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DAYTON, OHIO 45409

THE UNIVERSITY OF DAYTON BULLETIN

Volume LXXX April, 1969 Number 2

Published by the University of Dayton, 300 College Park Avenue, Dayton, Ohio 45409. Issued five times a year: twice in March, twice in April and once in June. Second class postage paid in Dayton, Ohio.

The University of Dayton Bulletin includes the admissions catalog issue, the undergraduate catalog issue, the graduate catalog issue, the evening session announcements, and the summer session announcements.

The provisions of the various issues of this Bulletin are to be considered directive in character and not as an irrevocable contract between the student and the University. The University reserves the right to make any changes that seem necessary or desirable.

The current number of any of these publications may be obtained by applying to the office of the Provost.
University of Dayton Bulletin

UNDERGRADUATE CATALOG ISSUE 1969-1970

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# Academic Calendar

## FIRST TERM

<table>
<thead>
<tr>
<th>Date</th>
<th>Day</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aug. 28, 29</td>
<td>Thurs., Fri.</td>
<td>Registration</td>
</tr>
<tr>
<td>Aug. 31</td>
<td>Sun.</td>
<td>Parents Day</td>
</tr>
<tr>
<td>Aug. 30-31</td>
<td>Sat., Sun.</td>
<td>Orientation for freshmen</td>
</tr>
<tr>
<td>Sept. 1</td>
<td>Mon.</td>
<td>Labor Day—no class meetings</td>
</tr>
<tr>
<td>Sept. 2</td>
<td>Tues.</td>
<td>Classes begin at 8 a.m.</td>
</tr>
<tr>
<td>Sept. 9</td>
<td>Tues.</td>
<td>Last day for change in schedules</td>
</tr>
<tr>
<td>Sept. 23</td>
<td>Tues.</td>
<td>Last day to withdraw without record</td>
</tr>
</tbody>
</table>
1969-1970

Sept. 24  Wed.  From this date every withdrawal from class for academic difficulty is recorded as F*
Oct. 18  Sat.  Homecoming—Saturday only classes conducted
Oct. 20  Mon.  Mid-term progress grades due in the Registrar’s Office for freshmen only
Nov. 26  Wed.  Thanksgiving recess begins after the last evening class
Dec.  1  Mon.  All classes resume
Dec. 11-17  Examinations in evening classes conducted during final class meeting
Dec. 15  Mon.  Examinations
Dec. 16  Tues.  Examinations
Dec. 17  Wed.  Examinations—Term ends after last examination
Dec. 20  Sat.  Diploma exercises

SECOND TERM

Jan.  2, 3  Fri., Sat.  Registration
Jan.  5  Mon.  Classes begin at 8 a.m.
Jan. 12  Mon.  Last day for change in schedules
Jan. 26  Mon.  Last day to withdraw without record
Jan. 27  Tues.  From this date every withdrawal from class for academic difficulty is recorded as F*
Feb. 23  Mon.  Mid-term progress grades due in the Registrar’s Office for freshmen only
Mar.  4  Wed.  Honors Day
Mar. 25  Wed.  Easter recess begins after the last evening class
Mar. 31  Tues.  All classes resume
Apr. 20-24  Examinations in evening classes conducted during final class meeting
Apr. 20  Mon.  Study Day—no class meetings
Apr. 21  Tues.  Examinations

*First-term freshmen, evidently misplaced in a course, may be allowed, with permission of their Dean, to withdraw from a class up to one week following the date on the mid-term grade report.
1969-1970

<table>
<thead>
<tr>
<th>Date</th>
<th>Day</th>
<th>Event</th>
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</thead>
<tbody>
<tr>
<td>Apr. 22</td>
<td>Wed.</td>
<td>Examinations</td>
</tr>
<tr>
<td>Apr. 23</td>
<td>Thurs.</td>
<td>Examinations. Term ends after the last examination</td>
</tr>
<tr>
<td>Apr. 26</td>
<td>Sun.</td>
<td>Commencement exercises</td>
</tr>
</tbody>
</table>

**THIRD TERM (First Session)**

<table>
<thead>
<tr>
<th>Date</th>
<th>Day</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>May 6</td>
<td>Wed.</td>
<td>Registration</td>
</tr>
<tr>
<td>May 8</td>
<td>Fri.</td>
<td>Classes begin at 8 a.m.</td>
</tr>
<tr>
<td>May 12</td>
<td>Tues.</td>
<td>Last day for change in schedule</td>
</tr>
<tr>
<td>May 19</td>
<td>Tues.</td>
<td>Last day to withdraw without record</td>
</tr>
<tr>
<td>May 20</td>
<td>Wed.</td>
<td>From this date every withdrawal from class for academic difficulty is recorded as F</td>
</tr>
<tr>
<td>June 15-19</td>
<td></td>
<td>Examinations in evening classes conducted during the final class meeting</td>
</tr>
<tr>
<td>June 18</td>
<td>Thurs.</td>
<td>Examinations</td>
</tr>
<tr>
<td>June 19</td>
<td>Fri.</td>
<td>Examinations—Session ends after the last examination</td>
</tr>
<tr>
<td>June 20</td>
<td>Sat.</td>
<td>Examinations—Saturday classes only</td>
</tr>
</tbody>
</table>

**THIRD TERM (Summer Session)**

<table>
<thead>
<tr>
<th>Date</th>
<th>Day</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>June 18, 19</td>
<td>Thurs., Fri.</td>
<td>Registration</td>
</tr>
<tr>
<td>June 22</td>
<td>Mon.</td>
<td>Classes begin at 8 a.m.</td>
</tr>
<tr>
<td>June 25</td>
<td>Thurs.</td>
<td>Last day for change in schedules</td>
</tr>
<tr>
<td>July 2</td>
<td>Thurs.</td>
<td>Last day to withdraw without record</td>
</tr>
<tr>
<td>July 3</td>
<td>Fri.</td>
<td>From this date every withdrawal from class for academic difficulty is recorded as F</td>
</tr>
<tr>
<td>July 27-31</td>
<td></td>
<td>Examinations in evening classes conducted during the final class meeting</td>
</tr>
<tr>
<td>July 30</td>
<td>Thurs.</td>
<td>Examinations—4 p.m. on</td>
</tr>
<tr>
<td>July 31</td>
<td>Fri.</td>
<td>Examinations—Session ends after the last examination</td>
</tr>
<tr>
<td>Aug. 2</td>
<td>Sun.</td>
<td>Diploma exercises</td>
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General Information

THE UNIVERSITY OF DAYTON

The University of Dayton is a medium-sized, private, coeducational school with a growing reputation for academic achievement. Located in the heart of the midwest, it attracts its student body from the local community, the state of Ohio and other Midwestern and Eastern states, and a number of foreign lands. With a full-time student body of seven-thousand-seven-hundred, the University of Dayton is ranked fifth in size among the nation’s Catholic colleges. It includes four schools and the college, offering a large selection of study ranging from art and philosophy to geology and computer science.

Founded more than a century ago by the Catholic teaching order of the Society of Mary (Marianists), the University numbers among its students representatives of many faiths. All students, however, partake of the friendly family spirit for which the campus is known.

The campus itself is located on a seventy-six acre hilltop at the southern edge of the city of Dayton where older and newer buildings are blended into a pleasant setting. A West Campus, just several minutes distant from the Main Campus, also comprises seventy-six acres; it is used primarily for housing of freshman men. An East Campus, on the dividing line between Montgomery and Greene Counties, is the motherhouse for young Marianist Brothers who are doing college work. The East Campus is also the site of Bergamo, a center for ecumenical study and activity.

A well-qualified faculty of laymen, priests, Brothers, and Sisters provides the student the “competent instruction, tempered discipline, and prudent counseling” which the University sees as one of its principal aims.

A placement service for students and graduates; reasonable tuition rates and financial aid plans; varied religious, social, and cultural opportunities; a trimester-type academic calendar providing a number of different study-recess possibilities; and high-caliber intercollegiate and intramural athletic programs are but a few of the “features” which contribute to the character of the University of Dayton.
UNIVERSITY GOALS

Education, which has as its ultimate aim to prepare man for what he must be and what he must do here on earth in order to attain the sublime end for which he was created, is necessarily a lifelong process in which many agencies participate. As one of these agencies, concentrating its efforts in the area of higher education, the University of Dayton professes to provide an academic atmosphere in which Christian principles of thought and action are the essential integrating and dynamic forces impelling the student to pursue, to cherish, and to disseminate what is true, good, and beautiful.

In promoting this formation the University envisions the harmonious development of the student's natural and supernatural capacities and contributes to this objective by helping him to acquire and develop sound religious and moral convictions, broad knowledge and basic intellectual habits, physical vigor and emotional stability, keen awareness of social responsibility, specialized professional attitudes and competencies.

To assure the achievement of these objectives the University endeavors to provide for all its students competent instruction, tempered discipline, and prudent counseling, together with appropriate physical surroundings and opportunities for participation in a variety of curricular and extracurricular activities.

The University is convinced that, by imparting such a well-rounded education to as many students as possible, it is preparing worthy members for both the Church and the State. Moreover, by offering these institutions its physical and human resources for the discovery and dissemination of truth and for the rendering of those specialized educational services that fall within the area of its competence, the University seeks to fulfill as fully as possible the mission to which it is committed by its official motto — Pro Deo et Patria, For God and Country.

HISTORICAL SKETCH

The University of Dayton traces its history to the year 1850 when a modest primary school for boys, known as St. Mary's Institute, was opened in Dayton. Operating the little school was a group of Catholic missionaries who had left their native France just a year earlier to bring their educational work to America. These priests and Brothers were members of the Society of Mary, a religious order founded in 1817 by Father William Joseph Chaminade.
These pioneer Marianists, as members of the Society are called, while conducting their ministry in Dayton fortunately became acquainted with a certain Mr. John Stuart, scion of the royal family of Scotland. Mr. Stuart sold the Marianists his one-hundred-and-twenty-acre “Dewberry Farm” just south of the city — an ideal, hilltop property for a school. The following summer, in 1850, fourteen pupils began classes in the house on Dewberry Farm.

From that humble beginning St. Mary’s Institute grew. Some years later, it became St. Mary’s College, and then, in 1920, the University of Dayton.

Its growth and progress continued. When the school adopted its present name, enrollment was one hundred and seventy-one. In 1937, two years after coeducation was introduced, it passed the thousand mark. Following World War II, enrollment at the University of Dayton — as at most other colleges and universities around the country — expanded rapidly. In 1946, almost three thousand students registered and, in 1967, a record total enrollment of over ten thousand was attained.

Growth in numbers does not necessarily represent progress, of course. While enrollments grew, new programs on both undergraduate and graduate levels were initiated, curricula and methods of presenting them were streamlined. New buildings to house various departments and activities were built at a rapid pace. Professional and educational groups recognized the University’s work with accreditation and approval.

Today, in its one-hundred-and-nineteenth academic year, the University of Dayton includes the College of Arts and Sciences, School of Business Administration, School of Education, School of Engineering, and Technical Institute. In all, forty departments of instruction function on the campus, awarding twenty-six different degrees on the associate, baccalaureate, and graduate levels. These degrees are:

- Bachelor of Arts
- Bachelor of Science
- Bachelor of Fine Arts
- Bachelor of Music
- Bachelor of Social Science
- Bachelor of Science in Home Economics
- Bachelor of Science in Medical Technology
- Bachelor of Science in Business Administration
- Associate in Business Administration
- Bachelor of Science in Education
- Bachelor of Chemical Engineering
- Bachelor of Civil Engineering
- Bachelor of Electrical Engineering
- Bachelor of Industrial Engineering
- Bachelor of Mechanical Engineering
- Bachelor of Technology
- Associate in Technology
- Master of Arts
- Master of Public Administration
- Master of Business Administration
- Master of Science
- Master of Science in Education
- Master of Science in Engineering
- Master of Science in Civil Engineering
- Master of Science in Electrical Engineering
- Master of Science in Mechanical Engineering
ACCREDITATION
The University of Dayton is officially accredited by the North Central Association of Colleges and Secondary Schools. Other official accreditations include those of the State of Ohio Department of Education, the National Council for Accreditation of Teacher Education, the Engineers’ Council for Professional Development (for civil, electrical, and mechanical engineering curricula, and for electronic, industrial, and mechanical engineering technology programs). The University has the approval of the American Medical Association (for its pre-medical program) and of the American Chemical Society (for its programs in chemistry).

In addition to these accreditations and approvals, the University holds institutional memberships in the Association of American Colleges, the American Association of Colleges for Teacher Education, the American Council on Education, the American Society for Engineering Education, the National Catholic Educational Association, the Ohio College Association, the International Council on Education for Teaching, the Association of Urban Universities, the American Association of University Women, and the Association of University Evening Colleges.

UNIVERSITY PROGRAMS
In addition to the regular day session, the University also conducts evening and summer sessions and offers short-term non-credit courses, conferences, and institutes through a Special Sessions program.

College of Arts and Sciences
The College of Arts and Sciences, largest of the University’s six academic units and traditionally the basic unit, includes twenty departments: Biology, Chemistry, Communication Arts, Computer Science, English, Fine Arts, Geology, History, Home Economics, Information Science, Languages, Mathematics, Music, Philosophy, Physics, Political Science, Psychology, Sociology and Anthropology, Theological Studies, and Military Science.
Pre-professional courses are offered in medicine, dentistry, dietetics, optometry, veterinary medicine, pharmacy, law, foreign service, social service, radio and television broadcasting. In cooperation with St. Elizabeth, Good Samaritan, and Miami Valley hospitals, courses are given in medical technology. Through its affiliation with the Dayton Art Institute, the University enriches its offerings in Fine Arts. Affiliation of the Dayton Junior Philharmonic Orchestra with the University provides music students an opportunity for valuable musical practice and experience.

Programs leading to the degrees of Master of Arts or Master of Science are offered in biology, chemistry, English, history, mathematics, philosophy, physics, political science, psychology, information science, and theological studies. The professional degree Master of Public Administration is also offered.

School of Business Administration

The School of Business Administration offers undergraduate majors in accounting, business management, industrial management, marketing, personnel management, and economics. On the graduate level, the School awards a Master of Business Administration degree. Also offered is a two-year course in secretarial studies leading to an associate degree.

School of Education

The School of Education prepares teachers for the elementary and secondary levels and for such specialized fields as art, music, speech, business, health and physical education, and home economics. It conducts retraining and post-graduate programs, and offers graduate programs leading to the degree of Master of Science in Education. These programs are designed to prepare school administrators, school counselors, school psychologists, master elementary teachers, master high school teachers, and educational research specialists.

School of Engineering

The School of Engineering includes the departments of Chemical Engineering, Civil Engineering and Engineering Mechanics, Electrical Engineering, Industrial Engineering, and Mechanical Engineering. The School offers a graduate program leading to the degree of Master of Science in Engineering, Civil Engineering, Electrical Engineering, and Mechanical Engineering.

Technical Institute

The Technical Institute includes the Departments of Chemical Technology, Electronic Engineering Technology, Industrial Engineering Technology, and Mechanical Engineering Technology. Each of these offers a five-term program leading
to the Associate in Technology degree. The Technical Institute also offers a program leading to the Bachelor of Technology degree for those who complete the Associate in Technology program.

**Special Sessions**

Many of the programs presented during the regular day sessions are offered also in the Evening and Summer Sessions, enabling students to work toward degrees on a part-time basis. These sessions are governed by the same policies and regulations prevailing during the Day Session.

In addition, specialized non-credit, adult education courses are offered through Special Sessions. Management development and continuing education programs are conducted for business, industry, government, schools, the professions, and the general public.

**STUDY ABROAD**

The University of Dayton, in cooperation with Loyola University, Chicago, offers a year abroad at the Loyola University Rome Center of Liberal Arts.

**WVUD-FM and UD-CCTV**

Modern communications media, available to all University departments and programs, include WVUD-FM, a radio station covering the Miami Valley area, and an on-campus, closed circuit television operation. Both facilities are housed in the John F. Kennedy Memorial Union.

**RESEARCH INSTITUTE**

As an integral unit of the University, the Research Institute administers sponsored research that the University agrees to perform for commercial organizations and governmental agencies. Research projects concerned with a single discipline are normally performed by the appropriate department of instruction, whereas the larger projects that are primarily multi-disciplinary in character are performed within research laboratories under the jurisdiction of the Research Institute. A strong emphasis is placed on the integration of all research with the instructional
activities of the University, and a concerted effort is made to provide opportunities for undergraduate, as well as graduate, students to acquire experience and training in the methods of research.

DAYTON-MIAMI VALLEY CONSORTIUM

Ten institutions of higher learning in the Miami Valley, among them the University of Dayton, have developed the Dayton-Miami Valley Consortium (DMVC). In so doing, the member institutions seek to increase interinstitutional cooperation, improve curricula, develop new courses and programs, minimize cost, and centralize selected functions, using the most recent technology, emphasizing computers, modern educational technology, and communication media.

Among the benefits enjoyed by the members of the Consortium is that regularly enrolled full-time students at one institution, under certain conditions, may register for credit in courses offered by other Consortium institutions at no additional charge, on a space-available basis.

CALENDAR

The University of Dayton operates on a “Split Third-Term” calendar. This modern calendar, detailed on page 3, comprises a fall and winter term, each of fifteen weeks, and a spring-summer term which is split into two six-week units. The advantages of such a calendar, for varying the vacation periods or for accelerating the study program, are many. A student may enroll for the traditional fall and winter terms and take an expanded summer vacation; or he may add each summer a half term or full term in order to complete graduation requirements sooner. The student who must work to put himself through school will have additional time in the spring and summer for employment; or he may enroll for the spring-summer term and use either the fall or winter term as a vacation period when the employment market is not crowded with other college students. Each student is free, within the broad limits of the calendar, to construct his own study-vacation plan.
1. Fieldhouse
2. Flyers Hangar
3. Albert Emanuel Library
4. St. Joseph Hall
5. Zehler Hall
6. Immaculate Conception Chapel
7. Liberty Hall
8. St. Mary Hall
9. Arcade
10. Chaminade Hall
11. Post Office
13. Services Bldg.
14. Power House-Laundry
15. Services Bldg.
16. Office Bldg.
17. J. F. Kennedy Memorial Union
18. Miriam Hall
19. Sherman Hall
20. Alumni Hall
21. Founders Hall
22. Wohlleben Hall
24. R.O.T.C. Bldg.
25. Marycrest Hall
26. Gosiger Health Center
27. Telescope
28. Stuart Hall
Under construction are an Engineering-Research Building, adjacent to the east end of the stadium, and an apartment building for women, four blocks southwest of the main campus at Alberta St. and Irving Ave. On the west bank of the Miami River, a sports arena is under construction.
LOCATION
The University of Dayton Main Campus is located near Interstate Route 75, just a short distance east from the Exit at Nicholas Road and Stewart St. Directional signs posted throughout the area facilitate travel to the campus.

The West Campus is located on Germantown Street (State Route 4 West) near the intersection of Gettysburg Avenue. City bus routes serve both campuses.

The East Campus, situated on Patterson Road five miles to the east of the Main Campus, houses in Marianist College over two-hundred religious Brothers of the Society of Mary who are students at the University. Bergamo, a center for ecumenical study and activity, is located on the East Campus.

(See map, inside back cover.)

CAMPUS AND BUILDINGS
Principal buildings on the Main Campus, with the date of construction of each in parentheses, are as follows:

Albert Emanuel Library (1928)

The University's main library was erected by the late Victor C. Emanuel, an alumnus, in memory of his father. It and two departmental libraries house two hundred and fifty thousand books and over four thousand journals. Occupying one wing of the building is the internationally famed Marian Library, containing the largest collection of Mariana in the western hemisphere. Construction of a new library building is about to begin.

University Fieldhouse (1950)

Home base of the Dayton Flyers, nationally prominent University basketball team, the Fieldhouse also houses the offices of the Department of Athletics and the Department of Health and Physical Education. University convocations and commencement exercises are conducted in this six-thousand-seat arena. On the west bank of the Miami River, a new sports arena is under construction which will seat over 13,000.
Flyers Hangar (1962)
A smart snack shop and cafeteria, the “Hangar” is a popular between-classes gathering place for students.

Baujan Field (1925)
The University football stadium, with a seating capacity of fourteen thousand, is named for Harry C. Baujan, long-time athletic director at the University.

St. Joseph Hall (1884)
One of the oldest buildings on the campus, St. Joseph Hall has seen many uses. It now houses classrooms and laboratories, faculty offices, and the administration of the Technical Institute.

Chapel of the Immaculate Conception (1869)
Dedicated to the patroness of the University, the main chapel is the focal point of religious life on the campus.

St. Mary Hall (1870)
When it was built, St. Mary Hall was the largest building in the city of Dayton. For many years, practically the entire school was centered in its five floors. Today it houses the University’s principal administrative offices and the Psychological Services Center.

Women’s Gymnasium and Music Building (1874)
Headquarters of the women’s physical education program (first floor) and the Department of Music (second floor), this building was originally a “Play House” and chemistry laboratory.
Post Office (1903)

The University’s postal service includes a federal Post Office contract station, assuring efficient service features for the campus.

Chaminade Hall and Arcade (1904)

Named for the founder of the Society of Mary, Father William Joseph Chaminade, this building provides quarters for the School of Education and the University Bookstore. The Arcade joins Chaminade Hall to St. Mary Hall.

Liberty Hall (1866)

This small, two-story structure is used as a service building.

C. H. Gosiger Health Center (1967)

This new three-story facility is a small hospital with 44 beds, 21 rooms for patients, and the latest in medical accommodations. The staff includes a doctor and five full-time and seven part-time registered nurses.
Zehler Hall (1865)
The oldest of the present campus buildings, Zehler Hall houses faculty offices, the University Printing Service, and some research activities.

Power House (1898)
Heat and power for older campus buildings is supplied through this facility. The University laundry also operates in the Power House.

John F. Kennedy Memorial Union (1964)
The “University Living Room” includes a little theater, cafeteria and snack shop, ballroom, art galleries, lounges, bowling alleys, and other “union” type facilities.

Miriam Hall (1965)
Construction of this modern classroom and office building was completed in 1965 for the School of Business Administration. It was named in memory of a great philanthropist, Miriam Rosenthal, without whose labor and enthusiasm the funds for erecting the edifice would not have been available.

Sherman Hall of Science (1960)
Honoring the late John Q. Sherman, distinguished Dayton industrialist and philanthropist, Sherman Hall includes the administrative offices of the College of Arts and Sciences, classrooms and laboratories of departments of Biology, Physics, Home Economics, Psychology, and Mathematics.
Wohlleben Hall (1958)

The departments of Chemistry, Chemical Engineering, and Geology, and administrative offices of the Research Institute are located in Wohlleben Hall, named for the late Brother William J. Wohlleben, Marianist Brother who introduced chemistry and chemical engineering studies to the campus. It also houses the office of the Dean of the School of Engineering.

Alumni Hall (1924)

This hall is the residence for members of the Society of Mary.

Founders Hall (1954)

Honoring the founders of the University, this men’s residence hall is conveniently located in the center of the campus.

ROTC Building (1952)

Regarded as the finest ROTC facility in the Army’s Twentieth Corps area, which includes Ohio, Kentucky, and West Virginia, the building is the headquarters of the Department of Military Science. Among its outstanding features is a large indoor rifle range.

Engineering-Research Building (1969)

The newest building on campus, this facility will be occupied in the fall of 1969 by the Departments of Electrical Engineering, Electronic Engineering Technology, Industrial Engineering, Industrial Engineering Technology, and Mechanical Engineering and will house a broad spectrum of Research Institute activity.

Mechanical Engineering Laboratory (1948)

Laboratories of several engineering departments are located in this building which was originally a drill hall at Camp Perry, Va. It was dismantled and brought to Dayton, rebuilt and bricked.

Marycrest (1962)

Marycrest is the University’s first residence hall for women. It is home for more than nine hundred women students, and has its own cafeteria, lounge and chapel. Several blocks from campus, a high-rise apartment house for women is under construction.

Stuart Hall (1963)

This men’s residence hall provides modern accommodations for some seven hundred students. Its name honors John Stuart, from whom the pioneer Marianists obtained the original University property.
West Campus, University Hall

In 1960, the University acquired through the federal government surplus program a large property in the western section of Dayton which had been a part of the vast Veterans Administration Center. The property included a large hospital building. The building was converted into University Hall, and the entire property, including housing facilities, cafeteria, classrooms, and indoor and outdoor recreational areas, is known as the West Campus. Residents of this campus are primarily freshman men. Regularly scheduled busses bring students to and from the Main Campus throughout the day and evening hours.

East Campus, Marianist College

Marianist College (1961) is located on the eastern outskirts of Dayton. It is the house of studies for religious members of the Society of Mary. These students pursue their collegiate studies, some on the East Campus, some on the Main Campus. On the East Campus are also located a dormitory, classroom and administration building (1915); a gymnasium and recreation building called Sieben Hall (1961); a residence (1926) for Brothers; and a retreat for students and men called Marianist Retreat House (1911). The Bergamo Center for Christian Renewal (1966) is also located on the East Campus.

RESERVE OFFICERS TRAINING CORPS (ROTC)

The Department of Military Science conducts the Reserve Officers Training Corps (ROTC) program on the campus, providing instruction in general military
subjects applicable to all branches of the Army. The purpose of the Reserve Officers Training Program is to develop selected college educated men for positions of responsibility as officers in the active Army and its Reserve components. The program enables qualified college graduates to fulfill their normal two year active duty obligation as commissioned officers.

The ROTC Course is designed: to implant habits of orderliness and precision; to encourage a high degree of personal honor, self-reliance, and leadership; and to provide the means of becoming a better informed citizen on matters of national defense. The program produces junior officers who by their education, training, and inherent qualities of leadership are suited to continued development as officers in the Army of the United States.

The ROTC program is divided into a basic and an advanced course. All male students who meet the qualifications may enroll in the basic course during the freshman and sophomore years. The basic course emphasizes military subjects relating to national security, military history, leadership techniques, and military science.

Admission to the advanced course, a two-year program, is on an optional-selective basis. Only students who have demonstrated a potential for becoming effective officers are selected for this training. The advanced instruction includes practical exercises in tactical training, management, military and leadership techniques and the exercise of command. Successful completion of the advanced course qualifies the student for commission as a Second Lieutenant in the United States Army. A student who maintains academic and performance standards that place him in the upper third of his class may qualify for designation as a Distinguished Military Graduate and for a Regular Army commission upon graduation.

Students enrolled in military courses are issued all appropriate uniforms, insignia, textbooks and other equipment without cost. Those in the advanced course received $50.00 a month. While in attendance at summer camp, required of all advanced students, they receive approximately one hundred and seventy dollars a month.

A flight training program is offered through the Army ROTC. Flight training (at government expense) is an extracurricular activity conducted by an FAA approved flying school near the college. The instruction includes 35 hours of ground training and more than 36 hours of flight instruction.

Subject to deferment quota limitations, which are prescribed by the Selective Service Act, selected ROTC students are deferred from induction into the Armed Forces as long as they remain in good standing in their academic and military courses. Selected ROTC graduates may be granted a delayed call to active duty to pursue an advanced degree.
II Student Life and Services

RESIDENCE FACILITIES

Men
It is the University’s policy that all male freshmen live in one of the men’s residence halls unless their home is within commuting distance, or unless all of the rooms are occupied.

Application/contracts for residence hall accommodations and instructions are forwarded by the Office of Admissions to all new students upon their official acceptance to the University of Dayton. The instructions should be read and followed carefully.

All rooms are double occupancy rooms with the exception of a number of triple occupancy rooms at University Hall. The University provides adequate furnishings for comfortable living. Bed linens are supplied and laundered, but students must furnish their own desk lamps, towels, wash cloths, and blankets.

A professional staff and a student staff coordinate with the Office of the Dean of Men and the Director of Housing in administering the management and personnel functions of the Halls. It is the responsibility of this staff to help each resident realize a total educational experience while at the University.

A Chaplain resides in each hall and is available for counseling or religious direction.

The University maintains a Housing Office for those students who are unable to obtain accommodations in one of the men’s residence halls and for those upper-classmen and transfer students who prefer not to live in one of the men’s halls.

For aid in securing accommodations off campus, please contact by mail or in person the Director of Housing in care of the University of Dayton.

Questions concerning housing information in any of the men’s residence halls should be directed to the Housing Office at the University of Dayton.
Women

Housing for women students at the University of Dayton is administered by the Office of the Dean of Women. University policy requires that freshman and sophomore women who do not live within commuting distance secure housing in Marycrest Hall on the University campus. Upperclass women are assigned to the women's apartment building or to University-approved off campus housing. Communications regarding women's housing should be addressed to the Dean of Women.

Application/contracts for residence hall accommodations and instructions are forwarded by the Office of Admissions to all new students upon their official acceptance to the University. Students should follow the instructions carefully and return the application/contract promptly. Upperclass transfer students apply directly to the Dean of Women's office for assignment to off campus housing.

Rooms at Marycrest are double or triple. Adequate closet space and comfortable furnishings are provided. Bed linens are supplied and laundered, but students must provide desk lamps, towels, wash cloths and blankets.

A professional staff and a student staff cooperate with the Office of the Dean of Women in managing the Residence Hall and providing student services. A Chaplain appointed by the University maintains an office in the Hall and is available for counseling. An elected Hall Council represents student opinion and initiates programs for the residents.

DINING FACILITIES

The University's food service is operated in four principal facilities. The main cafeteria is located in the Kennedy Memorial Union and contains a dining area seating four hundred students. Adjacent to this facility in the Union is a snack bar where light lunches may be obtained.

Marycrest cafeteria is located in the women's residence hall and is a smartly decorated modern dining room.

The University Hall cafeteria, located on the West Campus, serves the students residing in this residence hall.

The Flyers Hangar serves light lunches consisting of sandwiches, salads, soups, pastries, and beverages. It is a popular meeting place for the student body during the day and the early evening hours.

All food service on both campuses is operated under the direction of a professional manager, with qualified assistants managing each of the separate facilities.

Well-rounded, appetizing meals are served attractively in quantities appropriate to the needs of still growing young men and women. Food service is of
such proportions at the University that more than a million meals a year are served in the four cafeterias.

**STUDENT ORGANIZATIONS**

The University of Dayton campus abounds in student organizations. Any student from any part of the world, no matter what his interest, will find at least one group on the campus from which he will derive benefits.

Included are student government units such as the Student Government and the Central Women's Organization; many religious clubs, social groups, local University of Dayton fraternities and sororities; co-curricular or academic organizations from the Art Club and Debate Team to the honor societies in the various colleges and schools; and there are musical, military, and athletic clubs—all designed to help the student further his educational, religious, or social well-being while at the University. Students also publish a bi-weekly newspaper, a quarterly literary magazine, an annual pictorial review, and other special interest publications.

Each of the campus clubs elects its own officers and has a member of the faculty as adviser.

At the beginning of each academic year, students are issued a handbook in which these organizations are listed. During the regular orientation week early each year, new students are invited to become members of the various clubs.

**LITURGICAL LIFE**

As a Catholic college, the University of Dayton places great emphasis on the liturgical life of the student. All Catholic day students are strongly encouraged to attend a weekly chapel service on the campus at which Mass is offered and opportunities for the reception of the sacraments are provided. Regular attendance, it is felt, insures the integration of thought and action, of belief and practice, which is envisioned by the University in its professed purposes. At the same time, by enabling the students to pray and worship together, a spirit of unity and solidarity is fostered among them, thus creating a genuine Christian atmosphere on the campus.

Mass is celebrated in the Chapel of the Immaculate Conception (the main chapel) five times each morning during the week and six times on Sunday. At least one Mass each day (morning or evening) is offered in the chapels of the residence halls. Confessions are heard before, during, and after all Masses in the main chapel each day, and before the daily Mass in all the residence halls.

The Chaplain and Associate Chaplain of the University supervise all spiritual group activities of the student body and of all religious organizations. The many
priests on the faculty, under the direction of the Chaplain, are available at all times for counseling on moral, religious, or social matters.

TESTING
The University Psychological Services Center provides a complete testing program for the students of the University, and for industry and the community at large. Besides this local service, the Testing Center conducts testing programs for Catholic elementary and high school students in fifteen States and is under contract to the U.S. Government to administer the National Defense Education Act (N.D.E.A.) tests in secondary private schools in thirty-eight States.

COUNSELING AND GUIDANCE
In addition to the testing services for University full-time students which are used to help the student identify his talents and aptitudes and thus guide him into proper fields of study, the Psychological Services Center offers the student the opportunity to seek advice in personal, social, and academic problems which he may encounter.

Well-qualified psychologists direct and participate in the work of the Center—work which goes beyond the campus to provide counseling, guidance, and other psychological services to schools, business, and industry.

Specific counseling in all study areas is provided by the deans of the schools and colleges, by the departmental chairmen, and by individual faculty members who are available throughout the day, subject to their administrative and teaching schedules.
STUDENT LIFE AND SERVICES

PLACEMENT

The University maintains a placement office which energetically assists students in securing part-time work to help them financially while attending school. Details of this operation are treated under "Financial Aids" below.

In addition to the efforts in behalf of students, the placement office also maintains an exceptional liaison with business and industry throughout the nation, and arranges interview sessions between recruiters and senior students, assisting the graduating student in his choice of prospective employment or association. This same service is also provided the University's alumni without charge.

STUDENT HEALTH SERVICES AND INSURANCE

Centrally located in the C. H. Gosiger Health Center, the University Health Service provides a well-staffed and well-equipped operation to safeguard the health of the student. The University physician, on call at all hours, is on duty six hours daily for advice and treatment. A staff of professional nurses works around the clock.

Full-time students may come to the Health Service for out-patient treatment by the staff on duty at the time, and no restriction is made on the number of visits. Ordinary medications are provided without charge when ordered by the attending physician.

Students whose permanent residence is not within commuting distance may avail themselves of the in-patient service of the infirmary at a nominal cost. When the case warrants, students are transferred to local hospitals.

Infirmary or hospital costs are covered for the most part by the highly recommended student insurance program which is available to all full-time students. Blue Cross and Blue Shield family coverage expires when the student reaches age nineteen, and this student insurance plan continues much of this coverage at a nominal rate. (Full information on this program may be obtained by writing to the Office of Student Accounts.)

STUDENT IDENTIFICATION CARDS

At the beginning of the school year, each full-time student secures a student identification card (I.D. card) which he carries with him at all times. Provision for obtaining the card, complete with the student's photograph, is made during registration procedures. The I.D. card is vital and obligatory for the student, since it is necessary for participating in student elections or other activities for which official identification is necessary. It must be shown in order to obtain tickets to certain athletic events.
PARKING
Parking facilities are extremely limited on the Main Campus. Those that are available are restricted to commuting students who live some distance from the campus, and all such parking is by permit only. Students may apply for permits. Students residing on the West Campus are permitted to have cars and to park them on campus.

CULTURAL ACTIVITIES
Principally through its very successful University Arts Series, but as well through various other programs throughout the year, the University of Dayton provides for the student well-planned and coordinated opportunities for association with high-level intellectual and cultural ideas and personalities.

Among renowned guests to appear on the University Arts Series have been Contralto Marian Anderson, Poets Louis Untermeyer, John Ciardi, and W. H. Auden, Philosopher Mortimer Adler, Publisher Frank Sheed, Illinois Senator Paul Douglas, the Roger Wagner Chorale, the Dayton Civic Ballet, Journalists Drew Pearson, Marquis Childs, Ralph McGill, and Harry Golden. The Dayton Philharmonic Orchestra, the University Concert Band and the University Choir appear each year.
Art Series programs are given on the campus in mid-day, making attendance convenient for the student. Since the series, which has been extremely well-received, is supported through the student activities fee, there is no admission charge for the individual programs.

In addition to this series, many other continuing programs are offered for the student each year. Among these are the regular productions of the talented University Players; the Evening Religion Series, bringing to the campus outstanding theological scholars; annual lectures sponsored by the Department of History in which known historians are brought to the University; an interesting variety of musical and discussion programs on WVUD-FM; and lectures by outstanding men and women in many other fields of interest.

Many outstanding musical, dramatic, and artistic programs are given throughout the year in the Dayton community. Most offer students rates and are well advertised on the campus.
SOCIAL LIFE
Realizing that "all work and no play" will indeed dull the young student, the University of Dayton provides and encourages participation in a wide variety of social functions.

Small informal social events are held on the campus almost every weekend. Bigger, more formal occasions, such as the Homecoming Dance, or the Junior Prom, are usually held off the campus. Social functions are attended by members of the faculty.

RECREATION
All campuses of the University are equipped with recreational areas where, over and above intramural programs on an organized basis, the student may take part in recreation. Each residence hall has its own recreational areas; the Fieldhouse on the Main Campus and the gymnasium on the West Campus have facilities for individual calisthenics and similar programs. The new Kennedy Union includes bowling alleys, browsing rooms, music and art rooms, Tennis courts, outdoor and indoor basketball courts, baseball diamonds, and playfields are available on both campuses. During the winter months, skiing, tobogganing, and ice skating in nearby parks are popular with students. Dayton has a number of fine theaters and several campus organizations frequently present recent motion pictures in campus auditoriums as fund-raising ventures; these are well attended.
ATHLETICS
Participation in athletics is an integral part of the educational development that the University strives to achieve for all its students. This applies both to intercollegiate and intramural athletics.

All students are encouraged to engage in some form of athletic activity according to their ability. This is particularly emphasized for students majoring in physical education, for whom the various athletic activities have special importance in view of the career for which they are preparing.

The University feels that athletics, intercollegiate and others, cultivate a sense of unity which is one of the important factors in student morale.

Many persons throughout the country have come to know the University of Dayton through the accomplishments of its varsity team, the Dayton Flyers. The University also engages in intercollegiate competition in football, baseball, tennis, golf, soccer, ice hockey, and field hockey.

There are highly competitive intramurals in all sports including golf, tennis, softball, touch football, basketball, and volleyball.

THE STUDENT HANDBOOK
As a member of the University family, the student will desire more detailed information than that given here. This information is given in a separate publication called THE STUDENT HANDBOOK. Students and parents are strongly urged to familiarize themselves with the contents of this publication.
II Admissions

REQUIREMENTS FOR ADMISSION

For admission to a freshman class, the applicant must submit a written application, a satisfactory high school record, and results of the Scholastic Aptitude Test (mathematics and verbal) of the College Entrance Examination Board. The application must be on a form which the prospective student may obtain by writing the Director of Admissions.

A student is allowed to register only after all credentials have been received and evaluated and a registration permit has been issued.

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

ENTRANCE UNITS REQUIREMENTS

<table>
<thead>
<tr>
<th>DEGREES</th>
<th>English</th>
<th>Language</th>
<th>Algebra</th>
<th>Geometry</th>
<th>Trigonometry</th>
<th>Mathematics</th>
<th>Chemistry</th>
<th>Physics</th>
<th>Science</th>
<th>History</th>
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<td>Arts degrees</td>
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<td>Business degrees</td>
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<td>music and speech</td>
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<td>T.I. degrees</td>
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<td>Police Administration</td>
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</table>

*No trigonometry is required for Medical Technology and Home Economics degrees.

**Physics also required for those planning a major in Physics, Chemistry, Mathematics, and Computer Science.
All exceptions to the foregoing admission rules must be approved by the Academic Dean.

The University bases its acceptance of a prospective student on a satisfactory high school record, recommendation of the high school principal, and the results of the Scholastic Aptitude Test.

In addition to the above the University of Dayton requires all accepted students to take the English, Mathematics II, and Language Achievement Tests of the C.E.E.B. before June 1. These tests are used for placement only. Those who have not taken a language in high school do not take the Language Achievement Test.

**ACHIEVEMENT TESTS**

Students who are accepted to the University of Dayton must take the following Achievement Tests for *placement only*, sometime prior to June 1.

<table>
<thead>
<tr>
<th>COLLEGE OR SCHOOL</th>
<th>ENGLISH</th>
<th>MATH (LEVEL II)</th>
<th>FOREIGN LANGUAGE</th>
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<tbody>
<tr>
<td>Arts</td>
<td>required</td>
<td>required for those seeking registration in calculus during their first term</td>
<td>required</td>
</tr>
<tr>
<td>Business</td>
<td>required</td>
<td>optional</td>
<td></td>
</tr>
<tr>
<td>Education</td>
<td>required</td>
<td>required for those seeking registration in calculus during their first term</td>
<td>required for secondary teaching field in languages only</td>
</tr>
<tr>
<td>Engineering</td>
<td>required</td>
<td>required for those seeking registration in calculus during their first term</td>
<td></td>
</tr>
<tr>
<td>Sciences</td>
<td>required</td>
<td>required for those seeking registration in calculus during their first term</td>
<td>optional</td>
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<tr>
<td>Technical Institute</td>
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</tbody>
</table>

The University admissions standards and policies are free of discrimination on the grounds of race, creed, color, and national origin.
ADVANCED PLACEMENT

The University accepts the advanced placement program offered to secondary schools under the auspices of the Advanced Placement Committee of the College Entrance Examination Board.

The University will give not only advanced placement but also credit to students enrolled in the program, provided that such students have taken the tests provided and scheduled by the College Entrance Examination Board and have received a favorable interpretation grade from the Educational Testing Service.

Students desirous of receiving advanced placement under this program are to arrange that test scores be sent to the University Office of Admissions, which will grant advanced standing with or without credit in the appropriate subject areas. Credit, when given, will be recorded as Em credit and will be determined by the interpretation grade:

- For a score of "5", two terms of advanced standing with credit.
- For a score of "4", one term of advanced standing with credit.
- For a score of "3", one term of advanced standing without credit.

Scores below "3" do not entitle the applicant to either credit or advanced standing.

High school students in the senior year may under certain conditions take courses at the University of Dayton for advanced standing with credit. Interested students should seek further details from the Registrar.

TRANSFER STUDENTS

The admission of transfer students is controlled by a special Committee on Admissions comprising the Provost of the University, the Director of Admissions, and the Dean of the School concerned.

In addition to the credentials required of all applicants, a transfer student must present an official transcript of credits and a statement from the school last attended confirming that he was honorably dismissed and that the school would be willing to enroll him again.

The University, through the executive officer of the Admissions Committee, will accept transfer students in the following categories:

1. students who have established credit in less than thirty-two semester hours work (or the equivalent) with a grade point average of 2.00 or higher out of a possible 4.00;
2. students who have established credit in not less than thirty-two semester hours work nor more than sixty-three semester hours work (or the equivalent) with a grade point average of 2.25 or higher out of a possible 4.00;
3. students who have established credit in sixty-four semester hours work
(or the equivalent) with a grade point average of 2.50 or higher out of a possible 4.00. (Grade point averages will be calculated on the basis of all work taken and in University of Dayton equivalents.)

Transfer students who cannot meet the above requirements but who feel that, by reason of extraneous circumstances, their cases merit additional consideration may have their applications referred to the Committee on Admissions for final decision. Such referrals must be made to the Committee no later than four weeks prior to the first day of registration for the term in which enrollment is desired.

APPLICATION AND ADMISSIONS PROCEDURES

The prospective student should write to the Director of Admissions requesting application forms. This request should be made at the beginning of the applicant's senior year in high school.

After completing the forms, the applicant must affix a check or money order for a non-refundable application fee, made payable to University of Dayton, and present the application to his high school principal and/or high school counsellor.

The principal and/or high school counsellor completes those portions of the forms so designated (recommendation of the applicant, and official records of high school performance) and mails them to the University.

If the applicant is in the upper third of the class and has 1000 on Junior SAT his application is given immediate attention by the Committee on Admissions. If he is not within the upper third of the class or does not have 1000 on Junior SAT, his application is held until he has completed seven semesters of high school and grades are received, as well as Senior SAT scores.

After the Committee on Admissions studies the application, the applicant is notified if he has been found "acceptable" or not. Those "acceptable" must, on or before the date specified on the acceptance, forward the required deposit—the applicant's assurance to the University that he intends to register.

Prospective students who have designated on their applications that they wish to live in campus housing will receive a contract for such accommodations. This must be properly filled in, and a deposit made. All freshmen must live on the campus, if room is available.

These two latter deposits are applicable to the student's bill at the first registration, except for the housing deposit which is retained to cover possible damage to his room during occupancy.

Let it be noted that the provisions of this bulletin are not an irrevocable contract between the student and the University. The University reserves the right to change any provision or requirement at any time within the student's term of residence. The University further reserves the right to ask the student to withdraw for cause at any time.
DEADLINE DATES FOR APPLYING

September Term ....................................................... July 1
January Term ............................................................. November 20
May Term ................................................................. March 15
June Term ................................................................. May 15

Applications which arrive after the deadline dates mentioned above will be considered for the following term.

NO EXCEPTIONS WILL BE MADE!

EDUCATION OF VETERANS

All departments of the University have been approved by the Veterans Administration for training under United States Code, Title 38, Chapters 31, 33, 34, and 35. Credits earned during military service are accepted after an evaluation in terms of the University's standards and the course of study for which the veteran applies. An adequate counseling service is available under the direction of the Veterans' Adviser whose office is located in Room 108, St. Mary Hall.

PHYSICAL EXAMINATIONS

Physical examinations are required of all new full-time students. These examinations are to be performed by a private physician of the student's choice and the results submitted on the special form supplied by the Office of Admissions. The form must be returned, completed, to the admissions office for transmittal to the University Health Service to fulfill admission requirements. This must be done prior to registration. Physical examinations are not required of Police Administration students who are already in police service.

FOREIGN STUDENTS

All foreign students must comply with the admission requirements. In addition, the following items must be in order.

1) the official credentials must be in an official English translation.
2) the results of the TOEFL test must be submitted.
3) the student health record must be on file on the University of Dayton health form.

Foreign students must deposit $2,500 with the Treasurer of the University of Dayton before the form to obtain a student visa can be issued.

Arrangements to see the Foreign Student Advisor must be made within 24 hours of the student's arrival on campus.

Other pertinent facts may be found in the pamphlet "Information for Prospective Foreign Students." This pamphlet may be obtained by writing the Director of Admissions.
V  Financial Information

GENERAL POLICY
The tuition and fee charges of the University are set at the minimum permissible for financially responsible operation, and in general, these charges are less than the actual costs incurred. Gifts and grants received through the generosity of industry, friends, and the alumni of the University help to bridge the difference between income and costs. When need arises, the trustees of the University reserve the right to change the regulations concerning the adjustment of tuition and fees at any time, and to make whatever changes in the curricula they may deem advisable.

All fees and tuition are payable in full at the time of registration for the term, unless arrangements for payment by some deferred payment program are made with the Office of Student Accounts in advance of each registration.

No student will be registered for a new term, unless the account for the previous term is settled.

Transcript of credits and honors of graduation will be denied students whose bills have not been paid.

All checks should be made payable to the UNIVERSITY OF DAYTON.

A payment of tuition and fees made at the time of registration with a bad check will result in the cancellation of the student’s registration until the tuition and fees and penalty are properly paid. The penalty fee is $20.00.

The penalty for passing bad checks in any other area on the campus is $5.00.

Tuition reductions are granted to some unmarried children from the same family attending classes, full-time, simultaneously, and not on scholarship, if certain conditions are fulfilled. Inquiries regarding such reductions should be made through the Office of Student Aid in advance of each registration.
EDUCATIONAL CHARGES

May, 1969 through June, 1970

Application Fee, payable once, upon application ......................... $ 10.00
Matriculation Fee, payable once by Full Time Students, at entrance ......................................................... 10.00
Testing and Counseling Fee, payable once at entrance .................. 25.00
Freshman Orientation Fee .................................................. 35.00

FULL TIME COMPREHENSIVE ACADEMIC CHARGE, I & II TERMS

Undergraduate Student, per term ........................................ 700.00
Full Time Student Teacher (12 credit hours or less), including the supervising teacher fee, per credit hour ...................... 35.00
Full Time Student Teacher (13 or more credit hours), including the supervising teacher fee .................................. 700.00
Full Time Fine Arts Student, when taking art courses at Dayton Art Institute simultaneously, per credit hour .......... 35.00
Basic University Fee—Students carrying 12 or more hours at UD or 12 or more hours combined at UD and/or an affiliated institution and Full Time Student Teachers, per term ................................................. 50.00

Applied Music Fees — please refer to page 287

PART TIME UNDERGRADUATE STUDENTS, I & II TERMS

AND ALL UNDERGRADUATE STUDENTS, EACH SPLIT TERM

Registration Fee, each Registration ...................................... 2.00
Tuition, per credit hour ...................................................... 35.00
Tuition per Laboratory clock hour ...................................... 22.00
Laboratory Materials and Equipment Fee each term, where applicable ....................................................... 15.00
Laboratory Breakage Deposit, each term .............................. 5.00 to 10.00
Basic University Fee....$4.00 per credit hour—not to exceed $20.00 per term

OTHER CHARGES

R.O.T.C. Uniform Deposit, payable once each year, refundable ... $ 20.00
Service Charge for Change of Schedule per course ................... 2.00
Late Registration Service Charge ........................................ 5.00 to 15.00
Proficiency and Final Make-up Examinations ........................................ 5.00
Graduation Fee, Undergraduate and Graduate Students .................. 26.00
Books and Stationery ........................................................................ Variable

FULL-TIME STUDENTS
A student with an academic schedule of at least twelve lecture credit hours is considered a full-time student. Students from outside the Dayton area must be full-time students. With this status and upon payment of the tuition and applicable fees he is entitled to the benefits of the various activities.

PART-TIME DAY STUDENTS
A day student with an academic schedule of six to eleven lecture credit hours is considered a part-time student.

SPECIAL STUDENTS
Special students, non-matriculated students, and auditors are subject to the various expenses as outlined above (see pages 46 and 47).
CANCELLATION AND REFUNDS
Cancellation will be allowed only after the completion of the proper withdrawal forms. Students who discontinue class attendance without officially completing the withdrawal procedures during the cancellation period will be responsible for the full amount of the applicable tuition and fees. Those called to military service before the end of a given term should consult with the Bursar of the University concerning possible credits and financial adjustments.

During the four-week cancellation period for the first and second terms, the tuition charges will be made according to the following schedule:

- During first week of classes: 20%
- During second week of classes: 40%
- During third week of classes: 60%
- During fourth week of classes: 80%
- During or after fifth week of classes: 100%

During the two-week cancellation for each session of the split term the tuition charges will be made according to the following schedule:

- During the first week of classes: 35%
- During second week of classes: 70%
- During or after third week of classes: 100%

The special course and laboratory fees are not refundable nor is the University Fee for student activities.

