

A minimum of thirteen credit hours selected from the following courses: Biological Basis of Animal Behavior, Learning and Motivation, Design of Experiments, Research Problems in Psychology, Communication, Social Psychology, Differential Psychology, Psychological and Achievement Tests.

Clinical Psychology

A minimum of thirteen credit hours selected from the following courses: Learning and Motivation, Psychopathology, Dynamic Psychology, Individual Tests of Intelligence, Counselling Principles and Techniques, Projective Techniques I and II, Research Problems in Psychology, Communication, Counselling and Psychotherapy, Diagnosis and Correction of Reading Disabilities. Practicum in Clinical Psychology is required.

Counselling Psychology

A minimum of thirteen credit hours selected from the following courses: Learning and Motivation, Developmental Psychology, Dynamic Psychology, Vocational and Educational Guidance, Psychological and Achievement Tests, Counselling Principles and Techniques, Individual Tests of Intelligence, Communication, Diagnosis and Correction of Reading Disabilities. Practicum in Counselling is required.

Industrial Psychology

A minimum of thirteen credit hours selected from the following courses: Occupational Information and Job Analysis, Marketing Research, Personnel Selection and Evaluation Techniques, Communication, Design of Experiments, Dynamic Psychology, Learning and Motivation. Practicum in Industrial Psychology is required.

As a climax to his program, each student must register for Ps 699, Master's thesis, six credit hours. He will prepare an acceptable thesis, which he will defend in his final oral examination.

School Psychology

A minimum of thirteen credit hours selected from the following courses: Psychological and Achievement Tests, Individual Tests of Intelligence, Learning and
Motivation, Counselling and Psychotherapy, Projective Techniques, Developmental Psychology, and The Role and Function of the School Psychologist. All are required, together with a nine-month full-time approved internship, for Ohio School Psychologist certification.

Requirements

Depending on the student's concentration, a minimum of thirty-six graduate hours is required for the Master of Arts in psychology. These shall ordinarily be distributed as follows:

1. Seventeen credit hours in the core courses.
2. Thirteen hours in the area of concentration.
3. Six hours awarded for Master's thesis.

The Master of Arts in psychology will be awarded only to candidates who have demonstrated a reading knowledge of a foreign language or demonstrated competence in the computer language by passing the University course or passing a special examination and, in a final oral examination, have both successfully defended their thesis and demonstrated their knowledge of the general field of psychology.

Admission

1. Bachelor's degree from an accredited college or university.
2. A 2.5 overall undergraduate average and a 3.0 average in all psychology courses.
3. A minimum of eighteen undergraduate credit hours in psychology which should include experimental psychology (with laboratory), introductory statistics, psychology of personality, and/or abnormal psychology. Courses in biological science and college mathematics are recommended as a preparation for graduate studies. In case the applicant does not meet these requirements, he may be admitted as a special student until he makes up the necessary hours.
5. Personality and character traits which are in agreement with ethical standards of psychology.

Full-time students must complete the following procedures in advance of registration:

1. Submit to the Graduate Office the completed application form for admission to the Graduate School and special application form for admission to the Department of psychology.
2. Submit transcript of previous college work.
3. Submit to the Graduate Office report of M.A.T. score or arrange with the Department of Psychology for examination.
4. Arrange with the Psychology Department for a personal interview. (The interviewing of students from considerable distance may be delegated to a local psychologist by special arrangement.)
5. The Dean of the Graduate School will notify the applicant of official acceptance.

Part-time students may be admitted as special students for their first semester of work prior to M.A.T. results and personal interview. All admission procedures, however, must have been completed prior to their second registration.

THE MASTER OF SCIENCE—CHEMISTRY

The M.S. in chemistry is designed to prepare students for continuing their graduate studies to the doctoral level, or for employment in the more specialized areas of chemical industry.

For entrance into the graduate program in chemistry, the applicant should have had undergraduate training in chemistry substantially equivalent to a Xavier undergraduate major.

Undergraduate prerequisites also include mathematics through calculus and a year of physics (eight credit hours). A student seriously deficient in these prerequisites will be required to make up the deficiency prior to, or concurrent with, his graduate studies.

All candidates for the degree of Master of Science in chemistry must complete the following nine courses. These are offered on a two-year cycle, but the program can be entered in any semester (excluding summer). The sequence of courses is described in the chemistry department brochure. For descriptions of the courses see listings under the Department of Chemistry.