RESIDENCE FACILITIES FEES
Students from outside the Dayton area reside on the campus unless the residence halls are fully occupied. Meals are provided in the cafeteria assigned to service the particular residence halls. A seven day meal service is offered (three meals a day, Monday through Saturday; Sunday breakfast and noon dinner). The following rates include room rental, meal service, and bed linens; vacation periods are excluded.
### CHARGES FOR ROOM AND BOARD

**MAY, 1969 THROUGH APRIL, 1970**

<table>
<thead>
<tr>
<th></th>
<th>1st Split Term</th>
<th>2nd Split Term</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>May-June, 1969</td>
<td>June-Aug., 1969</td>
</tr>
<tr>
<td>Note 1</td>
<td></td>
<td>Note 1</td>
</tr>
<tr>
<td></td>
<td>1st Term</td>
<td>1st Term</td>
</tr>
<tr>
<td></td>
<td>Sept.-Dec., 1969</td>
<td>Jan.-April, 1970</td>
</tr>
</tbody>
</table>

### FULL TIME STUDENTS—WOMEN

<table>
<thead>
<tr>
<th>Room Type</th>
<th>May-June, 1969</th>
<th>June-Aug., 1969</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single Occupancy</td>
<td>$75.00</td>
<td>$75.00</td>
</tr>
<tr>
<td>Double Occupancy</td>
<td>$60.00</td>
<td>$60.00</td>
</tr>
<tr>
<td>Triple Occupancy</td>
<td>$385.00</td>
<td>$385.00</td>
</tr>
<tr>
<td>Room Deposit to Cover</td>
<td>$10.00</td>
<td>$10.00</td>
</tr>
<tr>
<td>Total (7 Day Meal Ticket)</td>
<td>$435.00</td>
<td>$435.00</td>
</tr>
</tbody>
</table>

### FULL TIME STUDENTS—MEN

<table>
<thead>
<tr>
<th>Room Type</th>
<th>May-June, 1969</th>
<th>June-Aug., 1969</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single Occupancy</td>
<td>$75.00</td>
<td>$75.00</td>
</tr>
<tr>
<td>Double Occupancy</td>
<td>$60.00</td>
<td>$60.00</td>
</tr>
<tr>
<td>Triple Occupancy</td>
<td>$365.00</td>
<td>$365.00</td>
</tr>
<tr>
<td>Room Deposit to Cover</td>
<td>$10.00</td>
<td>$10.00</td>
</tr>
<tr>
<td>Total (7 Day Meal Ticket)</td>
<td>$390.00</td>
<td>$390.00</td>
</tr>
</tbody>
</table>

### MEAL TICKETS—DORMITORY STUDENTS

<table>
<thead>
<tr>
<th>Meal Type</th>
<th>1st Term</th>
<th>2nd Term</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 Day Meal Service</td>
<td>$65.00</td>
<td>$65.00</td>
</tr>
<tr>
<td>7 Day Meal Service</td>
<td>$85.00</td>
<td>$85.00</td>
</tr>
</tbody>
</table>

### OFF-CAMPUS HOUSING—U.D. OWNED

<table>
<thead>
<tr>
<th>Room Type</th>
<th>Low</th>
<th>Med.</th>
<th>High</th>
<th>Low</th>
<th>Med.</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td>Room Only</td>
<td>$65.00</td>
<td>$70.00</td>
<td>$75.00</td>
<td>$180.00</td>
<td>$195.00</td>
<td>$210.00</td>
</tr>
<tr>
<td>Room Deposit to Cover</td>
<td>$25.00</td>
<td>$25.00</td>
<td>$25.00</td>
<td>$25.00</td>
<td>$25.00</td>
<td>$25.00</td>
</tr>
</tbody>
</table>

### MEAL TICKETS—OFF-CAMPUS FULL TIME STUDENTS

<table>
<thead>
<tr>
<th>Meal Type</th>
<th>1st Term</th>
<th>2nd Term</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 Day Meal Service</td>
<td>$65.00</td>
<td>$65.00</td>
</tr>
<tr>
<td>7 Day Meal Service</td>
<td>$85.00</td>
<td>$85.00</td>
</tr>
</tbody>
</table>

**Note 1:** Applies only to Full Time students who attended first and/or second term(s).

### ALL OTHERS—ROOM AND BOARD

<table>
<thead>
<tr>
<th>Room Type</th>
<th>Weekly Rate (7 Day Meal Ticket)</th>
<th>Weekly Rate (5 Day Meal Ticket)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single</td>
<td>$36.00</td>
<td>$32.00</td>
</tr>
<tr>
<td>Double</td>
<td>$30.00</td>
<td>$26.00</td>
</tr>
</tbody>
</table>

**Note:** The charges for residence facilities will be increased for the year 1969-70. At this time the charges have not been determined.
Students who cannot secure accommodations in the residence halls because of limited space may make arrangements to reside in approved housing in the vicinity of the University through the Housing Office. University cafeterias are closed on Sunday evening. However, vending areas are available in the residence halls for light lunches.

During the Christmas vacation, students may continue to reside in residence halls at a nominal charge. During the Thanksgiving and Easter vacation periods, students may reside in their rooms without any additional charge. The meal ticket is honored only during the Thanksgiving vacation period.

Request for accommodations in the residence halls should be addressed to the Director of Campus Housing for men or the Dean of Women for women.

Applications for room reservations must be accompanied by a fifty-dollar deposit of which forty dollars will be credited to the student's bill for the first session of attendance. The remaining ten dollars will be held as a deposit against any room damage which may result during the occupancy.

Students who cancel room reservations prior to June 15 (for fall term occupancy), December 1 (for second term occupancy), April 1 (for the first split term occupancy), or June 1 (for the second split term occupancy), will be entitled to a refund of the housing deposit. A fifty-dollar housing deposit is required for both the fall term applicants or the second term applicants. A twenty-five dollar deposit is required for each of the two split third terms.

Those who cancel reservations after these dates forfeit the entire deposit.

All students living in residence halls are required to observe University regulations in general along with the specific requirements of each hall, and will be held responsible for any damage to their rooms during occupancy. The cost for any unnecessary damage to the various community areas (lounges, utility rooms, halls, etc.) will be pro-rated to all residents of the area of damage in cases where individual responsibility is not ascertained.

STUDENT FINANCIAL AID
The financial aid program at the University of Dayton is designed to help the qualified student who is in need of financial assistance to continue his college education. Financial assistance at the University of Dayton is available in the form of scholarships, loans, grants, tuition reductions, and part-time employment. In most instances a student will be offered some combination of assistance which will include two or more of the above forms.

SCHOLARSHIPS
The scholarship program at the University of Dayton has been established to recognize excellent high school achievement by incoming freshman students and
outstanding performance by upperclass students in their academic pursuits along with evidenced service to the University.

Scholarships available to incoming freshmen include:

**UNIVERSITY COMPETITIVE SCHOLARSHIPS** Available to students in all curricula. Scholarship recipients are selected on the basis of: 1) high school academic performance; 2) SAT scores; 3) activities; 4) service to the community, church and/or school; and 5) earnings and savings.

**DAYTON AREA AND MARIANIST SCHOLARSHIPS** Offered to the first and second ranking senior of Dayton area and Marianist high schools with enrollments of one thousand or more; and to the first ranking senior in schools of less than one thousand students. Full tuition for eight consecutive terms is covered.

**BUSINESS, INDUSTRY SCHOLARSHIPS** Various business, industries, civic, fraternal, and professional organizations, and foundations provide funds for many scholarship awards. Many companies and organizations in a student's hometown also provide outstanding grants to children of employees and members. Students are encouraged to investigate such offers.

**NATIONAL DEFENSE STUDENT LOANS**
The University of Dayton participates in the National Defense Student Loan Program. These loans are intended to provide assistance for students of ability with limited financial resources who desire an opportunity for advanced study in the field of their choice.

The funds for the loans are provided by the Federal Government and the University follows prescribed guidelines in the administration of these funds.

**STUDENT EMPLOYMENT**
More than half of today's college students hold some form of employment, part-time or full-time, to help meet educational expenses. The University provides many such opportunities on campus, and through the Placement Office, helps the students locate such opportunities off campus.

**INSTITUTIONAL EMPLOYMENT** Last year, students earned a total of more than $400,000 for part-time work with the University's Research Institute. Others worked in campus cafeterias, libraries, and dormitories. The Placement Office helped some students find work off the campus. Such off-campus work brings the student an average of fifteen to twenty dollars a week.

**COLLEGE WORK-STUDY PROGRAM** Students who need a job to help pay for college expenses are potentially eligible for employment at the University of Dayton under federally supported work-study program.
V Academic Regulations

REQUIREMENTS FOR DEGREES
All bachelor's degrees granted by the University of Dayton require a minimum of one hundred and twenty semester credit hours. Three credits must be distributed over eight terms in point of time.

Requirements of the different degrees are listed under the various schools.

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

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

Students enrolled in the University as candidates for degrees should not take courses at other colleges or universities without first obtaining written permission from their respective deans. If the permission is granted, the dean will request "transient status" for such students at the institutions which they designate. The University reserves the right to refuse the acceptance of credits in transfer when this procedure has not been followed.

The Bachelor of Science in Education degree may be awarded to holders of non-professional degrees from the University of Dayton with the completion of a minimum of thirty semester credit hours prescribed by the School of Education beyond the requirements of the non-professional degree. Students who in addition to a professional degree from the University of Dayton complete all the requirements for the Bachelor of Arts or Bachelor of Science degree may be awarded that degree also. Otherwise, for a second bachelor's degree, a minimum of forty-eight semester hour credits in upper-level courses (plus prerequisites) is required. For a second associate degree, a minimum of twenty-four semester hour credits in the area of specialization (plus prerequisites) is required. Moreover, students seeking a second degree must complete, either as part of or in addition to the above minima, the prescribed philosophy and theological studies courses of the general curriculum requirements, if they have not already done so as part of their first degree.
GENERAL CURRICULUM REQUIREMENTS

The University desires that every student develop a thorough knowledge in at least one area of study. In addition, each student should be introduced to the humanistic, cultural, scientific and aesthetic areas. To broaden his education in a meaningful manner, at least one of these areas outside the field of specialization should be pursued in greater depth. Above all, the University endeavors to embrace a philosophical and theological dimension in all areas of student development. Although courses play an important part in the accomplishment of these aims, out-of-class contact with the faculty and fellow students, various activities, and the general atmosphere on campus likewise make an important contribution.

Day students following four-year programs are required to complete successfully certain general University requirements, viz., requirements in Communication Arts, English, Physical Education, Philosophy and Theological Studies.

INDEPENDENT STUDY PROGRAM AND HONORS COURSES

To facilitate development of each student to his fullest capacity the University offers a variety of honors courses and the opportunity to follow an independent study program.

Some of the growing list of honors courses presently offered include:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bio. 102L</td>
<td>General Biology Laboratory II</td>
</tr>
<tr>
<td>Bio. 421</td>
<td>Biological Problems (Laboratory)</td>
</tr>
<tr>
<td>Bio. 422</td>
<td>Biological Problems (Library research)</td>
</tr>
<tr>
<td>Bus. 450</td>
<td>Business Management Honors Seminar</td>
</tr>
<tr>
<td>Chem. 499</td>
<td>Research</td>
</tr>
<tr>
<td>Cme. 499</td>
<td>Special Problems in Chemical Engineering</td>
</tr>
<tr>
<td>Cps. 498</td>
<td>Problems in Selected Areas</td>
</tr>
<tr>
<td>Cps. 499</td>
<td>Special Topics</td>
</tr>
<tr>
<td>Econ. 499</td>
<td>Special Problems in Economics</td>
</tr>
<tr>
<td>Edf. 440</td>
<td>Honors Seminar</td>
</tr>
<tr>
<td>Eng. 240-241</td>
<td>Literature of Western Civilization</td>
</tr>
<tr>
<td>Eng. 395</td>
<td>Junior Honors Tutorial</td>
</tr>
<tr>
<td>Eng. 495</td>
<td>Senior Honors Tutorial</td>
</tr>
<tr>
<td>Hist. 497</td>
<td>Honors Colloquium I. American History</td>
</tr>
<tr>
<td>Hist. 498</td>
<td>Honors Colloquium II. Non-American History</td>
</tr>
<tr>
<td>Mkt. 499H</td>
<td>Problems in Marketing</td>
</tr>
<tr>
<td>Mth. 245H</td>
<td>Sophomore Honors Mathematics</td>
</tr>
<tr>
<td>Mth. 246H</td>
<td>Sophomore Honors Mathematics</td>
</tr>
<tr>
<td>Mth. 345H</td>
<td>Junior Honors Mathematics</td>
</tr>
</tbody>
</table>
Mth. 346H  Junior Honors Mathematics
Mth. 425H  Real Analysis I
Mth. 426H  Real Analysis II
Mth. 445H  Special Topics
Phil. 402  Metaphysics Seminar
Phy. 196H  Mechanics
Phy. 207H  Electricity and Magnetism
Phy. 208H  Mechanics of Waves
Phy. 430H, 431H, 432H, 433H  Independent Research
Phy. 499  Special Problems in Physics (Honors)
Pol. Sci. 101  Introduction to Political Science
Pol. Sci. 201  American National Government
Pol. Sci. 314  International Relations
Pol. Sci. 417  History of Political Philosophy
Pol. Sci. 431  Research in Political Science
Psy. 490  Special Problems in Psychology
Psy. 491-492  Readings in Psychology
Theol. 195  Theology Honors I
Theol. 295  Theology Honors II
Theol. 395  Theology Honors III
Theol. 404  Readings in Theology
Theol. 481  Modern Catholic Thought
Theol. 495  Theology Honors IV

A number of students are afforded the opportunity to participate in an
independent study program and pursue a more flexible curriculum under the
direction of a designated faculty advisor.

Eds. 456  Independent Study

Groups of outstanding students drawn from the many departments within
the University are given the opportunity to reflect on the relationships between
disciplines early in their intellectual progress. They have the opportunity to plan
interdisciplinary experience involving students and selected faculty. This experience
gives them the opportunity to interact with several professors identified with several
disciplines during single seminar sessions.

G.E. 200H  Interdisciplinary Seminar
G.E. 400H  Interdisciplinary Seminar
Students may consult with their faculty advisors, department chairman or dean for further information.

**GRADES AND SCHOLARSHIP**

A progress report of every freshman in each of his classes is submitted to the Registrar by every instructor at the middle of each term. Final grades are submitted at the end of the term and these are made part of a student's permanent record. Copies of these reports are given to the students and deans and are sent to the parents and guardians. The final grades of freshman students are also sent to their high school principals.

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

A—Excellent; for each semester credit hour, four quality points are allowed.

B—Good; for each semester credit hour, three quality points are allowed.

C—Fair; for each semester credit hour, two quality points are allowed.

D—Poor but passing; for each semester credit hour, one quality point is allowed.

F—Failed. This mark indicates poor scholastic work, or failure to report withdrawal from a course. In such cases required courses must be repeated at the next opportunity. A student who receives an F in a required course may repeat the course. He may not, however, take the course a third time unless at the time of the second failure he has a cumulative point average of 2.50 or higher. Under no circumstances will he be permitted to take a course a fourth time.

I—Incomplete. This grade may be given at the direction of the instructor to any student who, for reasons beyond his control, has not completed some portion of the work of the term, provided that the rest of the work has been of satisfactory grade. It is not to be given if the student has been delinquent in his work, that is, when work has not been completed through his own fault. A grade of I is not to be marked at mid-term. An I must be removed within thirty days from the date listed on the grade report, or it will be changed to an F on the student's permanent record card. No quality point is allowed.

W—Withdrawn. During the first three weeks of a term (or the first week and a half of a split term) a student may withdraw from a class without record. Beginning with the fourth week (or the middle of the second week in a split term) all withdrawals are recorded F, if the student withdraws because of academic difficulty. When a student finds it necessary to withdraw from a class for any reason whatsoever, it is important that he notify his Dean immediately. Financial adjustments, if allowed, will be made only from the date of notification.
K—Credit. This mark is used for work credited from other institutions by the Office of Admissions and for successful completion of a course. No quality point is allowed.

X—Audit. This mark indicates that the student has registered to audit the course. No credit hours or quality points are awarded for this mark.

Em—Examination. This mark indicates credit given to students registered in the University either on the basis of the advanced placement program of the C.E.E.B. or of examinations taken prior to or after admission to the University. The level of achievement which must be demonstrated by the student on these examinations is determined by the department in which the course is taught. This credit, up to a maximum of twenty-four semester credit hours, shall be assigned only on authorization of the Dean of the School or College in which the student is registered. No quality point is allowed.

No grade change of any kind is permitted after thirty days from the date listed on the grade report.

The semester grade point average is the total number of quality points divided by the number of semester credit hours carried by the student. In computing the cumulative grade point average, all grades except those for sub-college work are included; in cases where courses are repeated, both the original grades and the new grades are included. Marks of W, K, X and Em are disregarded in the computation of the grade point averages, but a course for which an F or an I is received is included in the usual manner.

ACADEMIC STANDING

The following rules will be observed regarding academic standing:

1. To be in good academic standing a student must have a cumulative point average of (a) at least 1.7 at the end of his first and second terms, (b) at least 1.8 at the end of his third, (c) at least 1.9 at the end of his fourth term, and (d) at least 2.0 at the end of his fifth and succeeding terms. A cumulative point average of at least 2.0 is required for graduation.

2. Any student who has a semester point average of less than 1.0, regardless of his cumulative point average, will be dismissed from the University.

3. A cumulative point average below those required will automatically place the student on academic probation for the next term. The Registrar's office will indicate such probation on the student's permanent record.

A student on probation must follow a restricted program as follows:

a) His course load shall be reduced by fifteen semester hours, or less in the event his available study time is reduced by remunerative employment or by other activities and responsibilities either in the University or elsewhere.
b) Although he may retain membership in extra-curricular organizations, he shall not take part as a performer, an officer, or an active participant in any extra-curricular activity or any intercollegiate meeting, conference, or athletic event.

4. To remove probation, a student in the following term must earn grades sufficiently high to attain the required cumulative point average. If he fails to do so, he will be dismissed from the School or College in which he is enrolled. He may remain in the University only if he is accepted by the Dean of another School or College.

5. No student will be put on probation more than once in the same School or College.

6. In general, if it appears from the record that a student is not meeting requirements, either scholastic or otherwise, he may be placed on academic probation or he may be dismissed from the University.

7. A student dismissed because of unsatisfactory academic standing may, after the lapse of one calendar year, submit a petition to the Dean of the School or College of his last registration for reinstatement, and be reinstated on probation if the Dean is convinced of his ability and desire to do satisfactory work.

HONORS AND AWARDS

Honors and awards for scholarships are announced at the Honors Convocation.

To be graduated "With Honors" a student must have a cumulative point average for seven terms at the University of 3.5 or higher, based on 4.0. A student who has the required cumulative point average but has been in attendance at the University for less than seven terms may be graduated with honors if he is so
recommended by the faculty of the School or College in which he is enrolled and if the recommendation is accepted by the Academic Committee of the School or College. For that Academic Committee to consider such a recommendation, it is necessary that a student must have at least a 3.5 cumulative average in every institution attended. Under no circumstances may a student be graduated with honors who has taken more than half his credits elsewhere and who has not enjoyed at least a 3.5 average in the institutions he attended prior to coming to the University of Dayton.

The notation of honors is made in the commencement program, on the diplomas, on the student’s permanent record, and on transcripts, as follows:

Cum Laude—if the cumulative point average is between 3.5 and 3.69;
Magna cum laude—if the cumulative point average is between 3.7 and 3.89;
Summa cum laude—if the cumulative point average is between 3.9 and 4.0.

Special awards for exceptional scholastic achievement are given annually through the generosity of donors. To be eligible for any of these awards a student must have a cumulative point average of at least 3.0. The awards:

**Accounting**—The Award of Excellence to Outstanding Senior in Accounting—donated by Jerome E. Westendorf ’43 and Warren A. Kappeler ’41.

**Arts and Sciences**—The Dean Leonard A. Mann, S.M., Award of Excellence to Outstanding Senior in the College of Arts and Sciences—donated by Joseph Zusman ’65.

**Athletics Citizenship Award**—The Reverend Charles L. Collins, S.M., Award of Excellence to an athlete for outstanding citizenship—donated by Joseph Zusman, ’65.

**Biology**—The John E. Dlugos, Jr., Memorial Award of Excellence to the outstanding senior majoring in Biology—donated by Mr. and Mrs. John E. Dlugos.

**Business Administration** — The Alpha Kappa Psi Scholarship Key, awarded by the Delta Nu Chapter to the male senior with the highest cumulative point average.


**Chemical Engineering** — The Victor Emanuel ’15 Award of Excellence to Outstanding Senior in Chemical Engineering—sponsored by the University of Dayton Alumni Association since 1962.

**Chemistry**—The Brother George J. Geisler, S.M., Award of Excellence to Outstanding Student in Chemistry—donated by Joseph Poelking ’32.

**Civil Engineering**—The Harry F. Finke ’02 Award of Excellence to Outstanding Senior in Civil Engineering—sponsored by the University of Dayton Alumni Association since 1962.
Communication Arts — The Sj Burick Award of Excellence for Outstanding Academic and Co-curricular Achievement in Mass Media Arts—donated by the University of Dayton.

Current Problem Award—The Very Rev. John A. Elbert, S.M., Memorial Award to the student who best assesses a human problem in light of current psychological, philosophical and theological understanding—donated by Dr. and Mrs. Anthony Debons.

Economics—The Doctor E. B. O'Leary Award of Excellence to Outstanding Senior majoring in Economics—donated by Winters National Bank and Trust Company.


Electrical Engineering — The Anthony Horvath '22 and Elmer Steger '22 Award of Excellence to Outstanding Senior in Electrical Engineering—donated by Anthony Horvath '22 and Elmer Steger '22.

Elementary Education—The George A. Pflaum '25 Award of Excellence to Outstanding Student in Elementary School Teacher Education—donated by George A. Pflaum, Jr.

Engineering—The Tau Beta Pi Award for the outstanding freshman student.

English — The Catholic Poetry Society Award.

English — The Faculty Wives Club Award for excellence in composition.

English—The Brother Thomas P. Price, S.M., Award of Excellence to Outstanding Senior in English—donated by the U.D. Mothers' Club.

General Excellence—Women—The Central Women's Organization Award in both academic and extra-curricular activities. (Senior women only.)

History—The Doctor Samuel E. Flook Award of Excellence to Outstanding Junior majoring in History—donated by Doctor Samuel E. Flook.

History—The Phi Alpha Theta Scholarship Key. (Senior members of Delta Eta Chapter only.)

Home Economics — The Upsilon Delta Chi Award for Outstanding Achievement.

Industrial Engineering — The American Institute of Industrial Engineers Award of Excellence to Outstanding Student in Industrial Engineering—donated by the local chapter of the American Institute of Industrial Engineers.

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

Mechanical Engineering — The Bernard F. Hollenkamp '39 Memorial Award of Excellence to Outstanding Senior in Mechanical Engineering—donated by Louise A. and Mrs. Lucille Hollenkamp.

Mechanical Engineering—The Martin C. Kuntz '12 Award of Excellence to Outstanding Junior in Mechanical Engineering—sponsored by the University of Dayton Alumni Association since 1962.

Mechanical Engineering — The Class of '02 Award of Excellence for Outstanding Mechanical Engineering Achievement in memory of Warner H. Kiefaber '05—donated by Michael J. Gibbons '02.

Mechanical Engineering Technology — The Dayton Chapter, No. 18, American Society of Tool and Manufacturing Engineers, Award of Excellence to the Outstanding Freshman in Mechanical Engineering Technology.
Oratory—The Mary Elizabeth Jones Memorial Award of Excellence to the First and Second Outstanding Debaters—donated by Doctor D. G. Reilly.

Philosophy—The Award of Excellence to the First and Second Outstanding Seniors in Philosophy—donated by Rev. Charles Polichek.

Physical and Health Education—The John L. Macbeth Memorial Award of Excellence to Outstanding Student in Physical and Health Education—donated by Mrs. John L. Macbeth.

Physics—The Sigma Pi Sigma Award of Excellence to a student majoring in Physics in memory of Caesar Castro—donated by Sigma Pi Sigma and Mrs. C. C. Castro.

Political Science—The Brother Albert H. Rose, S.M., Award of Excellence to Outstanding Senior in Political Science—donated by Joseph Zusman '65.

Political Science—The Eugene W. Stenger '30 Memorial Award of Excellence to the Outstanding Junior in Political Science—donated by Mrs. Eugene W. Stenger.


Scholar-Athlete—The John L. Macbeth Memorial Award to the outstanding scholar-athlete in football and basketball. Recipient must have completed five or more terms and must have won his varsity letter.

Student-Athlete—The Charles R. Kendall '29 Memorial Award of Excellence for Over-achievement in academic and athletic effort—donated by Mrs. Charles R. Kendall and Friends.

Secondary Education—The Brother Louis J. Faerber, S.M., Award of Excellence to Outstanding Student in Secondary School Teacher Education—donated by the University of Dayton Mothers' Club.

Sociology—The Doctor Edward A. Huth Silver Anniversary Award of Excellence to the Outstanding Student in Sociology—donated by Joseph Zusman '65.

Sociology—The Margaret Mary Emonds Huth Memorial Award of Excellence to the Outstanding Senior in Anthropology—donated by Doctor Edward A. Huth.


Sociology—The Dr. Martin Luther King Memorial Award in Human Relations for excellence in scholarship, Christian leadership, and the advancement of brotherhood among men—donated by Dr. Edward A. Huth.

Teacher Education—The Reverend George J. Renneker, S.M., Award of Excellence for Outstanding Achievement in Teacher Education—donated by the Montgomery County Chapter, University of Dayton Alumni Association.

Technical Institute—The Engineering Technician Society Award of Excellence to the graduating full-time student with the highest cumulative point average.

Theological Studies—The William Joseph Chaminade Award of Excellence in memory of Mr. and Mrs. George W. Dickson, to Outstanding Student in Theology—donated by Rev. John Dickson, S.M., '36.
CLASS ATTENDANCE

FOREWORD
It is desirable for students to attend all classes. Listening to the lectures of instructors and being involved in classroom discussions should:
1. stimulate an awareness and interest in the course topics beyond the levels acquired by textbook reading. Because textbook material is generally beneath the level of the current state of knowledge, instructors acquaint the student with new ideas and integrate this material into the course topics;
2. provide instances of the way of thinking and methodology employed by an academic discipline in formulating and solving problems,
3. serve to provide guidelines and goals in the course of study, thus lending direction to the study activities of the student.

POLICY
For the above reasons, students are expected to attend all classes. It is felt that upperclassmen, i.e., sophomores, juniors and seniors, can be relied upon to display sufficient maturity to assume this responsibility. Let it be noted, however, that to insure the accuracy of records, every student must be present at classes during the first week of each term.

Students are responsible for being aware of the proceedings and material covered in each class period. Students must attend all announced tests and submit assigned written work on the date set by the instructor; it is recommended that the instructor announce such tests and assignments at least a week in advance. The action taken as a consequence of missing a test or an assignment will be determined by the instructor and will be based upon a consideration of the individual circumstances involved.

To assist freshmen in their transition to college responsibilities, it is felt that a policy of compulsory attendance is necessary. Therefore, freshmen will be permitted only a limited number of absences. For freshmen, the allowable number of absences in the first term or in the second term will be equal to the number of class meetings per week, i.e., three absences for a class meeting three times a week. In either half of the third term the accumulated time for a freshman to be absent from class shall not exceed the number of credit hours for the course. Normally this would mean that such a student will be permitted two absences in a three credit hour course. A student exceeding this number will not be permitted to continue in the class unless he presents justifiable reasons for his absences to the Attendance Appeals Committee. Students on the Dean’s List are permitted unlimited cuts.

The handling of tardiness is left to the discretion of the instructor.
TRANSCRIPTS
A transcript of credits may be requested from the Office of the Registrar. The official transcript may be sent to the institution or organization desiring it or to the student himself. There is a fee of fifty cents for a transcript with less than twelve credit hours. The fee is one dollar for a transcript with twelve or more credit hours. For transcripts ordered in lots of two or more, the fee is one dollar for the first copy and fifty cents for each additional copy. The first copy requested after graduation is a free copy.
Consistent with the goals of the University, the College of Arts and Sciences not only strives to prepare the student for the practical task of making a respectable living, but recognizes that there are other benefits that should come to him. Among these are habits of clear thinking and critical reasoning, a recognition of the role of each person in his society and his responsibility for his fellow man, and an appreciation of the aesthetic and cultural values in life, and a desire for continuing growth in the pursuit of truth.

Ideally, the student is best served when he is equipped with knowledge deep enough to pursue graduate studies in a given discipline, understands and loves his fellow man, and confronts issues and questions that arise in every walk of life with a careful analysis based on unchanging principles that ultimately lead him to his final destiny. The educated man never stops developing his powers, and has a beneficial impact on all those with whom he comes in contact. The development of such a person is the goal of the College of Arts and Sciences.

To achieve these ends, the disciplines of Theology and Philosophy are included in every program, since they are most directly concerned with ultimates and basic principles. In addition to these, foreign language, the humanities, and the social and physical sciences complete the requirements that provide the base for this formation.

The non-academic aspects of the student's development are served best through the many organizations open to all students, such as the social and professional clubs and societies, the performing arts, student government, the campus publications, participation in the guest artist and lecture series, and the spiritual retreats and the campus religious activities.

DEGREE REQUIREMENTS

For the Bachelor of Arts or Bachelor of Science degree, it is necessary to complete all of the courses listed in one of the programs on the following pages. This will constitute a major field and usually a minor field. The total number of credit hours will vary from one program to another; the required number can be determined from the program in which the student is enrolled.

In most of the programs some courses are listed as electives. These courses are electives, not in the sense that they may be taken or not taken, but in that the
student may elect any course that is offered for which he has prerequisites. They constitute an important part of his program, and permit some latitude in achieving the goals he has set for himself. It is always advisable to select these courses in consultation with the faculty adviser.

The major field normally constitutes twenty-four hours of upper level courses, and the minor field, twelve. Under unusual circumstances, it is possible to modify this requirement by the substitution of courses from other departments if they serve the specific interests of the student in his pursuit of his major field. This can be done only with the permission of the chairman; however, it is not permitted to take less than eighteen hours in a major field under any circumstances.

POSSIBLE MAJORS
For the Bachelor of Arts degree the possible majors are: communication arts, economics, English, fine arts, geology, history, languages, mathematics, music, philosophy, political science, psychology, sociology, anthropology, or social work, and theological studies.

For the Bachelor of Science degree the possible majors are: biology, chemistry, computer science, geology, mathematics, home economics (the general program or the dietetics program), medical technology, physics, psychology, and social work.

Other programs lead to the Bachelor of Social Science with specialization in Police Administration, the Bachelor of Fine Arts, and the Bachelor of Music degrees.

ACADEMIC STANDING
As a requirement for graduation, it is necessary that the grade point average be at least 2.00 in the major field, in the minor field, and in the total program. In the B.F.A. and B. Music programs a 2.0 cumulative average is required in the non-professional courses, as well as in the professional courses.

PRE-PROFESSIONAL COURSES
The schedule should be drawn up with a view to preparation for a particular profession which the student may have in mind. Hence it is imperative that the student consult the dean to receive the proper educational guidance.

Students interested in librarianship or archival work will need a strong major and minor, a reading knowledge of German and French, and an interest in a variety of subjects. Technically, a law school will accept any college degree with the proper cumulative point average.

For public administration and civil service, a major in a social science is desirable. This is equally true for foreign service, and here a strong aptitude in modern language is also a strong aid.
Although vocational education is not the primary objective of the Arts, they are practical because the best "job-insurance" is not a narrow training in specific skills but a broad training in general capabilities. Graduates with the B.A., for example, are now accepted in graduate schools in M.B.A. programs.

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

Students contemplating the medical profession should consult the pre-medical program (Program—S11: pp. 94-95) adviser. Those interested in pharmacy, dentistry and similar programs also consult the pre-medical adviser.

TEACHER EDUCATION PROGRAM

Students planning to teach in secondary schools may elect a program of studies with a major in any academic discipline within the College of Arts and Sciences, and include sufficient courses from the School of Education, including student teaching, to qualify them for certification. For details of this program, see the School of Education section of this Bulletin. This would yield the B.A. or the B.S. degree in the discipline, in addition to the teaching certificate.
GENERAL REQUIREMENTS FOR BACHELOR OF ARTS DEGREES

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**Junior and Senior Years**

See specific programs on the following pages.

¹Under "Term," 3-0-3 means 3 hrs. class, 0 hrs. laboratory, and 3 hrs. credit.
²Freshmen elect 6 hours from Hst 101-102, 120, 125, 130, 135. Sophomores elect 6 hours from Hst 251, 252, 260, 265, 270, 275.
³Women take EdP 130-1; EdP 140—Women only.
⁴This course is fitted into the different programs at different times.
⁵Non-Catholic students take an elective, or Spe 101.
⁶Freshmen who continue a language studied in high school for 2 or more years must have taken CEEB Achievement and Supplementary Achievement Tests in that language in order to qualify for exemption from further language study. Exempted freshmen may take 307 as elective. Freshmen not exempted will be placed at the proper level. Freshmen who begin a new language take 101. Transfer students consult department chairman.
⁷Some programs do not require Sociology.
# PROGRAM—A1: BACHELOR OF ARTS WITH AN INTERDISCIPLINARY MAJOR IN AMERICAN STUDIES

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1. Under "Term" 3-0-3 means 3 hours class, 0 hours laboratory, and 3 hours credit.
2. Freshmen elect 6 hours from Hst 101-102, 120, 125, 130, 135. Sophomores elect 6 hours from Hst 251, 252, 260, 265, 270, 275.
3. Women only.
4. Non-Catholics may take an elective or Spe 101.
5. Students who qualify for intermediate level language may complete the requirements with six credits. See General Requirements for B.A. degree.
6. Students choose six or more hours of prerequisite courses in Departments in which they plan to take upper-level courses. Departmental prerequisites are as follows: Eco 201-2, Pol 201, Psy 201, Soc 205.
7. These courses are chosen from Group A, B, or C as listed under American Studies courses of instruction, p. 199. Nine term hours must be in non-American courses chosen in consultation with the American Studies Chairman.
8. These courses are chosen from one of the two remaining Groups A, B, or C as listed under American Studies courses of instruction, p. 199.
PROGRAM—A2: BACHELOR OF ARTS WITH A MAJOR IN CHEMISTRY

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**Junior Year**
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### Senior Year

1. Under "Term" 3-0-3 means 3 hours class, 0 hours laboratory, and 3 hours credit.
2. May substitute more advanced course depending on background, placement test, or permission of department head.
5. Must include two of the following courses: Chm 405, 412, 415, 420, 417, 404.
6. General Electives must include 3 credits in Speech 101, (unless previously taken), and 6 credits in Philosophy. Remainder may not be in physical sciences or math.
7. May substitute Chm 303-4
8. Must include either two more of the above in footnote 6, or two of the following courses: Bio 313, 310, 312, 325, 340, 407, 411, certain computer science, Geology etc.
9. See footnote 6, p. 66.
# PROGRAM—A3: BACHELOR OF ARTS WITH A MAJOR IN COMMUNICATION ARTS

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**Junior Year**

**Senior Year**

|         |     |                              |          |          |          |
|         | SPE | 430 Seminar in Communication Arts | 3-0-3    | 3-0-3    |          |
| THL     | —   | Theology elective             | 3-0-3    |          |          |
| —       | —   | Major                         | 6-0-6    | 6-0-6    |          |
| —       | —   | Minor                         | 3-0-3    | 3-0-3    |          |
|         |     |                               | 15       | 15       |          |

1. Under “Term” 3-0-3 means 3 hours class, 0 hours laboratory, and 3 hours credit.
2. See footnote 2, p. 61.
4. Non-Catholic students may take an elective.
5. Women only.
PROGRAM—A4: BACHELOR OF ARTS WITH A MAJOR IN ECONOMICS

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### Junior Year

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Junior Year Total: 16 15

### Senior Year

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Senior Year Total: 15 15

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1. Under "Term" 3-0-3 means 3 hours class, 0 hours laboratory, and 3 hours credit.
2. See footnote 2, p. 61.
3. Non-Catholic students may take an elective.
# PROGRAM—A5: BACHELOR OF ARTS WITH A MAJOR IN ENGLISH

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**Freshman Year**

| ENG⁷  | 2   | Sophomore electives                              | 3-0-3    | 3-0-3    |          |
| HST³  | —   | American History electives                       | 3-0-3    | 3-0-3    |          |
| EDP⁸  | 140 | Personal and Community Health                    | 2-0-2    |          |          |
| PHL   | 206 | Basic Problems in Philosophy II                  | 3-0-3    |          |          |
| PSY   | 201 | Introductory Psychology                          | 3-0-3    |          |          |
| SPE   | 101 | Fundamentals of Effective Speaking               | 3-0-3    |          |          |
| THL⁵  | —   | Theology elective                                | 3-0-3    |          |          |
| —     | —   | Modern Language elective                         | 3-0-3    | 3-0-3    |          |
|       | 17  |                                                   |          | 17       | 15       |

**Sophomore Year**

| ENG⁹  | —   | Author course                                    | 3-0-3    |          |          |
| ENG¹⁰ | —   | Advanced course                                  | 3-0-3    |          |          |
| ENG¹¹ | —   | Early period survey                              | 3-0-3    | 3-0-3    |          |
| ENG¹² | —   | Later period survey                              | 3-0-3    |          |          |
| SOC   | 204 | Modern Social Problems                           | 3-0-3    |          |          |
| PHL   | —   | Philosophy elective                              | 3-0-3    | 3-0-3    |          |
| THL⁵  | —   | Theology elective                                | 3-0-3    | 3-0-3    |          |
| —     | —   | General elective                                 | 3-0-3    | 3-0-3    |          |
| —     | —   | Minor                                            | 3-0-3    | 3-0-3    | 15       |
|       | 15  |                                                   | 18       |          |          |

**Junior Year**

| Soc   | 204 | Modern Social Problems                           | 3-0-3    |          |          |
| PHL   | —   | Philosophy elective                              | 3-0-3    | 3-0-3    |          |
| THL⁵  | —   | Theology elective                                | 3-0-3    | 3-0-3    |          |
| —     | —   | General elective                                 | 3-0-3    | 3-0-3    |          |
| —     | —   | Minor                                            | 3-0-3    | 3-0-3    | 15       |
|       | 15  |                                                   | 18       |          |          |
### PROGRAM—A5—Continued

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$^{1}$Under "Term" 3-0-3 means 3 hours class, 0 hours laboratory, and 3 hours credit.

$^{2}$Freshmen who complete Eng 106H take a 200 level course in the second term, or other honors option.

$^{3}$Freshmen elect 6 hrs. from Hst 101, 102, 120, 125, 130, 135. Sophomores elect 6 hrs. from Hst 251, 252, 260, 265, 270, 275.

$^{4}$Women only.

$^{5}$Non-Catholic students take an elective.

$^{6}$French or German preferred. See also footnote 6 on page 66.

$^{7}$Sophomores elect 6 hrs. from Eng 201, 202, 203, 204 and 205.

$^{8}$Only women take EdP 140.

$^{9}$Eng 405 or 431.

$^{10}$Eng 316, 318, 428.

$^{11}$Eng 412, 413, 420, 434, 435.

$^{12}$Eng 438, 441, 442.

$^{13}$Except for Eng 490, the required courses English could be taken in any term of the junior and senior year.

$^{14}$Eng 450, 452, 454, 456.

$^{15}$Eng 362, 423, 424, 425.
**PROGRAM—A6: BACHELOR OF ARTS WITH A MAJOR IN FINE ARTS**

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1Under "Term" 3-0-3 means 3 hours class, 0 hours laboratory, and 3 hours credit.
2Portfolio required before registration for regular as well as transfer students. Portfolio is also a requirement for graduation.
3Women students take EdP 130-1; men taking R.O.T.C. take EdP 101-2—EdP 140—Women only.
4Non-Catholic students may take an elective.
6Students are to select from upper level art courses; seniors may take Art 490.
7See footnote 6 on page 66.
### PROGRAM—A7: BACHELOR OF FINE ARTS

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**Freshman Year**

| 18   | 18   |

**Sophomore Year**

| ART   | 317  | Intermediate Design                       | 2-0-2 |
| ART   | —    | Elect either Art 217-18, Art 318          |       |
| ART   | 208-9| Intermediate Drawing                      | 2-0-2 |
| ART   | 231-2| Sculpture                                 | 2-0-2 |
| ART⁴  | C221-2| Ceramics                                 | 2-0-2 |
| ENG   | —    | Sophomore English                         | 3-0-3 |
| HST⁵  | —    | American History elective                 | 3-0-3 |
| PHL   | 206  | Basic Problems in Philosophy II           | 3-0-3 |
| HST³  | 221  | Theology of Christ                        | 3-0-3 |
| SPE   | 101  | Fundamentals of Effective Speaking        | 3-0-3 |
| EdP⁶  | 140  | Physical Education                        | 2-0-2 |

**Sophomore Year**

| **17** | **17** |
# PROGRAM—A7—Continued

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**Junior Year**

| ART   | 471 | Development of Modern Art                  | 3-0-3    |          |          |
| ART   | 472 | Art in the Twentieth Century               |          | 3-0-3    |          |
| ART   | —   | Electives: 10 hours each term             | 10-0-10  | 10-0-10  |          |
| PHL.8 | —   | Elective                                   |          | 3-0-3    |          |
| SOC   | 203 | General Sociology                          | 3-0-3    |          |          |

**Senior Year**

18 17

18 17

1 Under "Term," 3-0-3 means 3 hours class, 0 hours laboratory, and 3 hours credit.

2 Women students take EdP 130-1; men not taking R.O.T.C. take EdP 101-2.

3 Non-Catholic students take an elective.

4 This course is taken at the Dayton Art Institute.

5 Elect from Hst 251-2, 260, 265, 270 and 275.

6 For women only.

7 Electives must be used toward fulfillment of major requirements within the following principal professional divisions of the Department of Fine Arts: drawing, painting, sculpture, ceramics, crafts, graphics, and design (including advertising design and industrial design).

8 Students may take Phil 456 Philosophy of Creativity or Phil 455 Philosophy of Art if these courses are offered.

9 Select from upper level courses—seniors may take Art 490.
MINOR IN FINE ARTS
To minor in Fine Arts, 19 hours are required, 4 hours in upper level courses. Art 101-102 Introductory Drawing, and Art 111-112 Principles of Design must be taken before any of the other courses.

The student is to elect one Art History course. He then selects 8 hours in one, or at most two fields. The fields of choice are: Drawing, Design, Painting, Sculpture, Ceramics, Graphics, and Crafts. It is suggested that the student take one two-hour art course for four terms in order to allow for 8 hours of electives within the field or fields of his choice.

| ART  | 101-2 Introductory Drawing | 2-0-2 | 2-0-2 |
| ART  | 111-2 Principles of Design  | 2-0-2 | 2-0-2 |
| ART  | Elect one History of Art Course | 3-0-3 |
| ART\(^1\) | Electives: 2 hours in each term | 2-0-2 | 2-0-2 |
| ART\(^1\) | Electives: 2 hours in each term | 2-0-2 | 2-0-2 |

The elected courses can be taken from one, but not more than two of the following fields: Drawing, Design, Painting, Sculpture, Ceramics, Graphics, and Crafts, in order to get the 8 hours.

PROGRAM—A8: BACHELOR OF ARTS WITH A MAJOR IN HISTORY

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Under "Term," 3-0-3 means 3 hrs. class, 0 hrs. laboratory, and 3 hrs. credit.

\(^2\)Non-Catholic students take an elective.

\(^3\)May be taken in either the first or second term.
UNIVERSITY OF DAYTON

PROGRAM—A9: BACHELOR OF ARTS WITH A MAJOR IN LANGUAGE

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Freshman and Sophomore Years
Follow general requirements (p. 61)

Junior Year2

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Senior Year4

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1Under "Term," 3-0-3 means 3 hrs. class, 0 hrs. laboratory, and 3 hrs. credit.
2Students with a composite major arrangement may begin their second language in the fourth term, whether they continue the first language or not. A language major may minor in any other field approved in the College of Arts and Sciences, but a minor in languages is highly recommended.
3Non-Catholic students take an elective.
4It is recommended that students take any course, such as the history of a particular country or period, which will strengthen their grasp of the cultural background of the languages they are studying. It is possible also that in view of certain types of teaching or graduate work a student would elect special technical courses, such as psychology, statistics, etc. A good student with a background in two languages may be permitted to take as little as one term of a new language for reasons approved by the department chairman. In general, however, any additional language should be taken for at least two terms.
PROGRAM—A10: BACHELOR OF ARTS WITH A MAJOR IN MATHEMATICS

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¹Under “Term,” 3-0-3 means 3 hrs. class, 0 hrs. laboratory, and 3 hrs. credit.
²See footnote 2, p. 64.
³Women only.
⁴Non-Catholic students take an elective.
⁶See footnote 6 on page 66.
# PROGRAM—A11: BACHELOR OF ARTS WITH A MAJOR IN MUSIC

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²Women only.
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| Ensembles (ref. p. 236) | 2-4 credits |

¹Under “Term,” 3-0-3 means 3 hrs. class, 0 hrs. laboratory, and 3 hrs. credit.

²Women take required courses in Physical and Health Education (EdP).

³Piano, voice, organ, orchestral instrument; students with no previous study of piano will be required to take Music 296-7-8-9—Class Piano—one credit hour per term.

⁴Non-Catholic students take an elective.

⁵Select from Mus 322, 341, 315, 308, 300-400 courses in theory or composition, or additional applied music.

⁶See footnote 6 on page 66.
# PROGRAM—A12: BACHELOR OF MUSIC

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²Women only.
### PROGRAM—A12—Continued

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<td>Ensembles (ref. p. 236)</td>
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1. Under "Term," 3-0-3 means 3 hrs. class, 0 hrs. laboratory, and 3 hrs. credit.
2. Women take EdP 110-1.
3. Class Piano required only of students who have not previously studied piano.
4. Students majoring in theory, voice or orchestral instrument will be required to use piano or organ as a minor or demonstrate ability to perform at a level satisfactory to the department. Applied Music major: 24 hours.
5. Non-Catholic students take an elective.
6. Applied Music majors take Mus 499 for 4 hours credit; part of elective will be used for the additional hours in the second term.
7. Electives must be used toward fulfillment of major and minor requirements in music. Major in Theory/Composition: 20-24 credit hours above 100 level. Minor, 12 credit hours above 100 level. Additional hours for remaining electives may be taken in Applied Music or theory courses, or Music 308, 315, 325, 326, 327, 328, 335, 361-2, 421-2, 451-2, 431-2, 322.
PROGRAM—A13: BACHELOR OF ARTS WITH A MAJOR IN PHILOSOPHY

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**Junior Year**

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**Senior Year**

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¹Under “Term,” 3-0-3 means 3 hrs. class, 0 hrs. laboratory, and 3 hrs. credit.
PROGRAM—A14: BACHELOR OF ARTS WITH A MAJOR IN POLITICAL SCIENCE

A student must successfully complete a minimum of 120 semester hours for the degree.

1. **Humanities.** 36 semester hours, chosen from courses offered by the Departments of Communication Arts, English, Fine Arts, History, Languages, Music, Philosophy, and Theological Studies. These must include Eng 101-106, Freshman English (6), six semester hours of history, and Phl 106-206, Basic Problems in Philosophy (6), and six semester hours of philosophy chosen from 300-400 level courses. Catholic students also take Thl 112, and nine hours chosen from other courses in the Department.

2. **Social and Behavioral Science.** Six semester hours chosen from courses offered in Economics, Psychology, Sociology, Anthropology, and Police Administration.

3. **Political Science.** 30 semester hours, which are to include Pol 101, Introduction to Political Science, Pol 201, American National Government, and 24 hours chosen from 300-400 level courses. The advanced courses are to be distributed among the various areas as shown under the Department heading in the catalog.

4. **Minor Subject.** One minor subject is studied, chosen from any of the Departments of the College of Arts and Sciences. The requirements of the Departments concerned are followed, but ordinarily twelve semester hours of 300-400 courses are required. Students who are accepted may minor in Secondary Education.

5. **Laboratory Science.** Eight semester hours of laboratory science.

6. **Tool of Research.** One of the following sequences:
   A) completion of a foreign language at the intermediate level (202) or the equivalent as determined by the Department of Languages;
   B) four terms of the following, in any combination:
      1. two terms of foreign language
      2. Acc 207-208
      3. Computer Science
      4. Mathematics

7. **Physical Education.** Full-time women students take EdP 130, 131, and 140.
PROGRAM—A15: BACHELOR OF SOCIAL SCIENCE WITH A MAJOR IN POLICE ADMINISTRATION

1. To be admitted to this Program a student must have received an associate degree in police administration, criminal justice, corrections, or a similar field of law enforcement. To receive the B.S.S. degree, a candidate must complete a minimum of 62 semester hours beyond the associate degree.

2. Prerequisites. One year of college English and an introductory course in sociology must be taken in addition to the degree requirements if they were not included in the associate program.

3. Humanities. A minimum of 18 hours is required in the Program, chosen from courses in Communication Arts, English, Fine Arts, History, Languages, Music, Philosophy, and Theological Studies. These must include Phil 106-206, Basic Problems in Philosophy (6). Catholic students also take six hours of Theological Studies.

4. Social and Behavioral Sciences. A minimum of 27 hours is required in the Program, chosen from courses in Economics, Political Science, Psychology, and Sociology and Anthropology. These must include Pol 201, American National Government; Pol 302, Ohio Government, or Pol 303, State and Local Government; Soc 307, Criminology and Penology; and Soc 313, Juvenile Delinquency.

5. Police Administration. A minimum of 10 hours is required in the Program, including Pad 313, Criminal Law and Procedure, and Pad 460, Research in Police Administration.
### PROGRAM—A16: BACHELOR OF ARTS WITH A MAJOR IN PSYCHOLOGY

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**Freshman Year**

**Sophomore Year**

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**Junior Year**

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**Senior Year**

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1 Under "Term," 3-0-3 means 3 hrs. class, 0 hrs. laboratory, and 3 hrs. credit.
2 Freshmen elect 6 hrs. from Hst 120, 125, 130, 135, 101, 102—Sophomore elect from 200 level.
3 Women only.
4 See footnote 6, page 66, French, German, or Russian preferred.
5 Non-Catholic students take an elective.
6 Certain mathematics courses are recommended for students planning to pursue graduate study.
PROGRAM—A17: BACHELOR OF ARTS WITH A MAJOR IN
SOCIOLOGY OR ANTHROPOLOGY
(129 Credit Hours)

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**Freshman Year — Sociology and Anthropology Majors**

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### Junior Year — Sociology Majors

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### Junior Year — Anthropology Majors

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#### Senior Year — Anthropology Majors

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1. Under “Term,” 3-0-3 means 3 hrs. class, 0 hrs. laboratory, and 3 hrs. credit.
2. See footnote 2, p. 66.
3. Applies to women only.
4. Non-Catholic students take an elective.
5. See footnote 6 on page 66.
PROGRAM—A18: BACHELOR OF ARTS WITH A MAJOR IN THEOLOGICAL STUDIES

A student must successfully complete a minimum of 124 semester hours for the degree.

1. Tools of Research. The student must satisfy the basic requirements in Freshman English, Foreign Languages and Speech. See page 66—General Requirements.

2. Military Science/Physical Education. Basic university requirement.

3. Laboratory Science. Eight semester hours.

4. Humanities. Thirty semester hours in Philosophy (twelve semester hours), Literature, History, Fine Arts, Communication Arts.


6. Minor. Twelve semester hours of 300-400 courses in an area accepted by the College of Arts and Sciences.

7. Theological Studies. Thirty semester hours, including the basic required course.

8. Electives. Sufficient to total 124 semester hours.

PROGRAM—S1: BACHELOR OF SCIENCE WITH A MAJOR IN BIOLOGY

Biology Major Curriculum

Requirements:

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Study of Man electives include theology, philosophy, psychology, sociology and similar courses.

Humanities electives are to be selected from the various courses which would broaden the individual's approach to reality.

General electives are non-specified courses which add flexibility to the program.
Science electives include physics, chemistry, mathematics, computer science and the following biology courses:

Bio. 209 Comparative Anatomy  407  Embryology
Bio. 303 Physiology            411  General Bacteriology
Bio. 310 Microtechnique and Histology  434  Higher Plants
Bio. 325 Parasitology          436  Lower Plants
Bio. 361 Invertebrate Zoology  466  Pathogenic Bacteriology and Serology

Biology majors, with the permission of their advisor, may take one biology elective course on a Pass-Fail basis.

With permission of the Chairman, advanced students may also elect one or more graduate courses.

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**Sophomore Year**

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**Junior Year**

|       |     |                                       |          |          |          |
| Bio   | 440 | Environmental Biology                | 3-0-3    |          |          |
| Bio10 | 420 | Seminar                               | 1-0-1    |          |          |
|       |     | Science elective                      | 3-3-4    | 6-6-8    |          |
|       |     | Study of Man elective                 | 3-0-3    | 3-0-3    |          |
|       |     | Humanities elective                   | 6-0-6    | 3-0-3    |          |
|       |     |                                       | 17       |          | 14       |

**Senior Year**

1. Under “Term,” 3-0-3 means 3 hrs. class, 0 hrs. laboratory, and 3 hrs. credit.
3. May substitute depending on background and score on placement test.
4. Phl 106 or Thl 112.
5. Phl 206 or Thl elective; non-Catholics take Psych., Soc., Eco., etc.
6. Women only, men take elective.
7. Chm 201, 302 or 420.
8. Spe 101 in either semester.
9. Thl elective; non-Catholics take general elective.
10. Either semester.
11. Any other Bio., Chm., Phy., Mth., Cps course as needed. One Bio. elective may be taken on a Pass-Fail basis.
12. Thl electives to total 12 cr. Non-Catholics take humanities or Phl., etc.
### PROGRAM—S2: BACHELOR OF SCIENCE WITH A MAJOR IN CHEMISTRY

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**Freshman Year**

**Sophomore Year**

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#### Junior Year

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|       |      |                                       | 14       | 15       |          |

¹Under "Term," 3-0-3 means 3 hrs. class, 0 hrs. laboratory, and 3 hrs. credit.

²Non-Catholic students take an elective.

³Chm 313-4 may be substituted with permission of the department chairman.

⁴Students with 2 or more years of high school German take Ger 201-2; all others take Ger 101-2.

⁵Non-Catholic students take an elective.

⁶Chemistry electives: Chm 404, 412, 416, 420, 499.

⁷Non-Catholic students take a General elective.

⁸General electives: Soc 204, Pol 201, Acc 207-8, Bus 315, Mth 219. One course in advanced mathematics or advanced physics may be taken. Other electives may be taken with the approval of the department chairman.
PROGRAM—S3: BACHELOR OF SCIENCE WITH A MAJOR IN
COMPUTER SCIENCE

Minimum graduation requirements are distributed as follows:

A. COURSES ASSOCIATED WITH THE MAJOR (about 50 credits)

1. COMPUTER SCIENCE—a course in basic programming, normally Cps 147, and
   24 credits in upper-level courses, normally including two courses in the area of
   numerical methods or analysis, Cps 345 and Cps 441 in the area of programming,
   and Cps 383 in the area of logic.

2. MATHEMATICS—basic calculus and normally 12 credits beyond calculus, in-
   cluding Mth 362.

B. COURSES IN OTHER AREAS (about 50 credits)

3. HUMANITIES—30 credits, including 6 credits in Theological Studies for Catholic
   students and 6 credits in Philosophy. It is recommended that 12 credits be con-
   centered in one area of the humanities. Eng 101, Eng 106 and Spe 101 do not
   apply to this requirement.

4. SCIENCES—normally 12 credits, including Chm 123, 124, and Phy 196, 207.

5. COMPOSITION AND SPEECH SKILLS—A certain level of proficiency is
   required in these skills. Eng 101, 106, Spe 101 may be prescribed by the depart-
   ment or elected by the student to assist in attaining the minimum proficiency.

6. PHYSICAL EDUCATION—if prescribed by the general university requirements.

C. ELECTIVES (about 25 credits)

7. Additional courses to attain the required 124 credits.

More detailed information may be obtained from the department.
# PROGRAM—S4: BACHELOR OF SCIENCE WITH A MAJOR IN GEOLOGY

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1. Under "Term," 3-0-3 means 3 hrs. class, 0 hrs. laboratory, and 3 hrs. credit.
2. Women only.
3. May substitute Mth 112-3 with permission of department chairman.
4. Non-Catholic students take an elective.
5. May substitute Phy 196-207 if Mth is taken in sequence.
6. Choose from courses in chemistry, mathematics, physics, biology, geology, or engineering.
HOME ECONOMICS

The department provides two special curricula:

1. Dietetics and Institutional Management;
2. General Home Economics.

Students following these curricula may pursue a career in homemaking, interior decorating, the creating and construction of clothing; in the management of cafeterias, dormitories, and restaurants; as demonstrators for commercial manufacturing concerns; as dietitians in hospitals and other institutions; in graduate work and in research projects.

The curriculum for dietetics and institutional management meets the requirements of the American Dietetics Association. The department is one of eight in Ohio that meets the standards for vocational certification.

PROGRAM—S5: BACHELOR OF SCIENCE WITH A MAJOR IN HOME ECONOMICS (General Home Economics)

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**Sophomore Year**

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**Junior Year**

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**Senior Year**

1. Under "Term," 3-0-3 means 3 hrs. class, 0 hrs. laboratory, and 3 hrs. credit.
2. May substitute Chm 123-4 or Chm 110-200.
3. Foods I & II and Clothing I & II may be interchanged.
4. Student may elect any lower division Hst courses.
5. Non-Catholic students take an elective.
6. Non-Catholic students take an elective.
7. Can be taken in English, psychology, retailing, history, or education. Students choosing education must take Edu 208, 351, 419, and Hec 329, 405, and Chm 110-200 or 123-4. Hec courses must total 51 hours.
### PROGRAM—S6: BACHELOR OF SCIENCE WITH A MAJOR IN HOME ECONOMICS (Dietetic Internship)

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1 Under "Term," 3-0-3 means 3 hrs. class, 0 hrs. laboratory, and 3 hrs. credit.
2 Non-Catholic students take an elective.
3 May take Chm 200 with permission.
4 May take Bio 303 with permission.
5 May take Chm 420 if Chm 302 or 304 is elected.
6 May take EdF 208 with permission.
PROGRAM—S7: BACHELOR OF SCIENCE WITH A MAJOR IN MATHEMATICS OR MATHEMATICAL STATISTICS

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1Under "Term," 3-0-3 means 3 hrs. class, 0 hrs. laboratory, and 3 hrs. credit.
2Women only.
3The 30 hrs. in Humanities should include 6 hrs. Theology for Catholic students and 6 hrs. Philosophy. Normally 12 hrs. should be concentrated in one area of the Humanities.
4The general requirement in communication skills should be satisfied as soon as possible.
5All students majoring in Mathematics or Statistics will elect Mth 361, 362, 421, 422 as core courses and twelve hours of other mathematics courses in consultation with the Chairman of the Department. Students minoring in Physics will elect Mth 403 when registering for Phy 303.
MEDICAL TECHNOLOGY
A twelve or thirteen month course in medical technology is offered by the Diagnostic Laboratories of St. Elizabeth Hospital, Good Samaritan Hospital, and Miami Valley Hospital. Affiliation with the University of Dayton permits a student to obtain the degree of Bachelor of Science in Medical Technology if the University’s requirements are fulfilled. These schools are accredited by the Registry of Medical Technologists of the American Society of Clinical Pathologists through the Council on Medical Education and Hospitals of the American Medical Association, and qualify a student to take the examination given by the Registry of Medical Technologists.

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

METHODS OF INSTRUCTION
After a preliminary concentrated introduction to medical technology, the student participates in the activities of the Diagnostic Laboratories, spending a specific time in each department. Instruction is under the supervision of the pathologist and his staff. Regular assignments in recognized textbooks and laboratory periodicals are given. Conferences and examinations are held throughout the year. Following a review period at the end of the prescribed course, a final examination, patterned after that of the Registry of Medical Technologists, is given.

ADMISSION REQUIREMENTS
In planning for the hospital experience, the student is required to arrange for an interview with the pathologist at the approved School of Medical Technology at the hospital. He should also plan to visit each hospital for the purpose of seeing the facilities of the diagnostic laboratories. His choice of school must be stated in writing to both the pathologist at the school of medical technology, and the advisor of the medical technology students at the University. This must be done no later than February 1, if he intends to begin training at the hospital in June. The University advisor will submit letters of recommendation to each school of medical technology in behalf of the student seeking the interview. The Registry requires 90 semester hours of academic work for admission to the clinical year in the hospital.

SENIOR YEAR SCHOLARSHIP
A full tuition scholarship is made available for the senior year. This includes room and board for the women students; it may not be possible to secure housing for male students. Students provide their own uniforms and textbooks.
LENGTH OF CLINICAL COURSE
The course of instruction covers a period of fifty-two to fifty-six consecutive weeks. If vacation period or leave of absence is granted, additional equivalent time must be made up in the school of medical technology. The hours of duty are from 8 a.m. to 5 p.m., five days a week. Special assignments for Sunday and holiday work are given with time off during the week. There is no night call for students.

Textbook assignments and extracurricular reading and study shall be done outside the regular hours. Written and oral examinations are held at regular intervals throughout the course.

GRADUATION AND REGISTRATION
After demonstrating a theoretical and practical proficiency in clinical laboratory procedures, the student is given a certificate by the hospital, and becomes eligible for the national examination for certification by the Registry of Medical Technology.

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

Examinations for Registration and the Certificate of M.T. (Medical Technologist) are given in July and November by the Registry of Medical Technologists in various cities. These are written examinations.
PROGRAM—S8: BACHELOR OF SCIENCE WITH A MAJOR IN MEDICAL TECHNOLOGY

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Sophomore Year

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Junior Year

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1Under "Term," 3-0-3 means 3 hrs. class, 0 hrs. laboratory, and 3 hrs. credit.
2May substitute depending on background and score on placement test.
3Phi 106 or Thl 112.
4Spe 101 and Psy, Soc, Eco, Hst. etc.
5Phi 206 or Thl elective.
6Thl electives 6 cr. hrs., non-Catholics take humanities electives.
7Spe. 101.
8Other Bio, Chm, Mth., etc., as needed.
9Of the 38 credits in the senior year, 24 must be completed before graduation. The remaining 14 are necessary to complete the program of the Hospital School of Medical Technology.
THE BACHELOR OF SCIENCE IN PHYSICAL SCIENCE

The Department of Physics is inaugurating a new program leading to the degree of Bachelor of Science in Physical Science. There are two basic motivations for the inauguration of such a course on the part of the Department. The first one has to do with the development of a program in physical science which is less specialized and will allow more students to better relate the physical sciences to other parts of our culture. The second goal of this program is to encourage the development of people with a sound training in the physical sciences who will be able to communicate their knowledge to the new generation of students, primarily in our secondary schools.

The program, as outlined below, calls for 24-28 hours of college physics, 20-24 hours of chemistry and 21 hours of mathematics. In addition, there are sufficient hours to allow for an extremely strong minor of the students choice and enough time in the four year program to complete all necessary education requirements as outlined by our own School of Education for secondary school teachers. Students interested in this latter option should consult the E-11 program in the School of Education which is described elsewhere in the catalog.

PROGRAM—S9: BACHELOR OF SCIENCE WITH A MAJOR IN PHYSICAL SCIENCE

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Freshman Year

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<sup>1</sup>Under "Term," 3-0-3 means 3 hours class, 0 hours lab or recitation and 3 hours credit.

<sup>2</sup>This elective is to be used to meet any prerequisites necessary for the minor field; consult with department chairmen.

<sup>3</sup>Electives can be used to complete teacher certification.

<sup>4</sup>Upper level physics or chemistry course.
PROGRAM—S10: BACHELOR OF SCIENCE WITH A MAJOR IN PHYSICS

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**Freshman Year**

**Sophomore Year**

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¹Under “Term,” 3-0-3 means 3 hours class, 0 hours lab or recitation and 3 hours credit.
²This course can be waived for students who already have comparable programming experience.
³Non-Catholic students take an elective.
⁴Upper level courses in physics, math or other approved subjects, see page 292.
⁵Students planning graduate work in physics, astronomy or other applied science areas consult page 292.
PREMEDICAL AND PREDENTAL

This program meets the admission requirements of all approved medical and dental schools. A four year course leading to a Bachelor degree is strongly recommended. In addition to the basic sciences, it should include an adequate study of the humanities, social science and foreign language. Students contemplating a career in medicine should realize that preference is given to candidates who have the most complete education, as well as good scholastic standing.

A Premedical Faculty Committee is responsible for curriculum requirements, program changes, course advising and general counseling. Current members of this committee are: Dr. B. Lawrence Fox; Dr. Carl I. Michaelis; Prof. James M. Ramsey; Dr. Charles J. Chantell, Chairman. Upon admission to this program each student will be assigned a permanent faculty advisor.

A premedical recommendation board exists and is charged with making joint recommendations for students who apply for admission to medical and dental schools. In addition to considering academic standing these recommendations also weigh the applicant's character and personality qualities. Dr. Carl I. Michaelis is Chairman of the recommendation board.

A chapter of the National Premedical Honor Society, Alpha Epsilon Delta, is established on campus. All premedical and predental students should attend the chapter meetings and are urged to join this society.

Both the Medical College Test and the Dental Aptitude Testing Program are administered on this campus each year in the spring and fall. All prospective medical and dental school applicants must take these tests, usually in the spring of their junior year. Information regarding these tests can be obtained from the premedical advisors.

The increasingly high admission standard for medical and dental schools make it imperative that the premedical and predental student give full time to study. The undergraduate cumulative grade-point average is an important criterion in gaining admission to a professional school. The minimum acceptable cumulative average for most medical schools is 3.00, for most dental schools 2.8. For this reason, the Premedical Faculty Committee conducts a sophomore evaluation on all students enrolled in Program S11. Any student whose cumulative average after 2 years is below 2.7 will be directed to change his major.
PROGRAM—S11: BACHELOR OF SCIENCE FOR PREMEDICAL AND PREDENTAL STUDENTS

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| Sophomore Year                              |          |                                      |          |          |          |
| BIO   | 102  | General Biology                       | 3-3-4    |          |          |
| BIO   | 340  | Cellular Biology                      |          | 3-0-3    |          |
| ENG   |      | Sophomore English elective            | 3-0-3    |          |          |
| EDP⁵  | 140  | Personal and Community Health         | 2-0-2    |          |          |
|       | —    | Study of Man elective                 |          | 6-0-6    |          |
| CHM   | 313-4| Organic Chemistry                     | 3-3-4    | 3-3-4    |          |
| GER   |      | German                                | 3-0-3    | 3-0-3    |          |

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**Senior Year**

1. Under “Term,” 3-0-3 means 3 hrs. class, 0 hrs. laboratory, and 3 hrs. credit.
2. Women only.
3. May substitute depending on background and score on placement test.
4. Phl 106 or Thl 112.
5. Women only.
6. Phl 206, Psy, Soc, Pol, Eco, the elective, etc.
7. Eco, Hst, Psy, Soc, Pol, Phl, Thl, etc.
8. Eng, Hst, Pol, etc.
9. Bio, Chm, Phy, Mth as needed to meet specific admission requirements for professional school.
10. Must include Spe 101 if not taken earlier.
11. Non-Catholics may take electives in place of theology.
# PROGRAM—S12: BACHELOR OF SCIENCE WITH A MAJOR IN PSYCHOLOGY BIOLOGICAL EMPHASIS

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| **Senior Year**                               |         |                                           |          |          |          |
| BIO   |     | Biology elective                          |          |          | 3-3-4    |
| PSY   | 308 | Experimental Psychology                   |          | 3-2-4    |          |
|       |     | General elective                          | 3-0-3    | 6-0-6    |          |
| THL   | 3   | Theology elective                         | 3-0-3    |          |          |
| PSY   |     | Psychology elective                       | 6-0-6    | 6-0-6    |          |

1 **Under “Term”** 3-0-3 means 3 hrs. class, 0 hrs. laboratory, and 3 hrs. credit.
2 **Women only.**
3 **Non-Catholic students take an elective.**
4 **May substitute Mth 101 for Mth 112 and Mth 112 for 113.**
5 **French, German or Russian preferred.**
## PROGR—S13: BACHELOR OF SCIENCE WITH A MAJOR IN PSYCHOLOGY

### Dept. No. Course 1st Term 2nd Term 3rd Term

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¹Under "Term" 3-0-3 means 3 hrs. class, 0 hrs. laboratory, and 3 hrs. credit.
²Women only.
³Non-Catholic students take an elective.
⁴May substitute Mth 101 for Mth 112 and Mth 112 for 113.
⁵French, German or Russian preferred.
PROGRAM—S14: BACHELOR OF SCIENCE WITH A MAJOR IN SOCIAL WORK (129 Credit Hours)

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**Sophomore Year**

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**Junior Year**

- **THL**<sup>3</sup> — Theology elective
- **Hst** — History electives
- **Psy** — Psychology electives
- **Soc** 401-2 Social Research Methods and Statistics
- **Soc**<sup>4</sup> — Sociology or Anthropology electives

**Senior Year**

- **THL**<sup>3</sup> — Theology elective
- **Psy** — Psychology electives
- **S.W.** 305 Introduction to Social Work
- **S.W.** 306 Casework
- **S.W.** 418 Community Organization
- **S.W.** 424 Group Work
- **S.W.** 432 Social Work Field Experience
- **—**<sup>5</sup> — General electives

1 Under "Term" 3-0-3 means 3 hrs. class, 0 hrs. laboratory, and 3 hrs. credit.
2 Applies to women only.
3 Non-Catholic students take an elective.
4 Must be chosen from the following courses:

- **Soc 204** Modern Social Problems
- **Soc 301** Marriage and the Family
- **Soc 307** Criminology and Penology
- **Soc 313** Juvenile Delinquency
- **Soc 318** Social Stratification
- **Ant 322** Culture and Personality
- **Soc 325** American Ethnic and Racial Minorities
- **Soc or Ant 406** Social Change
- **Soc 426** Urban Sociology
- **Soc 435W** Human Relations Workshop

5 May not be taken in the Department of Sociology, Anthropology, and Social Work.
The School of Business Administration operates in accord with the educational philosophy and purposes of the University. It believes that Christian principles of thought and action are essential to the complete formation of a business man. Through instruction and related activities it aims to develop in the student a moral excellence and firmness along with a degree of professional competence. It proposes to enhance the student's awareness of his obligation to himself, his family, society, and God—an awareness that is fundamental to his total development as a business man.

The School of Business Administration particularly seeks to develop that knowledge of business policies, problems and procedures which will enable the student to take a responsible place in the business and economic environment within which he must earn a livelihood.

In order to insure the breadth of background demanded of successful business and community leaders, the student must complete work in humanities and general studies as well as in professional business courses. This preparation is included in each of the programs offered.

DEGREE REQUIREMENTS

The School of Business Administration confers the degree of Bachelor of Science in Business Administration upon satisfactory completion of the following prescribed requirements:

1. Each candidate must complete successfully the Freshman-Sophomore Business Administration program, which is designed to give the student a broad and liberal education in preparation for more specialized training in Business Administration and Economics.

2. Each candidate must earn a cumulative grade point average of at least 2.00 in:
   a) The core courses required of all students enrolled in the School of Business Administration;
   b) The major field of concentration elected by the student.

3. Each candidate must complete a minimum of forty-two credits in 300-400 level courses in the School of Business Administration consisting of the following:
   a) Twenty-four credits in the core courses required of all students enrolled in the Upper Division in the School of Business Administration;
b) Fifteen credits (or more) in one of the Upper Division areas of concentration offered in the School of Business Administration.

4. Each candidate must earn twelve credits of electives in the upper division. These electives may be taken outside the School of Business Administration.

The responsibility of meeting the degree requirements in Business Administration rests with the student and not with the faculty and staff of the School of Business Administration. The student should be thoroughly familiar with the course requirements and should keep his own record of courses completed and credit hours applicable to degree requirements.

FRESHMAN-SOPHOMORE BUSINESS ADMINISTRATION PROGRAM

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<td>ENG 101</td>
<td>Language and Thought</td>
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**Sophomore Year**

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1Under "Term" 3-0-3 means 3 hrs. class, 0 hrs. laboratory, and 3 hrs. credit.
2Courses listed in italics may be taken in either the first or second term as directed by the program advisor.
3Elect one of the following history courses: Hst 120, 125, 130, 135.
4Women only.
5Choose one of these courses: Bio 114, Chm 110, Geo 109, Phy 105.
6Women only.
7Non-Catholic students take elective.
8In addition choose one of these courses: Hst 252; Eng 201, 202, 203, 204, 205 or 208; Pol 201; Soc 203; Spe 201. Chosen course may be taken in lieu of upper level elective.

**UPPER DIVISION**

Specialization in the School of Business Administration occurs in the Junior and Senior years.

It is possible to major in any one of the following areas: accounting, management, marketing, or economics.

Each curriculum is organized to include six to twelve credits of electives in the Junior and Senior years. Since the aim of the School of Business Administration is to provide breadth of education, these credits may be taken outside of the School of Business Administration. The electives may be concentrated in one area, or, if the student desires, they may be taken in more than one area.
ACCOUNTING

The profession of accountancy concerns itself with recording, classifying, summarizing, and analyzing financial data. The professional accountant prepares the reports and statements which business management uses for control of operations, and which investors and credit grantors depend upon.

In addition to the three basic courses, required of all business administration students, the accounting major must earn credit for seven upper level accounting courses. Five of these are required of all accounting majors; the other two may be selected by the student from elective accounting courses.

Successful completion of the prescribed program may lead to a career in public accounting, to varied employment in business enterprises, or to service in federal, state, or local government.

PROGRAM—B1: BACHELOR OF SCIENCE WITH A MAJOR IN ACCOUNTING

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PROGRAM—B1—Continued

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15 14

1 Under "Term" 3-0-3 means 3 hrs. class, 0 hrs. laboratory, and 3 hrs. credit.
2 Courses listed in italics may be taken in either the first or second term as directed by the program advisor.
3 Non-Catholic students take Phl 306 and 402.
4 Choose general electives.
5 Select accounting courses in consultation with program advisor.
BUSINESS MANAGEMENT

The major of Business Management is designed, in conjunction with the business core requirements, to give the student the basic principles of the management area. In addition, through the proper selection of electives, the student may obtain a degree of specialization in either industrial management, or personnel management.

The following outline of courses constitutes the upper level work required for a Bachelor of Science with a major in Business Management.

PROGRAM—B2: BACHELOR OF SCIENCE WITH A MAJOR IN BUSINESS MANAGEMENT

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1Under "Term" 3-0-3 means 3 hrs. class, 0 hrs. laboratory, and 3 hrs. credit.
2Courses listed in italics may be taken in either the first or second term as directed by the program advisor.
3Non-Catholic students take Phil 306 and 402.
4Choose general electives.
5Select three business courses in consultation with the program advisor.
MARKETING

The program in Marketing is designed to develop competence in students in all or some part of the marketing process. Although the student often enters with interest in a single phase of marketing such as: selling, advertising, pricing, product planning, physical distribution, purchasing, market research, wholesaling, or retailing, the emphasis in the curriculum is on the marketing management concept. Thus, any specialized activity is studied as a part of a total marketing process which in turn must be integrated with the objectives of a business firm, the functioning of an economic system and the constraints of society.

The objective is to add limited specialization to a base made up of the general education required for graduation and a core of business administration courses required of all business students.

Within the marketing specialization the purpose is to:

1. Develop a student of marketing who has the tools and groundwork for continued study after graduation. Applications of the social sciences and quantitative techniques are stressed. Communications skills are emphasized. Understanding of institutions and nomenclature is essential.

2. Develop a practitioner of marketing with interests, attitudes, and sufficient understanding to be potentially productive at a responsible level of decision making.

3. Provide flexibility through choice of courses for marketing majors and provide some breadth of choice of marketing courses as electives for non-marketing majors both from within and without the School of Business Administration.

The Department of Marketing is represented through institutional or faculty memberships in the American Academy of Advertising, the American Collegiate Retailing Association, and the American Marketing Association. The courses and programs of the department are in accord with the recommendations of these professional groups.

Some of the options within the field of Marketing which have proved to be popular are:

Advertising

Students interested in advertising as a concentrated area of study take the following sequence of courses: Mkt 420 Marketing Communications, Mkt 421 Advertising, Mkt 430 Marketing Research.

A major in marketing requires three additional marketing courses selected in consultation with the chairman of the department.
Marketing Research
Students interested in marketing research as a concentrated area of study take the following sequence of courses: Mkt 315 Retail Merchandising, Mkt 405 Consumer Behavior, Mkt 430 Marketing Research.
A major in marketing requires three additional marketing courses selected in consultation with the chairman of the department.

Marketing Management
Students interested in marketing management as a concentrated area of study take the following sequence of courses: Mkt 315 Retail Merchandising, Mkt 335 Advanced Marketing, Mkt 430 Marketing Research.
A major in marketing requires three additional marketing courses selected in consultation with the chairman of the department.

Retailing
Students interested in retailing as a concentrated area of study take the following sequence of courses: Mkt 315 Retail Merchandising, Mkt 318 Retail Advertising and Sales Promotion, Mkt 417 Retail Buying and Merchandising.
A major in marketing requires three additional marketing courses selected in consultation with the chairman of the department.

Salesmanship
Students interested in salesmanship as a concentrated area of study take the following sequence of courses: Mkt 310 Salesmanship, Mkt 405 Consumer Behavior, Mkt 411 Sales Management.
A major in marketing requires three additional marketing courses selected in consultation with the chairman of the department.
PROGRAM—B3: BACHELOR OF SCIENCE WITH A MAJOR IN MARKETING

<table>
<thead>
<tr>
<th>Dept.</th>
<th>No.</th>
<th>Course</th>
<th>1st Term</th>
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<tbody>
<tr>
<td>Bus²</td>
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<td>Corporation Finance</td>
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<td>Bus</td>
<td>303</td>
<td>Business Law I</td>
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<tr>
<td>Mkt</td>
<td>305</td>
<td>Principles of Marketing</td>
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<td>Acc</td>
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</table>

Junior Year

Senior Year

| Eco   | 341 | Macro Economic Analysis                     | 3-0-3    |          |          |
| Eco   | 342 | Money, Banking, and Monetary Policy         | 3-0-3    |          |          |
| Bus   | 409 | Business Communication and Report Writing  | 3-0-3    |          |          |
| Bus   | 423 | Business Policies and Management            | 3-0-3    |          |          |
| Mkt³  | —   | Marketing electives                         | 3-0-3    | 6-0-6    |          |
| Thl   | —   | Theology electives                          | 3-0-3    |          |          |
| —     |     | Elective                                    | 3-0-3    | 3-0-3    |          |
|       |     |                                             | 15       | 15       |          |

¹Under "Term" 3-0-3 means 3 hrs. class, 0 hrs. laboratory, and 3 hrs. credit.
²Courses listed in italics may be taken in either the first or second term as directed by the program advisor.
³Select three marketing courses in consultation with the program advisor.
⁴Non-Catholic students take Phl 306 and 402.

ECONOMICS

The Department of Economics offers courses in the core business curriculum and in a major concentration. Economics 201 and 202 serve as the foundation for all upper level business subjects including those taken by economic majors. Within the core business curriculum, the Department of Economics offers Macro Economic Analysis (Eco 341) and Money, Banking, and Monetary Policy (Eco 342). In addition, Micro Economic Analysis (Eco 340) is required of all economics majors.

The major program in economics is designed for those students seeking careers as economists in education, government, or business, or who wish to prepare for other specialized areas such as banking, finance, investment security analysis,
or labor relations. To accomplish this objective, the Department of Economics emphasizes in its instruction the development and functioning of the economics of the United States and other countries. The student thus is equipped with the tools for the systematic analysis of the economic problems of the individual firm, the industry, the nation, and the world within their social, political, and legal contexts.

For admission to the major, a student must have completed Economics 201 and 202. To complete the major, fifteen hours of economics courses, in addition to Economics 340, 341, and 342, are required of the Business Administration student. After consultation with the Chairman of the Department, the major may select these fifteen hours to fit his own special needs or interests.

Candidates for the Bachelor of Arts degree who desire to major in economics will follow the program of the College of Arts and Science.

PROGRAM—B4: BACHELOR OF SCIENCE WITH A MAJOR IN ECONOMICS

<table>
<thead>
<tr>
<th>Dept.</th>
<th>No.</th>
<th>Course</th>
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<td>MKT</td>
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<td>ACC</td>
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<td>ECO</td>
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<td>Micro Economic Analysis</td>
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<td>BUS</td>
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<td>Business Communication and Report</td>
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¹Under "Term" 3-0-3 means 3 hrs. class, 0 hrs. laboratory, and 3 hrs. credit.
²Non-Catholic students take Phl 306 and 402.
³Choose general electives.
⁴Choose electives in Economics. Consult program advisor.
ASSOCIATE DEGREE IN BUSINESS ADMINISTRATION

The Associate Degree in the Business Administration program specializing in secretarial studies has been designed especially for those who plan to attend college for only two years.

University-trained secretaries with broad educational backgrounds are urgently needed in business. This cultural background, combined with competency in typing, shorthand, accounting, business machines, and office procedures, will prepare graduates for responsible positions in commerce and industry.

PROGRAM—B5: ASSOCIATE DEGREE IN BUSINESS ADMINISTRATION

<table>
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<tr>
<th>Dept.</th>
<th>No.</th>
<th>Course</th>
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<td>Physical and Health Education</td>
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<td>English Composition</td>
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<tr>
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<td>SPE</td>
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<td>Fundamentals of Effective Speaking</td>
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<td>THL</td>
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<td>Foundations in Theology</td>
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<td>SEC</td>
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<td>Dictation and Transcription</td>
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<td>SEC</td>
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<td>Advanced Dictation and Transcription</td>
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<td>Advanced Secretarial Practice</td>
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<td>Business Machines</td>
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</table>

1Under “Term,” 3-0-3 means 3 hrs. class, 0 hrs. laboratory, and 3 hrs. credit.
2Courses listed in italics may be taken in either the first or second term as directed by the program advisor.
3Refresher courses for qualified students with prior training.
EVENING PROGRAMS IN BUSINESS ADMINISTRATION
The University of Dayton, through its Evening classes, offers an Associate Degree in Business Administration, specializing in Accounting, General Business Management, or Marketing. Further information about these programs can be obtained from the office of the Dean of Business Administration.
In conformity with the University's purposes, the School of Education endeavors to foster both (1) the development of those general capacities of the students which flow directly from his human nature and (2) the development of those particular capacities which enable him to become an effective practitioner in the field of professional education.

The general capacities of the student are developed through a broad and sound education of a general nature. It endeavors to acquaint the student with the major areas of knowledge, integrated through the disciplines of philosophy and theology, and provides planned opportunities for personal, social, and ethical development.

The particularized concern of the School is the professional preparation of teachers for the elementary and secondary schools. Provisions for professional competence are made: (1) through comprehensive study of specialized teaching fields, (2) through thorough study of the professional foundations which are common to all teaching, and (3) through specialized study of the principles underlying a particular type and level of teaching.

DEGREE REQUIREMENTS
Specific four-year course requirements for kindergarten-primary, elementary, mentally retarded, secondary, and special (music, art, physical education, home economics, speech) certification are outlined in the following pages.

Toward the close of the Freshman year each student is required to file formal application for admission to the Sophomore class. At this point his work is reviewed by a faculty committee to determine the extent to which the applicant's personal traits, academic work, etc., point toward likelihood of success as a professional teacher.

As a rule the School of Education will not recommend students for graduation unless these students can also qualify for teacher certification.

The responsibility for meeting the University and State requirements rests with the student. The student is cautioned to study the course requirements and to keep accurate count of the credit hours applicable to graduation. Students planning
to teach in states other than Ohio should fulfill University requirements plus those of the State in which the candidate is destined to teach. (Consult the book, *Requirements for Certification* by Woellner, University of Chicago Press; this book is constantly available both in the Education Office, Room C-104, and in the Curriculum Materials Center, Room C-114.)

University requirements for graduation and for teacher certification are the following:

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

2. Evidence of participation in a variety of planned field experiences essential to the development of the resourcefulness needed by teachers. (For information regarding minimum requirements in observation of teaching and other field experiences request copy of instruction sheet from Education Office, Room C-104.)

3. Earn one hundred and thirty-two semester credit hours in approved courses.

4. Meet the following letter-grade requirements:
   a) Earn a grade-point average of 2.00 ("C" average) or better.
   b) Earn a grade-point average of 2.500 ("C+" average or better in both professional education courses and in one's principal teaching field.

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

<table>
<thead>
<tr>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Nature of the Learner ..................... 3</td>
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<tr>
<td>B. Growth and Development .................... 3</td>
</tr>
<tr>
<td>C. The Learning Process ...................... 3</td>
</tr>
<tr>
<td>D. The Elementary School: Purposes and Practices ..................... 3</td>
</tr>
<tr>
<td>2E. Special Methods .......................... 2</td>
</tr>
<tr>
<td>F. Student Teaching ........................... 6</td>
</tr>
<tr>
<td>G. Philosophy of Education ................... 3</td>
</tr>
</tbody>
</table>

With the possible exception of A and B above, all courses in the professional education sequence must be taken at the University of Dayton. Transfer credits from other institutions will not be accepted in substitution for courses C through G.

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1 Combination of Psy 201 Introductory Psychology and Phil 304 Philosophical Psychology may be substituted.

2 Students in Elementary Education follow special courses covering (a) Reading and Language Arts, (b) Arithmetic. Students in Kindergarten-Primary Education follow special courses in theory, methods, and materials on kindergarten-primary level.
6. Complete the theology-philosophy sequence as follows:
Catholic students—24 semester hours: Thl. 112 and 9 hours of electives; Phl. 106, 206, an elective course in philosophy, and EdF 419.
Other students—12 semester hours: Phl 106, 206, 312, and EdF 419.

7. Pass a comprehensive examination (The National Teacher Examination) involving the following: General Education, Professional Education, and the principal teaching field. The examination must be taken one term prior to the term in which the student expects to graduate. The Education Office should be consulted regarding dates on which the examination will be administered.

COUNSELING
Each freshman education student chooses a counselor to whom he reports at least twice a term for an interview. Each upperclassman reports for proper guidance at least once every semester to his dean or to the chairman of the department in which he is majoring.

STUDENT TEACHING
This consists of actual classroom teaching under competent supervision. During the semester of student teaching, the student is not permitted to carry more than six semester hours of additional course work. These additional hours are ordinarily scheduled outside the normal school day in order to keep intact the student teaching experience for the full school day. The student should arrange his financial obligations so that he need not continue with part-time employment during this semester.

The faculty of the School of Education screens each candidate who applies for student teaching on the basis of the following factors: (1) skill in communication arts, (2) quality point average in course work, (3) physical and emotional fitness, (4) desirable personal and moral traits, (5) completion of the prerequisite courses.

Prerequisites for candidacy for student teaching are: (1) official enrollment in a teacher education program at the University, (2) prospective completion of minimum residence requirement of thirty semester hours inclusive of student teaching, (3) completion of required clock hours in observation of teaching (consult sheet indicating “Total Hours of Observation for Each Student Classification” issued by the Education Office), (4) formal application for processing by screening committee; application must be submitted a term in advance of student teaching. (Application blanks may be secured from the Education Office, Room C-104.)

The campus supervisors have direct charge of the student teaching experience.

Once a week throughout the term a student teaching seminar is held on campus. The time allotted to student teaching is an entire term involving full-day sessions. However, if a student should evidence sufficient development before the
termination of the semester, the campus supervisor may dismiss the student ahead of time.

Students may register for up to a maximum of twelve semester credit hours. In this case, however, their student teaching may not be terminated before the expiration of a full term.

Once a student has been approved and placed for student teaching, he may not withdraw from the program unless approved by his Department Chairman. A student who withdraws without this approval forfeits future placement in student teaching.

Student Teaching during the summer term is restricted to candidates who have had previous teaching experience. The applications of such students will be processed only with the express permission of the Dean.
TEACHER PLACEMENT
Students who qualify for teacher certification in the School of Education are aided in securing teaching positions through the School's placement service located in Room C-323. This requires cooperation from the candidate in filling out the necessary papers and in submitting names for references. Interviews with prospective employers are conducted in the University Guidance Center and are announced in advance in the *Weekly Calendar.*

TEACHER CERTIFICATION
The School of Education is on the approved list of the State Department of Education and of the National Council for Accreditation of Teacher Education. NCATE accreditation is being used increasingly as the major basis for reciprocity between states in teacher certification. To date the following states grant regular certificates under practically all circumstances to teachers who have completed approved programs in institutions accredited by NCATE: Alabama, Arizona, Colorado, Delaware, Florida, Georgia, Illinois, Indiana, Iowa, Kentucky, Louisiana, Maine, Maryland, Mississippi, Missouri, Nebraska, North Carolina, North Dakota, Oklahoma, Oregon, Pennsylvania, Rhode Island, South Dakota, Tennessee, Texas, Utah, Vermont, Washington, West Virginia, and Wyoming.

In addition to preparing properly certified kindergarten-primary, elementary, and high school teachers, the School also enables students to qualify for special certification in art, physical education, driver education, home economics, music, speech, and the teaching of slow learning children.

A curriculum in Home Economics Education has been established through the vocational division of the State of Ohio, Department of Education. Graduates of this curriculum are certified to teach *vocational* home economics as well as *non-vocational.*

CORRECTIVE THERAPY CERTIFICATION
Through the affiliation of the Veterans Administration Center's Corrective Therapy Clinical Training Program (Brown Hospital, Dayton) students who follow the School of Education's program in health and physical education have the opportunity to qualify for national certification as *Corrective Therapists* by satisfactorily completing 250 clock hours of directed corrective therapy clinical training and by passing the examination of the American Medical Association. This program as designed for University of Dayton students has the certified approval of the Veterans Administration Central Office, Washington, D. C.

GRADUATE PROGRAMS
The School of Education offers six graduate programs for in-service teachers
leading to the *Master of Science in Education* degree; they are designed to prepare master high school teachers, master elementary teachers, school counselors, school psychologists, school administrators, and educational research specialists. (For details on the graduate programs request a copy of *The Graduate Catalog Issue*.)

**PROGRAM—E1: BACHELOR OF SCIENCE IN ELEMENTARY EDUCATION**

<table>
<thead>
<tr>
<th>Dept.</th>
<th>No.</th>
<th>Courses</th>
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<th>3rd Term</th>
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<tbody>
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**Freshman Year**

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**Senior Year**

1. Under "Term," 3-0-3 means 3 hrs. class, 0 hrs. laboratory, and 3 hrs. credit.
2. Courses listed in italics may be taken in terms other than listed. Consult program advisor.
3. Women only.
5. Men take special elective (see footnote 9) or EdP 413-4.
6. Students may elect Eng 203, 204, or 205.
7. May substitute Pol 300 or Eco 201.
8. Non-Catholic students take PHL 402.
9. A minimum of 6 semester credit hours in Art and 6 semester credit hours in Music for the degree. Recommended courses include: Art 101, Art 281-2, Art 481 and Mus 101, Mus 103 and Mus 231-2.
10. May substitute EdE 303 and EdE 324, if taken in the past.
12. Non-Catholic students take PHL 403.
13. Non-Catholic students take PHL 404.
14. Minor in one teaching field or in a concentrated area of interest. Minor in Special Education can be used for second certificate.
15. For Non-Catholics. Catholic students take elective.
16. *Required for minor in Math or for standard elementary certificate.*
### PROGRAM—E2: BACHELOR OF SCIENCE IN SECONDARY EDUCATION

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1Under "Term," 3-0-3 means 3 hrs. class, 0 hrs. laboratory, and 3 hrs. credit.
2Courses listed in italics may be taken in terms other than listed. Consult program advisor.
Language is optional and may be taken in the freshman year.
3Women only.
4Non-Catholic students take elective.
5Take 6 hours in Math or 8 hours in Science.
6Students may elect Eng 201, 202, 203, 204, or 205.
7Men take elective.
8Non-Catholic students take electives.
9Non-Catholic students take Pfl 404.
REQUIREMENTS IN HIGH SCHOOL TEACHING FIELDS

Students following the program in secondary education are required to have at least two teaching fields with a minimum of thirty-six semester credit hours in the principal teaching field (i.e. the field in which the special methods course is taken) and the minimum hours listed below for the second teaching field; or, instead of two teaching fields, they may take a single comprehensive field totaling at least fifty-one semester credit hours. To facilitate placement, students are advised to select fields which are related, e.g., Speech and English, or Science and Mathematics.

In order to be recommended for certification, the student must earn a quality point average of at least 2.500 in each field for which he seeks certification. Certification is valid for teaching in grades seven through twelve.

Minimum requirements in semester credit hours for the second teaching field are as follows: (For detailed course requirements in each field, secure copy of checklist for each teaching field in the Education Office, Room C-104.)

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COMPREHENSIVE FIELDS

In lieu of two separate teaching fields, a single comprehensive field (with a minimum of fifty-one semester hours) may be chosen from the following:

Art
Business Education
English
History—Gov't
Home Economics
Mathematics
Music
Science
Social Studies
Speech
Physical Science
PROGRAM—E3: BACHELOR OF SCIENCE IN PHYSICAL EDUCATION (MEN)

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1. Under "Term," 3-0-3 means 3 hours class, 0 hours laboratory, and 3 hours credit.
2. Courses listed in italics may be taken in terms other than listed. Consult program advisor.
3. May be waived on the basis of previous training.
4. Non-Catholic students take elective.
5. Non-Catholic students take elective.
6. Non-Catholic students take Phil 312.
7. Student may elect Eng 201, 202, 203, 204, or 205.
8. Sec Ed students with principal or second teaching field in Phy Ed, take EdF 206 Adolescent Growth and Development.
9. Sec Ed students with principal or second teaching field in Phy Ed take EdP 418.
10. 2 of the 3 coaching courses are required.
### PROGRAM—E4: BACHELOR OF SCIENCE IN PHYSICAL EDUCATION (WOMEN)

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3 May be waived on the basis of previous training.
4 Non-Catholic students take EDF 109.
5 Non-Catholic students take Phl 402.
6 Non-Catholic students take Phl 312.
8 Student may elect Eng 201, 202, 203, 204, or 205.
9 Sec Ed students with principal or second teaching field in Phys Ed, take EDF 206 Adolescent Growth and Development.
10 Sec Ed students with principal or second teaching field in Phys Ed take EDP 418.
PROGRAM—E5: BACHELOR OF SCIENCE IN MUSIC EDUCATION

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### Senior Year

1. Under "Term," 3-0-3 means 3 hrs. class, 0 hrs. laboratory, 3 hrs. credit.
2. Courses listed in italics may be taken in terms other than those listed. Consult program advisor.
3. Women only.
4. Applied Music (Mus 399) includes private instruction courses in Piano, Organ, Voice, orchestral instruments. Class Piano (Mus 296, 7, 8, 9) is required of students who have not previously studied piano.
5. Non-Catholic students take an elective.
7. EdF 205 or 207 may be taken. See course descriptions.
10. Required of students planning to teach instrument music in secondary schools.
**Program—E6: Bachelor of Science in Art Education**

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<p>| <strong>Sophomore Year</strong>                                     |          |                                            |          |          |          |
| ART   | 191-2| Lettering and Calligraphy                   | 2-0-2    | 2-0-2    |          |
| ART   | 226-7| Introductory to Painting                    | 2-0-2    | 2-0-2    |          |
| ART   | 208-9| Intermediate Drawing                        | 2-0-2    |          |          |
| ART⁶  | C221 | Ceramics                                   |          |          | 2-0-2    |
| ART   | 217-8| Three Dimensional Design                    | 2-0-2    | 2-0-2    |          |
| EDF   | 208  | Learning Process                            |          | 3-0-3    |          |
| EDP⁷  | 140  | Personal and Community Health               | 2-0-2    |          |          |
| ENG⁸  | 2    | English elective                            | 3-0-3    |          |          |
| PHL   | 206  | Basic Problems in Philosophy II             |          | 3-0-3    |          |
| THL⁴  | —    | Theology elective                           | 3-0-3    |          |          |
| HST   | 101  | History of Civilization                     |          |          | 3-0-3    |
|       |      | <strong>Total</strong>                                   | 16       | 17       |          |</p>
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| ART   | 472  | Art History elective            | 3-0-3    | 3-0-3    |          |
| ART   |      | Art electives                   | 10-0-10  |          |          |
| EdF   | 419  | Philosophy of Education         | 3-0-3    |          |          |
| EdS   | 415  | Student Teaching                | 1-x-9    |          |          |
| PHL⁴  |      | Philosophy elective             | 3-0-3    |          |          |
|       |      |                                 | 15       | 16       |          |

¹Under "Term," 3-0-3 means 3 hrs. class, 0 hrs. laboratory, 3 hrs. credit.
²Courses listed in italics may be taken in terms other than those listed. Consult program advisor.
³Women only.
⁴Non-Catholic students take an elective.
⁵Take Bio 114 and Phy 105 or Geo 109; or 6 hrs. Mth.
⁶Courses with letter-number codes are taken at the Dayton Art Institute.
⁷For women only.
⁸Students may elect Eng 201, 202, 203, 204 or 205.
⁹Take EdE 350 or EdS 351.
¹⁰Non-Catholic students take Phl 312 and an elective.
¹¹Craft elective: Art 261 Intro. Enameling or Art 263 Jewelry.
¹²Students may elect Art 371, 372, 471, 472.
¹³Electives from: Design, Drawing, Crafts, Graphics, Painting, Sculpture, following sequence and requirements of courses.
¹⁴Consult program advisor for appropriate course—Art 281, 282, 481, or 482.
## PROGRAM—E7: BACHELOR OF SCIENCE IN SPEECH EDUCATION

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**Freshman Year**

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**Total Credits**: 17 17
### Sophomore Year

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<td>Speaking Techniques</td>
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### Junior Year

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<td>EdS</td>
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<td>EdS</td>
<td>405</td>
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<td>SPE</td>
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<td>Persuasion</td>
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### Senior Year

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<tr>
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1. Under "Term," 3-0-3 means 3 hrs. class, 0 hrs. laboratory, 3 hrs. credit.
2. Courses listed in italics may be taken in either the first or second term as directed by the program advisor.
3. Women only.
4. May take Bio 114 and Phy 105 or Geo 109; or 6 hrs. Mth.
5. Non-Catholic students take an elective.
6. Students may elect Eng. 201, 202, 203, 204, or 205.
7. Women only.
8. Non-Catholic students take Phl 312.
9. Take Spe 204 or 302 and Spe 306.
10. Take Spe 401 or 424.
PROGRAM—E8: BACHELOR OF SCIENCE IN HOME ECONOMICS EDUCATION

<table>
<thead>
<tr>
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<td>Hec</td>
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<td>Child Development I and II</td>
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<td>Hec</td>
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</table>

1 Under "Term," 3-0-3 means 3 hrs. class, 0 hrs. laboratory, 3 hrs. credit.
2 Courses listed in italics may be taken in either the first or second term as directed by the program advisor.
3 Non-Catholic students take elective.
4 Students may elect Eng 201, 202, 203, 204, or 205.
5 Non-Catholic students take PHL 312 and an elective.
PROGRAM—E9: CERTIFICATION (POST-GRADUATE)

For graduates of the University of Dayton or of other accredited institutions who hold a non-professional degree (B.A., B.S., or equivalent) and who are interested in becoming certified teachers. The program involves a minimum of 30 semester credit hours and includes courses in professional education, courses needed to complete teaching field requirements and supervised teaching. No assignment to student teaching can be made until all prerequisite courses have been taken in the School of Education, and application for certification will be made only after successful completion of an approved program.

To be admitted to the Certification Program the applicant must:

1. have a cumulative quality point-average on his non-professional degree of at least 2.5 (out of a possible 4.0);
2. submit a letter of recommendation from one of his former professors or from a responsible school official;
3. meet the standards which the School of Education uses for screening transfer students.

PROGRAM—E10: RETRAINING (POST-GRADUATE)

For students who have completed requirements for the Provisional High School Certificate or for the Provisional Special Certificate and who desire certification valid for Elementary Teaching.

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

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>The Elementary School: Purposes and Practices</td>
<td>3</td>
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<tr>
<td>Reading in the Elementary School</td>
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<tr>
<td>Arithmetic in the Elementary School</td>
<td>3</td>
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<tr>
<td>Growth and Development</td>
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</tbody>
</table>

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

PROGRAM—E11: B.A. or B.S. DEGREE WITH TEACHER CERTIFICATION

For students who wish to qualify for a High School Teaching Certificate while working toward a B.S. or B.A. degree in the College of Arts and Sciences.
Students matriculating in the College of Arts and Sciences may enroll in the teacher education program (secondary school program) of the School of Education without transferring to the School of Education. For requirements in professional education courses and in teaching fields consult the Chairman of the Department of Secondary Education.

Enrollment in this program is subject to the same admission requirements, counseling, maintenance of a unified system of records, screening, and other professional provisions standard for regular students of the School of Education working toward the B.S. in Education degree. This includes the maintenance of at least a 2.500 average in each teaching field and taking the comprehensive exam (NTE). During the first semester of their enrollment, these students are given a regular orientation period suited to their special needs.

In order to finish in four years, a student in the College of Arts and Sciences will need to process his application for admission to the teacher education program during the third semester of his matriculation. He will need to begin his professional education sequence in his fourth semester. Failure to enroll on time would necessitate his going beyond the normal four years in order to qualify for teacher certification and graduation.

When the student has completed the proper course requirements in seven semesters, he may register for student teaching in the eighth semester (provided his application for student teaching is duly processed at the beginning of the semester directly prior to student teaching and, at that time, has passed the normal screening procedure).

When the duly enrolled student has completed all the requirements for teacher certification, he should make application for the standard State Teaching Certificate through the official recommending officer of the School of Education.
PROGRAM—E12: SECOND DEGREE (POST-GRADUATE)
For non-professional degree holders who, in addition to certification (see Program—E9 above) desire a Bachelor of Science in Education as a second degree. The gaining of such a second degree offers as one of several advantages that of enabling the candidate to qualify under and to benefit from the national accreditation which the School of Education holds through the National Council for the Accreditation of Teacher Education (NCATE).

The requirements for admission to this program are the same as those for Program—E9 (see above).

To qualify for the Bachelor of Science in Education as a second degree the student must:

1. complete a minimum of 30 semester credit hours beyond the first degree;
2. qualify for the Provisional Elementary Certificate by completing a pattern of courses substantially equivalent to the curriculum outlined in Program—E1, OR qualify for the Provisional High School Certificate by completing a pattern of courses substantially equivalent to the curriculum outlined in Program—E2, including the prescribed minimum requirements for both a principal and a second teaching field;
3. complete the general curriculum requirements prescribed by the University for all undergraduate degrees.
\[
\frac{R_1}{R_1 + R_2} \cdot E_1 = E_2
\]
\[
\frac{90}{90 + 30} = \frac{90}{90 + 30} = \frac{9000}{9000 + 300}
\]
GENERAL STATEMENT
The School of Engineering has as its purpose the implementation of the general purposes of the University of Dayton in the development of professional attitudes and competencies within its area of academic disciplines.

The engineering curricula in each of the fields of chemical, civil, electrical, industrial, and mechanical engineering are drawn up for a four year minimum period.

No effort is spared to acquaint the student thoroughly with fundamental principles and to give him a clear insight into the analysis of engineering problems. While emphasis is laid on fundamental theory, continued attention is paid to the solution of practical problems for the purpose of illustrating scientific principles and pointing out their industrial applications.

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

ENGINEERING ORIENTATION LECTURES
All entering freshmen are required to attend a series of orientation lectures one hour a week for the first term of enrollment. These lectures are intended to acquaint the student with the School of Engineering, academic requirements, and the various fields of engineering.

ENGINEERING MATHEMATICS
Since a sound knowledge of mathematics is essential for success in engineering, the School of Engineering tries to place each entering student at the proper level. Freshmen who are qualified will be placed in Mth 118, Analytic Geometry and Calculus I. Those who are not qualified will be placed in a lower level mathematics course.
DEGREE REQUIREMENTS
The Degrees—Bachelor of Chemical, Civil, Electrical, Industrial, and Mechanical Engineering—are conferred at commencement if the following requirements have been fulfilled:

1) All prescribed courses outlined in the respective curricula must have been passed with a grade “D” or better. Courses may be scheduled in terms other than listed, however, all prerequisites and corequisites must be met;
2) The cumulative quality point average must be at least 2.0;
3) The student must have attended the School of Engineering at the University of Dayton during his senior year, and have carried at least thirty credit hours.

CURRICULUM FOR ALL ENGINEERING FRESHMEN

<table>
<thead>
<tr>
<th>Dept.</th>
<th>No.</th>
<th>Course</th>
<th>1st Term</th>
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<th>3rd Term</th>
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<td>Language and Thought</td>
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<td>Analytic Geometry and Calculus</td>
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¹Under “Term,” 3-0-3 means 3 hrs. class, 0 hrs. laboratory, 3 hrs. credit.
²Non-Catholics take H-S Elective.

CHEMICAL ENGINEERING
Chemical engineering applies the principles of the physical sciences, economics and human relations to fields that pertain to processes and process equipment in which matter is treated to effect a change in state, energy or composition.

The first part of the curriculum provides a firm foundation in mathematics, physics and chemistry. The chemistry background is stressed in chemical engineering. Courses include inorganic, organic, analytical and physical chemistry. The second part of the curriculum stresses chemical engineering topics such as transport phenomena, thermodynamics, kinetics, unit operations and processes, process control, materials of construction and design.
The Chemical Engineering department is located in Wohlleben Hall. Three stories of the north wing house the Unit Operations Laboratory. Experimental equipment includes units for the study of fluid flow, heat transfer, distillation extraction, filtration, evaporation and drying. The Process Control and Transport Phenomena Laboratories are located on the second floor. In addition to the instructional laboratories, the department has a wood working shop, pipe fitting shop, analytical laboratory and dark room.

The curriculum in chemical engineering serves as basic training for graduate study or for positions in diverse areas of the chemical industry.