525 THERMODYNAMICS. Two credit hours.
530 CHEMICAL KINETICS. Two credit hours.
535 THE CHEMICAL BOND. Two credit hours.
550 ORGANIC STEREOCHEMISTRY. Two credit hours.
590 REACTION MECHANISMS. Two credit hours.
610 STRUCTURAL INORGANIC CHEMISTRY. Two credit hours.
660 CHEMICAL SEPARATIONS. Two credit hours.
670 CHEMICAL MEASUREMENT. Two credit hours.
680 INSTRUMENTAL METHODS. One or two credit hours.

In addition to the above block of required courses, the graduate student selects from available optional courses sufficient offerings such that his total number of credits in course work totals at least twenty-four. With the permission of the Chairman of the Department, one 300 level course may be included.

In his selection, the student is guided by the department chairman, or, after selection of his research topic, by his research advisor. Among the optional courses which are offered regularly are the following:

320 INTRODUCTION TO RADIOCHEMISTRY. Two credit hours.
370 BIOCHEMISTRY. Three credit hours.
538 INTRODUCTION TO VIBRATIONAL SPECTROSCOPY. Two credit hours.
555 HETEROCYCLIC ORGANIC CHEMISTRY. Two credit hours.
595 ORGANOMETALLIC CHEMISTRY. Two credit hours.
630 ADVANCED BIOCHEMISTRY. Two credit hours.
640 MEDICINAL CHEMISTRY. Two credit hours.
690 SPECIAL TOPICS. Two credit hours each semester.
692 SPECIAL STUDY. One credit hour each semester.

A minimum of thirty hours is required for the degree of Master of Science in Chemistry. These shall ordinarily be distributed as follows:

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1. Eighteen credit hours in the nine required graduate chemistry courses specified in the previous section.
2. Sufficient credit hours in optional courses such that the total number of course hours is at least twenty-four. With the permission of the Chairman of the Department, one 300 level course in chemistry and certain 300 or higher level courses in mathematics and physics may be included.
3. Six hours of credit obtained through the satisfactory completion of a Master's research problem (Ch 699), submission of a written thesis, and the passing of an oral examination on the contents of the thesis.
4. The satisfactory completion of a written examination in a scientific modern language (Chemical German, Russian, or French).
5. For full-time students, enrollment in Ch 500: Graduate Chemistry Seminar, each semester of attendance. Part-time students are encouraged to attend the seminar whenever their schedules permit.

All degree students must present at the time of registration a schedule of courses to be taken which has been approved by the Chairman of the Chemistry Department or the student's thesis advisor.

Non-degree students are encouraged to consult with the Chairman of the Chemistry Department prior to registration to determine if they possess the proper prerequisites for the course(s) of interest.

THE MASTER OF SCIENCE—MATHEMATICS

The programs of studies leading to a Master of Science in mathematics are designed to allow the students to specialize in theoretical mathematics, in general applied mathematics, or in a particular area in applied mathematics. The concentrations available are Operations Research, Physics-Engineering, and Probability-Statistics.

Courses are offered primarily in the late afternoon, evening, and Saturday to accommodate part-time as well as full-time students.

For those who cannot attend during the academic year, requirements for the degree may be completed during summer sessions. Courses will be offered in a five-summer cycle, and will cover material useful in teaching mathematics in high school or college.

Prerequisites and Required Courses

Before being admitted to the program, students must have completed the equivalent of at least six semester hours of Advanced Calculus-Differential Equations. In addition, there is a basic set of courses required for the Master of Science in Mathematics. These are:

240 MATRICES AND VECTOR SPACES. Three credit hours.
260 ELEMENTARY TOPOLOGY. Three credit hours.
270 INTERMEDIATE ANALYSIS. Three credit hours.
280 INTRODUCTION TO COMPLEX VARIABLES. Three credit hours.

These courses must be completed as soon as possible. They are required for graduation and are prerequisites for many courses in the program. The consent of the Chairman of the Department of Mathematics is necessary for any of these courses to be applied toward the graduate requirements for the degree. In general, at most two of the courses will be applicable. (Students with an extensive undergraduate mathematics background might apply more than two of these required courses toward the Master's degree requirements.)

As soon as possible after admission to the Graduate School, the student should choose an advisor. Upon completing six graduate credit hours at Xavier, he must choose an advisor. At that time he should submit a program of courses to his advisor and indicate whether or not his program will include a thesis.