**PROGRAM—EN1: BACHELOR OF CHEMICAL ENGINEERING**

<table>
<thead>
<tr>
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Sophomore Year

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**Senior Year**

1. Under "Term," 3-0-3 means 3 hrs. class, 0 hrs. laboratory, 3 hrs. credit.
2. Non-Catholic students take H-S Elective.
3. After the Junior year in the Chemical Engineering curriculum, students who are academically qualified (cumulative point average of 3.00 or higher) may substitute Honors Courses for those indicated (H) in the Senior Year. Honors Courses can be on the undergraduate or graduate level. Those who intend to obtain a Master's degree at the University of Dayton must choose Honors Courses at the graduate level so that an additional year of Graduate School work would enable a student to obtain a Master of Science in Engineering degree.
CIVIL ENGINEERING

The curriculum is designed to give a thorough education in the principles fundamental to the civil engineering profession, so that the graduate is prepared to pursue to advantage any field of civil practice of advanced study.

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

Engineering projects, completed or under construction, are visited under the guidance of the instructors. The Student Chapter of the American Society of Civil Engineers is very active, and close association is maintained with the Dayton Section of the American Society of Civil Engineers.

PROGRAM—EN2: BACHELOR OF CIVIL ENGINEERING

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**Junior Year**

**Senior Year**

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1 Under "Term," 3-0-3 means 3 hrs. class, 0 hrs. laboratory, 3 hrs. credit.
2 Three weeks special summer schedule which does not conflict with regular third term.
3 Select two courses from Ele 321, 322, Mee 301.
4 Non-Catholic students take H-S Elective.
5 May select from list of elective courses or by departmental approval select courses listed in Graduate Catalog.
ELECTRICAL ENGINEERING

The curriculum of electrical engineering is planned with the primary objective of providing a thorough knowledge of the fundamental laws of electricity and the application of these laws in electrical engineering.

Courses are arranged to give students of electrical engineering an understanding of the basic principles and practices in the fields of electrical power and electrical communications. Some degree of specialization in these fields is provided according to the abilities and interests of the individual students.

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

PROGRAM—EN3: BACHELOR OF ELECTRICAL ENGINEERING

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Sophomore Year

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¹Under “Term,” 3-0-3 means 3 hrs. class, 0 hrs. laboratory, 3 hrs. credit.
²Non-Catholic students take H-S Elective.
³Advanced Physics or Computer Science.

INDUSTRIAL ENGINEERING

"Industrial Engineering is concerned with the design, improvement, and installation of integrated systems of men, materials, and equipment. It draws upon specialized knowledge and skill in the mathematical, physical, and social sciences together with the principles and methods of engineering analysis and design, to specify, predict, and evaluate the results to be obtained from such systems."1

In accord with the purpose and goals of the University the Industrial Engineering Department has devised a specialized program in Industrial Engineering. It prepares students to use the quantitative, economic, and behavioral ingredients, and the processes of analysis and synthesis in design and decision making.
Students follow a program of study leading to broad and fundamental understanding of technology and of complex man and machine systems. Such a program is desirable for active participation as creative citizens and managers as well as for those who plan for other careers. However, the curriculum is especially designed for those preparing for a professional career in engineering. It includes chemistry, physics, mathematics, the engineering sciences, and courses in analysis and design. They lead to the application of knowledge to practical problems and decision making under economic constraints and uncertainty, and provide a balanced approach to lifelong career and educational development.

The curriculum recognizes understanding as being a desirable educational objective. To understanding it adds the social and technical design concepts needed by those who will be generating technological changes and the human interactions which have an even greater social impact.

Industry as used here means intelligent and purposeful human endeavor. Industrial Engineers, whose services were once largely restricted to manufacturing, now are engaged in organizations of all kinds: government, business, military, academic, financial. Industrial Engineering problems and practices are useful to all areas of human industry where employment is purposeful and systematic, where men give attention to achievement and are diligent in their attempts to accomplish objectives, and especially where land, capital, and labor meet and must be economically and efficiently related.

PROGRAM—EN4: BACHELOR OF INDUSTRIAL ENGINEERING

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**Senior Year**

1. Official definition of the American Institute of Industrial Engineers.
2. Under "Term," 3-0-3 means 3 hrs. class, 0 hrs. laboratory, and 3 hrs. credit.
3. Non-Catholic students take H-S Elective.
4. An Honors Course may be added each term for students designated by Department Chairman.
MECHANICAL ENGINEERING

The curriculum of Mechanical Engineering is designed to give the student thorough training in the fundamental principles of the mechanical engineering profession and the application of these principles to pertinent problems.

The course sequence is arranged so that the student completes courses in mathematics and the sciences early in his program. Departmental courses are then taken which build upon this scientific training. The course of studies includes lectures, recitations and laboratory practice.

Every attempt is made to prepare the student to accept the responsibilities of the profession upon graduation. The curriculum is designed to prepare the student equally well to enter the practice of engineering upon graduation, or to pursue an advanced degree through further study.

PROGRAM—EN5: BACHELOR OF MECHANICAL ENGINEERING

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1Under "Term," 3-0-3 means 3 hrs. class, 0 hrs. laboratory, 3 hrs. credit.

2Non-Catholic students take H-S Elective.

3A technical course from other engineering departments or science may be elected with the approval of the Department Chairman.
OBJECTIVES
The Technical Institute is a division of the School of Engineering and has as its objective the collegiate education of young men and women to be competent engineering and scientific technicians.

It is the philosophy of the Technical Institute that this objective is best accomplished by:

1. Providing specialized technical courses which emphasize the use of rational thinking and the application of scientific principles to the practical solution of technological problems.
2. Providing courses in mathematics and basic science sufficient to support the technical courses and to prepare the student for future growth.
3. Providing education to prepare the student to communicate intelligently and to take his place in society as a responsible Christian citizen.

THE ENGINEERING TECHNICIAN
An engineering technician is one who works in the engineering field. His work requires the application of established engineering knowledge and methods combined with technical skills in the support of engineering activities. He differs from the craftsman and the draftsman in his knowledge of engineering theory and methods. He also differs from the engineer in his more specialized background and his use of technical skills.

It should be noted that the engineering technician is concerned with the application of established scientific and engineering knowledge and methods. Therefore, Technical Institute programs consist of courses especially designed to emphasize the use of engineering knowledge. The engineering technician, as stated above, works in the support of engineering activities. He is usually involved in the design, testing, sales, and construction of products, and in some instances the supervision of craftsmen or other technicians. The engineering technician is a definite part of the scientific-engineering team. He works with the scientist who develops the theory, the engineer who seeks means of making effective use of this theory, and the skilled craftsman who works with tools to construct the finished product.

The current shortage of engineers has increased the use of engineering technicians by industry and engineering technicians themselves are in short supply. The need for competent engineering technicians educated at the college level is high and the future holds a bright prospect for those who are in this field.
PROGRAMS OFFERED

Associate Degree Curricula
The Technical Institute offers programs in chemical technology, electronic engineering technology, industrial engineering technology, and mechanical engineering technology leading to the associate degree. These programs are five terms in length and include specialized technical subjects, non-technical subjects, mathematics and science. Upon satisfactory completion of the prescribed courses in the programs outlined on the following pages the student is awarded the Associate in Technology degree. The holder of such a degree is prepared to enter industry as a beginning engineering technician.

Bachelor of Technology Degree
Since education is a lifelong process, some engineering technicians desire to continue their education. In particular, many wish to broaden their technical background to include areas other than their associate degree specialization. The objectives of the Bachelor of Technology program are to offer graduates from the associate degree programs the opportunity to broaden themselves technically as well as culturally. The requirements for this degree are outlined in the program on a following page.

GUIDANCE AND COUNSELING
The facilities of the Guidance Center are available for Technical Institute students. Staff members experienced in this type of program will be on hand before and during registration. Prospective students are encouraged to visit the campus or telephone for information regarding any of the programs offered.

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

CHEMICAL TECHNOLOGY
Chemical technology is designed to prepare students for technological services in chemical manufacturing plants and processing industries as well as for technical positions in chemical laboratories.

Emphasis is placed upon laboratory procedures for basic chemical analysis, especially quantitative analysis, certain non-technical subjects, mathematics, and physics.
### PROGRAM—TI: ASSOCIATE IN TECHNOLOGY WITH MAJOR IN CHEMICAL TECHNOLOGY

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1. Under "Term," 3-0-3 means 3 hrs. class, 0 hrs. laboratory, 3 hrs. credit.
2. Non-Catholic students may substitute a humanistic-social elective.
ELECTRONIC ENGINEERING TECHNOLOGY
Electronic engineering technology is designed to prepare students for services as engineering technicians in the modern industrial world. Emphasis is placed on the fundamentals of circuit-theory, electronics, and measurements in addition to related courses in mathematics, physics, and chemistry. The graduate is thus prepared to perform research and development, serve with manufacturers of electronic equipment, and with users of modern electrical and electronic devices. An E.C.P.D. accredited Engineering Technology curriculum.

PROGRAM—T2: ASSOCIATE IN TECHNOLOGY WITH MAJOR IN ELECTRONIC ENGINEERING TECHNOLOGY

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1. Under “Term,” 3-0-3 means 3 hrs. class, 0 hrs. laboratory, 3 hrs. credit.
2. Non-Catholic students may substitute a humanistic-social elective.
INDUSTRIAL ENGINEERING TECHNOLOGY

The curriculum in industrial engineering technology has as its objective the implementation of the broad purposes of the University in a college program of technical education by:

(1) Providing education to prepare students for subsequent development as responsible Christian citizens;
(2) Providing education in mathematics and basic sciences sufficient to support the specialized technical portion of the curriculum and to increase the student’s awareness of fundamental scientific principles in order to facilitate his future growth in an advancing technology;
(3) Providing specialized education designed to prepare students primarily for technological services to management in such industrial engineering areas as production, operations and control. It also covers the essentials of management with which foremen, supervisors, and administrative personnel in general are concerned.

Emphasis is placed on courses in motion and time study, production control, plant layout, quality control, and cost control. An E.C.P.D. accredited Engineering Technology curriculum.

PROGRAM—T3: ASSOCIATE IN TECHNOLOGY WITH MAJOR IN INDUSTRIAL ENGINEERING TECHNOLOGY

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### Sophomore Year

### Junior Year

| ITI   | 305  | Labor and Wage Administration               | 3-0-3    |          |          |
| ITI   | 318  | Statistical Quality Control                 | 3-0-3    |          |          |
| ITI   | 331  | Motion and Time Study II                    | 2-3-3    |          |          |
| ITI   | 332  | Plant Layout                                | 2-3-3    |          |          |
| PHL   | 206  | Basic Problems in Philosophy II             | 3-0-3    |          |          |
| STI   | 252  | American Political Ideas                    | 3-0-3    |          |          |
|       |      |                                             | 18       |          |          |

¹Under “Term,” 3-0-3 means 3 hrs. class, 0 hrs. laboratory, 3 hrs. credit.

²Non-Catholic students may substitute a humanistic-social elective.
MECHANICAL ENGINEERING TECHNOLOGY

This curriculum is designed to give the student a practical knowledge of the modern fundamental principles of mechanical engineering technology as they are applied in industrial and scientific endeavor.

Emphasis is placed on courses in applied mechanics; strength of materials; mechanism; thermodynamics; fluid mechanics; industrial automation actuation; dies, jig and fixture design; machine design, and basic technical courses such as technical drawing, physics, mathematics and chemistry.

The non-technical courses English, speech and report writing are specially designed to teach a student how to formulate and deliver technical communications, both oral and written.

Typical mechanical engineering technician assignments are research and development laboratory technician, designer, technical report writer, erection and maintenance technician, technical sales, field service and customer relations technician, plant engineering technician and industrial automation actuation technician. An E.C.P.D. accredited Engineering Technology curriculum.
PROGRAM—T4: ASSOCIATE IN TECHNOLOGY WITH MAJOR IN
MECHANICAL ENGINEERING TECHNOLOGY

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¹Under "Term," 3-0-3 means 3 hrs. class, 0 hrs. laboratory, 3 hrs. credit.
²Non-Catholic students may substitute a humanistic-social elective.
BACHELOR OF TECHNOLOGY

The curriculum is designed to provide the opportunity for those who hold the Associate in Technology degree to continue their education. Emphasis is placed upon broadening the student's technical knowledge. Flexibility in the curriculum permits the student with his advisor's consent to plan an individual program based on his needs, interests, educational background and occupational objectives.

PROGRAM—T5: BACHELOR OF TECHNOLOGY

Degree requirements for the Bachelor of Technology:

A. Completion of the requirements for the Associate in Technology degree.
B. Completion of a minimum of 45 additional credit hours distributed as follows:

<table>
<thead>
<tr>
<th>Dept.</th>
<th>No.</th>
<th>Course</th>
<th>Credits</th>
</tr>
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<td>Advanced Technical Institute Mth.</td>
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<td>Introductory Psychology</td>
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<td>Approved Technical electives</td>
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<tr>
<td>STI</td>
<td>499B</td>
<td>Seminar</td>
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</tbody>
</table>

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¹Non-Catholics take a Humanistic-Social elective.
X Courses of Instruction

Accounting (ACC)

Edward W. Rodgers, Acting Chairman
Professor: Hoben
Associate Professors: Clark, Eley, Fioriti, Rodgers, Zulauf
Assistant Professors: Ellis, Rawie, Slonaker, Winger, Wise.
Part-time Instructors: Grismer, Halsey, Luthman, Murray, Sanders, Williams

Acc 203. Survey of Accounting THREE CREDIT HOURS
An introduction to the basic principles and concepts of accounting and of the financial statements, with emphasis on understanding accounting terminology and the reasons for accounting conventions and practices; includes an introduction to management uses of accounting data and reports. This course is intended to furnish non-business graduates with a foundation in accounting necessary for graduate business study.

Acc 207-208. Principles of Accounting SIX CREDIT HOURS
An introduction to accounting terminology, concepts, and conventions, for the business student. Develops an understanding of the purposes of all financial statements, including conventional published reports as well as other special reports for use by business managers. This is a prerequisite for all upper level accounting courses.

Acc 303. Cost Accounting THREE CREDIT HOURS
An introduction to the purposes and methods of cost accounting. Embraces methods for determining product costs, but emphasizes procedures for effecting control of costs and the use of cost accounting data for managerial decision making.

Acc 304. Advanced Cost Accounting THREE CREDIT HOURS
This course explores the literature of cost accounting and managerial accounting, emphasizing concepts and the theoretical or philosophical basis of cost accounting methodology, and reconciles divergent views on controversial subjects. The relationship of cost accounting to economics and management concepts is also emphasized.

Acc 305-306. Intermediate Accounting I & II SIX CREDIT HOURS
A deeper study of the elements of financial statements, along with coverage of alternative accounting procedures and practices. Emphasizes accounting concepts and principles, and relies upon current professional pronouncements. Gives comprehensive coverage of the most essential theories and practices as a basis for advanced accounting study.

Acc 308. Advanced Accounting THREE CREDIT HOURS
This course introduces the student to some of the more specialized accounting subjects
such as special sales procedures, insolvencies, estates and trusts, branch and home office, and consolidated statements.

**Acc 312. Governmental Accounting**  
Three credit hours  
Accounting for institutions, municipalities, and for state and federal governments; organization; procedure, budget, accounts and records, reports.

**Acc 340. Fundamentals of Business Data Processing**  
Three credit hours  
Prerequisite Acc 207-208 and Bus 101. A course designed to give the student an understanding of the relationship between business systems and data processing equipment. Emphasis is placed on understanding business operations and the design of systems to provide business management with information useful in decision making.

**Acc 341. Management Information Systems**  
Three credit hours  
Prerequisite Acc 340. A study of simple and complex management information systems including electronic data processing applications, and the evolution of integrated systems; introduction of structured decision making functions into systems is emphasized.

**Acc 405. Auditing Principles**  
Two credit hours  
Introduction to standards for auditing procedures; accountants' reports and their implications; emphasis is on ethics and other aspects of public accounting practice, and on application of generally accepted accounting principles.

**Acc 407. Federal Income Tax Accounting**  
Three credit hours  
An interpretation of the income tax portions of the current Revenue Act. Emphasis is placed on provisions which influence the business decisions of individuals and business firms.

**Acc 408. Federal, State, and Local Taxes**  
Three credit hours  
An interpretation of the social security, estate gift and excise tax portions of the current Revenue Act. A study of income, franchise, property, sales and payroll taxes currently typical in states (particularly Ohio) and municipalities.

**Acc 413. Advanced Accounting Problems**  
Three credit hours  
A comprehensive review of accounting principles with training in the techniques of applying these principles to the solution of specific problems. Designed as a guide for preparation for the C.P.A. examination.

**Acc 414. Seminar in Accounting**  
Three credit hours  
Course consists of a study of current topics by individual reports, student panel discussions, open class discussions, case studies, and outside professional speakers. Recommended to seniors in accounting.

**American Studies (AmS)**

Dr. Rocco M. Donatelli, Chairman 1969-70  
Associate Professor: Donatelli  
Assistant Professor: Henninger

The course requirement for American Studies majors is 48 hours, distributed as follows:  
(1) American Studies 300, 301, and 400 in sequence;
(2) American Studies majors must take courses in each of the three areas identified below as Groups A, B, and C, as follows:

a. An area of concentration must consist of 24 semester hours. (15 hours must be chosen from the recommended American courses as listed in Group A, B, or C below. The other 9 hours must be non-American courses in the same area chosen in consultation with the Chairman.)

b. A second area consisting of nine semester hours to be chosen from one of the two remaining groups listed below;

c. A third area consisting of six semester hours to be chosen from the remaining group.

<table>
<thead>
<tr>
<th>GROUP A</th>
<th>GROUP B</th>
<th>GROUP C</th>
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<tbody>
<tr>
<td><strong>English</strong></td>
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<td><strong>Economics</strong></td>
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<td><strong>Fine Arts</strong></td>
<td><strong>Philosophy</strong></td>
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<td><strong>Music</strong></td>
<td><strong>Theological Studies</strong></td>
<td><strong>Sociology-Anthropology</strong></td>
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<td>318</td>
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</table>

No minor is required for American Studies majors.

**AMS 300. AMERICAN CULTURES**
A study of physical and literary artifacts in an attempt to discern the periods and places of development of America's general and sub-cultures.  
*First Term, 1969-1970*

**AMS 301. INTERPRETATIONS OF AMERICAN CULTURE**
A critical study of various interpretations of American culture through more than a hundred years.  
*Second Term, 1969-1970*
AMS 400. **Interdisciplinary Research**
A study of the principles of interdisciplinary scholarship as well as of what can and probably cannot be accomplished by it. Successful interdisciplinary accomplishments will also be studied, and the students will complete individual interdisciplinary projects.

*First Term, 1970-1971.*

**Biology (Bio)**

Dr. George B. Noland, *Chairman*

*Professors:* Jaffee, Noland  
*Associate Professors:* Cooney, Faso, Geiger, Joly, Lachapelle, MacMahon, Shay  
*Assistant Professors:* Bajpai, Chantell, Hayat, Laufersweiler, McDougall, Ramsey, Willis  
*Instructor:* Trigg

With the approval of their departmental advisor and/or chairman, students majoring in areas outside of the biological sciences may take any biology course above the 100 level on a Pass-Fail basis.

**Bio 101. General Biology I**

Three credit hours  
A study of the more important biological processes and principles through analysis and synthesis. Deals primarily with the organizational aspects of living matter.

**Bio 101L. General Biology Laboratory I**

One credit hour  
Course to accompany Bio 101. One three-hour laboratory per week in which the investigational and experimental approach is stressed.

**Bio 102. General Biology II**

Three credit hours  

**Bio 102L. General Biology Laboratory II (Honors)**

One credit hour  
Course to accompany Bio 102. One three-hour laboratory period per week.

**Bio 114. Biological Science**

Three credit hours  
An introduction to the various biological sciences for non-science majors. Stresses those principles which apply to all forms of life, taking examples from plant, animal and microbial life.

**Bio 114L. Biological Science Laboratory**

One credit hour  
Laboratory course to demonstrate and emphasize those principles discussed in lecture. One two-hour lab per week.

**Bio 207L. Human Anatomy Laboratory**

One credit hour  
A foundation study in the basic anatomy of the human body, consisting of study of the various organs and systems composing the body. Medical Technology majors only. One three hour lab per week. Prerequisites: Bio 101-102.

**Bio 209. Comparative Anatomy of the Vertebrates**

Three credit hours  
A study of the similarities and the differences in the anatomy of the different organ systems of the various vertebrate groups. Embryology, histology, and morphology play an important role in this study. Prerequisites: Bio 101-102.
BIO 209L. **Comparative Anatomy Laboratory**

Course to accompany Bio 209 lecture. Two three-hour periods per week.

BIO 303. **Physiology**

A study of the mammalian systems. Sufficient anatomy is introduced to give at least an elementary knowledge of the organs and organ systems. Prerequisites: Bio 101-102, Chm 123-124. Chm 313-314 recommended.

BIO 303L. **Physiology Laboratory**

Course to accompany Bio 303 lecture. One three-hour period per week.

BIO 310. **Microtechnique and Histology**

Fundamentals of cell morphology, microscopic structure of tissues and organs, and discussion of techniques in their study. Prerequisite: Bio 101-102.

BIO 310L. **Microtechnique and Histology Laboratory**

One credit hour

Fundamentals of fixing and processing various tissues in the preparation of slides; aims at recognition of microstructure of normal tissues. Prerequisite: Bio 101-102.

BIO 312. **General Genetics**

A study of the principles of variation and heredity in plants and animals, with stress on the inheritance of human characteristics. Prerequisites: Bio 101-102 and Mth 121.

BIO 312L. **General Genetics Laboratory**

Course to accompany Bio 312. One two-hour period per week.

BIO 325. **Parasitology**

An introduction to the morphology, life history and significance of those organisms deriving their sustenance from the tissues of others. Bio 101-102.

BIO 325L. **Parasitology Laboratory**

Course to accompany Bio 325 lecture. One three-hour period per week. Stresses the recognition of common parasites.

BIO 340. **Cell Biology**

A study of cell structure and function including ultrastructure, physical and chemical organization, metabolic processes in relation to structure, growth and specialization. Prerequisites: Bio 101-102.

BIO 342. **Developmental Biology**

Plant and animal ontogeny and morphogenesis; roles of genetic and environmental factors in growth and development; differentiation; aggregation; hormonal and other biochemical mechanisms of control and coordination. Prerequisites: Bio 101-102.

BIO 344L. **Advanced Biology Laboratory I**

Laboratory to supplement Bio 312 and 340. One three hour lab. per week. Prerequisites: Bio 101-102, Bio 340 and Bio 312. The latter may be taken concurrently.

BIO 345L. **Advanced Biology Laboratory II**

Laboratory to supplement Bio 342 and Bio 440. One three hour lab. per week. Prerequisites: Bio 101-102, Bio 340. The latter may be taken concurrently.
Bio 361. INVERTEBRATE ZOOLOGY  
A course designed to give the student a general knowledge of the structure, activities, life histories and relationships of the invertebrate animals, with some emphasis on their origin and development. Prerequisites: Bio 101, 102.

Bio 361L. INVERTEBRATE ZOOLOGY LABORATORY  
Course to accompany Bio 330 lecture. Two three-hour laboratory periods per week.

Bio 407. EMBRYOLOGY  
The course considers the early stages of animal development, paying special attention to the study of the development of the chick and the pig. Prerequisites: Bio 101, 102 and 209.

Bio 407L. EMBRYOLOGY LABORATORY  
Course to accompany Bio 407 lecture. One four-hour period per week.

Bio 411. GENERAL BACTERIOLOGY  
An introductory course in bacteriology stressing the physiology, cultivation, and classification of bacteria. Their role in medicine, agriculture and industry is emphasized. Prerequisites: Bio 101-102 and Chm 123-124. Chm 313-314 recommended.

Bio 411L. GENERAL BACTERIOLOGY LABORATORY  
Course to accompany Bio 441 lecture. Two two-hour periods per week.

Bio 420. SEMINAR  
Practice in development, presentation, and discussion of papers dealing with biological problems. Prerequisite: Jr. and Sr. standing.

Bio 421. BIOLOGICAL PROBLEMS (HONORS)  
(laboratory work)

Bio 422. BIOLOGICAL PROBLEMS  
(library work)

Bio 434. HIGHER PLANTS  
A study of structure, function, reproduction and interrelations of tracheophyte plants.

Bio 434L. HIGHER PLANTS LABORATORY  
Course to accompany Bio 434. One three-hour laboratory per week.

Bio 436. LOWER PLANTS  
A course to provide familiarity with basic processes, structures, distribution and reproduction of Thallophyte and Bryophyte plants.

Bio 436L. LOWER PLANTS LABORATORY  
Course to accompany Bio 436. One three-hour laboratory per week.

Bio 440. ENVIRONMENTAL BIOLOGY  
Ecosystems; cycles of energy and material; food chains; ecological aspects of natural selection; influences of physical environment, homeostasis and selection; populations and communities.
Bio 462. **Advanced Genetics**

Two credit hours
The nature of genes and gene action. The role of nucleic acids in protein synthesis. Molecular aspects of genotype and phenotypic expression. Prerequisite: Organic Chemistry.

Bio 462L. **Advanced Genetics Laboratory**

One credit hour
Course to accompany Bio 462. One three-hour laboratory per week.

Bio 466. **Pathogenic Bacteriology and Serology**

Three credit hours
The nature of infectious diseases, host-parasite relationships in resistance and infection, defense mechanisms (antigen-antibody response) and a brief survey of the bacteria causing disease in man will be considered. Prerequisite: Bact 411 and 411L.

Bio 466L. **Pathogenic Bacteriology and Serology Lab**

One credit hour
Laboratory to accompany Bio 416. 3 hours per week. Laboratory experiments to demonstrate immunological, serological, determinative and medical bacteriology.

**Business Management (Bus)**

Barth J. Snyder, *Chairman*

*Professors*: Snyder, George

*Associate Professors*: Bosshart, Holt, Kreider, Walden

*Assistant Professors*: Buckenmyer, Fuszara, Kussman, May, Marrinan, Miller, Office, Sunderhaus VonderEmbse


**Bus 102. American Business Environment**

Three credit hours
A survey of the environment of business. Historical determinants and present day influences on the business climate.

**Bus 110-111. Quantitative Analysis for Business**

Six credit hours
A study of the fundamental operations of algebra, including equations, inequalities, matrices, progressions, exponents and logarithms; compound interest and annuities; and introduction to calculus.

**Bus 210-211. Quantitative Analysis**

Six credit hours
A course in applied statistics covering the broad areas of probability, statistical inference, time series, regression and correlation, and sampling methods. Prerequisite: Bus 110-111.

**Bus 215. Principles of Management**

Three credit hours
A basic course in the managerial functions of planning, organizing, assembling resources and directing operations for a business.

**Bus 301. Corporation Finance**

Three credit hours
Principles of financial organizations. A study of corporate securities; financial structures; financing of new and established corporations; management of corporate funds; corporate expansions, mergers and reorganizations.
BUS 303. **BUSINESS LAW I: CONTRACTS**
Three credit hours
The basic course in business law treating the nature and classification of law, the courts and court procedure and considering in some detail the law of contracts and agency.

BUS 304. **BUSINESS LAW II: SALES AND NEGOTIABLE INSTRUMENTS**
Three credit hours
A consideration of the law of sales and negotiable instruments. Prerequisite: Bus 303.

BUS 313. **BUSINESS STATISTICS**
Three credit hours
A survey of statistical methods including sampling, tabulations, graphics, averages, dispersions, index numbers, time series, trends, and simple correlations.

BUS 314. **PERSONNEL MANAGEMENT**
Three credit hours
A study of managerial principles and practices as they pertain to the total work force. Including selection, training, compensation, employee services and industrial relations.

BUS 316. **PRODUCTION MANAGEMENT**
Three credit hours
Place of management, factors underlying management decisions; product designs, physical facilities, location, layout; job evaluation, classification; plant operation, output; control of purchases and inventories. Prerequisite: Bus 315.

BUS 318. **HUMAN RELATIONS FOR MANAGEMENT**
Three credit hours
Analysis of reactions, interactions, attitudes and activities of individuals and groups within a goal-seeking organization. Includes leadership, morale and goal oriented behavior.

BUS 322. **WORK SYSTEMS DESIGN**
Three credit hours
Approaches to Motion and Time study, work flow analysis, work and system analysis and related areas.

BUS 401. **INVESTMENTS**
Three credit hours
A study of the basic features and principles underlying sound investments. Short term as well as long term investments, the bond and stock markets are considered.

BUS 403. **BUSINESS LAW III: THE LAW OF BUSINESS ORGANIZATION AND PROPERTY**
Three credit hours
A treatment of the law of partnerships and corporations and the law of property. Prerequisite: Bus 303.

BUS 409. **BUSINESS COMMUNICATION AND REPORT WRITING**
Three credit hours
The principles of letter writing and report writing are studied and applied in conformity with the best current practices in business.

BUS 412. **WAGE AND SALARY ADMINISTRATION**
Three credit hours
A discussion of role of wages and salaries for individual, firm and society. Problems in determination of wage levels, structures, methods of compensation, fringe benefits, and general aspects of compensation. Prerequisite: Bus 314 or permission of instructor.

BUS 415. **PRODUCTION METHODS AND CONTROL**
Three credit hours
Principles and techniques used in production; current practices in production planning, routing, scheduling and dispatching; study of production standards, labor efficiency and costs; quantity and quality control. Prerequisite: Bus 316 or permission of instructor.
**Bus 419. Collective Bargaining, Mediation and Arbitration**

 Meaning, practices, principles and organization of collective bargaining; techniques of mediation and agencies for effecting mediation; major economic problems involved in the adjustment of labor disputes.

**Bus 420. Labor Legislation**

 A study of the National Labor Relations Act as amended.

**Bus 423. Business Policies and Management**

 Coordination and integration of knowledge and techniques acquired in previous courses in Business Administration. The case method is used. Prerequisite: Seniors only.

**Bus 450. Business Management Honors Seminar (Honors)**

 A course in research upon a subject within the student's major. The course is open only to those who have attained a cumulative grade point average of 3.00 or above in their Sophomore and Junior years.

**Bus 455. Business Ethics**

 Application of philosophy in the area of employee discipline with emphasis on rights, duties, and the purpose of discipline. Examination of arbitration cases in discipline.

**Chemical Engineering (Cme)**

 Dr. Michael A. Bobal, Chairman

 Professor: Bobal

 Assistant Professor: Keith, Olinger

 Adjunct Assistant Professor: Morrison

 Instructor: Srinivasan

**Cme 203. Material and Energy Balances**

 An introduction to chemical engineering with lectures and problems on material and energy balances as applied to industrial processes. Prerequisites: Chm 125, Mth 118.  

 First Term, Each Year

**Cme 215. Quantitative Analysis**

 Theory and techniques of gravimetric and volumetric analysis. Prerequisite: Chm 125.  

 First Term, Each Year

**Cme 215L. Quantitative Analysis Laboratory**

 Laboratory course to accompany Cme 215. One three hour laboratory period per week.  

 First Term, Each Year

**Cme 305. Thermodynamics**

 Development of the fundamental principles of thermodynamics, particularly with respect to chemical engineering processes. Prerequisite: Mth 218.  

 Second Term, Each Year

**Cme 306. Kinetics**

 Reaction kinetics, catalysis and adsorption. Prerequisite: Cme 305.  

 First Term, Each Year
CME 315-6. **Organic Chemistry**
A study of aliphatic, aromatic and heterocyclic compounds. Prerequisite: Chm 125.
CME 315: Second Term, Each Year
CME 316: First Term, Each Year

CME 315L-6L. **Organic Chemistry Laboratory**
Laboratory course to accompany CME 315 and 316. One three hour laboratory period per week.

CME 324. **Transport Phenomena I**
Topics include viscosity, shell momentum balances, isothermal equations of change, thermal conductivity, shell energy balances, non-isothermal equations of change, diffusivity, concentration profiles. Prerequisite: CME 381.
First Term, Each Year

CME 325. **Transport Phenomena II**
Topics include friction factor, dimensionless correlations, isothermal macroscopic balances, Bernoulli’s Equation, heat transfer coefficients, heat transfer correlations, heat exchangers, non-isothermal macroscopic balances. Prerequisite: CME 324.
Second Term, Each Year

CME 326L. **Transport Phenomena Laboratory**
Second Term, Each Year

CME 333-4. **Physical Chemistry**
A study of the laws of chemistry and physics as applied to gases, liquids, and solutions. Prerequisite: Mth 218.
CME 333: First Term, Each Year
CME 334: Second Term, Each Year

CME 333L-4L. **Physical Chemistry Laboratory**
Laboratory course to accompany CME 333-4. One three hour laboratory period per week.

CME 381. **Applied Mathematics for Chemical Engineers**
This course is designed to supply the mathematics to support transport phenomena and process control. Topics include vector calculus, solution of partial differential equations and Laplace transforms. Prerequisite: Mth 219.
First Term, Each Year

CME 411. **Unit Operations I**
Topics include fluid mechanics, transportation of fluids, flow of heat, evaporation, filtration and mixing. Prerequisites: CME 324-325.
First Term, Each Year

CME 412. **Unit Operations II**
Continuation of CME 411. Distillation, extraction, gas phase mass transfer, gas absorption, drying and crystallization. Prerequisite: CME 411.
Second Term, Each Year

CME 413L. **Unit Operations Laboratory**
This course is designed to acquaint the students with Unit Operations equipment and its utilization. Prerequisite: CME 324.
First Term, Each Year
CME 414L. UNIT OPERATIONS LABORATORY
Continuation of Cme 413L. Prerequisite: Cme 325.

CME 430. CHEMICAL ENGINEERING DESIGN
Study of the principles of process development, plant design and economics. Prerequisite: Cme 411.

CME 452. PROCESS CONTROL
Topics include block diagrams, system transfer functions, feedback, transient and steady state response, root locus method, frequency response, Bode diagrams, analog computer. Prerequisite: Cme 381.

CME 453L. PROCESS CONTROL LABORATORY
Experiments cover analog computer programming, analog solution of differential equations, frequency response, Bode diagrams, computer simulation, open and closed loop system response. Report writing emphasized. Prerequisites: Cme 452, Ele 322.

Chemical Engineering Electives

CME 499. SPECIAL PROBLEMS IN CHEMICAL ENGINEERING (HONORS)
Particular assignments to be arranged and approved by Chairman of the Department. Credit hours to be determined.

Chemistry (Chm)

Dr. John J. Lucier, S.M., Chairman
Professors: Chudd, Eveslage, Lucier, Michaelis
Associate Professors: Katchman, Walsh
Assistant Professors: Antony, Fox, Fratini, Meiser, Rogers, Vance
Part-time Instructors: Becker, DeSando, March, Semmelman

CHM 110. GENERAL CHEMISTRY
Fundamental principles of chemistry including a brief treatment of organic chemistry. Three class periods each week.
CHM 110L. **General Chemistry Laboratory**  
Course to accompany Chm 110 lecture. One two-hour laboratory period per week.

CHM 123-124. **General Chemistry**  
A comprehensive treatment of the fundamentals of general chemistry. Three class periods per week. Prerequisite: high school Chemistry.

CHM 123L-124L. **General Chemistry Laboratory**  
Course to accompany Chm 123-124 lecture. The laboratory work is devoted to semi-micro qualitative analysis. One three-hour laboratory period per week.

CHM 125. **General Chemistry**  
A terminal course for engineering students. Three class periods per week. Prerequisite: high school Chemistry.

CHM 125L. **General Chemistry Laboratory**  
Course to accompany Chm 125. One three-hour laboratory per week.

CHM 200. **Organic Chemistry**  
A brief course in the fundamentals of Organic Chemistry. Three class periods each week. Prerequisite: Chm 110 or Chm 123.  
*Second Term, Each Year*

CHM 200L. **Organic Chemistry Laboratory**  
Course to accompany Chm 200 lecture. One two-hour period per week.  
*Second Term, Each Year*

CHM 201. **Quantitative Analysis**  
A course intended for premedical, predental, and medical technology students. Two class periods per week. Prerequisite: Chm 124.

CHM 201L. **Quantitative Analysis Laboratory**  
Course to accompany Chm 201 lecture. One four-hour laboratory period per week.

CHM 215. **Quantitative Analysis**  
A course for chemistry majors and chemical engineers. The fundamental theory and techniques of gravimetric and volumetric analysis is treated. Two class periods per week. Prerequisite: Chm 124, one semester of college mathematics.  
*First Term, Each Year*

CHM 215L. **Quantitative Analysis Laboratory**  
Course to accompany Chm 215 lecture. Two three-hour laboratory periods per week.  
*First Term, Each Year*

CHM 217L. **Quantitative Analysis Laboratory**  
A short course for chemical engineers. To accompany Chm 215 lecture. One three-hour laboratory period per week.  
*First Term, Each Year*

CHM 302. **Physical Chemistry**  
A short course especially designed for premedical, predental, or biology majors. Three lectures per week. Prerequisite: Chm 124.  
*First Term, Each Year*

CHM 303-304 **Physical Chemistry**  
For chemistry majors and chemical engineers. Three lecture hours each week. Prerequisite: Chm 215 or equivalent. Corequisite: Mth 218.
CHEMISTRY 209

CHM 303L-304L. PHYSICAL CHEMISTRY LABORATORY  
TWO CREDIT HOURS  
Course to accompany Chm 303 lecture. One three-hour laboratory period each week.

CHM 308. CHEMICAL LITERATURE  
TWO CREDIT HOURS  
The use of chemical literature, indexing methods, and patent procedure. Prerequisite: Ger 101-102.  
Second Term, Each Year

CHM 313-314. ORGANIC CHEMISTRY  
SIX CREDIT HOURS  
This course is designed for premedical, predental, and medical technology students. A strong grounding in the fundamentals of Organic Chemistry is given. Three class periods per week. Prerequisite: Chm 124.

CHM 313L-314L. ORGANIC CHEMISTRY LABORATORY  
TWO CREDIT HOURS  
Course to accompany Chm 313-314 lecture. One three-hour laboratory period each week.

CHM 315-316. ORGANIC CHEMISTRY  
SIX CREDIT HOURS  
A study of aliphatic, aromatic, and heterocyclic compounds, including typical preparations, and basic techniques of organic chemistry; for chemistry majors and chemical engineers. Prerequisite: Chm 215.

CHM 315L-316L. ORGANIC CHEMISTRY LABORATORY  
FOUR CREDIT HOURS  
Course to accompany Chm 315-316. Two three-hour laboratory periods each week. Prerequisite: Chm 215.

CHM 400. BIOCHEMISTRY  
THREE CREDIT HOURS  
A one semester course for Home Economics students. Prerequisite: Chm 200 or equivalent.
CHM 400L course to accompany Chm 400 lecture. One three-hour laboratory period per week.

ONE CREDIT HOUR

CHM 404. SPECIAL TOPICS IN PHYSICAL CHEMISTRY THREE CREDIT HOURS
A thorough treatment is given to certain topics surveyed in Chm 303-304 such as macromolecules, spectroscopy, photochemistry and radiation chemistry. Prerequisite: Chm 304. Second Term, Each Year

CHM 405. QUALITATIVE ORGANIC ANALYSIS ONE CREDIT HOUR
A systematic study of the reactions of functional groups and of the physical properties which lead to the identification of organic compounds. One class period per week. Prerequisite: Chm 315-316, or Chm 313-314. Second Term, Each Year

CHM 405L. QUALITATIVE ORGANIC ANALYSIS LABORATORY TWO CREDIT HOURS
Course to accompany Chm 405 lecture. Two three-hour laboratory periods per week. Second Term, Each Year

CHM 412. INTERMEDIATE ORGANIC CHEMISTRY THREE CREDIT HOURS
This course provides an understanding of the modern theory of organic chemistry with emphasis on reaction mechanisms. Prerequisite: Senior standing. First Term, Each Year

CHM 415. ANALYTICAL CHEMISTRY TWO CREDIT HOURS
Methods of analysis based on modern instrumentation. Prerequisites: Chm 215, 215L, 304. Second Term, Each Year

CHM 415L. ANALYTICAL CHEMISTRY LABORATORY TWO CREDIT HOURS
This course accompanies Chm 415. Two three-hour laboratory sessions each week. Prerequisites: Chm 215, 215L, 304. First Term, Each Year

CHM 417. INORGANIC CHEMISTRY THREE CREDIT HOURS
Electron distribution in atoms, nature of the chemical bond, periodicity, nucleus and its reactions, coordination compounds. Prerequisite: Chm 303-304. First Term, Each Year

CHM 420. BIOCHEMISTRY THREE CREDIT HOURS
A course dealing with the fundamentals of biochemistry. Prerequisite: Chm 314 or 316, and Chm 302 or 303. Second Term, Each Year

CHM 497. SEMINAR ONE CREDIT HOUR
Required of all chemistry majors. One meeting each week. First Term, Each Year

CHM 499. RESEARCH (HONORS) THREE CREDIT HOURS
An elective for Chemistry majors. Permission of Chairman of Department required. Prerequisite: Senior standing.
Civil Engineering and Engineering Mechanics
Seymour J. Ryckman, Chairman
Professors: Chamberlain, Driscoll, Ryckman
Associate Professors: Kraft, Thomson
Assistant Professors: Bahramian, McDaniel, Payne
Instructors: Shaw, Weiss

Civil Engineering (Cie)

CIE 205L. Surveying Field Practice
THREE CREDIT HOURS
Field work and computation in topography, highway surveying, triangulation, level net, celestial observations, evaluation of errors, and preparation of plans. Five eight-hour days a week for three weeks. Prerequisite: Cie 208. Summer

CIE 207. Surveying I
FOUR CREDIT HOURS
Theory of Measurements, computation and instrumentation. Boundary and construction surveys, celestial observations, triangulation and level net adjustments, elementary geodesy, and state coordinate systems. Corequisite: Mth 118. First Term, Each Year

CIE 208. Surveying II
THREE CREDIT HOURS
Study of photogrammetry, circular and spiral curves, vertical curves, grade lines, earthwork and mass diagram, slope and grade stakes, contour grading, and use of aerial photographs. Prerequisite: Cie 207. Second Term, Each Year

CIE 213. Plane Table Surveying
ONE CREDIT HOUR
General Principles of Surveying with emphasis on plane table mapping. Designed for students in Geology. Prerequisite: Mth 101.

CIE 213L. Plane Table Surveying Laboratory
TWO CREDIT HOURS
Field and laboratory work in application of principles of Cie 213. Corequisite: Cie 213.

CIE 306. Theory of Structures
FIVE CREDIT HOURS
The analytical and graphical methods of stress determination in statically determinate structures, together with a study of influence lines. Prerequisite: Egm 303. First Term, Each Year

CIE 307. Hydraulics
FOUR CREDIT HOURS
Principles of liquid statics and fluid flow including similitude, measuring devices, channel and pipe flow, turbines and pumps. Corequisites: Cie 307L, Egm 301. First Term, Each Year

CIE 307L. Hydraulics Laboratory
ONE CREDIT HOUR
Laboratory experiments and problems associated with Cie 307. Corequisite: Cie 307. First Term, Each Year

CIE 310L. Civil Engineering Laboratory
ONE CREDIT HOUR
Experiments and studies relating the engineering properties of certain building materials to their fundamental nature and composition. Prerequisite: Egm 303. Second Term, Each Year
CIE 312. SOIL MECHANICS
Principles of soil structures, classification, capillarity, permeability, flow nets, shear strength, consolidation, stress analysis, slope stability, lateral pressure, bearing capacity, and piles. Corequisites: CIE 312L, EGM 304. Second Term, Each Year

CIE 312L. SOIL MECHANICS LABORATORY
Laboratory test to evaluate and identify soil properties for engineering purposes. Design problems are included. Corequisite: CIE 312. Second Term, Each Year

CIE 313. HYDRAULICS
Principles of liquid statics and fluid flow including similitude, measuring devices, channel and pipe flow, turbines and pumps. Corequisites: CIE 313L, EGM 301.

CIE 313L. HYDRAULICS LABORATORY
Laboratory experiments and problems associated with CIE 313. Corequisite: CIE 313. Three Credit Hours

CIE 314. THEORY OF STRUCTURES
The analytical and graphical methods of stress determination in statically determinate structures, together with a study of influence lines. Prerequisite: EGM 303. Four Credit Hours

CIE 402. STRUCTURAL DESIGN II
Concentrated loads on slabs, beams; composite construction, rigid frames, flat slabs as rigid frames, plastic design of rectangular and tee beams. Prerequisites: CIE 407, CIE 415. Corequisite: CIE 402L. Second Term, Each Year

CIE 402L. STRUCTURAL DESIGN LABORATORY II
Assigned problems illustrating and affording practice in the design covered in CIE 402. Corequisite: CIE 402. Two Credit Hours

CIE 405. HIGHWAY ENGINEERING
Fundamentals of highway design, construction maintenance, and economics with illustrative practical problems. Prerequisites: CIE 208, CIE 310L. First Term, Each Year

CIE 406. INDETERMINATE STRUCTURES
The determination of stresses and deflections of statically indeterminate frames and trusses by the classic and modern methods, including Castigliano's theorem, least work, moment and shear distribution. Prerequisite: CIE 407. Second Term, Each Year

CIE 407. REINFORCED CONCRETE
The first course in the theory and design of reinforced concrete structures; the study of earth pressure; design of retaining walls and footings. Prerequisite: CIE 306, or CIE 314. First Term, Each Year

CIE 408A. SEMINAR
Practice in the presentation and discussion of papers; lectures by staff and prominent engineers. Attendance required by Civil Engineering second term seniors only. One Credit Hour

CIE 408B. SEMINAR
Practice in the presentation and discussion of papers; lectures by staff and prominent engineers. Attendance required by Civil Engineering sophomores, juniors, and first term seniors. Zero Credit Hours
CIE 415. **Structural Design I**

A study of rolled beams, plate girders, columns and steel trusses with emphasis on typical connections and splices both riveted and welded, together with assigned problems. Prerequisite: Cie 306 or Cie 314. Corequisite: Egm 304. *First Term, Each Year*

CIE 433. **Sanitary Engineering I**

An integrated study of the principles of water sanitation, water supply, stream pollution abatement and waste water disposal systems. Prerequisites: Cie 307, Cie 307L, or Cie 313, Cie 313L. *First Term, Each Year*

CIE 434. **Sanitary Engineering II**

A continuation of Cie 433 and with brief considerations of municipal and rural sanitation. Prerequisite: Cie 433. *Second Term, Each Year*

**Civil Engineering Electives**

In addition to courses listed below, students may select with departmental approval Civil Engineering and Engineering Mechanics courses in the five hundred series listed in Graduate School Catalog including such courses as: experimental stress analysis, advanced soil mechanics, advanced structural analysis, traffic engineering, prestressed concrete, and foundation design.

CIE 421. **Construction Engineering**

Organization, planning and control of construction projects. Includes: a study of the use of machinery, economics of equipment, methods, materials, estimates, cost controls, and fundamentals of Cpm and Pert.

CIE 499. **Special Problems in Civil Engineering**

Particular assignments to be arranged and approved by Chairman of the Department. Credit hours to be determined.

**Engineering Mechanics (Egm)**

EGM 101. **Mechanics I**

The principles of mechanics; force systems, free body diagrams, resultants and equilibrium, centroids and centers of gravity; application to trusses, frames, and beams; friction; moments of inertia. Prerequisite: Phy 196. Corequisite: Mth 119.

EGM 202. **Statics**

The principles of mechanics; force systems, resultants and equilibrium; centroids and centers of gravity; application to trusses, frames, and beams; friction; virtual work; moments of inertia. Prerequisite: Phy 206. Corequisite: Mth 218.

EGM 301. **Dynamics**

Kinematics, including translation, rotation, plane motion, and relative motion; kinetics of particles and bodies by the methods of force—mass—acceleration, work—energy, and impulse—momentum. Prerequisite: Egm 101 or Egm 202.

EGM 303. **Strength of Materials**

The study of stresses and strains in tension, compression, shear, flexure and torsion; riveted and welded joints; shear and moment diagrams; stresses and deflections of beams and analysis of columns. Prerequisite: Egm 101 or Egm 202.
Egm 303L. Strength of Materials Laboratory

Action of metals, timber and concrete under load, verification of theories of mechanics.
Prerequisite: Egm 303.

Egm 304. Advanced Strength of Materials

Stresses and strains at a point; shear center; unsymmetrical bending; curved beams; approximate analysis of flat plates; torsion of non-circular bars; thick-walled cylinders.
Prerequisite: Egm 303.

Communication Arts

George C. Biersack, Chairman
Professor: Staats
Associate Professors: Biersack, Gilvary, Jukes, Knittel
Assistant Professors: Johenning
Instructors: Devine, Harcar, Harwood, Kiernan, Miller, Weatherly, Selka
Part-time Instructors: Vlahos, Reingold, Stroud

The course requirements for Communication Arts majors is 24 upper level credit hours distributed as follows:

FOR GENERAL MAJOR IN COMMUNICATION ARTS:
(1) Speech 101 and 200 (Introduction to Mass Communications).
(2) At least one upper level course in each of the following: Speech, Theatre, Broadcasting, Journalism, and Allied Areas, and electives in the field selected through consultation with the Department Chairman.
(3) Seminar in Communication Arts.

FOR CONCENTRATED MAJOR IN COMMUNICATION ARTS:
(1) Speech 101 and appropriate 200 level course.
(2) 21 credit hours of upper level courses with a minimum of 15 hours in Speech, Theatre, or Broadcasting-Journalism.
(3) Seminar in Communication Arts.

Minors in Communication Arts must have Spe 101 plus 12 hours of upper level courses selected through consultation with the department counselors.

The department sponsors three co-curricular activities, the University Players, the University Debaters, and the Flyer News.

Speech

Spe 101. Fundamentals of Effective Speaking

Introductory course in fundamental skills of speaking. Self-confidence is developed through speaking opportunities, with special attention given to poise, vocal variety, physical animation, and the communication of ideas.

Spe 201. Speaking Techniques

Covers area of oral communication in professional situations. Adapts principles of effective speaking to specific audiences and occasions. Student prepares and delivers informational, problem-solving, good-will, and special occasion speeches.
**Spe 300. Voice and Diction**

Course treating the four phases of speech production: proper breathing, phonation, resonance, and articulation. Projection, quality, and clarity of speech are emphasized. Student's voice is analyzed through tape recordings.

**Spe 301. Speech Composition**

Study of speech structure and composition. Critical analysis of model speeches, in conjunction with the preparation and presentation of original speeches on current public questions.

**Spe 302. Fundamentals of Debate**

Application of the principles of argument through extensive practice in several forms of debate. Consideration of analysis, evidence, reasoning, inference and fallacy.

**Spe 307. Conference and Discussion**

The guiding principles used by participants and leaders in the preparation and conducting of conferences and discussions. Exploratory, problem-solving, and policy-making conferences are staged.

**Spe 310. Interpretative Reading I**

Oral interpretation of poetry and prose. Combines a study of vocal modulations, pitch, inflection, and tone color with intellectual and emotional analysis of selections to develop a deeper appreciation of literature.

**Spe 312. Persuasion**

Analysis of the motivations which lead to belief and action of individuals and audiences. Study in the techniques of achieving persuasive purposes. Delivery of speeches in the application of the theory.

**Spe 320. Interpretative Reading II**

A continuation of Spe 310, with a deeper penetration into the field of oral interpretation. Individual problems are given more particular attention. Impromptu reading. Prerequisite: Spe 310.

**Spe 400. Speech Correction**

Investigates the theory of speech and hearing handicaps in elementary and secondary school pupils. Examples of such defects are explored clinically and methods of correction applied. Includes demonstrations with children.

**Spe 401. Public Speaking II**

A more intensive development of the goals sought in Spe 301. Students are required to demonstrate facility in holding audience attention through longer speeches. Prerequisite: Spe 201 or permission.

**Spe 402. Forensics**

A course designed to employ the values inherent in competitive speaking, and to relate those values in an alert, aggressive citizenship. Classroom experience in the various forms of debate, discussion, original oratory.
SPE 430. Seminar in the Speech Arts \hspace{1cm} THREE CREDIT HOURS

Individual research and report on a problem in the field of speech, theater, or broadcasting. Students will do research in the area of his interest. Communication Arts majors or minors only, with permission.

Theater

All Communications Arts majors with an emphasis in Drama are encouraged to participate in U.D. Players productions.

SPE 204. Introduction to the Theater \hspace{1cm} THREE CREDIT HOURS

Analyzes the nature of theater, its origin and development, from the standpoint of the play, the physical theater, and its place in our culture.

SPE 304. Theatre Production Workshop \hspace{1cm} THREE CREDIT HOURS

Principles and practical application of theatre production: including play analysis, stagecraft, lighting, stage blocking, and rehearsal process. Students work on selected plays and with full stage and shop facilities.

SPE 313. Acting I \hspace{1cm} THREE CREDIT HOURS

Affords study and practice in the fundamentals of acting, with stress upon the physical, mental, and emotional background of characterization. Prerequisite: 204 or permission.

SPE 323. Acting II \hspace{1cm} THREE CREDIT HOURS

A further development and practice of fundamental principles set down in the elementary course in acting, Spe 313. Emphasis is placed on more specialized character portrayal. Prerequisite: Spe 313, or with permission.

SPE 414. Stagecraft and Lighting \hspace{1cm} THREE CREDIT HOURS

Presents fundamentals of designing, constructing, and painting stage scenery. Explores basic applications of stage lighting. Includes construction of scenery and plotting of lighting charts for specific plays. Prerequisite: Spe 204.

SPE 415. History of the Theater I \hspace{1cm} THREE CREDIT HOURS

A survey of the history of theater from Aeschylus to Miller, with emphasis on plays, playwrights, and play productions that lead up to the representational theater of today. Prerequisite: Spe 204 or permission.

SPE 424. Play Directing \hspace{1cm} THREE CREDIT HOURS

Treats the basic functions of a Director in the production of a play; blocking of scenes, timing, characterization, and continuity. Includes all aspects of production and direction of a one-act play.

SPE 425. History of the Theater II \hspace{1cm} THREE CREDIT HOURS

Plays, players, and movements in recent and current theater, including realistic and non-realistic styles. Function of community theater and commercial and professional theater. Prerequisite: Spe 204 or permission.
Broadcasting

SPE 306. **Radio Fundamentals**
Three credit hours
A workshop course in microphone technique as applied to straight announcing, commercials, and newscasting. Development of articulation and tone for broadcasting purposes is emphasized. Station organization is discussed.

SPE 309. **Fundamentals of Television**
Three credit hours
Principles and practices of television broadcasting, studio layout, equipment, personnel, organization of channels, and networks, educational and closed circuit television. Students participate in various programming projects.

SPE 316. **Radio Workshop**
Three credit hours
Designed to develop voice, articulation, and reading skills. Exercises in microphone techniques. Development of radio stations' staff requirements and responsibilities. Project shows are taped for analysis.

SPE 409. **Television Production**
Three credit hours
Intensive practice in preparation and production of TV programs. Camera technique, floor set-ups, and direction of crews and talent demonstrated through actual participation in TV shows. Prerequisite: Spe 309, or with permission.

Journalism

Majors in Journalism must take Jrn 200 plus 18 semester hours in Jrn and Com 300-400 courses, plus 6 semester hours from 300-400 offerings in the Department of English, selected in consultation with the Chairman. Minors in Journalism 12 semester hours from 300-400 courses.

JRN 200. **Introduction to Mass Communications Media**
Three credit hours
Covers nature and purpose of mass communicative field. Emphasis on newspapers, television and radio, occupational opportunities, organizational structure of modern newspaper and news facets of television and radio.

JRN 300. **Reporting and Writing for News Media**
Three credit hours
Determining news values. Structure of a news story. Techniques of gathering news for all media and how this material is applied to newspapers, television and radio. Prerequisite: Jrn 200.

JRN 301. **Advanced News Story Writing**
Three credit hours
Advanced reporting and news writing. Analysis of feature story techniques and structure in all areas, especially columns and specialized reporting. Prerequisites: Jrn 200 and 300.

JRN 302. **The Law and News Media**
Three credit hours

JRN 400. **Editing and Copyreading**
Three credit hours
The copy desk on large and small newspapers, editing, headline writing, page makeup, uses of pictures and type. Prerequisite: Jrn 300 or permission of instructor.
JRN 401. Editorial Writing
Study of the methods used in preparing and writing newspaper editorials—editorial conferences to discuss topics, research necessary.

JRN 404. Newspaper Management Problems
Non-editorial operations—problems of business, circulation, advertising and printing departments as they affect operations of the news department. Special emphasis on small dailies and weeklies.

JRN 430. History of Journalism
Critical study of development of the English language press. Emphasis on the American press and its role in political and economic progress of this country. The outstanding editors and their newspapers.

Allied Areas

COM 301. Production of Audio-Visual Aids
Production of various types of audio-visual aids used in communications. Designing and producing audio-visual aids will be required.

COM 302. Uses of Audio-Visual Aids
Investigates areas of communication where audio-visual aids are used to great advantage. Deals primarily with developing techniques and skills in using audio-visual aids.

COM 303. Free-Lance Writing

COM 304. Advertising
Nature and functions of advertising; preparation of layouts, writing of copy; selection and evaluation of media. Coordination of advertising with other marketing efforts. Social implications of advertising. (See Mkt 421.)

COM 305. Propaganda Analysis
Use and abuse of propaganda. Editorial persuasion. Propaganda devices and techniques. An application of the principles of Aristotelian logic to the field of mass communication.

COM 306. Report Writing
The principles of letter writing and report writing are studied and applied in conformity with the best current practices in business. (See Bus 409.)

COM 307. Technical Writing

COM 401. Publicity and Public Relations
For students (business, education, personnel management, etc.) who expect to direct publicity campaigns or write news releases in their future work. Explains nature, organization, and problems of newspaper publishing.
Computer Science (Cps)

Thomas A. Schoen, S.M., Chairman
Associate Professors: Jehn, Schoen
Assistant Professors: Cada, Kester, Wesselkamper
Instructor: Krall
Part-time Instructors: Brunswick, Keller, Lokai, Sikora

CPS 133. FORTRAN PROGRAMMING
TWO CREDIT HOURS
General programming techniques; grammar and syntax of the Fortran IV compiler; programming in Fortran. Not open to students who have taken Cps 141 or Cps 147. Corequisite: Mth 101 or equivalent.

CPS 141. ALGOL PROGRAMMING
TWO CREDIT HOURS
General programming techniques; grammar and syntax of the Algol 60 compiler; programming in Algol. Not open to students who have taken Cps 133 or Cps 147. Corequisite: Mth 101 or equivalent.

CPS 147. PL I PROGRAMMING
TWO CREDIT HOURS
General programming techniques; grammar and syntax of the PL/I compiler; programming in PL/I. Not open to students who have taken Cps 133 or Cps 141. Corequisite: Mth 101 or equivalent.

CPS 203. DATA PROCESSING SYSTEMS
TWO CREDIT HOURS
Material applicable to data processing problems; applications requiring consideration or use of peripheral equipment.

CPS 232. COBOL PROGRAMMING
TWO CREDIT HOURS
General programming techniques; grammar and syntax of the Cobol compiler; programming data processing problems in Cobol. Corequisite: Mth 101 or equivalent.

CPS 345. PROGRAMMING LANGUAGES
THREE CREDIT HOURS
Programming in machine language and with an assembler; input/output techniques; introductory topics in compiler organization. Prerequisite: Cps 133, 141, or 147.

CPS 346. OPERATING SYSTEM
THREE CREDIT HOURS
Study of OS/360 or similar system and its functions of data, job, and task management. Prerequisite: Cps 345.

CPS 353-354. NUMERICAL METHODS
SIX CREDIT HOURS
Solution of nonlinear equations, interpolation and approximation, differentiation and integration, curve fitting, numerical filtering and data smoothing, matrices and systems of linear equations, eigenvalues and eigenvectors; solution of difference, differential, and integral equations; boundary value problems in ordinary differential equations, elementary statistics. Emphasis placed on applications. Prerequisite: Cps 133, 141 or 147, and Mth 218 or 228.
CPS 383. Logic and Set Theory  
Propositional and predicate calculus, formal and informal proofs, basic concepts of set theory, operations on sets, relations, functions. Corequisite: Mth 119 or 129.

CPS 387. Logical Design  
Minimization of Boolean functions, error detecting and error correcting codes; principles of design for arithmetic operations, including a survey of functional units for implementation; memory devices, central processing units, and input-output equipment. Prerequisite: Cps 133, 141 or 147, Mth 218 or 228.

CPS 405. Computer Techniques for Business Applications  
Linear programming, network analysis including PERT, game theory, queuing theory, inventory theory, Markov chains, simulation and other topics. Prerequisite: Cps 133, 141 or 147, Mth 362, Mth 367 or equivalent.

CPS 441-442. Advanced Programming  
Analysis of compilers and their construction; programming techniques discussed in the current literature; advanced computer applications in both mathematical and non-numeric areas. Prerequisite: Cps 345.

CPS 455-456. Numerical Analysis  
Quadrature methods and the numerical solution of ordinary differential equations; matrices and large scale linear systems; norms and spectral radii of matrices; modern iterative matrix methods, including the successive overrelaxation method; numerical solution of partial differential equations. Prerequisite: Cps 353, Mth 362.

CPS 481. Mathematical Logic  
Formalization of propositional calculus, first order theories including predicate calculi, formal number theory, recursive functions, Goedel's incompleteness theorem. Prerequisite: Cps 383 or Mth 390.

CPS 482. Automata Theory  
Finite automata, sequential machines, Turing machines, computability, existence of self-reproducing machines. Prerequisite: Cps 481.

CPS 498. Problems in (Named Area)  
Individual readings and research in a specialized area (see Cps 499.) May be taken more than once for additional credit. Prerequisite: permission of the department.

CPS 499. (Special Topics)  
Lectures and/or laboratory experience in such specialized areas as those listed below. May be taken more than once for additional credit. Prerequisite: permission of the department.

1. analog computers  
7. numerical analysis  
2. artificial intelligence  
8. programming languages  
3. formal languages  
9. sequential machines  
4. informational retrieval  
10. simulation languages  
5. linguistic analysis  
11. supervisory systems  
6. logical design  
12. utility programs
Economics (Eco)

Dr. George E. Matlin, Chairman
Professor: Matlin
Associate Professors: Louis, Vikor, Dailey
Assistant Professors: Berger, Schade, Gelson, Kumar, Weiler
Instructors: Gupta
Part-time Instructor: Suttman

Eco 201-202 are prerequisites for all advanced courses in Economics. Minors are required to take Eco 340, 341, 342, and one elective.

Eco 201. Principles of Economics I THREE CREDIT HOURS
Basic economic principles. Analyzes American economy—business organization, industrial relations, the economic role of government, money and banking in the productive process, determination of aggregate level of national income and employment.

Eco 202. Principles of Economics II THREE CREDIT HOURS
Examines pricing of production factors under conditions of perfect and imperfect competition. Considers distribution of income, principles of international trade, problems of economic development, and alternative economic systems.

Eco 340. Micro Economic Analysis THREE CREDIT HOURS
Analyzes theory of consumer behavior; production theory; equilibrium of the firm; market structures; monopoly, monopolistic competition, and oligopoly; allocation of resources; distribution of income.

Eco 341. Macro Economic Analysis THREE CREDIT HOURS
National income and determination of level of income and employment. Keynesian vs. classical systems. Role of government in economy; foreign trade and price levels; theory of economic growth; Keynesian and post-Keynesian theory.

Eco 342. Money, Banking, and Monetary Policy THREE CREDIT HOURS
Considers principles of money and monetary systems; commercial banking and role of the Federal Reserve System; monetary theory and policy; the mechanism of international payments.

Eco 343. Public Finance and Taxation THREE CREDIT HOURS
Studies major types of taxation and expenditure problems of local, state, and especially federal government. Emphasizes shifting, incidence, equity, and policy of different types of taxes together with fiscal administration and public debt.

Eco 360. International Economics THREE CREDIT HOURS
Studies international trade theory, issues, and problems. Examines national income and trade, foreign exchange, balance of payments, trade barriers, international economic organizations, and recent movements toward free trade.

Eco 371. Labor Economics THREE CREDIT HOURS
Eco 430. History of Economic Thought  THREE CREDIT HOURS
Surveys early philosophers. Examines various schools and systems of economic thought (Mercantilists, Physiocrats, Classical, Historical, Marginalists, Neo-classicals, Keynesians) and current economic theories with emphasis upon American developments.

Eco 440. Business Cycles and Forecasting  THREE CREDIT HOURS

Eco 441. Econometrics  THREE CREDIT HOURS
Discusses the questions with which quantitative economics and operations research are concerned. Subject matter considered includes: Linear programming, the optimum path, the critical path, input-output analysis, econometric macromodels, economic forecasts, concept of a strategy, game theory, queues, and the statistical specification of economic relations and the consumer's dollar. Prerequisites: Quantitative Analysis 110-111, and Quantitative Analysis 210-211.

Eco 450. Comparative Economic Systems  THREE CREDIT HOURS
Analyzes principal types of economic systems in the world today. Stresses their development in the United Kingdom, the Soviet Union, China, and India. Contrasts foreign systems with American capitalism.

Eco 460. Economic Development and Growth  THREE CREDIT HOURS
Inquiries into the nature of economic growth in both pre-industrial and industrial societies within their individual institutional framework. Analyzes theories of growth, domestic and international policy issues.

Eco 480. Current Economic Problems  THREE CREDIT HOURS
Analyzes current economic issues including the problems of agriculture, employment and economic growth, inflation, budgetary policy, public debt, international balance of payments, and underdeveloped economies.

Eco 499H. Honor Studies in Economics  THREE CREDIT HOURS
Directed readings and research in selected fields of Economics for senior Economics majors who have a cumulative point average of 3.0. The course will require a department approved treatise and/or comprehensive examination. Prerequisites: 12 hours in economics and permission of the Chairman of the Economics Department.

Education

Foundations of Education (EdF)

Sr. M. Audrey Bourgeois, Chairman
Professors: Panzer, Faerber
Associate Professors: Bourgeois, Brit
Assistant Professors: Anderson, Emling, Petit
Part-time Instructors: Wening, Werner

EdF 101. Introduction to Education  NO CREDIT
An introduction to the study of education as a discipline. The meaning of commitment in teaching in relation to the purposes of the School of Education and the University of Dayton is stressed. Attendance at each session is mandatory.
EDF 109. **Moral and Spiritual Values**

Three credit hours
A study of the basic religious and moral values inherent in the American tradition. Stresses the importance of such values for the teacher and emphasizes their role as integrating factor in the educative process.

EDF 198. **Nature of the Learner**

Three credit hours
General psychology emphasizing concepts from the standpoint of both science and philosophy. Focuses attention on fundamental equipment of man as a learner. (A combination of Psy 201 and Phl 207 may substitute.)

EDF 205. **Child Growth and Development**

Three credit hours
Professional education course designed to study growth and development in childhood with emphasis on the elementary school child. Knowledge gained will be made relevant for successful classroom practice in the elementary school. Prerequisite: EdF 198 or equivalent.

EDF 206. **Adolescent Growth and Development**

Three credit hours
Professional education course designed to study growth and development in adolescence with emphasis on the junior and senior high school student. Content will be made relevant for successful classroom practice in the high school. Prerequisite: EdF 198 or equivalent.

EDF 207. **Human Growth and Development**

Three credit hours
Professional education course designed to study growth and development in childhood and adolescence. Intended for the teacher, the knowledge will be made relevant for successful classroom practice. Prerequisite: EdF 198 or equivalent.

EDF 208. **Educational Psychology II: The Learning Process**

Three credit hours
The aim of this course is two-fold: (1) to treat the learning process; and (2) to treat topics dealing with factors which vitally affect the learning process. Prerequisites: EdF 198, EdF 207 or equivalents.

EDF 419. **Philosophy of Education**

Three credit hours
Culminating education course. By interrelating the principal concepts pertaining to man, society, and the school, the student should develop a constructive philosophy of education. Accredited in Philosophy. Prerequisites: EdF 198 or equivalent; EdF 205, EdF 206, or EdF 207; and EdF 208.

EDF 423. **Philosophy of Education: Catholic**

Three credit hours
The educand, the aims and agencies of education, the philosophy of the curriculum are studied in the light of Catholic theology and philosophy. The course may be taken in lieu of EdF 419. Prerequisite: EdF 198 or equivalent; EdF 205, 206, or 207; and EdF 208.

EDF 440. **Honors Seminar**

Two credit hours
Concerns itself with the great issues and problems of education. Offered as an elective for junior and senior members of the Education Honor Society. *Second Term, Each Year*
Elementary Education (EdE)

Dr. Simon Chavez, Chairman
Professors: Chavez, O'Donnell
Assistant Professors: Frye, Klein, Klosterman, Mathews, Miles, Thomas, Waters, Windell
Instructor: Fuchs
Part-time Instructors: Blackford, Bankston, Carroll, Cherney, Hackman, Hill, Rudolph, Weaver

EdE 219. Kindergarten—Primary Instruction
Three Credit Hours
Deals both with the theory and the necessary practical skills to meet the needs of children in the Kindergarten. Observation in Kindergarten is included. Required for Kindergarten-Primary certification.

EdE 303. Reading in the Elementary School
Three Credit Hours
Treats reading-readiness, experience reading, methods of meeting individual differences, functional reading, diagnosis in reading, and remedial measures. Prerequisite: EdF 205. Restricted to students who have had teaching experience in an Elementary School.

Summer

EdE 320. Reading and Language Arts in Elementary School
Five Credit Hours
An integrated language arts course with reading as its core subject. Acquisition of a certificate in handwriting required. One half day per week devoted to field experience. Prerequisite: EdF 205.

EdE 324. Language in the Elementary School
Two Credit Hours
Stresses the experssional phase of elementary school language, including oral and written expression, spelling and handwriting. Also treats instructional methods. Acquisition of certificate in handwriting is required. Prerequisite: EdE 303.

Summer

EdE 325. Social Studies in the Elementary School
Three Credit Hours
Function of the social studies in the elementary school; appraisal of teaching procedures in the field; formulation of definite principles; testing the results of instruction. Prerequisite: EdF 208.

Summer

EdE 330. Religion in CCD (Elementary)
Two Credit Hours
Principles and techniques for the effective teaching of religion. Prepares the student to teach Catholic pupils from the public elementary schools. Prerequisite: Four semester hours of Theology.

EdE 333. Religious Instruction in CCD Program
Two Credit Hours
Designed to prepare the student to teach Catholic pupils from the public elementary schools. Prerequisite: Eight semester hours of Theology.

EdE 350. The Elementary School: Purposes and Practices
Three Credit Hours
Deals with objectives, organization, curricula, community relationships, and the practical aspects of teaching in the elementary schools. Visitation of schools for observation. Prerequisites: EdF 205, EdF 208 or equivalents.
EdE 360. **Children's Literature**  
**THREE CREDIT HOURS**
Treats the history of children's literature, poetry for different age levels, folk tales, story telling. Required of and limited to students in Elementary Education.

EdE 400. **Religion in the Elementary School**  
**TWO CREDIT HOURS**
Methods and materials of instruction; employment of the principles of adaptation to the practical needs of elementary school children in the Catholic schools. Observation of teaching. Prerequisites EdF 205, EdF 208.

EdE 403. **Mathematics in the Elementary School**  
**THREE CREDIT HOURS**
Deals with distribution of content according to grade levels; methods of presentation; diagnosis of learning difficulties; remedial instruction; testing. Directed observation of teaching. Prerequisite: Mth 204. In addition, Mth 205 required for students with a standard certificate or a minor in Mth.

EdE 412. **Student Teaching—Summer**  
**SIX CREDIT HOURS**
Supervised teaching in actual classroom situations during the summer period. A seminar on campus twice a week. Restricted to students who have had previous full-time teaching experience. Prerequisite: Special permission of the Dean.

EdE 413. **Student Teaching (Elementary)**  
**SIX-TWELVE CREDIT HOURS**
Consists of teaching in actual classroom situations for full semester under close supervision. A seminar is held once a week. Prerequisite: Formal admission to student teaching a full semester in advance; also EdE 320, EdE 350 or 352, and EdE 403.

EdE 431. **Visual and Other Sensory Aids in Education**  
**TWO CREDIT HOURS**
Studies the aims and psychological bases of the use of visual and other sensory aids in the classroom. Includes demonstration lessons applying sensory methods to the subjects of the curriculum. Involves laboratory experience.

EdE 451. **Advanced Kindergarten-Primary Instruction**  
**THREE CREDIT HOURS**
Deals with current problems and practices of kindergarten through the third grade in relation to child and curriculum. Prerequisite: EdE 219.

EdE 460. **Science in the Elementary School**  
**THREE CREDIT HOURS**
Understanding the challenge of the newer developments of science for the elementary school program. Study of the objectives of elementary science and of the selection and grade placement of subject matter.

EdE 480. **The Psychology of Slow Learning Children**  
**TWO CREDIT HOURS**

EdE 484. **Language Arts for Slow Learning Children**  
**TWO CREDIT HOURS**
Practical measures for taking care of the language and reading needs of mentally retarded children in special classes. Diagnosis of unique problems combined with practice and program development. Prerequisite: EdE 480.

EdE 485. **Social Studies for Slow Learning Children**  
**TWO CREDIT HOURS**
Curriculum planning and program development for the integration of social studies in the education of mentally retarded children in special classes. Prerequisite: EdE 480.
EdE 486. Mathematics for Slow Learning Children  TWO CREDIT HOURS
Deals with the special adjustments and techniques required in developing basic arithmetic skills in mentally retarded children in special classes. Prerequisite: EdE 480.

EdE 487. Occupational Orientation and Job Training  TWO CREDIT HOURS
Designed to acquaint teachers with the problems and challenges involved in a program positively attuned to the limited occupational opportunities for mentally retarded children. Prerequisite: EdE 480.

EdE 488. Materials of Instruction for Slow Learning Children  TWO CREDIT HOURS
This course deals with the preparation, selection, and adaptation of instructional materials for slow learning children at the primary, intermediate, and secondary level. It points out the imperative need to use materials that meet the special needs of slow learners, a need that is not adequately met by using materials that exist for a specific grade level. This course is required for state certification in Ohio for beginning teachers of slow learners.

Secondary Education (EdS)

Dr. Ellis Joseph, Chairman
Professor: Joseph
Associate Professors: Edgington, John Jansen, Powers, Morton, Hand, Kriegbaum
Assistant Professors: Joseph Jansen, Frazier, Gay, Petit, Taylor, Willis, Metzger
Instructor: Landis
Part-time Instructors: Levin, Campbell, Lewis, Rogus

EdS 327. Business Education in the Secondary School  TWO CREDIT HOURS
Principles and techniques of teaching business education subjects in high school, including both the social business and secretarial subjects. Students should be prepared to devote one half a day each week to practicum experiences. Prerequisite: EdF 208.
First Term, Each Year

EdS 331. Religion in CCD (High School)  TWO CREDIT HOURS
Concentrates on principles and techniques of religious instruction for high school students and follows the program of the Confraternity of Christian Doctrine. Prerequisite: Eight semester hours of Theology.

EdS 333. Religious Instruction in CCD Program  TWO CREDIT HOURS
Designed to prepare the student to teach Catholic pupils from the public secondary schools. Prerequisite: Eight semester hours of Theology.

EdS 351. The Secondary School  TWO CREDIT HOURS
An examination of the interrelationships between school, self, and society utilizing group procedures when possible. Students should be prepared to devote one evening each week to practicum experiences. Prerequisite: EdF 208.

EdS 353. The Secondary School: Marianist  TWO CREDIT HOURS
Covers the basic course content of EdS 351 treated in terms of the Marianist traditions and concepts of teaching as revealed through Marianist educational literature. May be taken in lieu of EdS 351. Prerequisite: EdF 208.
EdS 405. **English in the Secondary School**

Ways and means whereby the teacher can make his teaching more functional in the lives of students. Students should be prepared to devote one half a day each week to practicum experiences. Prerequisite: EdS 351 or EdS 353.

*First and Second Term, Each Year*

EdS 406. **Social Studies in Secondary School**

Aims and values of social studies in high school. General method and special techniques in the social studies field. Students should be prepared to devote one half a day each week to practicum experiences. Prerequisite: EdS 351 or EdS 353.

*First and Second Term, Each Year*

EdS 407. **Speech Methods in the Schools**

Designed to prepare teachers for speech work on the high school level. Demonstrates how to arrange syllabi and prepare and administer assignments that will enrich speech classes. Students should be prepared to devote one half a day each week to practicum experiences. Prerequisites: EdS 351 or EdS 353.

*First Term, Each Year*

EdS 408. **Modern Language in the Secondary School**

Considers the functions and values of language study; courses of study; organization of materials; conventional and progressive methods. Students should be prepared to devote one half a day each week to practicum experiences. Prerequisite: EdS 351 or EdS 353.

*Second Term, Each Year*

EdS 409. **Mathematics in the Secondary School**

The objectives of high school mathematics; sequence and correlation of subject matter; methods of teaching. Students should be prepared to devote one half a day each week to practicum experiences. Prerequisite: EdS 351 or EdS 353.

*Second Term, Evening*

EdS 410. **Religion in the Secondary School**

Presents the teacher of religion with modern methods of instruction with view to the practical needs of adolescents. Prerequisite: EdS 351 or EdS 353.

EdS 411. **Science in the Secondary School**

Deals with instructional methods and materials in the modern science program. Includes the selection of objectives on the basis of reliable criteria, and the development of an integral science program. Students should be prepared to devote one half a day each week to practicum experiences. Prerequisite: EdS 351 or EdS 353.

*Second Term, Each Year*

EdS 412. **Student Teaching—Summer**

Supervised teaching in actual classroom situations during the summer period. A seminar on campus twice a week. Restricted to students who have had previous full-time teaching experience. Prerequisite: Special permission of the Dean and EdS 351.

EdS 414. **Student Teaching (Secondary)**

Consists of teaching in actual classroom situations for full semester under close supervision. A seminar is held once a week. Prerequisite: Formal admission to student teaching a full semester in advance and EdS 351.
EdS 415. **STUDENT TEACHING (SPECIAL)**  
**SIX-TWELVE CREDIT HOURS**  
Consists of teaching under close supervision in the specialized subject area in both elementary and high school grades for a minimum of twelve weeks. A seminar is held once a week. Prerequisite: Formal admission to student teaching a full semester in advance and EdS 351.

**EdS 416. THE TEACHING INTERNSHIP**  
**NINE CREDIT HOURS**  
For beginning Marianist teachers in Marianist secondary schools. Supervised experiences under an administrator and a master teacher. Prerequisite: EdS 351.

**EdS 455. PRACTICUM IN HIGH SCHOOL READING IMPROVEMENT**  
**TWO CREDIT HOURS**  
Diagnosis and cause of reading disabilities. Study of techniques applicable to delayed readers. Implementing the high school developmental reading program.  
*First Term, Each Year*

**EdS 456. INDEPENDENT STUDY**  
**TWO CREDIT HOURS**  
An opportunity for students to pursue (in groups or individually) various interests in education through self-appropriated learning. Prerequisite: permission of the chairman.

**Physical and Health Education (EdP)**

James B. LaVanche, *Chairman*
Philip Stanley, *Director of Men’s Division*
Associate Professor: LaVanche
Assistant Professors: Stanley, Schleppi
*Instructors:* Cathell, Donoher, Frericks, McVay, Landis, Powers
Doris Drees, *Director of Women’s Division*
Associate Professor: Drees
Assistant Professor: Siciliano, Bowman
*Instructors:* Balata, Jeremiah, Monaghan, Roberts, Trent

**General Program (Men)**

*EdP 101. SPORTS APPRECIATION*  
**ONE CREDIT HOUR**  
Lecture course concerning the philosophy of sports, especially activities, functions, and personalities of sports in our culture. Required of all those excused from R.O.T.C. Open as an elective to all students.  
*First Term, Each Year*

*EdP 102. HEALTH*  
**ONE CREDIT HOUR**  
Personal health knowledge for college students. Required of all those excused from R.O.T.C. Open as an elective to all students.  
*Second Term, Each Year*

*EdP 201-202. PHYSICAL EDUCATION ACTIVITIES*  
**ONE CREDIT HOUR EACH TERM**  
Provision of fundamental skills and knowledge of sports activities for those excused from R.O.T.C. and for non-medical reasons. Open as an elective to all students.

*EdP 201A-202A. ADAPTIVE PHYSICAL EDUCATION*  
**ONE CREDIT HOUR EACH TERM**  
Provision of fundamental skills and knowledge of sports activities for those limited in participation by ruling of University Health Service.
General Program (Women)

EdP 130-131. **Physical Education** one credit hour each term
Fundamentals of Physical Activities. The program includes knowledges and skills of team and individual sports, gymnastics, dance and body mechanics.

EdP 130A-131A. **Adaptive Physical Education** one credit hour each term
The teaching of recreational skills and limited motor activity. Designed for the student not able to take part in the regular activities course. (Medical recommendation from Health Center required.)

EdP 140. **Personal and Community Health** two credit hours
Lectures and discussions concerning personal and community health.

Professional Program—Men's Division

EdP 103-104(M). **Fundamentals of Physical Education Activities** one credit hour each term
Fundamentals of physical activities for physical education majors. Development of skills and knowledge needed to teach team and individual sports. Prerequisite to EdP 200.

EdP 203-204(M). **Fundamentals of Physical Education Activities** one credit hour each term
Continuation of EdP 103-104(M). Prerequisite to EdP 200 and EdP 324.

EdP 212. **Coaching Baseball, Track and Field, and Wrestling** two credit hours
The theory, skills, strategies and methods of coaching baseball, track and field, and wrestling. *Second Term, Each Year*

EdP 300. **Methods of Teaching Team and Individual Sports** two credit hours
Methods to teach individual and team activities in the physical education classes. Observation required. *Second Term, Each Year*

EdP 310. **Coaching Basketball** two credit hours
The theory, skills, strategies and methods of coaching basketball. *First Term, Each Year*

EdP 312. **Coaching Football** two credit hours
The theory, skills, strategies and methods of coaching football. *Second Term, Each Year*

EdP 319M. **Theory and Techniques of Officiating Football and Basketball** (elective) one credit hour each term
An application of the rules and techniques of officiating to game situations. Students are required to officiate in intramurals. Opportunity for taking O.H.S.A.A. Officials Examination.

EdP 320M. **Theory and Techniques of Officiating Baseball, Track and Field and Wrestling** (electives) one credit hour each term
An application of the rules and techniques of officiating to game situations. Students are required to officiate in intramurals. Opportunity for taking O.H.S.A.A. Officials Examination.
Professional Program—Women's Division

EdP 103-104W. Fundamentals of Physical Education Activities

Development of skills, knowledge and strategy of team and individual sport activities for physical education majors.

EdP 203-204W. Fundamentals of Physical Education Activities

Continuation of EdP 103-104. Prerequisite to EdP 217 and EdP 324.

EdP 217. Methods of Teaching Team Sports

Methods and skills essential to teach and coach various team sports. Prerequisite: EdP 103-104. Observation required. First Term, Each Year

EdP 245. Modern Dance

Emphasis on basic and intermediate technique involved in modern dance directed toward methods and composition. Second Term, Each Year

EdP 319W. Theory and Techniques of Officiating Field Hockey and Basketball (elective)

An application of the rules and techniques of officiating to game situations. Students are required to officiate in intramurals. Prerequisite: EdP 103-104W.

EdP 320W. Theory and Techniques of Officiating, Volleyball, Softball, and Tennis (elective)

An application of the rules and techniques of officiating to game situations. Students are required to officiate in intramurals. Prerequisite: EdP 103-104W.

EdP 334. Methods of Teaching Individual Sports

Methods and skills essential to teach and coach individual and dual sports. Prerequisites: EdP 203-204W. First Term, Each Year

EdP 346. Problems in Physical Education for Women

Theory and practice in the organization and administration of extra-curricular responsibilities. Two credit hours

Professional Program (Men and Women)

EdP 116. Personal Health

The establishment of proper health attitudes, habits, and knowledge by studying the human body and its environment. First Term, Each Year

EdP 118. Community Health

Prevention and control of disease in the family, school and community. Second Term, Each Year

EdP 205-206. Human Anatomy and Physiology

A study of the human body with emphasis on the interdependent relationships of structure and function. (Bio 101-102 prerequisite) Prerequisite to EdP 350 and EdP 408. Six credit hours
EdP 213. **Principals of Physical Education**
TWO CREDIT HOURS
A study of the aims, scope, and biological aspects of physical education in regards to its role in the educational process.

EdP 251. **Organization and Administration of Health Education**
THREE CREDIT HOURS
The organization and administration of a school health program with emphasis on principles of health education, health services, healthful school living and physical inspection.

EdP 309. **Methods and Materials of Health Education**
THREE CREDIT HOURS
Application of principles of methodology to health education in the elementary and secondary schools.

EdP 317. **Organization and Administration of Camping**
TWO CREDIT HOURS
Study and practice of the basic skills essential in planning and conducting a camping program.

EdP 324. **Principals and Practices of Physical Education in the Elementary School**
TWO CREDIT HOURS
Basic theory, techniques and methods of teaching physical education in the elementary school. Observation required.

EdP 325. **Methods of Teaching Dance**
TWO CREDIT HOURS
Materials and methods for teaching folk, square and ballroom dancing in elementary and secondary schools.

EdP 336. **Safety Education and First Aid**
THREE CREDIT HOURS
Prevention and care of injuries occurring from accidents in the home, school and community. The National Red Cross Standard, Advanced, and Instructors Certificates may be obtained.

EdP 348. **Organization and Administration of Recreation**
TWO CREDIT HOURS
Study of the philosophy, leadership, standards, facilities and programs of recreation.

EdP 350. **Kinesiology**
THREE CREDIT HOURS
The investigation and analysis of human motion based on anatomical, physiological and mechanical principles. Prerequisites: EdP 205-206.

EdP 402. **Organization and Administration of Physical Education**
TWO CREDIT HOURS
Organization and administration of programs in physical education.

EdP 405. **Tests and Measurements in Physical Education**
TWO CREDIT HOURS
This course is designed to present a direct relationship of tests and measurements to the teaching situation.

EdP 407. **Modern Problems in Public Health**
TWO CREDIT HOURS
A seminar study of current health problems with special emphasis on preventive medicine and epidemiology.
EdP 408. Physiology of Exercise
Detailed study of the effects of exercise on human functions; thus providing a basis for the study of physical fitness, motor skills, and athletic training.

EdP 410. Adaptive Physical Education
A study of the atypical child in order to organize and administer a program which will meet each individual’s needs.

EdP 413. Health Education in the Elementary School
A study of the total school health program. The Standard First Aid Course is given. Elementary Education majors only.

EdP 414. Physical Education in the Elementary School
Designed to equip the elementary education major with basic theory, techniques and methods for conducting a physical education program for the elementary students.

EdP 417. Student Teaching (Comprehensive and Special)
SIX-TWELVE CREDIT HOURS
Consists of teaching under close supervision in the specialized subject area in both elementary and high school grades for a minimum of twelve weeks. A seminar is held once a week. Prerequisite: Formal admission to student teaching a full semester in advance.

EdP 418. Student Teaching (Principal Teaching Field)
SIX-TWELVE CREDIT HOURS
Consists of teaching under close supervision in the specialized subject area in high school grades only for a minimum of twelve weeks. A seminar is held once a week. Prerequisite: Formal admission to student teaching a full semester in advance.

EdP 420. Aquatics (elective)
The American Red Cross Senior Life Saving and the Water Safety Instructor’s Course. Prerequisite: Advanced Swimming. Offered upon demand.

EdP 433. Gymnastics
TWO CREDIT HOURS
The practice and methods of beginning and intermediate gymnastic skills essential to effective teaching.

EdP 440. Driver Education
THREE CREDIT HOURS
Teacher preparation with practical teaching experience in Driver and Traffic Safety Education.

EdP 450. Selected Studies in Physical Education, Health and Education
ONE-THREE CREDIT HOURS
Investigating, analyzing, and reporting on a problem in the areas of physical education, recreation or health education.

EdP Corrective Therapy Clinical Training
Corrective therapy clinical training program is offered students who major in health and physical education. Involves 250 clock hours of directed clinical training at the Veterans Administration Center, Dayton.
Counselor Education (EdC)

Dr. Eugene K. Moulin, Chairman
Professor: Campanelle
Assistant Professors: Diethorn, Anderson

Courses are listed in the Graduate Catalog Issue of the Bulletin.

School Administration (EdA)

Dr. John O'Donnell, Chairman

Professor: O'Donnell
Associate Professors: Edgington, Morton
Part-time Instructors: Overly, Rogus

Courses are listed in the Graduate Catalog Issue of the Bulletin.

Electrical Engineering (ELE)

Bro. Louis H. Rose, S.M., Chairman

Professors: Holian, Morgan, Rose, Schmidt, Strnat
Associate Professors: Lewis, Tsui
Assistant Professors: Evers, Kubach, Moon

ELE 205. ALTERNATING CURRENT CIRCUITS
Vector and complex quantities applied to alternating currents; analysis of networks.

ELE 231. CIRCUIT THEORY I
Basic principles of linear circuit theory. Network equations and topology, phasor algebra,
resonance and the analysis of transient and steady state behavior of simple circuits.
Prerequisite: Mth 119.

ELE 232. CIRCUIT THEORY II
Network theorems and network equivalence, magnetically coupled circuits, polyphase
circuits and Fourier Series and Integral with circuit applications. Prerequisite: Ele 231.

ELE 233. FIELD THEORY I
Vector relations, static electric fields, dielectric materials, boundary conditions, field
mapping, steady electric currents and their magnetic fields, motion of charged particles.
Prerequisite: Mth 119.

ELE 307. ELECTRICAL MEASUREMENTS
A basic course covering both DC and AC measurements; errors of measurements; deflection
and null methods; bridge analysis; wave forms and AC meters; square law movements.
Corequisite: Ele 205.

ELE 307L. ELECTRICAL MEASUREMENTS LABORATORY

ELE 309. ELECTRICAL TRANSIENTS
Application of the LaPlace Transform; poles and zeros; transient and steady-state response.
Fourier series, integral, and transforms. Prerequisite: Mth 219.
ELE 310. CIRCUIT ANALYSIS
THREE CREDIT HOURS
Network theorems; wave filters; impedance transformation; long line theory; equalization. Prerequisite: Ele 312.

ELE 310L. CIRCUIT ANALYSIS LABORATORY
ONE CREDIT HOUR
Experiments to accompany topics outlined in Ele 310. Corequisite: Ele 310.

ELE 312. ENGINEERING ELECTRONICS I
THREE CREDIT HOURS
A first course on the terminal behavior of vacuum tubes and semiconductor devices. Topics include qualitative physical description, volt ampere curves, graphical solutions. Formulation of incremental and piecewise linear models. Analysis of simple circuits. Prerequisite: Ele 322.

ELE 312L. ENGINEERING ELECTRONICS LABORATORY I
ONE CREDIT HOUR
Receiving tube and transistor characteristics, electronic instruments, basic amplifier circuits, power supplies, waveshaping circuits. Corequisite: Ele 312.

ELE 313. ENGINEERING ELECTRONICS II
THREE CREDIT HOURS
A course in linear electronic circuits; network theorems; single and multistage amplifiers; transient response of electronic circuits and feedback amplifiers. Prerequisite: Ele 309. Corequisite: Ele 310.

ELE 313L. ENGINEERING ELECTRONICS LABORATORY II
ONE CREDIT HOUR
Single and multistage amplifiers, DC amplifiers, transistor amplifier configurations, feedback amplifiers, electronic timing and switching circuits. Corequisite: Ele 313.

ELE 318. MACHINERY I
THREE CREDIT HOURS
The theory, construction and characteristics of series, shunt and compound generators and motors; the theory of commutation and armature reaction; transformers. Prerequisite: Ele 205.

ELE 321. BASIC ELECTRIC THEORY
THREE CREDIT HOURS
For Chemical, Civil, Mechanical and Industrial Engineering students. Fundamental methods of analysis in DC and AC circuits. Prerequisites: Phy 207, Mth 218.

ELE 322. FUNDAMENTAL ENGINEERING ELECTRONICS
TWO CREDIT HOURS

ELE 322L. FUNDAMENTAL ENGINEERING ELECTRONICS LABORATORY
ONE CREDIT HOUR
Experiments, tests and measurements paralleling lectures in Ele 322. Basic receiving tube and transistor characteristics, electronic instruments, basic amplifier circuits, power supplies, wave-shaping circuits. Corequisite: Ele 322.

ELE 331. CIRCUIT THEORY III
THREE CREDIT HOURS
LaPlace transform analysis, zero-pole structure of network impedance functions. Foster's reactance theorem, synthesis of simple networks. Prerequisites: Ele 232, Mth 219.
**ELE 332. CIRCUIT THEORY IV**  
Three Credit Hours  

**ELE 333. FIELD THEORY II**  
Three Credit Hours  
Ferromagnetic materials, time changing electric and magnetic fields, Maxwell’s equations, relations between field and circuit theory, plane waves, Poynting vector, energy relations. Prerequisite: Ele 233.

**ELE 334. FIELD THEORY III**  
Three Credit Hours  
Boundary value problems, retarded potentials, radiation and propagation in unbounded media. Prerequisite: Ele 333.

**ELE 335L. ELECTRICAL ENGINEERING LABORATORY I**  
One Credit Hour  
Theory and range of application of electrical instruments; measurement of resistance, inductance, capacitance, and impedance at audio frequencies. Prerequisite: Ele 232.

**ELE 336L. ELECTRICAL ENGINEERING LABORATORY II**  
One Credit Hour  
Study of electric circuits including resonant circuits, currents and voltage loci, coupled circuits, polyphase circuits and power measurements, network theorems and circuit transients. Prerequisites: Ele 312, Ele 335L.

**ELE 338L. ELECTRICAL ENGINEERING LABORATORY III**  
One Credit Hour  
Determination of terminal characteristic of vacuum, gaseous, and solid state electron devices; non-sinusoidal wave form frequency analysis; power supplies, three-phase rectifiers, single stage amplifiers. Prerequisite: Ele 312.

**ELE 403. MACHINERY II**  
Three Credit Hours  
Theory, construction and characteristics of polyphase induction motors, synchronous generators and motors, single phase motors and rotary converters. Selected topics on energy conversion. Prerequisite: Ele 318.

**ELE 403L. MACHINERY LABORATORY**  
One Credit Hour  

**ELE 410A. SEMINAR**  
One Credit Hour  
Presentation of papers by the students and lectures by engineers in active practice. Attendance required by second term seniors only.

**ELE 410B. SEMINAR**  
Zero Credit Hours  
Presentation of papers by the students and lectures by engineers in active practice. Attendance required by Electrical Engineering juniors and first term seniors.

**ELE 411. ELECTRIC AND MAGNETIC FIELD THEORY**  
Three Credit Hours  
Mathematical theory of classical electricity and magnetism with an introduction to electromagnetism and Maxwell’s equations. Prerequisite: Mth 219.
ELE 413. Communication Engineering

Treatement of Fourier series; Fourier transform, frequency and time domain; modulation; random signal theory; basic information theory; noise in communication system. Prerequisite: Ele 332.

ELE 414. Advanced Electronics

Electron ballistics; theory of metals and semiconductors; electron emission, space charge flow, fundamental gas processes; modern electron devices. Prerequisite: Mth 219.

ELE 431. Energy Conversion


ELE 432. Automatic Control Systems

Closed-loop control systems; Routh's and Nyquist stability criterion; attenuation frequency methods. The root-locus approach; relationship between steady-state and transient performance. Prerequisite: Ele 413.

ELE 435L. Electrical Engineering Laboratory IV

Tube and transistor multistage amplifiers and broadbanding; audio frequency power amplifiers. Prerequisites: Ele 313, Ele 338L.

ELE 436L. Electrical Engineering Laboratory V

Amplitude modulation; demodulation of a modulated wave; production of shaped waveforms; switching and control circuit applications; design and evaluation of a single-frequency oscillator; filters. Transmission line parameters. Prerequisite: Ele 435L.

Electrical Engineering Electives

ELE 415. Microwave Theory and Practice

Maxwell's equations; transmission lines, wave guides, cavity resonators; transmission, reflection; and absorption in media; microwave generators; applications of microwaves. Prerequisite: Ele 313.

ELE 417. Thesis

Independent project in a field selected by the student and approved by the faculty. Open to seniors in the second semester.

ELE 419. Servomechanisms

Closed-loop control systems; Routh's and Nyquist stability criterion; attenuation-frequency methods. The root-locus approach; relationship between steady-state and transient performance. Prerequisite: Ele 331.

ELE 440. Advanced Electronics

Electron ballistics; theory of metals and semiconductors; electron emission, space charge flow, fundamental gas processes; modern electron devices. Prerequisite: Mth 219.

ELE 499. Special Problems in Electrical Engineering

Particular assignments to be arranged and approved by Chairman of the Department.
Eng 101 and Eng 106 are normally prerequisites for all courses listed as 200 or above. In addition to 12 hrs. of freshman and sophomore courses majors must take 316, 318, or 428; 405 or 431; 490; a semester of Shakespeare; a period survey each from sequence 412 to 435 and 438 to 442; a semester of American literature from the sequence 450 to 456; and one additional elective from 300-400 level offerings. Majors should consult the departmental chairman for advisor assignment. In addition to Freshman and Sophomore courses minors must take one course from the 300 level and three from the 400 level. Minors should consult the departmental chairman regarding the program of study when there is a question involved.

The Department sponsors one co-curricular activity. *The Exponent*, the literary magazine of the University.

Students for whom English is a second language, in their first term, will be required to enroll in English 90, *A Review of American English*, offered through the Office of Special Sessions before their initial enrollment in Eng 101, unless they demonstrate sufficient proficiency in an examination given during Orientation Week.

**ENG 101. LANGUAGE AND THOUGHT**
Three credit hours
An analysis of the logical and linguistic structure of exposition and argument. Practical application aimed at developing perceptive readers and responsible writers. Required conferences. Required of every student.

**ENG 106. LANGUAGE AND LITERATURE**
Three credit hours
An analysis of the major literary forms with emphasis on precision in the use of language. Papers required involve the student with problems of language and structure. Required conferences. Prerequisite: Eng 101.

**ENG 106H. LANGUAGE AND LITERATURE**
Three credit hours
Specific honors sections for first semester freshmen who show proficiency in the English Composition Test. Prerequisite: Superior scores in entrance exams.

**ENG 108. TOPICS IN COMPOSITION**
Three credit hours
Exploration of subjects in composition or related problems in developing writing skills. This course may be substituted for Eng 101 or Eng 106 under special circumstances.

**ENG 201. POETRY AND THE NOVEL**
Three credit hours
A study of representative examples of two major literary genres. Prerequisite: Eng 106.
ENG 202. DRAMA AND SHORT FICTION
A study of representative examples of two major literary genres. Prerequisite: Eng 106.

ENG 203. MAJOR BRITISH WRITERS
A study of four or five writers representative of the principal periods in English literature. Prerequisite: Eng 106.

ENG 204. MAJOR AMERICAN WRITERS
A study of four or five writers representative of the principal periods in American literature. Prerequisite: Eng 106.

ENG 205. MAJOR WORLD WRITERS
An examination of significant writings from the Western world, exclusive of English and American literature. Prerequisite: Eng 106.

ENG 208. TOPICS IN LITERATURE
Exploration of varying approaches to the study of literature. This course may, under special circumstances, be substituted for the other 200 level courses in fulfilling a sophomore requirement. Prerequisite: Eng 106.

ENG 204H-241H. SOPHOMORE HONORS
A seminar in which selected works from the literature of western civilization would be studied. Prerequisite: Sophomore standing in Arts. By invitation only.

ENG 315. DEVELOPMENT OF GRAMMAR
Studies in grammatical structure of modern English in the light of historical development. Traditional and modern linguistic points of view considered. Prerequisite: Twelve hours of English.

ENG 316. ADVANCED COMPOSITION
Offers intensive practice in the standard forms of theme writing, with emphasis on the formal, rhythmic, and thought patterns of the sentence, the paragraph, and the total composition. Prerequisites: Twelve hours of English.

ENG 318. CREATIVE WRITING
The principles for writing the short story, the informal and formal essay, and the biographical sketch. Prerequisite: Eng 316 or permission.

ENG 321. EUROPEAN LITERATURE OF THE MIDDLE AGES
A consideration of selected literary masterpieces of Western civilization in the Middle Ages. Prerequisite: Twelve hours of English.

ENG 322. WORLD LITERATURE
A survey of the literature of continental Europe and of Asia, from its beginning up to the twentieth century. Not open to students who have had Eng 205. Prerequisite: Twelve hours of English.

ENG 323. DANTE
A comprehensive study of the three Canticles of the Divine Comedy: Inferno, Purgatorio, and Paradiso. Prerequisite: Twelve hours of English.
ENG 329. SHORT STORY
A study of the techniques employed in the writing of the short story. Various models of
the short story will be analyzed. Not open normally to students who have had Eng. 202.
Prerequisite: Twelve hours of English.

ENG 330. DEVELOPMENT OF DRAMA
A study of the historical development of the drama from its beginnings in the Classic
Age to the nineteenth century. Selected plays from each significant period are read and
analyzed. Not open normally to students who have had Eng 202. Prerequisite: Twelve
hours of English.

ENG 332. MODERN DRAMA
A selected number of dramas, representing the best of world theater by the foremost
playwrights of the modern period. Prerequisite: Twelve hours of English.

ENG 335. TOPICS IN MODERN LITERATURE
A study of selected Continental, English, and American writers with a background of
discussion of the significant forces shaping the literature of the twentieth century. Pre-
requisite: Twelve hours of English.

ENG 362. SHAKESPEARE
A study of selected plays of Shakespeare. Some of these are discussed intensively in class;
others are assigned for outside reading. Not open to students who have had Eng 423,
424, or 425. Prerequisite: Twelve hours of English.

ENG 368. NEWMAN: THE IDEA OF A UNIVERSITY
The primary objective of this course is to cultivate a consciousness of the "philosophical
habit of the mind," as set forth by Cardinal Newman in the Discourses on the Idea of a
University. Prerequisite: Twelve hours of English.

ENG 370. FRANCIS THOMPSON
A study of his poems toward the discernment of their manifold spiritual and autobi-
ographical implications. Prerequisite: Twelve hours of English.

ENG 382. DIRECTED READINGS
A program of professionally oriented readings and reports in humanities and social
sciences, utilizing seminars and individual conferences. Required of Juniors in Business
Administration. Prerequisite: Six hours of English.

ENG 395H. JUNIOR HONORS TUTORIAL
Independent directed study on special topics for selected students. May be repeated
when topic or instructor changes. Permission required.

ENG 403. HISTORY OF THE ENGLISH LANGUAGE
Stages in the development of the English language and influences shaping its develop-
ment are studied to show what happened to the English language from the beginning to
the present time. Prerequisite: Twelve hours of English.

ENG 405. CHAUCER
A study of the life, the times, and the language of Chaucer. The main concentration is
on The Canterbury Tales as rendered in Middle English. Prerequisite: Twelve hours in
English.
ENG 407. Medieval English Literature. Three credit hours
A study of the dominant types in the literature of England from the beginning to 1500. Prerequisite: Twelve hours in English.

ENG 412. Early Renaissance Literature. Three credit hours
A survey of the non-dramatic literature of the sixteenth century from Thomas More to Sidney and Spenser. Prerequisite: Twelve hours in English.

ENG 413. Later Renaissance Literature. Three credit hours
A survey of the non-dramatic literature of the early seventeenth century from Bacon, Jonson, and Donne, to Marvell, exclusive of Milton. Prerequisite: Twelve hours in English.

ENG 420. Renaissance Drama. Three credit hours
A study of the drama of the Elizabthan, Jacobean, and Caroline periods, exclusive of Shakespeare. Prerequisite: Twelve hours in English.

ENG 423. Tragedies of Shakespeare. Three credit hours
All of the tragedies of Shakespeare are read; some are taken through in detail in the lecture periods and the rest assigned for out of class reading. Not open to students who have had Eng 362. Prerequisite: Twelve hours of English.

ENG 424. Comedies of Shakespeare. Three credit hours
The same procedure as followed for Eng 423. Some of the Comedies may be omitted at the discretion of the professor. Not open to students who have had Eng 362. Prerequisite: Twelve hours of English.

ENG 425. Histories of Shakespeare. Three credit hours
The same procedure as followed for Eng 423. All of the Histories are taken. Not open to students who have had Eng 362. Prerequisite: Twelve hours of English.

ENG 428. Literary Criticism. Three credit hours
A study of the history and development of literary criticism. It includes a study of fundamental principles of literary structure and style, together with the various theories advanced. Prerequisite: Twelve hours of English.

ENG 431. Milton. Three credit hours
A study of the major and minor poems and of selected prose of Milton. Prerequisite: Twelve hours of English.

ENG 434. Age of Wit and Satire. Three credit hours
The concern of the course is with the literature from Dryden to Pope, Addison, and Steele. Prerequisite: Twelve hours of English.