The specialization in theoretical or applied mathematics is specified by the student's choice of a comprehensive examination given in two parts. Part I, common to all areas of concentration, is based on material from the four basic required courses, and all areas of concentration. The student should consult with the Chairman of the Chemistry Department. He may choose to take this part of the comprehensive examination in one of the following areas:

1. Theoretical Mathematics
2. General Applied Mathematics
3. Operations Research
4. Physics-Engineering
5. Probability-Statistics

A detailed description of the material to be covered may be obtained from the Mathematics Department.

These courses are offered regularly in the various areas of concentration:

Theoretical Mathematics
250 INTRODUCTION TO MODERN ALGEBRA
510, 520 GENERAL TOPOLOGY I, II
540, 550 ABSTRACT ALGEBRA I, II
560, 570 REAL ANALYSIS I, II
580, 590 COMPLEX ANALYSIS I, II

General Applied Mathematics
Courses may be taken from any of the areas of concentration or from the general Applied Mathematics offerings listed below.

213 COMPUTATIONAL MATHEMATICS
303, 613 NUMERICAL ANALYSIS I, II
343 NUMERICAL LINEAR ALGEBRA
653 NUMERICAL METHODS OF NON-LINEAR SYSTEMS

Operations Research
302 OPERATIONS RESEARCH
342 LINEAR PROGRAMMING
602, 612 ADVANCED OPERATIONS RESEARCH I, II
642, 652 ADVANCED OPTIMIZATION TECHNIQUES I, II

Physics-Engineering
314, 614 ADVANCED ORDINARY DIFFERENTIAL EQUATIONS I, II
344, 644 VECTOR AND TENSOR ANALYSIS I, II
604 PARTIAL DIFFERENTIAL EQUATIONS
624 INTEGRAL EQUATIONS
634 CALCULUS OF VARIATIONS
Statistics
201, 211 MATHEMATICAL STATISTICS I, II
611 DESIGN OF EXPERIMENTS
621 APPLIED REGRESSION ANALYSIS
631 STOCHASTIC PROCESSES
641 STATISTICAL DECISION THEORY
651 SURVEY SAMPLING

A student need not complete all the courses offered in his area of concentration, but he should take a sufficient number to be prepared for the comprehensive examination in it. With the exception of the four basic required courses, this is the only condition imposed on selection of courses.

THE MASTER OF SCIENCE—PHYSICS

The graduate program in physics is designed to familiarize students with the techniques of mathematical and experimental physics that would be useful to them in an industrial research or engineering position, in physics teaching, or as a preparation for more advanced graduate work. Courses may also be taken for self-improvement on a non-degree basis by those so inclined.

The flexibility in the programs of studies leading to a Master of Science in physics enables the student to emphasize either the experimental or theoretical aspects in the particular area of his interest.

Students are encouraged to participate in a research program. Areas of primary interest to the faculty include atomic and molecular physics, foundations of quantum theory, physical optics, atmospheric physics, seismology, mechanics, astronomy, vibration theory, the philosophy of physics, and application of analog and digital computers.

Full-time students may complete requirements for the degree in one calendar year. Course offerings are scheduled evenings and Saturdays to allow those engaged in teaching, industry, or defense work to complete degree requirements on a part-time basis, taking one or two courses a semester.

Undergraduate Prerequisites

Prospective graduate students in physics must ordinarily submit evidence of a baccalaureate degree and a satisfactory performance record in undergraduate physics and mathematics courses comparable with those taken by a physics major at Xavier University. Upon recommendation of the student's advisor and approval of the Dean of the Graduate School, up to six hours of credit may be granted for graduate work satisfactorily completed at other institutions.

The Chairman of the Physics Department, or an advisor designated by him, should be consulted by each full-time student before registration and by each part-time student before completing his first six hours of work. The student should secure a precise statement concerning any undergraduate deficiencies at that time, his schedule for each subsequent registration must be approved in advance in writing by his advisor.

Requirements

Thirty semester hours are required for the degree. At least one-half of the credit hours must be at the 500 level. Six semester hours of research culminating in a thesis may be included within the thirty hours at the option of the student.

Program of Studies

All candidates for the degree of Master of Science in physics must complete at least two of the following four courses (twelve hours). For description of courses see listings under the Department of Physics.

501, 502 CLASSICAL MECHANICS. Six credit hours.
511, 512 RELATIVISTIC ELECTRODYNAMICS. Six credit hours.
521, 522 QUANTUM MECHANICS. Six credit hours.
531, 532 PHYSICAL OPTICS. Six credit hours.

Additional hours, upon approval of the student's advisor, will be selected from courses in physics or from supporting courses offered by other departments, such as Mathematics, Chemistry, or Biology.