ENG 435. English Literature of the Eighteenth Century. Three credit hours
A study of the most representative works in prose and poetry from Swift to Johnson. Prerequisite: Twelve hours of English.
ENGLISH 241

ENG 437.  THE ENGLISH NOVEL  THREE CREDIT HOURS
A study of the development of the English novel from its beginning in the middle of the eighteenth century to the end of the nineteenth century. Prerequisite: Twelve hours of English.

ENG 438.  THE AGE OF ROMANTICISM  THREE CREDIT HOURS
A study of the major poets and critics of the Romantic Age. Prerequisite: Twelve hours of English.

ENG 441.  THE VICTORIAN AGE I  THREE CREDIT HOURS
A study of the major British poets from Tennyson to Housman. Prerequisite: Twelve hours of English.

ENG 442.  THE VICTORIAN AGE II  THREE CREDIT HOURS
English prose writers from Carlyle to Pater. Eng 441 is not a prerequisite. Prerequisite: Twelve hours of English.

ENG 445.  MODERN BRITISH FICTION  THREE CREDIT HOURS
A consideration of significant developments in the novel and short fiction from Joyce to the present day. Prerequisite: Twelve hours of English.

ENG 446.  MODERN ENGLISH POETRY  THREE CREDIT HOURS
A study of tradition and innovation in English poetry from Yeats to the present day. Prerequisite: Twelve hours of English.

ENG 450.  NINETEENTH CENTURY AMERICAN POETRY AND PROSE  THREE CREDIT HOURS
A survey of the significant developments in American literature, exclusive of fiction, from Bryant and Poe to Whitman and Henry Adams. Prerequisite: Twelve hours of English.

ENG 452.  AMERICAN FICTION OF THE NINETEENTH CENTURY  THREE CREDIT HOURS
A study of developments in the novel and short fiction from Washington Irving to Mark Twain and Stephen Crane. Prerequisite: Twelve hours of English.

ENG 454.  MODERN AMERICAN FICTION  THREE CREDIT HOURS
A treatment of significant movements in the novel and in the theory of fiction in twentieth century American literature. Prerequisite: Twelve hours of English.

ENG 456.  MODERN AMERICAN POETRY  THREE CREDIT HOURS
A study of the technique of modern poetry in America from Robinson, Jeffers, and Frost to the present. Prerequisite: Twelve hours of English.

ENG 490.  SEMINAR  THREE CREDIT HOURS
Concentration on one literary figure, genre, or period for purposes of research and analysis. Reports are read at sessions. Required of all majors in English. With permission. Prerequisite: Thirty hours of English.

ENG 495H.  SENIOR HONORS TUTORIAL  THREE CREDIT HOURS
Independent directed study on special topics for selected students. May be repeated when topic or instructor changes. Permission required.
Fine Arts (ART)

Bernard E. Plogman, Chairman
Assistant Professors: Barrish, Weber
Part-time Instructors: Black, Carmichael, Dreisbach, Emery, Fiehler, Henry, Martin, Petrovich, Riesing, Robohm, Smith, Vongruenigen

Art Consultant: Edw. Burroughs

The Fine Art Department offers three degree programs:
1. Bachelor of Fine Arts
2. Bachelor of Arts with a Major in Fine Arts
3. Bachelor of Science in Art Education

Minors are required to take 19 credit hours in art, 4 hours of which must be in upper level courses. All art students, regardless of their programs, are required to take Art 101-102 Introductory Drawing, and Art 111-112 Principles of Design before taking intermediate and advanced courses.

Students entering degree programs are required to present an art portfolio of at least five pieces of work. Transfer students entering a BFA program if possible should present a few samples of artwork to chairman. Seniors must present to the full-time faculty a portfolio of at least ten pieces of their best work as a requirement for graduation. Three dimensional work will also qualify.

ART 101-102. INTRODUCTORY DRAWING
Introduction to drawing from a variety of objects, as well as from the imagination, as a means of visual communication. Contact with a wide range of drawing media is encouraged to develop capabilities. One two-hour course each week.

ART 111-112. PRINCIPLES OF DESIGN
A study of the underlying elements and principles of design as they are applied to surface pattern. Color theories and their use in creative design are a part of the course. One two-hour course each week.

ART 191-192. LETTERING AND CALLIGRAPHY
The same rules governing other aspects of art apply also to lettering. Application of the drawn letter and the designed letter to poster, books, inscriptions and manuscripts through class assignments and projects will be required. One two-hour course each week.

ART 208-209. INTERMEDIATE DRAWING
Studio course offering further disciplined study in various drawing media such as pencil, crayon, charcoal, and ink as a means of expression. One two-hour course each week.

ART 217-218. THREE DIMENSIONAL DESIGN
The application of the principles of design and aesthetic factors to the development of form; creative use of a wide variety of materials experimentally; development of the knowledge, skills, and techniques necessary to design within limitations imposed by materials. Art 101-102 Introductory Drawing, and Art 111-112 Principles of Design are prerequisites for this course.
ART 226-227. **INTRODUCTORY PAINTING**

Painting in oil and water color from still life, landscape and floral subjects. Emphasis is placed on composition and application of art theories. Use of imaginative subject matter will also be encouraged. One two-hour course each week.

ART 228-229. **WATERCOLOR.**

In this course the basic principles and techniques of transparent watercolors are studied. Emphasis is placed on picture composition, value and color sketching as preparatory steps in painting.

In the second course, varying expressions and interpretations of subject material are encouraged. Prerequisites are: Art 101-102 Drawing, Art 111-112 Design, and Art 226-227 Introductory Painting. One two-hour course each week.

ART 231-232. **SCULPTURE**

Consideration of forms as a means of developing an understanding of mass, shape, and control of medium. Direct use of the widest possible range of materials with special emphasis on the integration of their characteristics with the expression. One two-hour course each week.

ART 251-252. **GRAPHIC ARTS**

The principal processes of the graphic arts are studied as they pertain to contemporary expression in the fine arts and advertising. One two-hour course each week.

ART 261-262. **INTRODUCTORY ENAMELING**

Basic principles and techniques of enameling on copper are studied. The student works out original pieces employing elementary processes. In the second term the student progresses into other enameling processes. The course prerequisites are Art 101-102 Introductory Drawing, and Art 111-112 Principles of Design. One three-hour course each week.

ART 263-264. **JEWELRY: INTRODUCTORY CASTING**

A complete experience in designing original pieces, making wax models, burning out, casting, and finishing pieces. The course prerequisites are Art 101-102 Introductory Drawing, and Art 111-112 Principles of Design. These courses must be taken in sequence.

ART 281. **PRACTICAL ARTS: KINDERGARTEN THROUGH PRIMARY GRADES**

Two credit hours

Art teaching methods and experiences geared to the primary grade level. Problems and projects are assigned with meaningful theory. Required course for all primary school teachers. One two-hour course each week.

ART 282. **PRACTICAL ARTS: INTERMEDIATE GRADES**

Two credit hours

Same as Art 281, adjusted to the maturity of children in the intermediate grades. Emphasis placed on creative teaching techniques. Required of all intermediate elementary school teachers. One two-hour course each week.

ART 303-304. **ADVANCED DRAWING**

Four credit hours

Observational and expressive drawing. The use of accumulated knowledge from previous drawing experiences in the introductory program, to assist in the development of an individual creativity and original style. One two-hour course each week.
ART 317-318. **Intermediate Design**

Four Credit Hours
Principles and practices in the application of design to the Fine Arts as well as the Practical Arts. The assignments are designed to motivate the student in design solutions of projects requiring research into original concepts. The project-oriented program includes assignments in the areas of graphic design, and product design. One two-hour course each week.

ART 321-322-323-324. **Advanced Painting**

Eight Credit Hours
A Continuation of Art 221-222 Introductory Painting, with increased emphasis on the personal interpretation of the subject. The use of various painting media are encouraged, such as oils, water color, opaque water color, and synthetic paints. These courses must be taken in sequence.

ART 331-332. **Advanced Sculpture**

Four Credit Hours
Contemporary consideration of sculptural form. Individual expression, employing the use of modern techniques and experimental as well as traditional materials. One two-hour course each week. Prerequisites for this course are Art 231-232.

ART 355-356. **Silk Screen—Serigraphy**

Two Credit Hours
Basic principles and techniques of the silk screen process exploiting the unique characteristics of the medium as a creative expression. All operations of screen printing are covered including stencil and resist techniques, selecting and preparing the color material, printing and displaying the finished print.

ART 371. **History of Ancient Art**

Three Credit Hours
A Study of great art and the masters of art and the influences upon their work beginning with the ancient period and continuing through the medieval and Gothic periods.

ART 372. **Renaissance Art**

Three Credit Hours
A continuation of Art 271, beginning with the Renaissance and continuing through the Baroque and Rococo periods.

ART 411-412. **Advanced Design**

Four Credit Hours
The widest possible latitude for experimentation and development of the student's own direction is provided during this third year of study. At this time the student is considered mature enough to have developed certain convictions about his work. One two-hour course each week.

ART 471. **Development of Modern Art**

Three Credit Hours
New art forms are studied in the development of art history in the late 18th Century and the complete flowering in the 19th Century throughout Europe and the Americas.

ART 472. **Art in the Twentieth Century**

Three Credit Hours
The development of twentieth century art from 1900 to the present, covering the early cubistic movement, abstract expressionism, and the various aspects of other minor art movements to the present.

ART 481. **Creativity in Teaching Art**

Two Credit Hours
Use of art elements and principles as the basis for creative approach; organization of units of work, including drawing, painting, design, color, modeling, block printing, lettering, and the mural. Accredited in Education. One two-hour course each week.
ART 482. TEaching Art in Secondary Schools  
TWO CREDIT HOURS  
Basic principles of teaching art more creatively at the secondary school level. The elements of teaching techniques, arts student learning processes, creative personality involvement, and creative art performance will be explored. The course is required of all prospective secondary school art teachers and is open to interested art teachers in service. One two-hour course each week.

ART 483W. Elementary School Art  
THREE CREDIT HOURS  
A workshop designed to give the regular classroom teacher on the elementary level new and practical ideas on the employment of art materials and techniques in relation to seasonal interests of pupils and to holiday observances. May substitute for Art 281 or Art 282.

ART 484W. Creativity in Teaching High School Art  
THREE CREDIT HOURS  
Intended primarily for the art teacher on the high school level; creative art expression, use of materials, study of handwork and organization of units of work. May substitute for Art 481.

ART 490. Special Problems  
TWO TO SIX CREDIT HOURS  
A course reserved for senior art students and devoted to advanced work in art. Permission must be granted by the chairman. Students may work privately under the supervision of full time staff. They are encouraged to explore advanced problems in such areas as drawing, painting, design, graphics, crafts, sculpture and art research.

Honors Program. Each year a group of high school seniors, outstanding in art, is invited to take art courses at the University of Dayton. The courses may be offered at various times of the year and are taught by the Fine Arts Staff. The purpose of the program is to further develop and encourage art talent prior to the students' entering either the University of Dayton, or other accredited art institutions offering work beyond high school levels. It is, in effect, a modified advanced placement program, originated to advance highly talented high school seniors in art at the University of Dayton.

Interdisciplinary (GE)  

GE 200H. Interdisciplinary Seminar  
GE 400H. Interdisciplinary Seminar  
Opportunities for students to explore relationships meaningful to them in symbolics, empirics, aesthetics and synoptics.

Geology (GEO)  

George H. Springer, Chairman  
Professor: Springer  
Assistant Professors: Gray, Horvath, Murtaugh, Ritter  
Assistant Instructor: Cella  
Part-time Instructor: Herron

GEO 103. Principles of Geography  
THREE CREDIT HOURS  
An analysis of the physical factors of the earth's environment; weather, climate, rocks, land forms, oceans. Does not satisfy science requirement for Arts and Sciences.
Geo 109. General Geology
Three Credit Hours
An introduction to the earth as a planet, its composition, structure, and evolutionary development; a brief consideration of the life of the past. Designed for the non-science major.

Geo 109L. General Geology Laboratory
Course to accompany Geo 109. Two hours per week.

One Credit Hour

Geo 115. Physical Geology
Three Credit Hours
An introductory course in geologic principles; the composition and structure of the earth, its land forms, and the agencies active in their production.

Geo 115L. Physical Geology Laboratory
Course to accompany Geo. 115. Two hours per week.

One Credit Hour

Geo 116. Historical Geology
Three Credit Hours
A comprehensive study of earth history as interpreted from the rocks of the crust. Prerequisite: Geo 115.

Geo 116L. Historical Geology Laboratory
Course to accompany Geo 116. Two hours per week.

One Credit Hour

Geo 201. Mineralogy
Three Credit Hours
An introduction to the study of minerals; their chemical and physical properties; their associations and occurrences.

Geo 201L. Mineralogy Laboratory
Course to accompany Geo 201. Three hours per week.

First Term, Each Year

Geo 204. Optical Mineralogy
Two Credit Hours
Mineral determination through the use of the petrographic microscope employing crushed grains and thin sections. Prerequisite: Geo 201.

Geo 204L. Optical Mineralogy Laboratory
Course to accompany Geo 204. Four hours per week.

Second Term, Each Year

Geo 218. Engineering Geology
Three Credit Hours
A comprehensive study of geologic principles applicable to civil engineering practices.

Second Term, Each Year

Geo 301. Structural Geology
Three Credit Hours
The origin and development of structural features of the earth's crust; folding, faulting, volcanism, mountain building, and metamorphism. Prerequisites: Geo 115, 116, 201, 204.

First Term, 1969-1970

Geo 301L. Structural Geology Laboratory
Course to accompany Geo 301. Two hours per week.

First Term, 1969-1970

Geo 302. Glacial Geology
Three Credit Hours
The origin of mountain and continental glaciers; their depositional features and erosive activity; history of glaciation in geologic past with special emphasis upon North American Pleistocene ice advances. Prerequisites: Geo 115, 116.

Second Term, 1969-1970
Six weeks summer study of structural and age relationship problems in areas containing abundant crystalline and sedimentary exposures. Prerequisites: Geo 115, 116, and 301.

Summer

GEO 307. GEOMORPHOLOGY
A detailed study of landforms and the erosional processes that develop them. Prerequisites: Geo 115, 116, and 301.

GEO 307L. GEOMORPHOLOGY LABORATORY
Course to accompany Geo 307. Two hours per week. Second Term, 1970-1971

GEO 309. PETROGRAPHY
A study of the composition of igneous, sedimentary, and metamorphic rocks through the use of thin sections and hand specimens. Prerequisites: Geo 204. First Term, 1969-1970

GEO 309L. PETROGRAPHY LABORATORY
Course to accompany Geo 309. Four hours per week. First Term, 1969-1970

GEO 310. STRATIGRAPHY
The interpretation of specific lithotypes and the synthesis of the stratigraphic record. Prerequisites: Geo 116, 301.

GEO 310L. STRATIGRAPHY LABORATORY
Course to accompany Geo 310. Two hours per week. Second Term, 1970-1971

GEO 401. PALEONTOLOGY
A study of animal life of the geologic past as shown by the fossil record. First Term, 1969-1970

GEO 401L. PALEONTOLOGY LABORATORY
Course to accompany Geo 401. Two hours per week. First Term, 1969-1970

GEO 403. SEDIMENTATION
Detailed study of sediments; their sources, environments of deposition, and methods of consolidation. Sedimentary rock classifications and analyses. Prerequisites: Geo 201, 204, 301.

GEO 403L. SEDIMENTATION LABORATORY
Course to accompany Geo 403. Two hours per week. First Term, 1970-1971

GEO 404. PROBLEMS IN GEOLOGY
A consideration of special problems involving advanced work in the laboratory and library; arranged to meet the needs of individual students.

GEO 411. IGNEOUS PETROLOGY
A study of the formation of igneous rocks. Prerequisites: Geo 201, 204, 309. Second Term, 1969-1970
GEO 411L. **Igneous Petrology Laboratory**
Course to accompany Geo 411. Two hours per week.  
*Second Term, 1969-1970*

GEO 415-416. **Micropaleontology**
A study of microfossils with special attention given to index fossils characteristic of various geologic horizons. Prerequisites: Geo 310, 403.  
*Full Year Course, 1970-1971*

GEO 415L-416L. **Micropaleontology Laboratory**
Course to accompany Geo 415-416. Two hours per week.  
*Full Year Course, 1970-1971*

**History (HST)**

Dr. Wilfred J. Steiner, *Chairman*
Dr. Rocco M. Donatelli, *Assistant Chairman*

*Professors:* Beauregard, Maras, Ruppel, Steiner

*Associate Professors:* Donatelli, King, Sha

*Assistant Professors:* Bannan, Eid, Grant, Isaacs, Jegen, Mathias, Rhee, Soffer, Taylor, Yaple

*Instructors:* Edwards, Gorie, Ridgway, Vines

*Part-time Instructors:* Perkins, Peters, Whelan

History courses in the 100-200 series are prerequisite courses and may not be applied toward a major or a minor.

The course requirement for History majors is 26 credit hours, distributed as follows:

1. Four courses (12 credit hours) should be selected from the 300-350 and 403-450 sequences;
2. Four courses (12 credit hours) should be selected from the 351-399 and 451-495 sequences;
3. History 401—2 credit hours;
4. Honors Colloquium courses (Hst 497H and 498H) may be substituted for any course except History 401.

The course requirement for History minors is 12 credit hours. Two courses should be selected from the 300-350 and 403-450 sequences, and two courses from the 351-399 and 451-495 sequences.

**HST 101. History of Civilization**  
Three credit hours
A survey of mankind from earliest times to 1660 A.D. The course stresses the social and cultural aspects of the prehistoric, ancient, medieval, and early modern eras.

**HST 102. History of Civilization**  
Three credit hours
A survey of mankind from 1660 A.D. to the present. Emphasis on the Old Regime, the French Revolution and Napoleonic Age, the Era of Nationalism and Liberalism, the New Industrialism and Imperialism.

**HST 120. History of England**  
Three credit hours
This course is designed to acquaint undergraduate students with the major forces and trends in the history of England from earliest times to the present.
HST 125. **History of Russia**  
Three Credit Hours  
The development of the Russian state from earliest times to the present. This course is concerned with the origins of the Russian state, political and economic growth, and the development of the modern Soviet state.

HST 130. **History of the Far East**  
Three Credit Hours  
Brief review of the early historical development of the Far East, and a study of China and Japan in the 19th and 20th centuries. Emphasis on political, religious, cultural, and economic growth of China and Japan.

HST 135. **History of Africa**  
Three Credit Hours  
Attuned to the new approach to African history, this survey, covering early times to the present, aims to display Africa's significance by examples of political grandeur, commercial ingenuity, intellectual ferment, and religious revolutions.

HST 251. **American History to 1865**  
Three Credit Hours  
A general survey of the development of the American nation from colonial times to 1865. Due consideration is given to political trends, but the economic and social foundations of American institutions are also emphasized.

HST 252. **American History Since 1865**  
Three Credit Hours  
This course carries forward the story of the nation and its development after the Civil War. Stress is on those social, economic, and political problems, a knowledge of which is essential to an understanding of contemporary America.

HST 260. **Social and Cultural History of the United States**  
Three Credit Hours  
Social and cultural development of the American people. Emphasis on the growth of national spirit, the impact of expansion, conflict over slavery, and problems of industrialization and urbanization.

HST 265. **Diplomatic History of the United States**  
Three Credit Hours  
Beginning with an explanation of the foundations of American foreign policy this course continues with the diplomacy of continental expansion through the 19th century. Emphasis is placed on diplomatic problems since 1898.

HST 270. **Economic History of the United States**  
Three Credit Hours  
A survey of the economic theories and institutions peculiar to the United States with special reference to their influence on social and political development.

HST 275. **Latin American Republics**  
Three Credit Hours  
A survey of the development of the Latin American republics from independence to the present. Stress will be placed on political, economic, and social development.

HST 300. **Roman History**  
Three Credit Hours  
A survey of the political, cultural, religious, and socio-economic history of the Roman Republic and Empire, 509 B.C. to 476 A.D. A study of early Christianity and the Byzantine Empire is included.  

*First Term, 1970-1971*
<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
<th>Description</th>
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<tbody>
<tr>
<td>HST 301</td>
<td>Medieval Europe</td>
<td>3</td>
<td>The development of European history from the 4th to the 14th century. Topics include: birth of Middle Ages: Christianity; Byzantine, Islamic, and Carolingian Empires: feudalism; manorialism; Crusades; growth of national states. Second Term, 1969-1970</td>
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<tr>
<td>HST 302</td>
<td>Renaissance and Reformation</td>
<td>3</td>
<td>The development of European history from the 14th to the middle of the 17th century. Emphasis on the economic, political, social, and religious aspects of the Renaissance, Protestant Revolution, and Catholic Reformation. Second Term, 1970-1971</td>
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<tr>
<td>HST 303</td>
<td>Expansion of Europe</td>
<td>3</td>
<td>A study of European imperialism from the 15th to the 20th century. Stress is laid on the reasons for the beginning of the movement, the theory and practice of colonialism, and the manner in which imperialism influenced Europe. Second Term, 1970-1971</td>
</tr>
<tr>
<td>HST 304</td>
<td>The Age of Enlightenment</td>
<td>3</td>
<td>Designed to bridge the gap between the later Reformation and the era of the French Revolution. Intellectual and cultural developments will be covered, with emphasis on political, economic and social trends of the Old Regime. First Term, 1969-1970</td>
</tr>
<tr>
<td>HST 310</td>
<td>Military History Since 1789</td>
<td>3</td>
<td>This course touches upon the evolving concept and philosophy of war, the development and inter-relationships of weapons, tactics and strategy, and the role of military affairs in politics. First Term, 1970-1971</td>
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<tr>
<td>HST 318</td>
<td>French Revolution and Napoleonic Era</td>
<td>3</td>
<td>Concentration on the ideological, economic, social and political background of the Revolution; an analysis of the Revolutionary governments; the resulting international wars; the rise and fall of Napoleon. First Term, 1969-1970</td>
</tr>
<tr>
<td>HST 319</td>
<td>France Since 1815</td>
<td>3</td>
<td>A study of French history from the Bourbon Restoration to the establishment of the 20th century Fourth Republic, with special emphasis on the intellectual, social economic, political, and diplomatic trends. First Term, 1970-1971</td>
</tr>
<tr>
<td>HST 328</td>
<td>History of Eastern Europe</td>
<td>3</td>
<td>The course surveys the history of the nations lying between Germany and the Soviet Union, the Baltic and Aegean Seas. Medieval and early modern background will be stressed as a foundation for understanding the profound trends of contemporary history. Second Term, 1969-1970</td>
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<tr>
<td>Course Code</td>
<td>Course Title</td>
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<tr>
<td>Hst 333</td>
<td>North Africa in Modern Times</td>
<td>Three</td>
<td>A study of Morocco, Algeria, Tunisia, and Libya since the 16th century. Stress is placed on the institutional histories of these countries which enabled them ultimately to expel European imperialism. First Term, 1969-1970</td>
</tr>
<tr>
<td>Hst 334</td>
<td>South Africa in Modern Times</td>
<td>Three</td>
<td>The establishment of the Bantu people and institutions and their subjection to assaults by Boers and British. Such study seeks to illuminate the present dominant governmental policy of apartheid. Second Term, 1969-1970</td>
</tr>
<tr>
<td>Hst 335</td>
<td>West Africa in Modern Times</td>
<td>Three</td>
<td>West Africa’s significance since the 18th century, with special references to the slave trade, the commercial revolution, religious ferment, imperialistic rivalry, and the recent independence movement. First Term, 1970-1971</td>
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<tr>
<td>Hst 340</td>
<td>The Revolutionary Era, 1789-1918</td>
<td>Three</td>
<td>A historical analysis of the European nations and peoples emphasizing the themes of War and Revolution. The course covers the revolutions of the period as well as ideological, scientific, and technological developments. First Term, 1970-1971</td>
</tr>
<tr>
<td>Hst 356</td>
<td>Latin America: The Colonial Period</td>
<td>Three</td>
<td>The Indian civilizations, the Spanish and Portuguese conquest, the colonial period and the movements for independence are covered. Special emphasis is placed on the blending of Iberian, Indian, and African cultures. First Term, 1970-1971</td>
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<tr>
<td>Hst 364</td>
<td>History of Ohio</td>
<td>Three</td>
<td>Political, economic, and cultural history of the state will be explained in relation to the parallel growth of the United States. Recommended for elementary and secondary school teachers. First Term, 1969-1970</td>
</tr>
<tr>
<td>Hst 370</td>
<td>The Age of Jefferson and Jackson</td>
<td>Three</td>
<td>Emphasizes the whole range of historical, cultural, social and political trends that are traditionally associated with the presidencies of Jefferson and Jackson. The period covered extends from the 1790’s to the 1850’s. Second Term, 1970-1971</td>
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<tr>
<td>Hst 374</td>
<td>The Gilded Age, 1877-1900</td>
<td>Three</td>
<td>A study in the political, diplomatic, economic, social, and cultural developments of the age. The rise of big business, organized labor, and the Populist revolt will be studied. Second Term, 1969-1970</td>
</tr>
<tr>
<td>Hst 375</td>
<td>The Progressive Period, 1900-1920</td>
<td>Three</td>
<td>A study in depth of the major historical trends that dominated these years which saw the universal acceptance of America’s claim to world power. Due attention will be placed on cultural as well as political developments. First Term, 1969-1970</td>
</tr>
</tbody>
</table>
HST 391. History of Canada
A general survey of Canadian History from early settlement to the present, with stress placed on the years after 1867. Three credit hours.
First Term, 1969-1970

HST 396. History of the Negro in the New World
A study of the role of the Negro in the history of the New World, stressing the problems of integration, race relations, and the achievements and contributions of the Negro. Three credit hours.
Second Term, 1969-1970

HST 397. History of Civil Liberties in the U.S.
The issues of religious liberty, discrimination, defendants’ rights and individual rights will be studied with an overview of the historical development of all human rights in the U.S. Three credit hours.
First Term, 1970-1971

HST 401. Pro-Seminar in History
An introduction to historiography and the study of research and writing in History. A term paper is required. Prerequisite: 6 credit hours of upper level history. Two credit hours.

HST 403. History of Modern Communism
A historical treatment of modern communism and the growth of Communist parties after 1917. Marxism, Leninism, Stalinism, and Maoism will be considered in their historical settings and in the light of Christian principles. Three credit hours.
Second Term, 1970-1971

HST 409. Europe Since 1918
Topics included: causes and outcome of World War I; internal policies of nations between the two World Wars; diplomatic actions leading to World War II; and the impact of World War II. Three credit hours.
First Term, 1969-1970

HST 413. Diplomatic History of the Far East Since 1840
A survey of the diplomatic relations of China, Korea, and Japan among themselves and with other powers. The course selects major diplomatic events from 1840 to the present. Three credit hours.
First Term, 1970-1971

HST 415. Soviet Union Since 1917
A detailed survey and analysis of the historical development of the USSR from the Revolution of 1917 to the present time. Three credit hours.
Second Term, 1969-1970

HST 421. History of England Since 1688
A study of England and Great Britain from the Restoration to the present time. The aim of the course is to study the economic, political, and cultural developments of the Hanoverian, Victorian and modern periods. Three credit hours.
First Term 1969-1970

HST 422. English Constitutional History
The study of the origin and development of English legal, constitutional and institutional history. Three credit hours.
Second Term, 1970-1971

HST 429. Modern Germany
Analysis of the development of the German state from 1848 through the period of unification, Second Empire, Weimar Republic, Third Reich, the post World War II Germanies. Three credit hours.
First Term, 1969-1970
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
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<tbody>
<tr>
<td>HST 433</td>
<td>Social and Cultural History of the Middle East</td>
<td>Three</td>
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<td></td>
<td>Social and cultural development of the Middle-Eastern people. Emphasis upon the growth of national spirit, the impact of westernization and industrialization, stressing transition and innovation in social and cultural traits.</td>
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<td>Second Term, 1969-1970</td>
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<tr>
<td>HST 435</td>
<td>The Middle East, 19th and 20th Centuries</td>
<td>Three</td>
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<td></td>
<td>A survey of the Ottoman Empire, Iran, Egypt, and the modern states of the Middle East, emphasizing the development of nationalism and the place of the Middle East in international politics.</td>
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<td>First Term, 1970-1971</td>
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<tr>
<td>HST 442</td>
<td>Modern China</td>
<td>Three</td>
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<td></td>
<td>A survey of the political, cultural and international developments in China from the eighteenth century to the present.</td>
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<td>Second Term, 1969-1970</td>
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<tr>
<td>HST 446</td>
<td>Southeast Asia</td>
<td>Three</td>
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<td></td>
<td>A survey of the cultural and political history of Southeast Asian countries, emphasizing recent developments.</td>
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<td>First Term, 1969-1970</td>
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<tr>
<td>HST 451</td>
<td>Civil War and Reconstruction</td>
<td>Three</td>
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<td></td>
<td>Remote and immediate causes of the Civil War, especially from 1850 to 1861: problems of North and South during the war; consequences of the war; efforts to create a new Union, 1865 to 1877; problems created by those efforts.</td>
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<td>First Term, 1969-1970</td>
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<tr>
<td>HST 458</td>
<td>Intellectual and Cultural History of the U.S.</td>
<td>Three</td>
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<td></td>
<td>An attempt to trace the evolution of a distinctive American civilization through a study of American thought and its expression in the fine and utilitarian arts. There will be parallel treatment of fine arts and technological developments.</td>
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<td>Second Term, 1970-1971</td>
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<tr>
<td>HST 459</td>
<td>U.S. Constitutional History</td>
<td>Three</td>
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<td>A historical analysis of the origin and evolution of the American Constitution, constitutional theory and constitutional practice.</td>
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<td>Second Term, 1970-1971</td>
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<tr>
<td>HST 460</td>
<td>Caribbean Since 1801</td>
<td>Three</td>
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<td></td>
<td>Study of the cultural, social, economic and political history of the islands and the northern shore of South America in modern times, stressing areas that have gained independence or autonomy.</td>
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<td>First Term, 1970-1971</td>
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<tr>
<td>HST 461</td>
<td>The History of Mexico</td>
<td>Three</td>
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<td>Study of Mexican history since 1820. Origins of revolution of 1910 and its development to the present emphasize Mexico's struggle for democracy. Diplomatic and cultural relations between Mexico and the U.S. are considered.</td>
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<td>First Term, 1969-1970</td>
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<tr>
<td>HST 462</td>
<td>The A-B-C Powers</td>
<td>Three</td>
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<td>The historical role of Argentina, Brazil, and Chile. Internal problems are considered in a detailed study of national histories. 20th century developments are stressed. The place of these powers in international politics is analyzed.</td>
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<td>Second Term, 1969-1970</td>
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<tr>
<td>HST 470</td>
<td>The Catholic Church in the U.S.</td>
<td>Three</td>
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<td>This course begins with the establishment of the first Catholic missions in the U.S. The influences of the Church on the cultural, political, economic and religious customs of the American people is explained.</td>
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<td>First Term, 1970-1971</td>
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</tbody>
</table>
Hst 481. Recent American History
A study of the immediate background of contemporary political, social and economic problems. Topics discussed: "Normalcy," Depression and New Deal, impact of World War II on the United States, and World Communism. Three credit hours.

First Term, Each Year

Hst 490. The Westward Movement
A history of the expansion of settlement in the U.S. since 1783. Topics include explorations, Indian relations, land policy, transportation, types of frontier settlements, and Western influence on American ideals and institutions. Three credit hours.

First Term, Each Year

Hst 492. Eminent Americans
A study in depth of the work of Americans who have had an enduring effect on our history; e.g., Washington, Franklin, Hamilton, Jefferson, Lincoln, and the Roosevelts. Three credit hours.

Second Term, 1969-1970

Hst 495. American Historians
Intensive readings and discussion to foster understanding of American history, as written and interpreted in various periods and intellectual environments. Three credit hours.

Second Term, 1969-1970

Hst 497. Honors Colloquium I (Honors)
A course devoted to the study of a special topic in American History to be selected by the instructor. Applicants will be admitted on the basis of academic record. Limited to ten students. Three credit hours.

First Term, Each Year

Hst 498. Honors Colloquium II (Honors)
A course devoted to the study of a special topic in non-American History to be selected by the instructor. Applicants will be admitted on the basis of academic record. Limited to ten students. Three credit hours.

Second Term, Each Year

Home Economics (HEC)

Elizabeth L. Payne, Chairman
Associate Professor: Payne
Assistant Professors: Bernhard, Ittelson, Metzger, Smallwood

Hec 101. Clothing I
A study of clothing selection and construction of simple garments using commercial patterns. Emphasis is on short-cut methods of construction, fitting, dressmaking, details and finishing procedures. Two lecture periods per week. Two credit hours.

Hec 101L. Clothing I Laboratory
A course to accompany Hec 101 lecture. One three-hour period per week. One credit hour.

Hec 102. Foods I
Basic concepts and practices in food planning, preparation, preservation and serving. Two lecture periods per week. Two credit hours.
HEC 102L.  Foods I Laboratory  
A course to accompany Hec 102 lecture. One three-hour period per week.

HEC 105.  Introduction to Related Art  
A study of the fundamentals of design and color and their application in selection and arrangement. Three lecture periods per week.  
*First Term, Each Year*

HEC 201.  Foods II  
Continuation of Foods I. Two class periods per week. Prerequisite: Hec 102 or equivalent.

HEC 201L.  Foods II Laboratory  
Course to accompany Hec 201 lecture. One three-hour laboratory period per week.

HEC 211.  Clothing II  
Detailed emphasis on principles of fitting and creative construction. Two lecture periods per week. Prerequisite: Hec 101 or equivalent.

HEC 211L.  Clothing II Laboratory  
Course to accompany Hec 211 lecture. One three-hour laboratory per week.

HEC 214.  Textiles  
A study of the natural, thermoplastic and non-thermoplastic fibers including the construction and finishing of fabrics for their use and care. Three class periods per week.  
*Second Term, Each Year*

HEC 221.  Home Management I and Consumer Education  
A study of home management and the use of resources to promote the development of home and family life. The resources of time, energy, money and material goods are stressed. Three class periods per week.  
*First Term, Each Year*

HEC 225.  Child Development I  
Developmental study of prenatal, infancy and early childhood. Obesrvation and work in nursery school arranged. Two lecture periods per week.  
*First Term, Each Year*

HEC 303.  Nutrition and Health  
Fundamental principles of human nutrition, including requirements of the body for the nutritive essentials, the composition of foods and the planning of adequate diets for health. Three class periods per week.

HEC 304.  Quantity Cookery  
The planning, preparing and serving of foods in large quantities. Use and care of equipment for quantity cookery. One class period per week.

HEC 304L.  Quantity Cookery Laboratory  
Course to accompany Hec 304 lecture. Hours arranged.

HEC 308.  Institutional Buying  
Selection and methods of purchasing institutional food and equipment. Three class periods per week.  
*As Needed*
**HEC 309. Household Equipment**
Three Credit Hours
A study of the principles involved in the selection, construction, operation and care of household equipment and its relation to the well-being of the family. Three lecture periods per week. Prerequisites: Hec 102, 201 or equivalent.

**HEC 318. Family Living**
Three Credit Hours
A consideration of the factors necessary for the establishment and maintenance of a home in its changing context. Three lecture periods per week. *Second Term, Each Year*

**HEC 323. Demonstration Methods**
One Credit Hour
A study of lecture-demonstration techniques. Emphasis is placed upon students giving lecture-demonstrations. Two class periods per week.

**HEC 327. Experimental Foods**
Two Credit Hours
Comparative and experimental approach to food preparation as it affects quality. Introduction to the standard experimental procedures leading to independent project of student's choice. Prerequisite: Hec 201

**HEC 327L. Experimental Foods Laboratory**
One Credit Hour
Course to accompany Hec 327 lecture. One three-hour laboratory period per week. *Second Term, Each Year*

**HEC 328. Housing and Home Furnishings**
Three Credit Hours
A study of housing and exterior design and the selection of furnishings for the home, including arrangements, furniture styles and decorative details. Three lecture periods per week. Prerequisite: Hec 105. *Second Term, Each Year*

**HEC 329. Child Development II**
Three Credit Hours
An evaluation of the growth of children; case study and nursery school participation arranged. Two lecture periods, plus observation. Prerequisite: Hec 225. *Second Term, Each Year*

**HEC 401. Advanced Nutrition**
Three Credit Hours
Aims to extend the student's knowledge of the science of nutrition, stressing the metabolism of food constituents and the recent advances in the field of nutrition. Three class periods per week. Prerequisites: Hec 303, Chm 400. *Second Term, Each Year*

**HEC 402. Diet in Disease**
Three Credit Hours
Metabolic processes of the body in diseased conditions and dietary modifications. Three class periods per week. Prerequisite: Hec 303. *As Needed*
Hec 405. Teaching of Home Economics in Schools  
Three credit hours  
A study of Vocational Home Economics philosophy and Techniques of Teaching. Planning and preparing scope and sequence units and lessons for different grade levels. Three class periods per week.  
First Term, Each Year

Hec 406. Home Management II  
One credit hour  
Planning experience in managing a home on a minimum budget. One lecture period per week. Prerequisite: Hec 221.

Hec 406L. Home Management II Laboratory  
Two credit hours  
Course to accompany Hec 406 lecture.

Hec 407. Institutional Organization and Management  
Three credit hours  
Principles and problems of feeding institutional groups, including personnel management, organization and administration. Three class periods per week.  
As Needed

Hec 415. Tailoring  
One credit hour  
Tailoring construction as applied in the making of coats and suits. One lecture period per week. Prerequisites: Hec 105, 211 or equivalent.  
Second Term, Each Year

Hec 415L. Tailoring Laboratory  
Two credit hours  
Course to accompany Hec 415 lecture. Two two-hour periods per week.  
Second Term, Each Year

Hec 430. Problems in Home Furnishings  
Two credit hours  
Individual problems of refinishing furniture, upholstering, slip covering and draperies. Assessment of fabrics, buying, use and care of tools, techniques and materials. Two class periods per week. Prerequisite: Hec 105.  
First Term, Each Year

Hec 430L. Home Furnishings Laboratory  
One credit hour  
Course to accompany Hec 430 lecture. One three-hour period per week.  
First Term, Each Year

Hec 436. Special Problems  
Two credit hours  
Problems chosen for individual study in various areas of the field of Home Economics. Two periods per week.

Hec 436L. Special Problems Laboratory  
One credit hour  
Course to accompany Hec 436 lecture. One two-hour laboratory.

Hec 437. Meal Management  
Two credit hours  
To develop the ability to plan, prepare and serve palatable, nutritious and attractive meals at various economic levels. Gourmet and foreign cookery is also included. Two lecture periods per week. Prerequisite: Hec 201.  
As Needed

Hec 437L. Meal Management Laboratory  
One credit hour  
Course to accompany Hec 437 lecture. One two-hour period per week.  
As Needed
Industrial Engineering (INE)

Robert I. Mitchell, Chairman
Professors: Schmid, Gephart
Associate Professors: Kovacs, Mitchell

*INE 201. INDUSTRIAL ENGINEERING FUNDAMENTALS
THREE CREDIT HOURS
A study of the development of industrial engineering, the scope of its function, its relationship to other professions, organizing for industrial engineering, and methods for utilizing industrial engineering techniques.

*INE 202. ENGINEERING ECONOMY
THREE CREDIT HOURS
Emphasizes rational, scientific methods of economic analysis for engineering and management decision-making. Prerequisite: Mth 118.

*INE 220-221. STATISTICAL METHODS FOR ENGINEERS I AND II
SIX CREDIT HOURS
Discrete and continuous probability distributions, parameter and interval estimations, tests of hypothesis, regression, analysis of variance and experimental designs, non-parametric methods. Emphasizes application to Engineering problems. Prerequisite: Mth 119.

INE 301. PERSONNEL ADMINISTRATION
THREE CREDIT HOURS
A study of the contributions of the behavioral sciences to the design of complex management systems which require effective integration of human resources.

INE 303. WAGE ADMINISTRATION
THREE CREDIT HOURS
A study of financial remuneration; theory, philosophy, and practice. An interdisciplinary approach involving economics, psychology, sociology, engineering and management as they are related to the design of management systems.

*INE 310-311. ENGINEERING SYSTEMS DESIGN I AND II
SIX CREDIT HOURS
Emphasizing the total systems concept for solving engineering design problems reasoning from general principles or laws to their application to achieve specific objectives. Prerequisite: Mth 118.

*INE 313. ENGINEERING LAW
TWO CREDIT HOURS
Legal principles applied to engineering.

*INE 320-321. MANAGEMENT SYSTEMS DESIGN I AND II
SIX CREDIT HOURS
The application of design concepts to the development of simple systems which involve purposeful human industry with special attention to the integration of scientific and engineering methods with those of the applied psychologists or social scientists.

*INE 332. STATISTICAL CONTROL AND SYSTEMS DESIGN
THREE CREDIT HOURS
Sampling theory, tests of hypotheses, analysis of variance, regression and correlation, experimental design, and factor analysis with examples from quality control and process design, analysis and control. Prerequisite: Mth 331.

*Recommended to students from other departments as appropriate elective.
INE 341. Work Design I
Three credit hours
Introduction to design and analysis of work systems. Application of models to work study. Study of symbolic chart models, physical analog models, mathematical and statistical models. Prerequisites: CPS 233, INE 332.

INE 403. Time and Motion Study I
Two credit hours
A study of the job analysis techniques including process charts, right and left hand charts, the laws of motion economy, man-machine charts and a survey of micromotion techniques.

INE 403L. Time and Motion Study Laboratory I
One credit hour
A series of laboratory problems based on the above. Corequisite: INE 403.

INE 404. Time and Motion Study II
Two credit hours
A study of advanced problems in establishing standard time data, progressive operations, application of statistics, micromotion study with practical problems. Prerequisite: INE 403.

INE 404L. Time and Motion Study Laboratory II
One credit hour
A series of laboratory problems based on the above. Corequisite: INE 404.

INE 405. Production Planning
Three credit hours
A study of the practices in production scheduling, routing, dispatching and inventory control; including an analysis of mechanized systems and current practices.

INE 406. Plant Layout and Material Handling
Two credit hours
The design of a plant for a specified product. Includes: structure; power requirements; heat; light; sound; and ventilation; transportation facilities, material handling requirements and equipment. Prerequisite: MEE 106L.

INE 406L. Plant Layout Laboratory
One credit hour
The complete design of a light manufacturing plant including choice of site, building, equipment and organizational structure. Corequisite: INE 406.

*INE 408. Administration and Organization
Three credit hours
Social relationships, achievements, goals, objectives of organizations. Processes, functions, techniques, and tasks of management. Theories and practices utilized in the dispersion and concentration of authority and responsibility.

INE 410. Seminar
One credit hour
Full time students other than those classified as freshmen are required to enroll in INE 410 each semester until they graduate regardless of the number of such courses for which they receive credit. No student will be graduated without having received credit in at least one such Seminar course, during which his selected topic must be presented.

*Recommended to students from other departments as appropriate elective.
INE 411. Personnel Administration THREE CREDIT HOURS
A study of the contributions of the behavioral sciences to the design of complex, management systems which require effective integration of human resources. Prerequisite: Ine 320 or Ine 408.

INE 412. Wage Administration THREE CREDIT HOURS
A study of financial remuneration; theory, philosophy, and practice. An interdisciplinary approach involving economics, psychology, sociology, engineering and management as they are related to the design of management systems. Prerequisites: Ine 320 and 321, or Ine 408.

*INE 421. Reliability Theory THREE CREDIT HOURS

*INE 422. Reliability Application THREE CREDIT HOURS
The application of reliability theories to the design of complex, integrated systems. Prerequisite: Ine 421.

INE 430. Engineering Systems Design I THREE CREDIT HOURS
Emphasizing the total systems concept for solving engineering design problems reasoning from general principles or laws to their application to achieve specific objectives. An introduction to the theory of control with emphasis upon general principles as contrasted with a detailed study of specific control systems. Prerequisite: Mth 331.

INE 431. Engineering Systems Design II THREE CREDIT HOURS
The use of industrial engineering concepts in research and development undertakings including the design of products, programming of effort, assigning probabilities to event, time or cost schedules. Prerequisite: Ine 430.

INE 442. Work Design II TWO CREDIT HOURS
Advanced studies of work systems. Development and analysis of techniques to standardize and measure work. Development of standards through the use of MTM, time study and WMS. Development of standard data and applications of its use in production control and work systems. Prerequisite: Ine 431.

INE 442L. Work Design Laboratory II ONE CREDIT HOUR
Practice in the application of MTM, time study, and WMS. Development of rating and its application to time study. WMS and work sampling. Studies conducted under both actual and simulated industrial conditions. Corequisite: Ine 442.

INE 443. Work Design III TWO CREDIT HOURS
Application of work design techniques to the development of work systems. Studies of computerized techniques to design and control work systems. Application of simulation and O.R. optimizing techniques to production scheduling, inventory control and plant layout problems. Prerequisites: Ine 442, 442L.

*Recommended to students from other departments as appropriate elective.
INE 443L. **Work Design Laboratory III**  
**One credit hour**  
Practice in the development and application of models (mainly, but not limited to, computerized statistical models) to the solution of typical industrial problems in work design. Corequisite: INE 443.

INE 499. **Special Problems in Industrial Engineering**  
**Two to six credit hours**  
Particular assignments to be arranged and approved by Chairman of the Department.

**Program of Judaic Studies (JUD)**

*Liaison*: Fr. John Kelley, S.M.

The Program of Judaic Studies brings Jewish scholars to our campus for specialized offerings relative to the literature of the Hebrew scriptures, the archeology and history of Israel, the Hebrew language and culture. Scholarship funds from the Joseph and Pearl Thal Scholarship Fund (1966) are available for deserving students.

*Visiting Instructors*: Rabbi Herbert Brichto, Dr. Samuel Greengus, Rabbi Alvin Reines, Dr. Ellis Rivkin, Rabbi Ezra Spicehandler

**JUD 320. History of Israel**  
**Two credit hours**  
A survey of the history of the chosen people from Abraham unto modern times with stress on biblical history and the contemporaneous resurgence of a national state.  
*First Term*

**JUD 321. Biblical View of History**  
Seminar dealing with the biblical view of history.  
*First Term*

**JUD 330. Judaic Literature**  
An introduction to and overview of the field of Judaic literature with emphasis upon literary forms.  
*Third Term*

**JUD 331. Selected Texts from Jewish Literature**  
Seminar discussing selected texts of Judaic literature.  
*Third Term*

**JUD 340. Archaeology and the Bible**  
An historical and synthetic analysis of the development of archaeology in Palestine and the subsequent impact upon the understanding of the culture of Judaism.  
*Second Term*

**JUD 341. Seminar: Modern Developments in Archaeology**  
**One credit hour**  
*Second Term*

**JUD 350. Martin Buber, Life and Work**  
**Two credit hours**  
An overview of the life and writings of Martin Buber and the significance of his work for philosophy, sociology and psychology, as well as his contribution to the dialog of Christian and Jew.  
*Third Term*

**JUD 351. Seminar: Selected Writings of Martin Buber**  
Examination of texts from *I and Thou* and other writings.  
*Third Term*
JUD 360. JUDAISM AND ISLAM
An historical and comparative analysis of the development of Islam from Judaic and Christian elements; a survey of the Koran in its literary dependence on scripture.

JUD 361. SEMINAR: THE BIBLE AND THE KORAN
To be announced

JUD 370. THE WORLD OF THE PSALMIST
A general course on the psalms in the world of the Hebrew bible. The conceptual world of the Hebrew scriptures reflected in the book of Psalms, and the relation of the Psalms to religious life today.

JUD 371. SEMINAR: PROBLEMS OF THE PSALMS
Selection of passages in the psalms which present special difficulties in understanding the sacred songs. (No student will be permitted to take Jud 371 without taking Jud 370.)

First Term

LANGUAGES

Dr. James M. Ferrigno, Chairman
Professors: Ferrigno, Perz
Associate Professor: McKenzie
Assistant Professors: Bartholomew, Boenninghofen, Castelló-Lamas, Conard, Darby, Frazier, Galeano, Rus, Saquel, Sory, Walter, Zeinz
Instructors: Chiodo, Franklin, Greely, Markus, Paglierani, Rock, Thompson, Treacy
Part-Time Instructors: Anduze, Baumann, Bruggeman, Fox, Nersoyan

A language major may arrange his courses, with the approval of the department chairman, in one of these two forms concentration: (A) Major in a single language, requiring 24 hours in upper level courses (300-400); (B) Composite major, requiring a minimum of 18 hours in each of two language (any level).

It is recommended that students of either category elect a minor in languages as well. For a language minor, students in category A are required to do 12 hours of upper level work not in their major language, and students in category B are required to add 18 hours (any level) preferably in a language or languages other than those of their composite major.

A composite major in Classical Languages (Greek and Latin) may be earned by completing the following program:

(a) minimum of 24 credit hours of courses in the Latin Language at the 300-400 level;
(b) minimum of 12 credit hours of courses in the Greek Language at any level;
(c) electives to minimum total of 42 credit hours, such electives to be chosen from courses in Greek or Roman History, Ancient Philosophy, Greek, or Latin.
French (FRN)

FRN 101. ELEMENTARY FRENCH
Elements of French, including pronunciation, reading, translation, grammar, dictation and conversation.

FRN 102. ELEMENTARY FRENCH II
Continuation of Elementary French 101. Prerequisite: Frn 101.

FRN 201. INTERMEDIATE FRENCH
Grammar review, selected readings from modern authors, exercises in composition and conversation. Prerequisite: Frn 102.

FRN 202. INTERMEDIATE FRENCH II
Continuation of Intermediate French 201. Prerequisite: Frn 201.

FRN 307. ADVANCED FRENCH COMPOSITION AND CONVERSATION
Practice in composition based on area material. Intensive drill in the aural and oral use of the language. 
First Term, Each Year

FRN 308. ADVANCED FRENCH COMPOSITION AND CONVERSATION
Continuation of Advanced French Composition and Conversation, Frn 307. 
Second Term, Each Year

Note: French 307 and French 308 are prerequisites for all other upper level courses in French.

FRN 309. RAPID READING IN FRENCH
A course designed to improve and accelerate reading ability and to develop understanding and appreciation of the great works of French literature. Readings, reports and discussions. 
First Term, Each Year

FRN 310. RAPID READING IN FRENCH
Continuation of Rapid Reading in French 309. 
Second Term, Each Year

FRN 311. FRENCH LITERATURE TO 1700
A survey of French literature from the earliest beginnings to the eighteenth century, with special emphasis on the principal authors and works of the seventeenth century. Lectures, discussions and reports on area material. 
First Term, 1969-1970

FRN 312. FRENCH LITERATURE TO 1700
Continuation of French Literature to 1700, Frn 311. 
Second Term, 1969-1970

FRN 405. FRENCH LITERATURE OF THE TWENTIETH CENTURY
A survey of the literary movements, outstanding authors and works of the present century. Lectures, discussions and reports on assigned readings. 
First Term, 1969-1970

FRN 406. FRENCH LITERATURE OF THE TWENTIETH CENTURY
Continuation of French Literature of the Twentieth Century, Frn 405. 
Second Term, 1969-1970
FRN 407. French Literature of the Eighteenth and Nineteenth Centuries
THREE CREDIT HOURS
A survey covering the literary movements, outstanding authors and works of this period. Lectures, discussions and reports on assigned readings. First Term, Each Year
FRN 408. French Literature of the Eighteenth and Nineteenth Centuries
THREE CREDIT HOURS
Continuation of French Literature of the Eighteenth and Nineteenth Centuries, FRN 407. Second Term, Each Year

German (GER)

GER 101. Elementary German I
THREE CREDIT HOURS
Introduction to German speech and grammar. A structural approach, i.e., stress on audio-lingual as well as syntactical elements of the target language. Language lab required. No prerequisite.

GER 102. Elementary German II
THREE CREDIT HOURS
Continuation of German 101. Prerequisite: Ger 101 or equivalent.

GER 201. Intermediate German
In this course the knowledge of syntax and morphology of German is deepened. The vocabulary is enlarged, the student is exposed to German prose and poetry. Emphasis on conversation and composition. Prerequisite: successful completion of German 102 or equivalent.

GER 202. Intermediate German II
THREE CREDIT HOURS
Continuation of German 201. The student is exposed to the development of German civilization and culture. Reading, conversation and composition. Prerequisite: successful completion of German 201 or equivalent.

GER 201S. German for Science Majors I
THREE CREDIT HOURS
In this course the student is exposed to prose of the various scientific fields. The stress here is on translating and understanding the peculiarities of scientific, expository German, its grammar and vocabulary. Prerequisite: successful completion of German 102 or equivalent.

GER 202S. German for Science Majors II
THREE CREDIT HOURS
Continuation of German 201S. Prerequisite: successful completion of German 201S.

GER 305. Advanced Composition and Conversation
THREE CREDIT HOURS
Further stress on mastery of syntax and morphology, enlarging vocabulary. Discussion of readings on German Culture and civilization. Required for German majors and minors. First Term, Each Year

GER 306. Bibliography and Methods
THREE CREDIT HOURS
An intensive course in methods of literary criticism. A study of the development of German literary history. The student learns to use the standard reference works. Required for German majors and minors. Second Term, Each Year
GER 405. **Survey of German Literature**

German Literature and its development from 750 AD to end of the Baroque period. The student is exposed to exemplary works of each century and period and gets an understanding of literary movements and trends. Required for German majors.

*First Term, 1969-1970*

GER 406. **Survey of German Literature**

Continuation of German 405. German Literature from the end of the Baroque period to the death of Goethe, excluding Romanticism. Required for German majors.

*Second Term, 1969-1970*

GER 409. **German Literature of the Nineteenth Century**

A survey of nineteenth century German literature, including a study of literary movements, outstanding authors and works. Lectures, discussions and reports on assigned readings.

*First Term, 1969-1970*

GER 410. **German Literature of the Nineteenth Century**

A continuation of German Literature of the Nineteenth Century, Ger 409.

*Second Term, 1969-1970*

GER 411. **Twentieth Century German Literature**

A survey of the outstanding authors and works in the first half of the present century up to the World War II. Lectures, discussions and reports on assigned readings.

*First Term, 1970-1971*

GER 412. **Twentieth Century German Literature**

Continuation of German 411; German literature since 1945. Lectures, discussions and reports on assigned readings.

*Second Term, 1970-1971*

GER 413. **The Classical Period**

A study of the principal authors of this period, with emphasis on Schiller.

*First Term, 1970-1971*

GER 414. **The Classical Period**

Continuation of German 413, with emphasis on Goethe.

*Second Term, 1970-1971*

GER 415. **Modern German Drama**

A study of the Modern German Theater with emphasis on Brecht.

*Offered as needed*

GER 416. **Modern German Drama**

The German Theater since Brecht.

*Offered as needed*

GER 417. **Kafka**

Study of Kafka's works, with emphasis on Kafka as the forerunner of the absurd, and how his world-view developed.

*Offered as needed*

GER 418. **Modern German Prose After Kafka**

German literary reaction to the two wars; influences of Kafka, Hemingway, Dos Passos, Faulkner, Joyce, and Camus on Doblin, Kasack, Koeppen, Andresch, Böll, and Lind; the *nouveau roman* illustrated by Johnson and one work by Grass.

*Offered as needed*
Greek (GRK)

GRK 101. ELEMENTARY GREEK
A study of the essentials of classical Greek grammar with exercises and readings.

GRK 102. ELEMENTARY GREEK
Continuation of Elementary Greek 101. Prerequisite: Grk 101.

GRK 201. INTERMEDIATE GREEK
Continuation of the study of grammar, Readings from Herodotus, Xenophon, and Plato. Prerequisite: Grk 102.

GRK 303. PLATO
The Apologia is read and selections from the rest of Plato's works. Plato's contribution to the history of ideas as emphasized and illustrated through extensive supplementary reading in Jowett.

GRK 304. HOMER
Readings from the Iliad and the Odyssey.

GRK 305. THE SEPTUAGINT
Extensive readings. Comparison with the Vulgate. Excursions into the field of Biblical science.

GRK 306. THE NEW TESTAMENT
Similar to Grk 305. Comparison of the Greek and Latin texts with modern renditions.

GRK 403. GREEK DRAMA
Readings of Sophocles' Oedipus Rex and Antigone with a study of the origin and development of Greek drama.

Hebrew (HEB)

HEB 101. ELEMENTARY HEBREW
Brief history of the language. Basic grammar; nouns and adjectives with their pronominal suffixes; regular verbs in the seven ordinary conjugations; prepositions and their suffixes. Reading, translation, writing, and conversation. First Term, Each Year

HEB 102. INTRODUCTION TO CLASSICAL HEBREW
Further study of the verb. Chapters from all portions of the Old Testament with emphasis on the Pentateuch. Oral reading and conversation in the spirit of Classical Hebrew. Translation of poetic portions. Prerequisite: Heb 101. Second Term, Each Year
Italian (ITA)

**ITA 101. ELEMENTARY ITALIAN**
Elements of Italian, including pronunciation, reading, translation, grammar, dictation and conversation.

**ITA 102. ELEMENTARY ITALIAN**
Continuation of Elementary Italian 101. Prerequisite: Ita 101.

**ITA 201. INTERMEDIATE ITALIAN**
Grammar review, selected readings from modern authors, exercises in composition and conversation. Prerequisite: Ita 102.

**ITA 202. INTERMEDIATE ITALIAN**
Continuation of Intermediate Italian 201. Prerequisite: Ita 201.

**ITA 301. MASTERPIECES OF ITALIAN LITERATURE**
Major works from Dante to Tasso, presented in literary-historical perspective. Prerequisite: Ita 202 or permission of the Department.

**ITA 302. MASTERPIECES OF ITALIAN LITERATURE**
The major works from Marino to D'Annunzio presented in literary-historical perspective. Prerequisite: Ita 202 or permission of the Department.

**ITA 307. ADVANCED ITALIAN COMPOSITION AND CONVERSATION**
Practice in composition based on area material. Intensive drill in the aural-oral aspects of the language. Discussions, reports, debates. Three class hours and two laboratory hours. Prerequisite: Ita 202 or permission of the Department.

**ITA 308. ADVANCED ITALIAN COMPOSITION AND CONVERSATION II**
Continuation of Ita 307.

Latin (LAT)

**LAT 101. ELEMENTARY LATIN**
A college course in Latin fundamentals.

**LAT 102. ELEMENTARY LATIN**
A continuation of Elementary Latin 101. Prerequisite: Lat 101.

**LAT 201. INTERMEDIATE LATIN**
Second year course in Latin. Readings from classical authors of the pre-Christian periods. Prerequisite: Lat 102.

**LAT 202. INTERMEDIATE LATIN**
A continuation of Intermediate Latin 201. Prerequisite: Lat 201.

**LAT 301. LATIN COMPOSITION AND CONVERSATION**
This course aims to give an intensive review of inflections and syntax with emphasis on original style and fluency of expression.
**LAT 302. INTENSIVE LATIN**
An intensive course in Latin Composition and Conversation with special emphasis on philosophical and ecclesiastical Latin. Prerequisite: Latin 301.  
*Eight Credit Hours*

**LAT 304. VERGIL**
A survey of the work of Vergil, with special attention to the literary art of the *Aeneid* and the nature and development of the Roman epic.  
*Three Credit Hours*

**LAT 305. MEDIEVAL LATIN**
An outline of the main course of Latin literature from 400 A.D. to 1500 A.D., with special attention being given to the classical heritage of the Middle Ages.  
*Three Credit Hours*

**LAT 306. HORACE**
Readings of selected Odes and Epodes, and the *Ars Poetica* of Horace; a study of his lyric quality, workmanship, and meters.  
*First Term, Each Year*

**LAT 307. READINGS IN LATIN LITERATURE**
This course embraces the reading of excerpts from a wide range of Latin authors.  
*First Term, Each Year*

**LAT 309. CICERO**
A study of *De Amicitia* and *De Senectute* or other works of Cicero.  
*Second Term, Each Year*

**LAT 310. SELECTED LETTERS OF PLINY**
A study of the Latin letter as a literary form. The men and the world of the times of Pliny are revealed by his letters.  
*Three Credit Hours*

**LAT 313. OVID**
Intensive readings in the *Metamorphoses* with emphasis on the influence of the mythological epic on some of the modern literatures.  
*Three Credit Hours*

**LAT 314. LIVY**
This course comprises readings from Books I, XXI, and XXII of Livy’s History and an examination of his historical methods and literary form.  
*Three Credit Hours*

**LAT 335. ROMAN SATIRE**
Origins, development and influence of Roman satire. Reading in the original of selections from the chief writers of Roman satire, with emphasis on Horace and Juvenal.  
*First Term, 1969-1970*

**LAT 401. ADVANCED LATIN COMPOSITION**
An intensive course in Latin composition, with special attention to the classical type of Cicero.  
*Three Credit Hours*

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

**LAT 405-406-407. PHILOSOPHICAL LATIN**
Translation of Latin philosophical works. Lat. 405: *Logica et Ontologia*; Lat 406: *Cosmologia et Psychologia*; Lat 407: *Theodicea et Ethica*.  
*Nine Credit Hours*
LAT 412. ECCLESIASTICAL LATIN
The object of this course is to acquaint students for the priesthood with the Latin of theologians.

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

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

Russian (RUS)

RUS 101. ELEMENTARY RUSSIAN
Designed to familiarize the beginner with the essentials of the spoken and written language. Vocabulary practice, simple sentence structure, conversational drills, and reading, stress on pronunciation and handwriting.

RUS 102. ELEMENTARY RUSSIAN II
Continuation of Russian 101. Prerequisite: Rus 101.

RUS 201. INTERMEDIATE RUSSIAN
Review of the essentials or grammar, intensive conversational and comprehension exercises, reading of graded modern and contemporary prose and poetry. Prerequisite: Rus 101-102, or equivalent.

RUS 202. INTERMEDIATE RUSSIAN II
Continuation of Russian 201. Prerequisite: Rus 201.

RUS 301. RUSSIAN READING AND CONVERSATION
For students who possess a general knowledge of Russian, but lack practical experience of the spoken language. Conversation is based on more advanced reading material. Prerequisite: Rus 201-202, or equivalent.

RUS 302. RUSSIAN READING AND CONVERSATION
Continuation of Rus 301.

RUS 303. ADVANCED RUSSIAN GRAMMAR AND COMPOSITION
Phonology and Morphology. A thorough treatment, entirely in Russian, of pronunciation and the parts of speech including a basic treatment of the verb. Recommended for future teachers or graduate students.

RUS 304. ADVANCED RUSSIAN GRAMMAR AND COMPOSITION
Specialized Morphology. Syntax. A treatment, like that of Rus 303, of verb aspects, word structure and sentence structure. Entirely in Russian. May be taken independently of Rus 303.
RUS 305. RUSSIAN CULTURE AND CIVILIZATION THREE CREDIT HOURS
Survey in Russian of the country's history, politics, religion, music, art, geography and literature. Emphasis on key ideas and basic terminology. Useful as background for other Russian courses or a summation of courses, readings. Third term (I), each year. 
Prerequisite: Rus 202 or equivalent.

RUS 403. EARLY RUSSIAN LITERATURE THREE CREDIT HOURS
Short review of the beginnings of Russian literature, the early forms of literature, the post-Peter I period, and the outstanding authors. Introduction to techniques of translation. Conducted in Russian.

RUS 404. LATER RUSSIAN LITERATURE THREE CREDIT HOURS
The literature of the late 18th Century. Reading of outstanding works. Literature of 19th and 20th Centuries (outstanding works and authors). Scientific translation. Course conducted in Russian.

RUS 405. PUSHKIN THREE CREDIT HOURS
Survey of Pushkin's life, work and influence. Extensive readings in his works and readings in selected authors, contemporary or later, who show his influence. Course conducted in Russian.

RUS 406. L. N. TOLSTOY THREE CREDIT HOURS
Survey of Tolstoy's life, work and influence. Extensive readings in his works and readings in selected authors, contemporary or later, who show his influence. Course conducted in Russian.

Spanish (SPN)

SPAN 101. ELEMENTARY SPANISH THREE CREDIT HOURS
Elements of Spanish, including pronunciation, reading, translation, grammar, dictation and conversation.

SPAN 102. ELEMENTARY SPANISH II THREE CREDIT HOURS
Continuation of Spanish 101. Prerequisite: Spn 101.

SPAN 201. INTERMEDIATE SPANISH THREE CREDIT HOURS
Grammar review, selected readings from modern authors, exercises in composition and conversation. Prerequisite: Spn 102.

SPAN 202. INTERMEDIATE SPANISH THREE CREDIT HOURS
Continuation of Intermediate Spanish 201. Prerequisite: Spn 201.

SPAN 301. SPANISH LITERATURE THREE CREDIT HOURS
A survey of Spanish literature, with special emphasis on the Golden Age and the modern period. Lectures, discussions and reports on assigned readings.

SPAN 302. SPANISH LITERATURE THREE CREDIT HOURS
A continuation of Spanish Literature, Spn 301.
SPN 303. SPANISH-AMERICAN LITERATURE
A study of the principal authors and works of the colonial, revolutionary and modern
periods. Lectures, discussions and reports on assigned readings. First Term, 1969-1970

SPN 304. SPANISH-AMERICAN LITERATURE

SPN 307. ADVANCED SPANISH COMPOSITION AND CONVERSATION
Practice in composition based on area material. Intensive drill in aural and oral use
of the language. First Term, Each Year

SPN 308. ADVANCED SPANISH COMPOSITION AND CONVERSATION II
Continuation of Spn 307. Second Term, Each Year

Note: Spanish 307 and Spanish 308 are prerequisites for all other upper level Spanish
courses.

SPN 403. MODERN SPANISH DRAMATISTS
A study of the important dramatists from 1830 to the present time. Lectures, discussions
and reports on assigned readings. First Term, 1969-1970

SPN 404. DRAMA OF THE GOLDEN AGE
A study of the significance and principal works of the great dramatists of the sixteenth
and seventeenth centuries. Lectures, discussions and reports on assigned readings.
Second Term, 1969-1970

SPN 405. SPANISH LITERATURE OF THE TWENTIETH CENTURY
A study of the principal Spanish and Spanish-American authors and works of the
present century. Lectures, discussions, and reports on assigned readings.
First Term, 1970-1971

SPN 406. SPANISH NOVELISTS OF THE NINETEENTH CENTURY
A study of the more important works of the principal novelists of this period. Lectures,
discussions and reports on assigned readings. Second Term, 1970-1971

Marketing (MKT)

Harry C. Murphy, Chairman
Professor: Murphy
Associate Professors: Comer, Densmore
Assistant Professors: Jain, Kline, Royer
Part-time Instructors: Booher, Gupta

MKT 305. PRINCIPLES OF MARKETING
The general principles and practices underlying the processes of marketing. An analysis
of the problems of the manufacturer, wholesaler, retailer and other marketing agencies.
Principles, trends, methods and policies with relation to marketing efficiency.
Mkt 310. Salesmanship  
A study of the basic principles underlying all selling and their practical application to specific cases.

Mkt 315. Retail Merchandising  
Surveys basic merchandising principles and problems of large and small retail stores. Includes organization, location, buying and selling, cost reductions, current practices and trends. Prerequisite: Mkt 305.

Mkt 318. Retail Advertising and Sales Promotion  
Principles and practices of retail advertising and other sales promotional activities; where, when, and what to promote; budgeting and planning of special events and activities; emphasis upon coordination. Prerequisite: Mkt 315.

Mkt 335. Advanced Marketing  
Applications of the principles of marketing; marketing policies of manufacturers and/or wholesalers; analysis of current problems and literature relating to marketing efficiency. Prerequisite: Mkt 305.

Mkt 340. Industrial Marketing  
Fundamental basis and problems of marketing industrial goods and services. Analysis of the industrial market, channels of distribution, industrial sales, promotional practices, research, and marketing policies. Illustrative case studies utilized. Prerequisite: Mkt 305.

Mkt 405. Consumer Behavior  
The consumer-firm relationship studied in terms of concepts drawn from contemporary social sciences as related to present and prospective business activities.

Mkt 411. Sales Management  
The structure of the sales organization, determination of sales policies, the selection, training, and motivation of salesmen, the establishing of sales territories and quotas. Prerequisite: Mkt 305.

Mkt 417. Retail Buying and Merchandising  
Determining what to buy, how much, market resources, and model stocks, as well as the mathematic principles involved in purchase planning, planning initial markup, terms and dating, stockturn, inventory methods. Prerequisite: Mkt 315.

Mkt 420. Marketing Communications  
Problems of marketing considered as problems of effective communication in such functional areas as advertising, personal selling, packaging, research, display and pricing. Prerequisite: Mkt 305.

Mkt 421. Advertising  
Nature and functions of advertising; the preparation of layouts; the writing of copy; selection and evaluation of media. The coordination of advertising with other marketing efforts. Social implications of advertising are discussed.

Mkt 430. Marketing Research  
A study of the application of the scientific method to the definition and solution of marketing problems. Examines the range of activities and the problems faced in market research. Prerequisite: Mkt 305.
MKT 450. Market Development, Programming and Policies three credit hours
Marketing responsibilities approached from the managerial perspective utilizing the systems view of today’s complex business organization. Comprehensive discussion of cases involving a variety of products and environmental circumstances. Prerequisites: Six hours of Marketing including Mkt 305.

MKT 499H. Problems in Marketing (Honors Credit) one to six credit hours
A study of one or more specific aspects of the marketing process with emphasis on individual student reading and research. Subject matter to be determined by the instructor on the basis of interest and need of the student. Enrollment limited.

Mathematics (MTH)

Dr. Kenneth C. Schraut, Chairman
Professor: Schraut
Associate Professors: Back, Esser, Peterson, T. Schoen, Stander
Assistant Professors: Cada, Friel, T. Ganter, McCloskey, Mushenheim, Neuendorf, Rice, Steinlage, Shaughnessy
Instructors: Kauflin (on leave), H. Schoen, C. Gantner

Honors Program

The Honors committee of the Department of Mathematics will, upon review, extend invitations to second semester freshmen with a minimum 3.5 average in mathematics and a minimum 3.0 cumulative average. Students entering with advanced placement would be considered as exceptional cases and would be reviewed by the committee.

MTH 245H. Sophomore Honors Mathematics four credit hours
Finite Dimensional Vector Spaces, Linear Transformations and Matrices, Linear Differential Equations. Prerequisites: Mth 128 and the permission of the Honors Committee of the Department.

MTH 246H. Sophomore Honors Mathematics four credit hours
Multidimensional calculus, exterior derivatives, Stokes’ Theorem. Jordan canonical form, bilinear forms. Prerequisite: Mth 245 and the permission of the Honors Committee of the Department.

MTH 345H. Junior Honors Mathematics three credit hours
Introduction to real analysis: real number system, convergence, series, sequences, derivatives, and integration. Prerequisite: Permission of the Honors Committee of the Department.

MTH 346H. Junior Honors Mathematics three credit hours
Continuation of real analysis. Introduction to the theory of functions of a complex variable. Cauchy Integral Theorems. Prerequisite: Mth 345 and the permission of the Honors Committee of the Department.
MTH 445H. (SPECIAL TOPICS IN NAMED AREA) ONE TO THREE CREDIT HOURS
Lectures in the specialized areas listed below. May be taken more than once for additional credit. Prerequisite: Permission of the Honors Committee of the Department.

1. Abstract Algebra
2. Applied Mathematics
3. Complex Variables
4. Differential forms
5. Functional Analysis
6. Galois Theory
7. Game Theory
8. General Topology
9. Normed Linear Spaces
10. Probability Theory
11. Real Variables
12. Topological Groups

In his senior year, each student in the Honors Program will be required to enroll in one graduate course.

GENERAL OFFERINGS OF THE DEPARTMENT:

MTH 101. PRECALCULUS MATHEMATICS FOUR CREDIT HOURS
For students whose achievement in mathematics is insufficient to profit from instruction in Mathematics 112, Mathematics 118, or Mathematics 128. Topics from algebra and trigonometry chosen to satisfy the needs of the class.

MTH 111. MATHEMATICS AND ITS CULTURAL ASPECTS THREE CREDIT HOURS
Historical development of mathematics, the axiomatic approach, various mathematical systems, applications. Three class periods a week. Prerequisite: One and one-half years of high school algebra and a year of high school geometry.

MTH 112-113. INTRODUCTORY MATHEMATICAL ANALYSIS THREE CREDIT HOURS
Sets, systems of numbers, functions and the mapping process, sequences, limits, continuous functions, derivative function, exponential and logarithmic functions, definite integral, applications to life sciences and behavior sciences. Prerequisite: Satisfactory score on prescribed placement test.

MTH 118. ANALYTICAL GEOMETRY AND CALCULUS I FOUR CREDIT HOURS
Fundamentals of analytic geometry, differentiation of algebraic functions with applications to geometry and physics, indefinite and definite integrals with application to geometry and physics and engineering. A more applied presentation than is followed in Mth 128. Prerequisite: Satisfactory score on prescribed placement test.

MTH 119. ANALYTICAL GEOMETRY AND CALCULUS II FOUR CREDIT HOURS
Continuation of Math 118. Conic sections, differentiation of transcendental functions with applications to geometry and physics, indefinite and definite integrals with applications to geometry and physics and engineering. Prerequisite: Mth 118.

MTH 128. ANALYTICAL GEOMETRY AND CALCULUS I FOUR CREDIT HOURS
The material in this course is equivalent to Mth 118. It is presented with greater rigor and is designed for students in the mathematical and physical sciences. Prerequisite: Satisfactory score on prescribed placement test.

MTH 129. ANALYTICAL GEOMETRY AND CALCULUS II FOUR CREDIT HOURS
Continuation of Mth 128. Essentially the material is equivalent to Mth 119, but presented with a greater degree of abstraction. Prerequisite: Mth 128.
MTH 204. **Mathematical Concepts I**  
Three credit hours  
Concepts necessary for an understanding of the structure of arithmetic and its algorithms. Prerequisite: One year of high school algebra and one year of high school geometry.

MTH 205. **Mathematical Concepts II**  
Three credit hours  
Concepts necessary for an understanding of operations and structure of algebra and geometry. Prerequisite: MTH 204.

MTH 215. **Basic Statistics for the Biomedical Sciences**  
Three credit hours  
A discussion of probability, sample, normal distribution, confidence intervals, tests of hypotheses, proportions, chi-square test. F-distribution, regression & correlation. Prerequisite: MTH 113 or consent of instructor.

MTH 218. **Analytical Geometry and Calculus III**  
Four credit hours  
Continuation of MTH 119. Improper integrals, infinite series, expansion of functions, solid analytic geometry, partial differentiation, multiple integrals. Prerequisite: MTH 119.

MTH 219. **Applied Differential Equations**  
Three credit hours  
Linear differential equations of higher order with constant coefficients, power series solutions, Bessel's equation. Legendre's equation, the Laplace transformation, applications to problems in engineering. Prerequisite: MTH 218.

MTH 228. **Analytical Geometry and Calculus III**  
Four credit hours  
Continuation of MTH 129. The material is essentially equivalent to MTH 218, but presented with a greater degree of abstraction. Prerequisite: MTH 129.

MTH 229. **Differential Equations**  
Three credit hours  
Equations of the first order and first degree, Linear equations of higher order with constant coefficients, method of Frobenius, Euler's equations and other special equations. Prerequisite: MTH 218 or MTH 228.

MTH 331. **Statistics for Engineers**  
Three credit hours  
Probability distributions including binomial, hypergeometric, Poisson, normal. Estimation of mean and standard deviation. Sampling distributions. Quality control procedures including acceptance and inspection sampling. Confidence intervals and tests of hypotheses using t, chi-square, and F statistics. Prerequisite: MTH 218 or MTH 228.

MTH 332. **Industrial and Engineering Applications of Statistics**  
Three credit hours  

MTH 361. **Introduction to Abstract Algebra**  
Three credit hours  
Introductory treatment of the various number systems of elementary algebra, fundamental concepts of groups, rings, integral domains and fields. Prerequisite: MTH 218 or 228.
MTH 362. INTRODUCTION TO LINEAR ALGEBRA AND MATRICES  
Fundamental concepts of vector spaces, systems of linear equation, determinants, linear transformations and matrices. Prerequisite: Mth 218 or Mth 228.

MTH 367. STATISTICAL METHODS  
See Cps 367. Prerequisite: Mth 218 or 228 and Cps 233 or 241.

MTH 370. INTRODUCTION TO HIGHER GEOMETRY  
Euclidean, projective, affine, and metric geometries using synthetic and analytic methods. Prerequisite: Mth 218 or Mth 228.

MTH 383. LOGIC AND SET THEORY  
See Cps 383. Corequisite: Mth 119 or 129.

MTH 390. INTRODUCTION TO THE FOUNDATIONS OF MATHEMATICS  
Introduction to mathematical logic and set theory, the history and development of the various schools of mathematical thought. Offered in alternate years. Prerequisite: Mth 218 or 228 and Mth 361.

MTH 403. APPLIED ANALYSIS I  
Introduction to vector integral calculus, line and surface integrals, Green's theorem, Stokes' theorem, the divergence theorem. The Sturm-Liouville problem. Orthogonal functions. Prerequisite: Mth 219 or 229.

MTH 404. APPLIED ANALYSIS II  
Introduction to functions of a complex variable, conformal mapping, solution of real integrals by contour integration. Special functions. Calculus of variations. Prerequisite: Mth 403.

MTH 411. PROBABILITY AND STATISTICS I  
Mathematical probability, stochastic variables, joint distributions. Bayes' theorem, moments, Chebyshev's inequality, limit theorems including the laws of large numbers and Central limit theorem. Prerequisite: Mth 218 or Mth 228.

MTH 412. PROBABILITY AND STATISTICS II  
Random sampling, estimation of parameters including maximum likelihood, methods of moments, and Bayes' estimate, confidence intervals, tests of hypotheses, regression, sampling from a normal population. Prerequisite: Mth 411.

MTH 413. PROBABILITY AND STATISTICS III  
Statistical decision theory, partitioning of sums and squares, analysis of variance, regression on several independent variables, multiple regression approach to analysis of variance, design of experiments. Prerequisite: Mth 412.

MTH 421. ADVANCED CALCULUS I  
The number system, sequences and series, functions of a real variable, functions of several variables. Prerequisite: Mth 218 or 228.  
First Term, Each Year
Mth 422. Advanced Calculus II
The definite integral, improper integrals, line integrals, multiple integrals, and uniform convergence. Prerequisite: Mth 421.

Second Term, Each Year

Mth 455-456. Numerical Analysis
See Cps 455-456.

Six Credit Hours

Mth 461. Introduction to the Theory of Functions of a Complex Variable
Fundamental concepts, Cauchy integral theorem, analytic functions, analytic continuation, conformal transformations, the calculus of residues, applications to physics and engineering. Prerequisite: Mth 218 or 228.

Three Credit Hours

Mth 471. Topology
Calculus of point sets. Hausdorff and other topological spaces. Completeness, compactness, metrics, Euclidean spaces, connectedness, partial ordering, axiom of choice, homeomorphisms and continuous functions. Prerequisite: Mth 218 or 228.

Three Credit Hours

Mth 481. Mathematical Logic
See Cps. 481.

Three Credit Hours

Mth 482. Automata Theory
See Cps 482. Prerequisite: Mth 481.

Three Credit Hours

Mth 490. Readings in (Named Area)
Individual study in specialized areas carried out under the supervision of a staff member. May be taken more than once for additional credit. Prerequisite: Permission of the Department.

One to Three Credit Hours

Mechanical Engineering (MEE)

Howard Smith, Chairman
Professor: Csaky
Associate Professors: Minardi, Nielsen, Ray, Smith, Thorne
Assistant Professors: Bauer, Boehman, Bornhorst, Chuang, Luming, Schauer, Schmall

Instructors: Hery, Scott

Mee 106L. Engineering Graphics I
Fundamentals of engineering graphics and the part that graphical communication plays in engineering.

Two Credit Hours

Mee 207L. Engineering Graphics II
Training in the analysis and graphical solution of fundamental problems involving three dimensions and the application of these solutions to engineering problems. Prerequisite: Mee 106L.

Two Credit Hours
MEE 211. MATERIALS AND PROCESSES  
Crystalline nature of solids, work hardening, mechanical properties of metals, common industrial processes, metal cutting, economics of machining and processing. Prerequisites: Chm 125, Mee 106L, Phy 196; Corequisite: Mee 211L.

MEE 211L. MATERIALS AND PROCESSES LABORATORY  
Study of machining processes and machine tools; shaping and planing, drilling, turning, milling, broaching and grinding. Basic experiments in metal cutting. Experiments in workshop metrology. Corequisite: Mee 211.

MEE 221. THEORY OF MACHINES  
Kinematic and dynamic analysis of mechanisms and machines; study of machine elements such as linkages, cams, gears, differentials; analog computing mechanisms; balancing; flywheels. Prerequisite: Egm 301; Corequisites: Mee 221L, Mee 301.

MEE 221L. THEORY OF MACHINES LABORATORY  
Laboratory exercises based on the principles covered in Mee 221. Prerequisite: Egm 301; Corequisites: Mee 221, Mee 301.

MEE 301. THERMODYNAMICS I  
The zeroth, first and second laws of thermodynamics for both closed systems and control volumes; properties and processes of gases and vapors. Prerequisite: Mth 218.

MEE 302. THERMODYNAMICS II  
Review of second law and entropy. Treatment of irreversibility and availability; mixtures and solutions; chemical reactions; chemical phase equilibrium. Prerequisite: Mee 301.

MEE 303. METALLURGY  
Electronic structure, bonding, crystal structure, imperfections in crystals, strengthening mechanisms, phase transformations, equilibrium diagrams, heat treatment, mechanical behavior and corrosion. Prerequisites: Mee 211, Phy 437, or permission of instructor.

MEE 303L. METALLURGY LABORATORY  
Heat treatment, hardness testing, preparation of specimens for metallurgical examinations, use of metallograph, examination of metallic structures, thermal analysis. Corequisite: Mee 303.

MEE 305L. MECHANICAL ENGINEERING LABORATORY I  
Purpose and planning of experimental projects; measurements, data analysis and error estimation; techniques of selection, application and calibration of instruments used for the measurement of fundamental quantities, such as pressure, temperature, shaft speed, fluid flow rate, frequency, torque, power, area, and sound level. Prerequisite: Mee 211L.

MEE 308. FLUID MECHANICS  
Laws and theory relative to incompressible fluids; continuity, momentum and energy relations in flow situations; internal and external flow in laminar and turbulent regimes. Prerequisite: Mee 301.

MEE 310. THERMAL ENGINEERING  
Steam power plants; fossil and nuclear fuels; introduction to power reactors, gas turbine power plants, total energy concept and direct energy conversion devices. Prerequisite: Mee 301.
ME 312L. **MECHANICAL ENGINEERING LABORATORY II**

Determination of thermodynamic and physical properties of fuels and lubricants, study of energy release or transfer mechanisms, such as, combustion and measurement of fluid flow. Prerequisite: ME 305L.

ME 316. **MECHANICAL ENGINEERING ANALYSIS**

Mathematical modeling and simulation of engineering systems. Solutions and evaluation by digital and analog methods. Prerequisite: MTH 219.

ME 319. **MECHANICAL VIBRATIONS**

Undamped free vibration; damped free vibration; forced vibration; vibration isolation and absorption; vibrations of systems with several degrees of freedom; mechanical and electrical models of vibration systems. Prerequisites: EGM 301, ME 316.

ME 320. **THERMAL ENGINEERING I**

Steam power plants; fossil and nuclear fuels; introduction to power reactors, gas turbine power plants, total energy concept, and direct energy conversion devices. Prerequisite: ME 301.

ME 407. **MACHINE DESIGN I**

Development of mathematical equations for analysis and design of static and dynamic machine members. Prerequisites: EGM 304, ME 221; Corequisite: ME 407L.

ME 407L. **MACHINE DESIGN LABORATORY I**


ME 408. **MACHINE DESIGN II**

Continuation of ME 407. Prerequisite: ME 407; Corequisite: ME 408L.

ME 408L. **MACHINE DESIGN LABORATORY II**

Problems involving the application of principles covered in ME 407 and ME 408. Solution of complex problems with emphasis on synthesis and creative design of mechanical systems. Corequisite: ME 408.

ME 410. **HEAT TRANSFER**

Laws of conduction, radiation and convection; heat transfer to boiling liquids and condensing vapors; steady state and variable flow heat transfer. Prerequisites: ME 308, ME 316.

ME 414A. **SEMINAR**

Presentation of papers by students and lectures by engineers in active practice. Registration required by all students in their last term prior to graduation.

ME 414B. **SEMINAR**

Presentation of papers by the students and lectures by engineers in active practice. Registration required by all junior and senior students not registered in ME 414A.
MEE 416. MECHANICAL VIBRATIONS  
TWO CREDIT HOURS
Undamped free vibration; damped free vibration; forced vibration; vibration isolation and absorption; vibration of systems with several degrees of freedom; mechanical and electrical models of vibration systems. Prerequisites: Mee 221, Mth 219.

MEE 417. THERMAL ENGINEERING II  
THREE CREDIT HOURS
A study of combustion and energy release processes; theoretical flame temperature, degree of dissociation and ionization, reaction rates. Applications to spark and compression ignition systems, thermal jet and rocket engines, gas turbine power plants; fuel requirements for each. Engine testing. Prerequisites: Mee 302 and Mee 310 or Mee 320. Corequisite: Mee 312L.

MEE 418. ADVANCED FLUID MECHANICS  
THREE CREDIT HOURS
Application of fundamental fluid mechanics and thermodynamic laws and auxiliary equations to compressible flows. Isentropic flows; normal and oblique shock waves; convection heat transfer. Prerequisites: Mee 308, Mth 219; Corequisite: Mee 410.

MEE 419. MECHANICAL ENGINEERING ANALYSIS  
TWO CREDIT HOURS
The application of mathematics to the solution of engineering problems. Prerequisite: Mth 219.

MEE 424L. MECHANICAL ENGINEERING LABORATORY III  
ONE CREDIT HOUR
Analysis and testing of selected power generation devices and turbo-machinery, such as turbines, internal combustion engines, pumps, fans, solar cells, thermoelectric and thermionic power generators. Prerequisite: Mee 305L; Corequisites: Mee 410, Mee 417.

MEE 425L. MECHANICAL ENGINEERING LABORATORY IV  
ONE CREDIT HOUR
Analysis and testing of heat transfer devices involving principles of conduction, convection, condensation, and refrigeration; gas dynamics experiments. Prerequisites: Mee 305L, Mee 410, Mee 418.

MEE 426L. MECHANICAL ENGINEERING LABORATORY III  
TWO CREDIT HOURS
Testing of selected devices or machines which employ engineering principles; such as, turbines, combustion engines, pumps, fans and heat exchangers. Corequisites: Mee 410, Mee 417.

Mechanical Engineering Electives

MEE 420. ENVIRONMENTAL CONTROL  
THREE CREDIT HOURS
Application of thermodynamics, heat flow and fluid flow to the investigation and design of thermal environmental control systems and subsystems. Prerequisite: Mee 302; Corequisite: Mee 410. Offered once each year.

MEE 421. TURBO-MACHINERY  
THREE CREDIT HOURS
Theory applicable to turbines, compressors and pumps. Dimensional analysis concepts; energy transfer in centrifugal and axial flow turbines, compressors and pumps. Thermodynamic relationships in turbomachinery processes. Prerequisites: Mee 302, Mee 308.

MEE 430. PRODUCTION CONTROL AND PROCESSES  
THREE CREDIT HOURS
Introduction to statistics, quality control, and reliability. Production methods and processes; automation. Prerequisites: Mth 218, Mee 211. Offered once each year.

MEE 499. SPECIAL PROBLEMS IN MECHANICAL ENGINEERING  
THREE TO SIX CREDIT HOURS
Particular assignments to be arranged and approved by Chairman of the Department.
Medical Technology (MET)

Dr. Abramson, Chairman (St. Elizabeth Hospital)
Dr. McMillan, Chairman (Good Samaritan Hospital)
Dr. Oosting, Chairman (Miami Valley Hospital)

The work of the senior year in Medical Technology is done at Miami Valley Hospital, St. Elizabeth Hospital, Good Samaritan Hospital or Kettering Hospital. The courses are conducted by the respective hospital faculties.

MET 481. INTRODUCTION TO MEDICAL TECHNOLOGY        FOUR CREDIT HOURS
A study of basic hospital and laboratory routine, Medical Terminology, Laboratory Ethics, Laboratory Mathematics.

MET 482. URINALYSIS AND RENAL FUNCTION            FOUR CREDIT HOURS
Instruction in various methods of performing these tests with correlation based on anatomical and physiological functions of the organs.

MET 483. HEMATOLOGY                             SIX CREDIT HOURS
Instruction in the morphology of the blood and blood-forming tissues and practice in the association studies. Correlation of findings based on anatomical and physiological functions of the cellular components of the blood.

MET 484. BACTERIOLOGY, PARASITOLOGY, MYCOLOGY     SEVEN CREDIT HOURS
Instruction in various methods of microbiological examination of the body tissues, fluids, secretions, and excretions; tests for reaction of the body to specific diseases; tests for and study of various parasites found as pathologic organisms in the human body.

MET 485. CHEMISTRY AND GASTRIC ANALYSIS           EIGHT CREDIT HOURS
Instruction in biochemical analysis and the chemical changes in the body due to disease; procedures for analyzing gastric fluid.

MET 486. HISTOLOGY AND CYTOLOGY                  THREE CREDIT HOURS
Instruction in various methods of preparation for sectioning and staining of tissues in preparation for microscopic examination.

MET 487. SEROLOGY AND SPINAL FLUID               THREE CREDIT HOURS
Instruction in antigen-antibody reaction in vitro and the performance of the associated tests; procedures for analyzing cerebrospinal fluid.

MET 488. BLOOD BANKING                          THREE CREDIT HOURS
Instruction in blood typing and crossmatching of blood for administration of transfusions. Techniques in withdrawing blood from donors is included.
MET 489. LABORATORY MANAGEMENT
The student familiarizes himself with the ordering of supplies, office procedures, and with basal metabolism techniques.

MET 490. NORMAL PATHOLOGIC PHYSIOLOGY
A series of lectures stressing the correlation of theory and practical laboratory testing as it relates to disease states.

Military Science (MIL)

LTC William F. Murley, Chairman (Acting)
Professor: Murley
Assistant Professors: Gannon, Hoerning, Barker, Kosty, McCollum, Renn, Sullivan, Anderson, Hovey, Morris, Newman, O'Brien, Rowzee, Smith, Van Horn, Kwieciak, MacLellan, Fawcett

Students desiring to obtain a commission as an officer in the United States Army are required successfully to complete four years of Military Science and be awarded a Bachelor's Degree from the University.

MIL 101-102. FIRST YEAR BASIC COURSE
TWO CREDIT HOURS
Instruction provided in those subjects common to all branches of the Army; U.S. Military Establishment; Leadership Principals; individual weapons; map reading; organization of the Army and R.O.T.C.; and leadership laboratory. One period of classroom instruction and one period of leadership laboratory each week.

MIL 201-202. SECOND YEAR BASIC COURSE
TWO CREDIT HOURS
Continuation of above course. Subjects include: American military history; map and aerial photograph reading; basic tactics; and leadership laboratory. Prerequisites: Mil 101-102. Two periods of classroom instruction and one period of leadership laboratory each week.

MIL 301-302. FIRST YEAR ADVANCED COURSE
FOUR CREDIT HOURS
Subjects: Military teaching principles; service branches; small unit tactics-communications; pre-camp orientation; internal defense/development; leadership; summer camp. Prerequisites: Mil 101, 102, 201, 202, pass physical and selection. Three periods of classroom instruction and one period of leadership laboratory each week.

MIL 401-402. SECOND YEAR ADVANCED COURSE
FOUR CREDIT HOURS
Continuation of above. Subjects: Logistics; Army administration; military justice; operations; service orientation; leadership; world change and military implication; internal defense development. Prerequisites: Mil 301-302 and Summer Camp. Three periods of classroom instruction and one period of leadership laboratory each week.
Music (MUS)

Maurice R. Reichard, Chairman

Professors: Reichard, Thomas
Associate Professors: Tagg, Zech
Assistant Professors: Ritter, Weaver
Instructor: Faust

Special Applied Music Instructors: Blagg, Enoch, Katz, Needham, Odum, Reger, Wildman

MUS 101. FUNDAMENTALS OF MUSIC TWO CREDIT HOURS
For the student with no previous experience with the theory of music. Notation of music, key and time signatures, fundamental harmonic progression, and an introduction to the piano keyboard. Elementary ear training and dictation.

MUS 103. MUSIC APPRECIATION TWO CREDIT HOURS
A study of the masterpieces of music with special reference to the listener: includes compositions of value to the classroom teacher. For students in elementary education. Not open to students who have credit for Mus 108.

MUS 108. INTRODUCTION TO MUSIC LITERATURE TWO CREDIT HOURS
A study of the masterpieces in music aimed at developing a broad understanding and an intelligent discrimination of music. For music majors and students in Music Education. Not open to students who have credit for Mus 103.

MUS 151-152. FIRST YEAR THEORY EIGHT CREDIT HOURS
Formation of scales and intervals; progression of triads and seventh chords; simple modulation; basic technique of dictation, sight singing, and rhythmic reading. Prerequisite: Knowledge of the fundamentals of music.

MUS 183. TEACHING MUSIC IN PAROCHIAL SCHOOLS—PRIMARY GRADES THREE CREDIT HOURS
Reading and notation of music is developed along with key signatures, sight singing in major and minor modes, ear training and dictation. Materials for grades 1, 2, 3, and their presentation.

MUS 231. TEACHING MUSIC IN GRADES 1, 2, AND 3 TWO CREDIT HOURS
Materials to be used in music for the first three grades and their presentation; problems and possibilities of the primary school music program. Prerequisite: Knowledge of the fundamentals of music equivalent to Mus 101.

MUS 232. TEACHING MUSIC IN GRADES 4, 5, AND 6 TWO CREDIT HOURS
Materials to be used in music for the intermediate grades and their presentation; problems and possibilities of the elementary school music program. Prerequisite: Equivalent of Mus 101.

Second Term—Evenings
Mus 235-236. Voice Class
Principles of good singing; development of the voice; vocal literature. May be repeated to a total of eight credit hours. Minimum of four students required for class. Prerequisite: Permission of the instructor.

Mus 251. Second Year Theory
Continuation of Mus 151-152; more advanced sight-singing and dictation; analysis and writing of advanced seventh chords, modulation. Non-harmonic tones, and altered chords. Prerequisite: Mus 152.

Mus 262. Musical Form
A study of the structural designs used in musical composition; a study of all polyphonic, homophonic, and the larger forms. Prerequisite: Mus 251.

Mus 272. Keyboard Harmony
A study of diatonic chord progressions, including simple modulations, at the keyboard; their use in accompaniment of melodies; improvisation; modern chord terminology. Prerequisite: Mus 251; four credit hours in Piano.

Mus 283. Teaching Music in Parochial Schools—Intermediate Grades
Continued note reading, modulation to dominant and subdominant, introduction to the piano keyboard, two- and three-part singing. Materials for grades 4, 5, 6, and their presentation. Prerequisite: Mus 183.

Mus 296. Applied Music—Class Piano I
ONE CREDIT HOUR

Mus 297. Applied Music—Class Piano II
ONE CREDIT HOUR

Mus 298. Applied Music—Class Piano III
ONE CREDIT HOUR

Mus 299. Applied Music—Class Piano IV
ONE CREDIT HOUR

Mus 301. History of Music I
Development of music, instruments, forms, sacred and secular, from the earliest records through the Classical period. The relationship of music to the other arts and to broad movements in society and civilization. First Term, Each Year

Mus 302. History of Music II
Music of the nineteenth century; Romanticism; impressionism; nationalism; beginnings of the modern period. Relationship of music to social and cultural trends in Europe and America during the last one hundred and fifty years. Second Term, Each Year

Mus 304. History of American Music
Development of music in America dating from its early psalmody of the 17th century to its present day forms and styles.

Mus 305. Contemporary Trends in American Music
Survey of the contemporary American composers and their styles of writing. The relationship of American music to the other arts.
Mus 308. Contemporary Music
Two credit hours
A survey of contemporary music; its relationship to modernism in the other arts and to present-day society.

Mus 311-312. Eighteenth Century Counterpoint
Four credit hours
A study of the contrapuntal technique of the eighteenth century particularly as used in the instrumental works of Johann Sebastian Bach. Original compositions in the forms of the Invention and the Fugue. Prerequisite: Mus 251.

Mus 315. The Opera
Two credit hours
A survey of operas written in classical, romantic, and modern periods; particular attention is given to works currently performed by major opera companies.

Mus 322. Instrumentation and Orchestration
Three credit hours
Scoring for instruments in small combinations and full orchestra and symphonic band; emphasis on the needs of school music organizations. Prerequisite: Junior standing in music and permission of the instructor. Second Term, Each Year

Mus 325. Stringed Instruments
Two credit hours
Class instruction in stringed instruments; teaching of stringed instruments in the schools. First Term, Each Year

Mus 326. Reed and Woodwind Instruments
One credit hour
Class instruction in reed and woodwind instruments; teaching of reeds and woodwinds in the schools. Second Term, Each Year

Mus 327. Brass Instruments
One credit hour
Class instruction in brass instruments; teaching brass instruments in the schools. First Term, Each Year

Mus 328. Percussion Instruments
One credit hour
Class instruction in percussion instruments; teaching of percussion instruments in the schools. Second Term, Each Year

Mus 331. Vocal Music in the High School
Two credit hours
Materials used in the general music class and their presentation; glee club, choir, voice class, vocal ensembles. Prerequisite: Junior standing in Music Education. Second Term, Each Year

Mus 332. The School Band and Orchestra
Two credit hours
A general course in the organization and teaching of instrumental music in the schools; materials; survey of equipment and facilities necessary for the instrumental music program. Prerequisite: Junior standing in Music Education. Second Term, Each Year

Mus 335. Music in the Elementary Grades
Three credit hours
The music education program in the elementary grades; materials and their presentation; problems and responsibilities of the music teacher. Prerequisite: Sophomore standing in music education. First Term, Each Year
MUS 341. CONDUCTING  
THREE CREDIT HOURS
Methods of controlling tempo and the dynamic elements of musical performance groups; practical experience in experimental campus organizations. Prerequisite: Junior standing in Music; permission of the instructor.
First Term, Each Year

MUS 361. PIANO PEDAGOGY I  
tWO CREDIT HOURS
A systematic preparation for the development of piano technique and tone: a survey and study of graded teaching material of Grades I and II. Prerequisite: Four terms of piano study or the equivalent.
First Term, Each Year

MUS 362. PIANO PEDAGOGY II  
tWO CREDIT HOURS
A continuation of Piano Pedagogy I through the material of Grades III and IV. Prerequisite: Piano Pedagogy I or five terms of piano study or equivalent.
Second Term, Each Year

MUS 383. TEACHING MUSIC IN PAROCHIAL SCHOOLS—JUNIOR HIGH SCHOOLS  
THREE CREDIT HOURS
Repertoire in three and four parts which exploits the musical skills developed in the first six grades. Procedure for handling the problem of the boy's changing voice.

MUS 399. APPLIED MUSIC  
tWO CREDIT HOURS
Private instruction in Piano, Voice, Organ, Orchestral Instruments.

MUS 411-412. MUSICAL COMPOSITION  
FOUR CREDIT HOURS
Prerequisites: Mus 251, Mus 311-312 or Mus 417-418; other prerequisites to be determined in consideration of the aims and objectives of the student; permission of the instructor.

MUS 415-416. 19TH AND 20TH CENTURY STYLES  
FOUR CREDIT HOURS
Analysis of the harmonic and contrapuntal devices used after Bach with special emphasis on contemporary music and composers. Prerequisite: Junior standing in music; permission of the instructor.

MUS 417-418. SIXTEENTH CENTURY COUNTERPART  
FOUR CREDIT HOURS
A study of the medieval modes and the vocal polyphony of the motet and the Mass, up to and including five-part writing; original student compositions. Prerequisite: Permission of the instructor.

MUS 421-422. LABORATORY IN ORCHESTRATION  
FOUR CREDIT HOURS
Advanced work in orchestration; special problems in scoring for full orchestra, symphonic band or dance orchestra; transcription of orchestral works for band. Prerequisite: Mus 322, permission of instructor.

MUS 425-426. PROBLEMS IN INSTRUMENTAL MUSIC  
FOUR CREDIT HOURS
Practical problems and experience in instrumental music in teaching or other professional situations approved by the Department of Music. Prerequisite: Senior standing in Music or in Music Education.

MUS 429. MARCHING BAND TECHNIQUES  
tWO CREDIT HOURS
Materials and methods of organization and instruction for the Marching Band.
First Term, Each Year
**Mus 431-432. Problems in Vocal Music**

Four credit hours

Practical problems and experience in vocal music in teaching or other professional situations approved by the Department of Music. Prerequisite: Senior standing in Music or in Music Education.

**Mus 441-442. Laboratory in Composition**

Four credit hours

Advanced work in musical composition; writing multi-movement forms of both vocal and instrumental music. Prerequisite: Mus 411 and 412; permission of the instructor.

**Mus 451-452. Chamber Music and Symphony**

Four credit hours

Formal and harmonic analysis of Chamber Music and the symphonies of the Classicists, the Romanticists, and the Impressionists. Prerequisite: Mus 251, 262.

**Mus 470W. Music in the Primary Grades**

Three credit hours

The workshop treats phases of the child's music needs and considers appropriate materials and methods for the regular classroom teacher. Opportunities given for participation in music activities. For primary teachers.

**Mus 499. Applied Music (for Majors in Applied Music)**

Four credit hours

Private instruction in Piano, Voice, Organ, Orchestral Instruments, admission by permission of instructor-advisor.

**MAJOR IN APPLIED MUSIC:** Twenty four credit hours for Bachelor of Music degree; sixteen to twenty credit hours for Bachelor of Science in Music Education degree.

**APPLIED MUSIC**

Credit in Applied Music may be earned in Mus 296-299, Class Piano, or in private instruction courses, Mus 399 and Mus 499 (Applied Music Majors) at the following rates:

**Mus 296-299**

One credit hour (one class lesson per week)

**Mus 399**

Two credit hours (one private lesson per week)

**Mus 499**

Four credit hours (two private lessons per week)

In order to register for credit toward a major in Applied Music, students must have studied sufficient preparatory material. In piano, this should include ability to play major and minor scales in a moderate tempo in parallel motion, ability to play major and minor triads in arpeggio form in all keys. The student should have studied Hanon, Vol. 1; Piscina; Czerny, Op. 299, or their equivalent; some of the Mozart and Haydn sonatas; Mendelssohn "Songs Without Words"; Little Preludes and Fugues or Two- and Three-part Inventions by Bach; "Lyric Pieces" by Grieg, or their equivalent. To study organ, the student should have previous study in piano amounting to the Two- and Three-part Inventions by Bach; Sonata No. 1 in f Minor, Op. 2, by Beethoven; Nocturne in f Minor, Op. 55, by Chopin or their equivalent.

**APPLIED MUSIC FEES:**

Mus 296 to 299 Class Piano.................................................................................Term fee $10.00
Mus 399 Piano, Organ, Voice, Woodwind or Brass Instruments............Term fee $20.00
Mus 499  Applied Music Majors.................................................................Term fee $40.00
N.B. Applied Music courses which involve private study with special teachers who are not full-time members of the University faculty must incur private lesson fees paid to the instructor .................................................................Term fee $40.00 to $80.00

ENSEMBLES

*Orchestra* (Dayton Philharmonic Training Orchestra)
*Band* (Marching Band, Concert Band)
*Choir* (Mixed Chorus)
*Glee Clubs* (Men’s Glee Club, Women’s Glee Club)
*Ensembles* (Brass Choir, String, Vocal, Woodwind Ensembles)

Credit may be earned in Orchestra, Band, Choir, Glee Club and Ensembles by students enrolled in music courses. Credit will be allowed at the rate of one-half credit per semester in each organization, and is required of students majoring in Music or qualifying for degrees of Bachelor of Music or Bachelor of Science in Music Education. Students do not register for credit in musical ensembles and no grades are given. Granting of such credit, however, will entail attendance at rehearsals and performances in conformity with policies applying to regular academic courses. The amount of credit required is to be determined by the needs and experience of the student, and/or State requirements in music education.

Philosophy (PHL)

Dr. Richard R. Baker, *Chairman*
*Professors*: Baker, Dieska
*Associate Professors*: Baltazar, Rhodes
*Assistant Professors*: Bloemer, Cartagenova, Chrisman, Dombro, Edelenyi, Greene, Herbenick, Hoy, Kunkel, Monasterio, Nersoyan, O’Brien, Opalek, Petritz, Seman, Thompson, Ulrich, Wening.