THE MASTER OF SCIENCE—CORRECTIONS

The Master of Science in corrections is a professional degree designed to meet the needs of workers, both institutional and non-institutional, already in the field of corrections, as well as for those who are preparing to enter careers in corrections.

Accordingly, this degree will be awarded to candidates who have demonstrated a capacity for understanding the dynamics of criminal and delinquent behavior, the nature and scope of the crime and delinquency complex in contemporary society, and the current philosophy, methodology, and techniques of corrections, by satisfactorily completing a program of graduate work designed to impart this knowledge, establish desirable attitudes, and sharpen the necessary skills.

Students electing graduate work in corrections generally must present evidence of an undergraduate degree from an accredited college or university acceptable to the Admissions Committee.

A minimum of thirty hours is required for the degree of Master of Science in corrections. These will be distributed as follows:

501 FOUNDATIONS OF CORRECTIONS. Three credit hours.
503 INSTITUTIONAL CORRECTIONS. Three credit hours.
505 NON-INSTITUTIONAL CORRECTIONS. Three credit hours.
266 CRIME AND PERSONALITY. Three credit hours.

The following five courses are also required:

276 PSYCHOLOGY OF DELINQUENCY. Two credit hours.
510 LEGAL ASPECTS OF CORRECTIONS. Two credit hours.
540 CORRECTIONAL ADMINISTRATION. Two credit hours.
580 INDIVIDUAL RESEARCH AND DIRECTED STUDY IN CORRECTIONS. (Non-classroom.) Two credit hours.
590 INTERNSHIP IN CORRECTIONS. (Non-classroom.) Two credit hours.

The following courses are available as electives to fill out the final eight hours of the M.S. in corrections program:

Cr 533 INTERVIEWING AND COUNSELING IN CORRECTIONS. Two credit hours.
Ed 272 GUIDING THE EMOTIONALLY DISTURBED CHILD. Two credit hours.
Ed 273 EDUCATING THE DISTURBED CHILD. Two credit hours.
Ed 507 EDUCATIONAL RESEARCH. Three credit hours.
The Master of Education aims to meet the needs of teachers and school administrators actively engaged in school work. It has one basic aim: stimulating better teaching wherever the influence of the successful candidate may extend, whether it be in an individual classroom, an entire school, or a whole school system.

Accordingly, this degree is awarded to the candidate who has demonstrated a capacity for improving the quality of teaching within the particular sphere of his specialization for high school teachers this area may be an appropriate academic field; and capability in the skills and knowledge necessary for intelligent comprehension and use of educational research.

To ensure comprehensiveness in their programs for the degree of Master of Education, all candidates must include in their programs each of four general survey courses designed, in their whole, to provide integrated coverage of the broad field of education. These courses are:

501 PHILOSOPHY OF EDUCATION. Three credit hours.
503 EDUCATIONAL PSYCHOLOGY. Three credit hours.
505 EDUCATIONAL ADMINISTRATION. Three credit hours.
507 EDUCATIONAL RESEARCH. Three (two/one) credit hours.

To insure their mastery of a particular area of education, candidates must include in their programs a concentration of at least twelve credit hours in one of the following areas of concentration:

Administration, guidance, school psychology, elementary education, secondary education, physical education, the emotionally disturbed child, Montessori education, Curriculum Design and Teaching Strategies, research specialist, reading specialist, biology, business, chemistry, classics, communication arts, English, history, political science, mathematics, French, German, Spanish, philosophy, physics, theology and music.

Those interested in the M. Ed. program may obtain brochures covering specific concentrations from the Graduate School office. Separate folders are available for concentrations in Montessori education, physical education, research specialist, reading specialist, and Curriculum Design and Teaching Strategies specialist.

A minimum of thirty hours is required for the degree of Master of Education. These shall be distributed as follows:

1. General surveys in education, twelve credit hours.
2. Concentration, twelve credit hours.
3. Pertinent electives, six credit hours.

The degree will be awarded only to candidates who have passed an extensive written examination on the general field of education covered by the four survey courses and the individual's area of concentration.

THE MASTER OF BUSINESS ADMINISTRATION

The degree of Master of Business Administration is a professional degree designed to meet the needs of persons in industry for training which will ready them for increasing executive responsibilities.

Accordingly this degree is awarded to the candidate who has demonstrated
capacity for leadership in the field of business by satisfactorily completing a graduate program designed to give him the following characteristics:

1. Broad knowledge of the principles and techniques of business administration.
2. Specific knowledge of one of the major phases of business administration.
3. Essential understandings and skills necessary for intelligent consumption of research in the fields of business.

Students may be admitted to graduate work in business administration on any of these bases:

1. Undergraduate degree in business administration.
2. Undergraduate non-business degree, plus at least two full years of business experience, and eighteen hours of course work in business subjects including accounting, economics, marketing, statistics, finance, and quantitative analysis. Undergraduate deficiencies may be removed by completing BA 501: Basic Economics (four credit hours); BA 502: Introduction to Quantitative Methods (two credit hours); BA 503: Basic Accounting (four credit hours); BA 505: Basic Marketing (two credit hours); BA 506: Basic Statistics (two credit hours); BA 507: Basic Finance (two credit hours) or their equivalents, as appropriate. These are special courses open only to graduate students with undergraduate deficiencies.
3. Undergraduate non-business degree with at least thirty hours of business and economics subjects. Deficiencies may be removed by an extended graduate program including BA 501, 502, 503, 505, 506, and 507 (sixteen graduate hours as shown) and two additional hours as advised in individual cases.

All M.B.A. degree applicants must take the Admission Test for Graduate Study in Business. Applicants should arrange to take the test prior to admission. Test application forms may be obtained from Xavier’s Graduate School Office or by writing directly to the Educational Testing Service, Box 966, Princeton, New Jersey 08540.

To insure comprehensiveness in their programs for the degree of Master of Business Administration, all candidates must include in their programs each of five general survey courses designed in their whole to provide integrated coverage of the broad business field. These courses are:

511 ECONOMICS OF BUSINESS. Three credit hours.
512 QUANTITATIVE BUSINESS METHODS. Three credit hours.
513 MANAGERIAL ACCOUNTING. Three credit hours.
514 ADMINISTRATIVE OPERATION. Three credit hours.
515 MARKETING STRATEGY. Three credit hours.

To insure their mastery of a particular area of business administration, candidates will ordinarily include in their programs a concentration of at least nine credit hours in one of the following areas of concentration:

**Accounting**
- Advanced Business Economics
- Quantitative Methods

**Management**
- Hospital Administration
- Industrial Management
- Data Processing

As a climax to his program, the candidate must include the conference-type seminar, BA 699. This will assist him in marshalling his knowledge of the business field in the solution of specific problems. A student must have at least eighteen graduate hours before taking this course.

A minimum of thirty graduate hours is required for the M.B.A. These shall ordinarily be distributed as follows:

1. Fifteen hours in the five core areas.
2. At least nine hours in a functional area of concentration.
3. Three hours in Seminar: Business Administration Problems.

The degree will be awarded only to candidates who have passed a written comprehensive examination on the general field as covered by the five core courses and the individual’s area of concentration.

**MASTER OF BUSINESS ADMINISTRATION—HOSPITAL AND HEALTH ADMINISTRATION**

The degree of Master of Business Administration with a concentration in Hospital and Health Administration is awarded the candidate who has followed a program of studies designed to give him a background in three areas: first, in the principles and concepts of general organization and management theory; second, in the principles and concepts particularly applicable to the management of hospitals; and third, in the social, political and economic determinants of the health care system.

To accomplish the above objectives, the candidate must satisfactorily complete the following:

**Academic Year**

<table>
<thead>
<tr>
<th>BA 511 Economics of Business</th>
<th>3 cr. hrs.</th>
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<tr>
<td>BA 514 Administrative Operations</td>
<td>3 cr. hrs.</td>
</tr>
<tr>
<td>HA 630 Hospital Organizational Theory</td>
<td>3 cr. hrs.</td>
</tr>
<tr>
<td>HA 631 Hospital Systems Management</td>
<td>3 cr. hrs.</td>
</tr>
<tr>
<td>HA 632 Comprehensive Health Planning</td>
<td>3 cr. hrs.</td>
</tr>
<tr>
<td>HA 633 Hospital Financial Management</td>
<td>3 cr. hrs.</td>
</tr>
<tr>
<td>HA 634 Hospital Legal Aspects</td>
<td>3 cr. hrs.</td>
</tr>
<tr>
<td>HA 635 Current Trends in Medicine</td>
<td>3 cr. hrs.</td>
</tr>
<tr>
<td>HA 636 Hospital Personnel Administration</td>
<td>3 cr. hrs.</td>
</tr>
<tr>
<td>HA 637 Seminar: Health Care Administration</td>
<td>3 cr. hrs.</td>
</tr>
<tr>
<td>HA 638 Public Health Administration</td>
<td>3 cr. hrs.</td>
</tr>
<tr>
<td>HA 639 Medical Care Organization</td>
<td>3 cr. hrs.</td>
</tr>
<tr>
<td>HA 640 Psychology of Executive Behavior</td>
<td>3 cr. hrs.</td>
</tr>
<tr>
<td>HA 641 Research in Hospital Administration</td>
<td>3 cr. hrs.</td>
</tr>
</tbody>
</table>

**Administrative Residency Year**

<table>
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<tr>
<th>HA 648 Master’s Thesis</th>
<th>3 cr. hrs.</th>
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<tbody>
<tr>
<td>HA 649 Administrative Residency (12 months)</td>
<td>9 cr. hrs.</td>
</tr>
</tbody>
</table>

Before receiving the degree of Master of Business Administration with concentration in Hospital and Health Administration, all students must complete a
calendar year of administrative residency in a hospital, unless specifically exempted in writing by the Director of the Hospital and Health Administration program. Exception will be made only when the student evidences equivalent experience prior to enrolling in the degree program. While a student will ordinarily receive compensation from the hospital in which he serves his residency, a residency fee of $423 is charged by the University to cover expenses of University administration of the program. This is the normal charge for nine graduate credit hours.

A minimum of forty-two graduate hours plus the completion of the administrative residency is required for the degree of Master in Business Administration with a concentration in Hospital and Health Administration.

The degree of Master of Business Administration will be awarded only to candidates who have passed a written comprehensive examination on seven areas of study.

The candidate must write a Master's Thesis and have it accepted by the faculty of the Graduate Program in Hospital and Health Administration as partial fulfillment of the requirements for the degree.

Students may be admitted to graduate degree work in hospital administration on either of the two following bases:

1. Undergraduate degree which includes at least twenty-one hours of study in business subjects including six credit hours in accounting, three credit hours in statistics and six credit hours in economics.

2. Undergraduate degree, at least two full years of hospital or general business experience and course work as follows: six credit hours, in accounting, three credit hours, in statistics, and six credit hours in economics.

Notes—Undergraduate deficiencies may be removed by completing:

BA 501 BASIC ECONOMICS. Four credit hours.
BA 503 BASIC ACCOUNTING. Four credit hours.
BA 506 BASIC STATISTICS. Two credit hours.

The forty-two graduate credit hours must be taken exclusive of the pre-requisite work in basic accounting, basic economics, and basic statistics.

There is also a Journal Club requirement which includes an outside reading program and a seminar discussion series of current hospital and health care problems.

### Intercollegiate English Contest, 1970

Michael J. Seidler, Second Place
Robert J. Collins, Fourth Place
Robert Hollingsworth, Fifth Place

### The Washington Oratorical Medal, Gift of the Alumni Association, 1970

Louis A. Ginocchio, Jr.

### The Verkamp Debate Medal, Founded by Joseph B. Verkamp, '77, 1970

Gregory R. Burwinkel
Jesuit Educational Association
Colleges and Universities
Alabama
Spring Hill College, Mobile 36608

California
Loyola University, Los Angeles 90045
University of Santa Clara, Santa Clara 95053

University of San Francisco, San Francisco 94117

Colorado
Regis College, Denver 80221

Connecticut
Fairfield University, Fairfield 06430

District of Columbia
Georgetown University, Washington 20007

Illinois
Loyola University, Chicago 60626

Louisiana
Loyola University, New Orleans 70118

Maryland
Loyola College, Baltimore 21210

Massachusetts
Boston College, Boston 02167
Holy Cross College, Worcester 01610

Michigan
University of Detroit, Detroit 48221

Missouri
Rockhurst College, Kansas City 64110
St. Louis University, St. Louis 63103

Nebraska
The Creighton University, Omaha 68131

New Jersey
St. Peter’s College, Jersey City 07306

New York
Canisius College, Buffalo 14208
Fordham University, Bronx 10458
Le Moyne College, Syracuse 13214

Ohio
John Carroll University, Cleveland 44118
Xavier University, Cincinnati 45207

Pennsylvania
St. Joseph’s College, Philadelphia 19131
University of Scranton, Scranton 18510

Washington
Gonzaga University, Spokane 99202
Seattle University, Seattle 98122

West Virginia
Wheeling College, Wheeling 26003

Wisconsin
Marquette University, Milwaukee 53233

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