*Instructor*: Rinderly

Courses required for a major: Phil 106, 206, 303, 304, 306, 308, 310, three electives (9 hrs.)
Courses required for a minor: Phil 106, 206, 304, 306, 308, one elective (3 hrs.)
Students should consult the chairman concerning electives.
Phil 106 and Phil 206 are prerequisites for all 300 and 400 courses.

**PHL 106. BASIC PROBLEMS IN PHILOSOPHY I**

An introduction to the problem of the nature of philosophic inquiry, the problem of knowledge, the problem of being, and the problem of God.
**PHILOSOPHY 289**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td><strong>PHIL 206.</strong> Basic Problems in Philosophy II</td>
<td>An introduction to the problem of man, the problem of morality, and to such problems in politics, aesthetics, education, etc., as chosen by the instructor.</td>
<td>THREE CREDIT HOURS</td>
</tr>
<tr>
<td><strong>PHIL 301.</strong> Logic</td>
<td>Correct methods of defining and dividing concepts and terms; analysis of propositions and their immediate implications; rules for valid inference; introduction to symbolic logic; induction; fallacies.</td>
<td>THREE CREDIT HOURS</td>
</tr>
<tr>
<td><strong>PHIL 303.</strong> Philosophy of Nature</td>
<td>A consideration of the fundamental problems inherent in the physical universe and a critique of various solutions. An examination of the philosophical presuppositions and implications of contemporary physical theories. A philosophical analysis of such phenomena as motion, quantity, time and space.</td>
<td>THREE CREDIT HOURS</td>
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<tr>
<td><strong>PHIL 304.</strong> Philosophy of Man</td>
<td>Nature of life in general; plant soul; brute animal soul; knowledge and appetite in man; human intellect and will; intellectual and moral habits; nature, origin and immortality of the human soul.</td>
<td>THREE CREDIT HOURS</td>
</tr>
<tr>
<td><strong>PHIL 306.</strong> Philosophy of Knowledge</td>
<td>A critical examination of the validity of sensory and intellectual knowledge; the problem of the trustworthiness of the senses; the problem of the universal; skepticism, idealism and subjectivism.</td>
<td>THREE CREDIT HOURS</td>
</tr>
<tr>
<td><strong>PHIL 308.</strong> Philosophy of Being</td>
<td>An analysis of real being; analogy of being; transcendentals; application of act and potency to essence and existence, substance and accident, the one and the many, causality; special classes of being.</td>
<td>THREE CREDIT HOURS</td>
</tr>
<tr>
<td><strong>PHIL 310.</strong> Philosophy of God</td>
<td>The existence and nature of God as discoverable by natural reason; the divine causality; the relation of the universe to God; the problem of evil; criticism of the arguments advanced by the atheist and the agnostic.</td>
<td>THREE CREDIT HOURS</td>
</tr>
<tr>
<td><strong>PHIL 312.</strong> Ethics</td>
<td>Happiness and ultimate end of man; human act; norms and determinants of morality; eternal and natural law; conscience; moral virtues; rights and duties. Required of all non-Catholics.</td>
<td>THREE CREDIT HOURS</td>
</tr>
<tr>
<td><strong>PHIL 350.</strong> History of Greek Philosophy</td>
<td>A survey of the beginnings and later development of philosophical speculation by the Greek philosophers from Thales to Plotinus.</td>
<td>THREE CREDIT HOURS</td>
</tr>
<tr>
<td><strong>PHIL 351.</strong> History of Medieval Philosophy</td>
<td>A survey of the course of philosophical thought from the Patristic Period to the end of the Scholastic era in the 14th century.</td>
<td>THREE CREDIT HOURS</td>
</tr>
<tr>
<td><strong>PHIL 352.</strong> History of Modern Philosophy</td>
<td>A consideration of the rise and development of modern philosophic thought from the Renaissance to the 20th century.</td>
<td>THREE CREDIT HOURS</td>
</tr>
</tbody>
</table>
PHL 401H. **Honors Course in Metaphysics**
\[\text{THREE CREDIT HOURS}\]
An investigation of such special problems as the possibility and conditions of metaphysical inquiry, the proper object of metaphysics, and the methodology proper to metaphysics. By permission of the chairman.

PHL 409. **Recent Philosophy**
\[\text{THREE CREDIT HOURS}\]
A consideration of the trends in philosophy since 1900, especially viewed as a logical outgrowth of the thought of Kant and of Hegel. Among the trends to be considered are Positivism, Mathematical Logic, Analytic Philosophy, Phenomenology and Existentialism.

PHL 410. **History of Political Philosophy**
\[\text{THREE CREDIT HOURS}\]
A study of the principle political opinions of the Western philosophers; Plato, Aristotle, and the leading Roman, medieval, and modern political philosophers. Required of all political science majors.

PHL 414. **Philosophy of Law**
\[\text{THREE CREDIT HOURS}\]
Nature of law; natural and positive law; implications and juridical origin and effect of law; justice; genetic origin of law.

PHL 430. **Philosophy of Plato**
\[\text{THREE CREDIT HOURS}\]
The purpose of the course is to give an insight into the philosophy of Plato by reading, analyzing and commenting on four of Plato's dialogues: *Phaedo, Symposium, Protagoras* and the *Republic*.

PHL 432. **Philosophy of Aristotle**
\[\text{THREE CREDIT HOURS}\]
Readings and classroom discussion of selections from the basic works of Aristotle, including the *Physics, Metaphysics, Ethics* and *Politics*.

PHL 434. **St. Thomas Aquinas**
\[\text{THREE CREDIT HOURS}\]
This course offers St. Thomas' teachings on God, Creation, Man, Law, Grace, Habit, Virtue and kindred subjects, derived from the Summa Theologica and the Summa Contra Gentiles.

PHL 436. **Philosophy of Descartes**
\[\text{THREE CREDIT HOURS}\]
A detailed examination of the logical, epistemological, psychological, and metaphysical concepts in the philosophy of Descartes, together with an exposition of his place in the history of philosophy as the "Father of Modern Philosophy".

PHL 438. **Philosophy of Kant**
\[\text{THREE CREDIT HOURS}\]
A close analysis of Kant's monumental work, the *Critique of Pure Reason*, with emphasis on its metaphysical implications, followed by a brief study of Kantian ethics in the *Foundations of the Metaphysics of Morals*.

PHL 440. **Philosophy of Hegel**
\[\text{THREE CREDIT HOURS}\]
A detailed examination of Hegel's *Phenomenology of Mind*, with additional reference to his *Science of Logic, Lectures on the Philosophy of Religion*, and *Lectures on the History of Philosophy*. 
PHIL 450. SPECIAL PROBLEMS IN PHILOSOPHY
The objective of this seminar is to gain insight into the perennial and contemporary problems of philosophy. Permission to take this course must be obtained from the instructor. May be repeated when topic varies.

PHL 451. SEMINAR IN INDIVIDUAL PHILOSOPHERS
The objective of this seminar is to study in depth the thought of an individual philosopher of sufficient importance to warrant special study. May be repeated when topic varies.

PHL 455. PHILOSOPHY OF ART
An analysis of the nature of art, beauty, and the aesthetic judgment in the light of the philosophical principles and distinctive conditions found in each. A discussion of the permanent and inward relationship of the values of truth, goodness and beauty.

PHL 456. THE PHILOSOPHY OF CREATIVITY
An effort at a more adequate understanding of the process of artistic creation. Such concepts as "inspiration," "genius," "creative imagination," etc., are examined, together with an investigation of methods, techniques, and suggestions for enriching the creative dimension of one's life. Prerequisite: Consent of Instructor.

PHL 457. AESTHETICS OF THE CINEMA
A general discussion of the aesthetics of the cinema, using films and criticism for analysis, from Chaplin's "aesthetic existence" to the formalism of Alain Resnais. Particular attention will be given to the contemporary dichotomy between style and content. Prerequisite: permission of chairman.

PHL 458. PHILOSOPHY OF LITERATURE
An analysis of the structure, the creation, and the criteria of literature, with a selective study of some of the philosophical implications which underlie certain influential works from antiquity to the present.

PHL 460. BUSINESS ETHICS
Application of philosophy in the area of employee discipline with emphasis on rights, duties, and the purpose of discipline. Examination of arbitration cases in discipline.

PHL 465. SPECIAL PROBLEMS IN ETHICS
The application of ethical principles to the special problems in the life of the individual, the family, and the state. A consideration of the values, rights, and duties involved in such problems as ownership, contracts, education, labor, war and peace, government, international law, etc.

PHL 470. CLASSICAL AMERICAN PHILOSOPHY
A survey of the major trends and issues of American thought from the 18th century to the present, especially as reflected in the writings of Edwards, Jefferson, Emerson, Royce, Peirce, James, Dewey, and Santayana. The development of democratic traditions; transcendentalism; the significance of recent European importations.
Physics (PHY)

Dr. Joseph J. Kepes, Chairman

Professors: L. Mann, Bueche

Associate Professors: Kepes, Schick

Assistant Professors: Bransky (visiting), Cothern, Crivello, Frank, Graham, Kreiman, R. Mann, O'Hare, Schneider, Yaney

Instructor: Huffman

A major in Physics should have completed as a minimum 24 hours (15 hours from Group I below and 9 hours from Group II) of upper level course work in Physics plus at least 12 hours of course work in a minor field. In particular circumstances, substitutions in other disciplines can be made in the Group II courses with permission of the Department Chairman. Students may also fulfill the minor requirement by taking at least 12 hours from the Group II and III courses below. Normally students going to do graduate study in Physics will follow this latter program, i.e., courses in Groups I, II, III (Recommended open electives in Mathematics are listed in Group IV).

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The minor can be chosen from any Department in the University with the provision that the student have the permission of the Physics Chairman and the Chairman in the minor field. This should be done some time in the Sophomore year. It is recommended that students choosing a minor use the open electives where feasible to strengthen their background in either Physics or in the minor.

PHY 100.  Seminar  NO CREDIT

The student has an opportunity to acquaint himself with the broad spectrum of modern science through periodic meetings with the entire department. Films, talks, book reviews, and informal discussions. Required of Freshmen and Sophomores in physics.

PHY 105.  The Physical Sciences  FOUR CREDIT HOURS

Applies fundamental principles of nature to physics, chemistry, astronomy, meteorology. Gives the student a broad understanding of man's physical environment. Four class periods per week. Does not satisfy science requirement in Arts and Sciences.

PHY 151.  General Physics  THREE CREDIT HOURS

Designed to give (non-science) students an appreciation of physics, and approaches mechanics and heat from a point of view with a minimum of mathematics. Three class periods per week. Prerequisite: Elementary algebra.

First Term, Each Year
PHY 151L. General Physics Laboratory
A course designed to accompany Phy 151. Designed to verify and apply theory through a selected program of experiments and demonstrations. Corequisite: Phy 151. One two-hour period per week.

PHY 152. General Physics
This course is a continuation of Phy 151 and includes electricity, light and sound with some discussion of the most recent developments of physics. Three class periods per week. Prerequisite: Phy 151.

PHY 152L. General Physics Laboratory
A course designed to accompany Phy 152. Designed to verify and apply theory through a selected program of experiments. Corequisite: Phy 152. One two-hour period per week.

PHY 196. General Physics I Mechanics
An introductory course in Mechanics using the calculus. Three lectures, one and ¼ hours recitation per week. Corequisite: Mth 118 or Mth 128.

PHY 196H. General Physics I Mechanics (Honors)
An introductory course in Mechanics for students with a strong background in Physics. Three lectures, one and ¼ hours recitation per week. By invitation only.

PHY 196L. General Physics Laboratory I
Introduction to laboratory methods, handling of data, analysis, experiments in classical mechanics for students in Science. One three hour period per week. Corequisite: Phy 196.

PHY 201. General Physics
A discussion of mechanics and heat without the formalism of the calculus. Three class periods per week.

PHY 201L. General Physics Laboratory
Accompanying laboratory course to Phy 201. Designed to verify and apply theory, and to teach scientific techniques. One two-hour period per week.

PHY 202. General Physics
A continuation of Phy 201, covering the fields of magnetism, electricity, sound and light. Three class periods per week. Prerequisite: Phy 201.

PHY 202L. General Physics Laboratory
A continuation of Phy 201L, with experiments in magnetism, electricity, sound and light. One two-hour period per week. Prerequisite: Phy 201L.

PHY 207. General Physics II Electricity and Magnetism
The basic principles of electricity and magnetism are studied. Three lectures, one and ¼ hours recitation per week. Prerequisite: Phy 196, Mth 128.

PHY 207H. General Physics II Electricity and Magnetism (Honors)
Basic principles of electricity and magnetism. Three lectures, one and ¼ hours recitation per week. By invitation only.
PHY 207L. **General Physics Laboratory II**

Open-ended experiments in mechanics and electricity and magnetism, tailored to the background of students. One three hour period per week. Prerequisite: Phy 196L; Co-require: Phy 207.

PHY 208. **General Physics III Mechanics of Waves**

Introduction to wave phenomena including sound, light and matter waves leading to basic concepts in Modern Physics. Three lectures per week. Prerequisite: Phy 207, Mth 129.

PHY 208H. **General Physics III Mechanics of Waves (honors)**

Three credit hours

An introduction to Modern Physics through a study of wave phenomena including sound, light and matter waves. Three class meetings per week. By invitation only.

PHY 208L. **General Physics Laboratory III**

The students perform a number of experiments emphasizing Modern Physics. One three-hour period per week. Prerequisite: Phy 207L; Corequisite: Phy 208.

PHY 301. **Statistical Thermodynamics**

The thermodynamical description of many particles systems obtained from microscopic statistical considerations. Topics include: laws of thermodynamics, kinetic theory of dilute gases and Fermi-Dirac and Bose Einstein statistics. Three class periods per week. Corequisite: Mth 219 or Mth 229. 

*First Term, Each Year*

PHY 303. **Intermediate Mechanics I**

Three credit hours

The fundamental concepts of mechanics. The topics covered include virtual work, kinematics, special theory of relativity, Lagrange's equation and central forces, particle dynamics. Three class periods per week. Corequisite: Mth 219 or Mth 229.

*First Term, Each Year*

PHY 304. **Intermediate Mechanics II**

Three credit hours

A continuation of Phy 303. Topics include scattering of particles, fluid flows, rotating systems, rigid bodies, small oscillations and transition to wave mechanics. Three class periods per week. Prerequisite: Phy 303. 

*Second Term, Each Year*

PHY 351. **Introduction to Astronomy**

Three credit hours

History of astronomy, apparent motions of celestial bodies, planetary systems, spectral classifications, multiple systems, variable stars, structure of the Universe. Prerequisites: Mth 228, Phy 208.

PHY 361. **Principles of Reactor Physics**

Three credit hours

Chain reactors. Slowing down theory, diffusion equations, space distribution, criticality, group theories. Laboratory experiments accompany the lecture. Prerequisites: Phy 208.

PHY 390. **Introduction to Quantum Mechanics**

Three credit hours

Basic postulates of Quantum Mechanics, applications made to atomic physics. Prerequisite: Phy 303, or consent of instructor.

*Second Term, Each Year*

PHY 404. **Physical Optics**

Three credit hours

This course discusses the wave theory of light, interference, diffraction, dispersion, polarization, velocity of light and electromagnetic theory of light. Three class periods per week. Prerequisite: Phy 208; Corequisite: Mth 229.
PHY 408. **INTERMEDIATE ELECTRICITY AND MAGNETISM I**

Three credit hours

Electrostatics, Coulomb's and Gauss' laws and the Laplace and Poisson equations, dielectrics, electrostatic energy methods, scalar and vector potential. Three class periods per week. Prerequisite: Phy 207.

First Term, Each Year

PHY 409. **INTERMEDIATE ELECTRICITY AND MAGNETISM II**

Three credit hours


Second Term, Each Year

PHY 411. **THEORETICAL PHYSICS I**

Three credit hours

Calculational techniques in Modern Physics, complex variable theory, dispersion relations, linear vector spaces, operators, matrix mechanics, eigenvalue equations. Prerequisites: Mth 403-4, or consent of department.

PHY 412. **THEORETICAL PHYSICS II**

Three credit hours

Orthogonal functions, Dirac delta function, Laplace's equation, Poisson's equation, D'Alembert's equation, transformation theorems, Green's function. Prerequisites: Mth 403-4, or consent of department.

PHY 420. **INTRODUCTION TO SOLID STATE**

Three credit hours

Classification of solids, definition of crystals and crystal structures, survey of lattice properties. Free electron theory, band theory of solids, semi-conductors and crystal imperfections. Prerequisite: Phy 390 or consent of department.

PHY 421. **NUCLEAR PHYSICS**

Three credit hours

Radioactivity, particle accelerators, the interaction of nuclear radiation with matter, particle detection, fission, and cosmic rays. Three class periods a week. Prerequisites: Phy 390 or consent of instructor.

First Term, Each Year

PHY 430. **ADVANCED LABORATORY I**

A laboratory course in basic electronic circuit elements and devices. One four hour period per week.

PHY 430H. **INDEPENDENT RESEARCH I**

Two credit hours

Student performs independent experiments in electronics. Approximately four hours per week. Prerequisite: Previous experience in circuitry, permission of departmental chairman required.

PHY 431. **ADVANCED LABORATORY II**

Two credit hours

A laboratory course in which the student performs advanced experiments in optics, mechanics, electricity and magnetism, and modern physics. One four-hour period per week. Corequisite: an advanced course in physics.

PHY 431H. **INDEPENDENT RESEARCH II**

Two credit hours

Student performs independent experiments in classical physics. Approximately four hours per week. By invitation only.

PHY 432. **ADVANCED LABORATORY III**

Two credit hours

A continuation of Phy 431 with emphasis on solid state physics but may be taken without having had Phy 431. One four-hour period per week. Corequisite: an advanced course in physics.
PHY 432H. INDEPENDENT RESEARCH III
TWO CREDIT HOURS
Senior thesis, a laboratory problem in solid state, nuclear physics or other modern research areas. By invitation only.

PHY 433. ADVANCED LABORATORY IV
TWO CREDIT HOURS
A continuation of Phy 431, 432, but may be taken without having had either. Basic experiments in Nuclear Physics. One four-hour period per week. Corequisite: an advanced course in physics.

PHY 433H. INDEPENDENT RESEARCH IV
TWO CREDIT HOURS
Senior thesis, a laboratory problem in solid state, nuclear physics or other modern research areas. By invitation only.

PHY 437. MODERN PHYSICS FOR ENGINEERS
THREE CREDIT HOURS
Basic postulates of Quantum Mechanics, Special Relativity with practical application to Atomic, Nuclear and Solid State Physics. Prerequisite: Phy 208.

PHY 440. X-RAYS
THREE CREDIT HOURS
Nature, production and properties of x-rays and their interaction with matter. Applications and x-ray spectroscopy. Three class periods per week. Prerequisite: Phy 390 or consent of instructor.

PHY 441. TOPICS IN MODERN PHYSICS
THREE CREDIT HOURS
Includes elements of Modern Optics, Solid State and other selected subjects. Prerequisite: Phy 390 or equivalent, consult chairman of department.

PHY 450. ADVANCED ASTRONOMY
THREE CREDIT HOURS
Orbits, celestial mechanics, spectroscopic theory and analysis, ionization theory, radiation transfer, nuclear reactions, atmospheres, star models. Three class periods per week. Prerequisites: Phy 301, 303, 351, 390, or consent of department.

PHY 451. INTERMEDIATE PHYSICS I
FOUR CREDIT HOURS
The practical nature of matter; application to classical mechanics, astronomy, special relativity and modern physics. Three hours of lecture and three hours of laboratory experience, demonstrations and presentation of topical reports. Prerequisite: Phy 208 and Mth 219 or equivalent.

PHY 452. INTERMEDIATE PHYSICS II
FOUR CREDIT HOURS
The electrical and magnetic nature of the universe; problems in basic electricity and electronics with applications made first to modern circuits and atomic physics. Three hours of lecture and three hours of laboratory experience and demonstrations. Corequisite: Phy 451.

PHY 453. INTERMEDIATE PHYSICS III
FOUR CREDIT HOURS
The nature of waves as applied to optics, quantum mechanics, nuclear physics and elementary particles. Three hours of lecture and three hours of laboratory experience, demonstrations and presentation of optical reports. Prerequisite: Phy 451-2.
PHYSICS 460. SEMINAR
Presentation of papers by undergraduate students, faculty and guest lecturers on topics of concern to the modern physicist. Reviews of books and films appropriate to the group are also given. Two meetings per week. Required of Juniors and Seniors.

PHYSICS 499. SPECIAL PROBLEMS IN (NAMED AREA) HONORS
Laboratory, tutorial or library work in one of the selected topics (a) Solid State Physics (b) Polymer (c) X-Rays (d) Nuclear Physics (e) Modern Optics (f) Theoretical Physics (g) General Physics. Taken with permission of department chairman.

Police Administration (PAD)

Dr. Norbert C. Brockman, S.M., Coordinator
Part-time Instructors: Clift, Makley, Stamm

Students in the B.A. programs may minor in Police Administration. A minor requires fourteen hours, which is to include Pad 200 and Pad 313.

PAD 101. POLICE PHYSICAL TRAINING
Four credit hours
Replaces Phc 101-102, 201-202 for police officers who have completed an approved police academy program. Elements of first aid and health, Judo instruction, and general physical training.

PAD 150. POLICE OPERATIONS
Three credit hours
The process of law enforcement from detection of crime to parole, evaluation of police services, patrol functions.

PAD 200. INTRODUCTION TO POLICE ADMINISTRATION
Two credit hours
Principles of organization and management as applied to police administration. Emphasis on management process rather than structures.

PAD 250. POLICE SYSTEMS
Three credit hours
Study of the organization of police agencies at national, state, and local levels, with consideration of areas of cooperation and relationships with other areas of administration.

PAD 301. CRIMINALISTICS
Three credit hours
The application of scientific principles to police work. Students will become familiar with laboratory procedures and basic chemical tests.

PAD 305. TRAFFIC ADMINISTRATION
Two credit hours
Problems of traffic administration and public safety. Accident prevention, licensing, safety education, and traffic engineering.

PAD 309. CRIMINAL INVESTIGATION
Two credit hours
The application of various investigatory techniques to criminal situations. Some considera-
PAD 313. CRIMINAL LAW AND PROCEDURE
Principles of criminal liability, preparation of case materials, court procedures and case disposition, and basic rules of evidence are considered.

PAD 320. LAW OF EVIDENCE
A comprehensive study of the rules of evidence; evaluation of evidence and proof; physical evidence; testimony.

PAD 350. READINGS IN POLICE ADMINISTRATION
Directed readings in police administration, with emphasis on problems of supervision and recent legal developments.

PAD 360. JUVENILE PROCEDURES
A study of juvenile problems and the role of police in their management and control, and the modification of police procedures in juvenile crime prevention.

PAD 401. ADVANCED POLICE ADMINISTRATION
Principles of supervision and control procedures. Teaching of police academy programs. Comparative study of police training systems.

PAD 410. CORRECTIONAL ADMINISTRATION
The administration of correctional institutions and other detention facilities. Special problems of the mentally disturbed. Rehabilitation and parole administration.

PAD 425. COMMUNITY RELATIONS
Contemporary problems of police-community relations; policy development and implementation; training programs.

PAD 450. PRACTICUM IN POLICE ADMINISTRATION
Intensive studies of particular practical problems in police administration. Field trips, lectures, and readings are combined to give both a practical and theoretical orientation.

PAD 460. RESEARCH IN POLICE ADMINISTRATION
Directed research on specific problems, enabling the student to take responsibility for investigating an area of particular interest to him. A field project will be required.

PAD 470. SEMINAR IN POLICE ADMINISTRATION
A coordinating seminar to integrate the studies in Police Administration with contemporary social science, with a focus on community mobilization for crime prevention.

Political Science (POL)

Dr. Norbert C. Brockman, S.M., Chairman
Professors: Rose, Steinbicker
Associate Professors: Brockman, Liebler, Patyk
Assistant Professors: Abbott, Kerns
Lecturer: Carrell
Part-time Instructor: Wilson

A major in Political Science includes Pol 101 and Pol 201, plus eight advanced courses.
One course must be chosen from each of the following areas, and residents of Ohio must choose Pol 302 as part of the major sequence. A minor in Political Science includes Pol 201 and any four advanced courses.

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<th>Group I: Government</th>
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**Pol 101. Introduction to Political Science**

An introduction to political phenomena from a number of approaches: behavioral, institutional, and normative.

**Pol 101H. Introduction to Political Science (Honors)**

By permission only. Limited enrollment.

**Pol 201. American National Government**

A functional study of the origin, organization, and operations of the national government with a rapid survey of the American system of state and local governments.

**Pol 201H. American National Government (Honors)**

By permission only. Limited enrollment.

**Pol 300. Principles of Government**

An advanced survey of American governmental systems, with emphasis on the federal establishment. Not open to majors or minors in Political Science, nor to students who have taken Pol 201.

**Pol 301. Introduction to Law**

A study of the American legal system, with emphasis on the courts and the bar. The criminal and civil legal processes are taken in detail.

**Pol 302. Ohio Government—State and Local**

An examination of the state and local governments of Ohio with special reference to Montgomery County and the City of Dayton.

**Pol 303. State and Local Government**

A comparative survey of the governments of the states and their local jurisdictions, with emphasis on current developments and issues. Local government is treated within the context of the federal system.

**Pol 306. International Law**

An analysis of the development of international law, its theory and application to the various phases of international relations.

**Pol 310. Political Parties**

A descriptive analysis of the nature and interaction of parties, pressure groups, and the functioning of public opinion on the national and state level. Prerequisite: Pol 201.
POL 312. NATIONAL LEGISLATIVE PROCESS  THREE CREDIT HOURS
A detailed treatment of the organization, powers, functions, procedures of, and influences on Congress in federal legislation. Prerequisite: Pol 201.

POL 314. INTERNATIONAL RELATIONS  THREE CREDIT HOURS
An exposition of the dynamic forces influencing nations in their conduct of world affairs.

POL 314H. INTERNATIONAL RELATIONS (HONORS)  THREE CREDIT HOURS
By permission only. Limited enrollment.

POL 316. INTERNATIONAL ORGANIZATIONS  THREE CREDIT HOURS
A study of origins and evolution of organized international collaboration with an emphasis on the United Nations.

POL 360. URBAN POLITICS  THREE CREDIT HOURS
Examination of contemporary urban problems and the response of the governmental and political system. Locus of power and decision-making; community mobilization; citizen participation.

POL 401. THE AMERICAN PRESIDENCY  THREE CREDIT HOURS
An expository approach to the United States Presidency, as the most powerful elective political office in the world today. Prerequisite: Pol 201.

POL 402. WESTERN EUROPEAN GOVERNMENTS  THREE CREDIT HOURS
A comparison of the governments of the United Kingdom, France, Germany, and others. Operation of legislative, administrative and judicial institutions.

POL 403. RUSSIA AND EAST EUROPE  THREE CREDIT HOURS
A study of the philosophy, structure, and practical operation of the political and economic institutions of the Soviet Union and other countries with a similar system.

POL 407. POLITICAL GEOGRAPHY  THREE CREDIT HOURS
This program proposes to include the geopolitical aspects of land, sea, outer space, communications, transportation, military strategy and the contributions of geography to international problems.

POL 408. AMERICAN FOREIGN POLICY  THREE CREDIT HOURS
An analytic study of policies and methods followed by the State Department in its relations with other countries in its conducting of United States relations.

POL 410. PUBLIC ADMINISTRATION  THREE CREDIT HOURS
A study of basic principles of organization and management in executive departments of government at all levels. Questions of planning, leadership, and control are also considered. Prerequisite: Pol 201.

POL 411. THE AMERICAN CONSTITUTION  THREE CREDIT HOURS
An exposition of the fundamental principles inherent in the Constitution, Common Law, delegated powers of government, and other areas, with application to contemporary situations. Prerequisite: Pol 201.
POL 414. PHILOSOPHY OF LAW
Nature of law; natural and positive law; implications and juridical origin and effect of law; justice; origin of law; legal reasoning.

POL 416. LATIN AMERICAN GOVERNMENTS
An examination of the social, cultural, and political systems of the American states with special consideration of recent developments.

POL 417. HISTORY OF POLITICAL PHILOSOPHY
Principal political opinions of the Western philosophers drawn from original sources. Political doctrines of Plato and Aristotle, leading Roman and Medieval thinkers, and modern political philosophies. Accredited in Philosophy.

POL 417H. HISTORY OF POLITICAL PHILOSOPHY (HONORS)
By permission only. Limited enrollment.

POL 421. GOVERNMENT SEMINAR
Research and conferences on current problems and issues in Political Science. Prerequisite: Permission of professor.

POL 422. READINGS AND PROBLEMS IN NATIONAL GOVERNMENT
This is essentially a course to supplement the other courses in the national field. Prerequisite: Pol 201.

POL 431. RESEARCH IN POLITICAL SCIENCE
Individual research on selected topics, under the direction of a member of the faculty.

POL 431H. RESEARCH IN POLITICAL SCIENCE (HONORS)
By permission only.

POL 450. CIVIL LIBERTIES
An analytical examination of civil liberties in the United States with special emphasis upon the Supreme Court as arbiter in the endless conflict between the demand for individual liberty and the needs of constitutional authority. Prerequisite: Pol 201.

POL 460. GOVERNMENT AND POLITICS OF THE FAR EAST
A study of the political systems of Japan and China, with some consideration of the smaller states of the Far Eastern area.

POL 465. AFRICAN POLITICAL SYSTEMS
A survey of the governments and politics of Africa, with emphasis on Black Africa. Some consideration is given to Pan-African movements.

POL 467. POLITICS OF THE NEAR EAST
Study of the political systems, problems, and philosophies of the Near East. Problems of Arab unity and Middle East international relations are considered.

POL 471. CATHOLIC POLITICAL THOUGHT
A study of basic Catholic social doctrine, with emphasis on the teachings of recent Popes on political and economic questions and movements, in the light of contemporary Catholic theology.
POL 475. American Political Thought
THREE CREDIT HOURS
A careful study of the significant ideas that have shaped the American political system as it is today. Concentration on the impact of puritanism, the American Revolution, Hamiltonianism, Jeffersonianism, racism, nativism, social Darwinism, the New Deal and contemporary liberalism and conservatism.

POL 480. Political Behavior
THREE CREDIT HOURS
A survey of the important literature and an analysis of the relevant concepts and techniques in the behavioral approach to political science. Emphasis on the importance of surveys, quantitative analysis and the psychology of political relationships.

POL 495. Internship
THREE CREDIT HOURS
Supervised experience in government agencies and programs. Pre-law students are assigned to law firms and judicial chambers. Prerequisite: permission of supervising professor.

Psychology (PSY)

Dr. Samuel M. Bower, Acting Chairman
Mr. L. T. Kempel, Administrative Assistant to Chairman
Professor: Rancurello
Associate Professor: Noland
Assistant Professors: Bower, Davis, Rosa, Shine, Upson
Instructors: Kempel, Rueth
Part-time Instructors: Debons, Kuntz, Matthews, Riley, Scheidler, Smith, Stevens, Zink
Lecturers: Erlick, Hanes, Hughes, Kuhr

Psychology majors must complete the required courses as follows: Psy 201, 302, and 308. In addition to these basic courses, the student must elect in consultation with his advisor, elective credits in Psychology corresponding to the program he selects. Majors will be assigned to individual advisors. They should contact the department chairman for assignments as soon as possible. A Psychology major will be advised to follow one of three psychology programs. The first leads to a B.S. degree, the second to a B.S. degree with Biology emphasized, and the third to a B.A. degree which provides general training and allows for an allied minor in an Arts & Sciences department. Students with a minor in Psychology are required to complete a minimum of 15 credit hours in psychology courses, including Introductory Psychology.

All 400 level courses are open for graduate credit to candidates for a Master's degree in Psychology upon permission of advisor, but not to exceed six (6) credit hours.

PSY 201. Introductory Psychology
THREE CREDIT HOURS
Studies man as an integrated personality including development, motivation, emotion, adjustment, learning, perception, thinking, and the general application of psychological principles to personal, social, and industrial problems. Required of all Psychology majors.
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<tr>
<td>PSY 302</td>
<td>Elementary Statistics</td>
<td>THREE</td>
<td>Measures of central tendency, dispersion, and correlation. Basic concepts involved in estimating parameters and testing hypotheses. Required of all Psychology majors. Prerequisite: Psy 201 or equivalent.</td>
</tr>
<tr>
<td>PSY 303</td>
<td>Experimental Design and Inference</td>
<td>THREE</td>
<td>Develops rationale for the design and interpretation of experiments, including analysis of variance, correlational analyses, and data transformations. Prerequisite: Psy 302 or equivalent.</td>
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<tr>
<td>PSY 304</td>
<td>Adolescent Psychology</td>
<td>THREE</td>
<td>Treats interrelated physical, social, and emotional development of adolescents. Child Psychology is recommended as prerequisite though not required. Prerequisite: Psy 201 or equivalent.</td>
</tr>
<tr>
<td>PSY 306</td>
<td>Child Psychology</td>
<td>THREE</td>
<td>A longitudinal study of childhood from birth to 12 years stressing the importance of developmental sequences in motor, emotional, social, language, intelligence and imaginative life. Concentrates on recent research findings in this field. Prerequisite: Psy 201 or equivalent.</td>
</tr>
<tr>
<td>PSY 308</td>
<td>Experimental Psychology</td>
<td>THREE</td>
<td>Introduces the student to the basic concepts of scientific methods as applied to psychological problems. Prerequisite: Psy 302. Required of all Psychology majors.</td>
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<td>PSY 308L</td>
<td>Experimental Psychology Laboratory</td>
<td>ONE</td>
<td>Experiments are conducted to familiarize student with the application of scientific methodology to the study of psychological processes of man. Must be taken with lecture course. One two-hour laboratory period each week.</td>
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<tr>
<td>PSY 311</td>
<td>Dynamics of Adjustment</td>
<td>THREE</td>
<td>Explains the continuous adjustment process through an examination of psychological, social, biological, philosophical and other interrelated conceptions. Emphasizes personality dynamics and effective behavior. Prerequisite: Psy 201 or equivalent.</td>
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<tr>
<td>PSY 313</td>
<td>Behavior Disorders</td>
<td>THREE</td>
<td>Examines patterns of disordered behavior. Discusses cultural, social, psychological and biological relationships and approaches to behavior modification. Prerequisite: Psy 311 or permission of the instructor.</td>
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<tr>
<td>PSY 314</td>
<td>Cognitive Processes</td>
<td>THREE</td>
<td>The cognitive approach to the mental functions of attention, perception, memory, imagery, and thought. Theoretical structures including neuron modeling of higher cognitive and experiential process. Prerequisite: Psy 201.</td>
</tr>
<tr>
<td>PSY 315</td>
<td>Personality</td>
<td>THREE</td>
<td>Introduction to the scientific study of personality as reflected in both clinical and experimental findings. Prerequisite: Psy 311, or permission of the instructor.</td>
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PSY 321. Human Factors Engineering  
THREE CREDIT HOURS
Designed to provide engineer and psychologist with essential psychological concepts and methods to optimize use of men and equipment. Principles governing design of equipment which account for the capacities and limitations of human processes are outlined, and discussed within the framework of prevailing man-machine systems. Prerequisite: Psy 201.

PSY 321L. Human Factors Engineering Laboratory  
ONE CREDIT HOUR
Selected experiments on displays and other equipment to illustrate the application of human factors principles to design of equipment. Must be taken with lecture course. One two-hour laboratory period each week.

PSY 322. Learning  
THREE CREDIT HOURS
The foundations of the learning process. Classical and instrumental and variants of each are considered prior to investigations of complex learning. Prerequisite: Psy 201.

PSY 402. Psychological Tests and Measurements  
THREE CREDIT HOURS
Historical background of testing and the ethics involved. Concentrates on the requirements of acceptable tests in general. Reviews principal tests of intelligence, personality, and aptitude. Prerequisite: Psy 302 or equivalent.

PSY 406. Community Problems and Psychology  
THREE CREDIT HOURS
A more advanced course in the practical application of psychology to the home, industry, marketing and advertising, law, criminology, social relations, medicine, music, art and warfare. Prerequisite: Psy 201.

PSY 407. Psychology of Exceptional Children  
THREE CREDIT HOURS
An evaluation of the field of atypicalities existing throughout childhood. This includes intellectual superiority and mental retardation. Stress is placed on deviations existing because of organic pathology resulting in varying kinds of mental and physical aberrations. Etiology, diagnosis, and testing techniques are included. Prerequisite: Psy 306.

PSY 408. Social Psychology  
THREE CREDIT HOURS
Presents systematic treatment of social forces affecting human behavior. Emphasizes methods of social psychology. Prerequisite: Psy 201.

PSY 409. History of Psychology  
THREE CREDIT HOURS
Considers modern psychology from the vantage point of its origins in philosophy and science. Emphasizes an evaluation of systems and schools in the history of psychology. For seniors in psychology or with permission of instructor.

PSY 412. Interviewing and Counseling  
THREE CREDIT HOURS
Theories and techniques of interviewing and counseling are discussed and evaluated. Practice provided by role playing and by case study. Permission of the instructor or chairman is required. For seniors only.

PSY 412L. Interviewing and Counseling Laboratory  
ONE CREDIT HOUR
Demonstrations, role-play and interviewing practice are used to give students meaningful experiences in this area. Two hours per week. Must be taken with lecture course (Psy 412).
PSY 415. SMALL GROUP DYNAMICS
Experimental and experiential analysis of the dynamics of small group behavior. Inter-
personal behavior at various levels and in differing settings will be investigated, e.g.,
school, work, family; formal and informal organization. Introduction to sensitivity train-
ing and group therapy. Permission of instructor required.

PSY 415L. LABORATORY IN SMALL GROUP DYNAMICS
Designed to provide demonstrations and experiences in group dynamics, group therapy,
sensitivity training and the diagnosis and restructuring of group behavior. Limited to
ten students. One two-hour lab period per week.

PSY 420. INDUSTRIAL PSYCHOLOGY
Introduces modern efforts to improve human performance in industrial organization and
society. Studies selection and placement of employees, morale, training, and incentives.
Prerequisite: Psy 302.

PSY 451. DIFFERENTIAL PSYCHOLOGY
Discusses the problems, methods and results of differential psychology, including the
nature and distribution of individual differences, role of heredity and environment,
organization of psychological traits, sex differences, and characteristics of racial, national
and other common groupings.

PSY 454. PHYSIOLOGICAL PSYCHOLOGY
Study of neurological structure and function emphasizing role of nervous and glandular
systems in the study of behavior. Prerequisite: Psy 201.

PSY 465. PSYCHOLOGY AND RELIGION
The conscious and unconscious mental processes which together modify the religious
experience: the rational, irrational, personal and social characteristics of religious expe-
rience and the manner in which this experience emanates from a total psychic entity.
Prerequisite: 311 or 315.

PSY 490. SPECIAL PROBLEMS IN PSYCHOLOGY (HONORS)
Research problems of special interest to the student are investigated under direction of
psychology staff members. Permission of department chairman is required. May be
taken more than one time.

PSY 491-492. READINGS IN PSYCHOLOGY (HONORS)
Directed readings in some specific phase of Psychology are done under the supervision
of a staff member. A written or oral report will be required. Permission of instructor
or department chairman is required.

Secretarial Studies (SEC)

Velma M. Miller, Chairman
Associate Professors: M. Civille, V. Miller
Instructors: J. Huff, J. Webster

During registration week, the department of Secretarial Studies offers tests in both
shorthand and typewriting to assist in proper placement of students desiring to continue
work in either or both fields. These tests are required of all students who have had prior work in shorthand or typewriting and expect to continue in these fields, whether for teaching purposes, professional reasons, or personal use.

Section 101. **Fundamental Shorthand**  
Three Credit Hours  
Gregg Shorthand is the method employed in this course. Using the Diamond Jubilee series, the entire theory is covered during the first semester. Transcription is introduced. Five class periods a week.

Section 101A. **Fundamental Shorthand (Refresher)**  
Three Credit Hours  
Shorthand Review. Emphasis is placed upon the mastery of the basic principles, brief forms, and phrasing of Gregg Diamond Jubilee shorthand through immediate reading and writing practice. Transcription is introduced. Five class periods a week.

Section 102. **Intermediate Shorthand**  
Three Credit Hours  
Gregg theory is reviewed. Reading practice continues but transcription is emphasized. Five class periods a week.

Section 103. **Elementary Typewriting**  
Three Credit Hours  
The keyboard is mastered. Additional emphasis is placed on the function and care of various models and makes of typewriters. Manuscript writing, tabulation, and letter writing are introduced. Five class periods a week.

Section 103A. **Fundamental Typewriting (Refresher)**  
Three Credit Hours  
Typewriting Review. A thorough review of the keyboard and its operative parts is followed by a careful analysis of typewriting techniques and work habits. Manuscript writing, tabulation, and letter writing are introduced. Five class periods a week.

Section 104. **Intermediate Typewriting**  
Three Credit Hours  
The development of further basic skill in the operation of the typewriter. Introduces basic office typing problems and stresses fundamentals needed in office employment. Five class periods a week.

Section 107. **Personal Typewriting**  
Two Credit Hours  
Students are taught typing for personal use—this includes knowledge of the typewriter, preparing outlines, manuscript writing, business letters, fill-in forms, rough drafts, etc. Three class periods a week.

Section 110. **Secretarial Mathematics**  
Three Credit Hours  
Review and practice of essential mathematical computations common to business offices; development of proficiency in these functions.

Section 201. **Dictation and Transcription**  
Three Credit Hours  
Gregg principles are reviewed. Rapid reading is emphasized. Sustained writing periods are increased. Practical office dictation speeds are employed. Five class periods a week.

Section 202. **Advanced Dictation and Transcription**  
Three Credit Hours  
This course is intended to develop greater competency in dictation and transcription. It qualifies the student for high-level positions of responsibility. Five class periods a week.
Sec 203. Advanced Typewriting
Three Credit Hours
Prepares for employment in the office occupations. Stresses advanced typing problems and emphasizes techniques, knowledges, and skills involved in office work. Five class periods a week.

Sec 204. Production Typewriting
Three Credit Hours
Specifically designed for job preparation in high-level office employment. Five class periods a week.

Sec 205. Secretarial Practice
Three Credit Hours
A study of filing techniques and duplicating processes. Dictating-transcribing machines are used; principles of data processing are introduced. Four class periods a week. Prerequisite: Intermediate Typewriting.

Sec 206. Advanced Secretarial Practice
Three Credit Hours
Advanced training in duplication processes, dictating-transcribing machines, and communications. Four class periods a week. Prerequisite: Sec 205 (Secretarial Practice).

Sec 207. Business Machines
Three Credit Hours
The student is given the opportunity to become acquainted with and correctly use the principal types of ten key adding machines, full-bank adding machines, printing calculators, rotary calculators, and key-driven calculators. Three class periods a week. Prerequisite: Sec 205 (Secretarial Practice).

Sec 208. Secretarial Accounting
Three Credit Hours
A short course in accounting especially designed for private secretaries; covers the fundamental principles of accounting as applied to mercantile and personal service enterprises operated by sole proprietors. Three class periods a week. Prerequisite: Sec 110 (Secretarial Mathematics) or equivalent.

Sec 209. Secretarial Accounting
Three Credit Hours
This course develops further the accrual basis of accounting for mercantile enterprises, with emphasis on partnership transactions, but with an introduction to corporation accounting. Three class periods a week.

Sociology, Anthropology, and Social Work

Dr. Mary Jo Huth, Chairman
Full-time Faculty:
Professor: S. C. Lee
Associate Professor: M. Huth
Assistant Professors: Bregenzer, Fakhouri, McDonald, Shaskolsky, Thomas
Part-time Faculty: Balachandran, Curran, Dickson, E. Huth, Merrick, Ward

STATEMENT OF PURPOSE: The curriculum of the Department of Sociology, Anthropology and Social Work is organized around eight major fields: anthropology, pre-professional social work, social organization, social disorganization, social change, population and ecology, methods, and sociological theory. The department's objectives are: (1) to promote understanding of the social character of human life in both primitive and advanced societies through an analysis of social structures, interaction processes and
institutions; (2) to present a balanced perspective of current social issues and problems; and (3) to encourage the objective study of society by instruction in scientific research methods. Courses in the Department of Sociology, Anthropology, and Social Work are designed for various groups of students: (1) those desiring scientific knowledge of social relationships as a part of their general equipment for living; (2) those planning to enter a public service profession such as social work, nursing, medicine, dentistry and law; (3) those expecting to engage in a form of public relations work that will require a broad grasp of the nature of society, public opinion, and social change; (4) those anticipating a career in social research and planning; (5) those looking forward to the teaching of social studies, social work, sociology or anthropology; and (6) those intending to pursue graduate training in social work, sociology or anthropology.

REQUIREMENTS FOR MAJORS AND MINORS

Major or Minor in Sociology: Majors and Minors in Sociology should consult the chairman of the department in planning their course programs. They must complete, during their Freshman and Sophomore years, the general requirements for the B.A. degree. Majors must complete 30 hours of course work in the department, including Sociology 205, 401-2, 415, 420, and 422; Soc. 204 and any 300 or 400 level sociology or anthropology courses may be chosen to complete the remaining 12 hours. Minors must complete 15 hours in the department, including Sociology 205.

Major or Minor in Anthropology: Majors and Minors in Anthropology should consult the chairman of the department in planning their course programs. They must complete, during their Freshman and Sophomore years, the general requirements for the B.A. degree. Majors must complete 30 hours of course work in the department, including Sociology 401-2 and Anthropology 320, 321, 322, 400, 403, 406, 408. Minors must complete 15 hours in the department, including Anthropology 320.

Major in Social Work: The Department of Sociology, Anthropology and Social Work is a Constituent Member of the Council on Social Work Education, an international accrediting agency for Schools of Social Work in the United States and Canada. Majors in Social Work should consult the chairman of the department in planning their course programs. Forty-five (45) hours of course work must be completed in the department, including Soc 205 and 401-2; Ant 320; and SW 305, 306, 418, 424, and 432.

SOCIOMETRY COURSES

SOC 204. Modern Social Problems
The study of the extent, causes, prevention and treatment of abnormal conditions affecting contemporary society. Will be accepted as upper division elective course; required in most Bachelor of Arts degree programs.

SOC 205. Principles of Sociology
The basic course in the principles of sociology: an introduction to the fundamental concepts of sociology. Restricted to Sociology Majors and Minors and to Social Work Majors, for whom the course is required.
Soc 301. Marriage and the Family  
A fundamental course concerned with mate selection, husband-wife relationships, parenthood, family disorganization and rehabilitation.

Soc 303. Population  
The study of population growth, composition, distribution, problems and theory, with special reference to the United States.  
Second Term, Each Year

Soc 307. Criminology and Penology  
The study of crime: its extent, etiology, prevention and treatment; probation and parole; punishment theory and practice in historical perspective; prison reform and the objectives of modern penology.  
Second Term, Each Year

Soc 313. Juvenile Delinquency  
Analysis of the relationship of the home, school, church, peer group, neighborhood, mass media and other elements in the community—the child guidance clinic, detention home, and juvenile court—to delinquency as regards its causes, prevention and treatment.  
First Term, Each Year

Soc 315. Industrial Sociology  
An analysis of the characteristics of industrial society; occupational roles and relationships; technological progress and its repercussions; industrial relations problems.  
Second Term, Each Year

Soc 318. Social Stratification  
Status, class, and social mobility in selected societies; conditions affecting the flexibility of a society's stratification system; the influence of class position on life habits; implications for research and social policy.  
First Term, Each Year

Soc 325. American Ethnic and Racial Minorities  
The study of the cultures of the major immigrant and racial groups in this country and of their assimilation into the dominant culture.  
First Term, Each Year

Soc 328. Collective Behavior  
The nature of crowds, mobs, manias, panics, fads, social movements, reforms, and revolutions; consideration of public opinion and propaganda in relation to these phenomena.  
Second Term, Each Year

Soc 401-2. Social Research Methods and Statistics  
Principal methodological approaches and basic statistical techniques in social research. Required of Sociology, Anthropology, and Social Work Majors.  
First and Second Terms, Each Year

Soc 412. School and Society  
Teacher-student, teacher-administration, and school-community relationships; educational processes, deviant behavior in schools, education for social responsibility.  
Second and Third Terms, Each Year

Soc 415. Senior Seminar in Sociology  
Individual and group projects developed around such topics as: Marriage and Family Problems, Urban Renewal, and Deviant Behavior. Required of Sociology Majors.  
First and Second Terms, Each Year
Soc 420. Classical Sociology Theory THREE CREDIT HOURS
Examination of the important questions concerning man's relationship to society, drawing upon the classical literature of the Western tradition. Required of Sociology Majors. First Term, Each Year

Soc 422. Contemporary Sociology Theory THREE CREDIT HOURS
Consideration of leading sociological theorists' works and of major trends in sociological thought during the 19th and 20th centuries. Required of Sociology Majors. Second Term, Each Year

Soc 426. Urban Sociology THREE CREDIT HOURS
Physical and social characteristics of urban areas; urban ecology; major problems of urban life; urban planning and renewal. First Term, Each Year

Soc 435W. Human Relations Workshop SIX CREDIT HOURS
The objective of this workshop is to provide an opportunity for gaining greater knowledge and understanding of the principles and techniques leading to good human relations. Causes of tension and conflict in American society are examined and effective solutions for interpersonal and intergroup problems will be studied and evaluated. Lectures by the workshop staff and by community leaders, discussions in small groups, individual projects, demonstration of audio-visual materials, field trips, library research, daily lunch together and a picnic are all considered integral facets of the workshop process. Third Term, Each Year

Anthropology Courses

Ant 320. Introduction to Cultural Anthropology THREE CREDIT HOURS
Survey of man's adaptation to, and creation of his environment by means of culture. A prerequisite for all specialized courses in Anthropology, except 321; required of Anthropology Majors and Minors and of Social Work Majors. First and Second Terms, Each Year

Ant 321. Introduction to Physical Anthropology and Archaeology THREE CREDIT HOURS
Survey of man's biological and cultural evolution from pre-human ancestors until the development of settled city-states. Required of Anthropology Majors. First and Second Terms, Each Year

Ant 322. Culture and Personality THREE CREDIT HOURS
The development of personality in relation to patterns of culture and subcultures in which one grows up; materials are drawn from both literate and non-literate societies. Required of Anthropology Majors. First Term, Each Year

Ant 400. Language and Culture THREE CREDIT HOURS
Introduction to the scientific study of language and its relationship to other aspects of human behavior. Required of Anthropology Majors. Second Term, Each Year

Ant 403. Primitive Religion THREE CREDIT HOURS
Comparative study of the religious beliefs and practices of non-literate peoples of the world. Required of Anthropology Majors. Second Term, Each Year
ANT 408. **Culture Area Studies**

Three credit hours
One major cultural area of the world—North America, South America, the Middle East, Africa, Asia, or Oceania—is studied each time the course is offered. Required of Anthropology Majors.

**ANT 433. Anthropological Field Work**

Six credit hours
Formulation and carrying out of a research design in archaeology, physical anthropology, linguistics, or cultural anthropology. Prerequisite: consent of instructor.

*Third Term, Each Year*

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**Sociology or Anthropology Courses**

**SOCIOLOGY OR ANTHROPOLOGY COURSES**

**SOC or Ant 406. Social Change**

Three credit hours
The process of social change in the modern world; culture lag and conflict of norms; individual and social problems arising from conflicting systems of values and norms. Required of Anthropology Majors.

*First Term, Each Year*

**SOC or Ant 439. Seminar in Community Development**

Three credit hours
This seminar will introduce the student to the basic concepts of community, with a focus on their application to community planning and action.

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**Social Work Courses**

**S.W. 305. Introduction to Social Work**

Three credit hours
A comprehensive survey of social work, including social casework, social group work, community organization, social research, social action, and social administration. A prerequisite for specialized courses in Social Work.

*First and Second Terms, Each Year*

**S.W. 306. Casework**

Three credit hours
An introduction to the basic principles and processes involved in helping people solve their problems; the techniques of interviewing and history-making; the relationship between caseworker, client and community; a critical evaluation of referral and treatment plans. Required of Social Work Majors.

*First and Second Terms, Each Year*

**S.W. 418. Community Organization**

Three credit hours
The mobilization of community resources to meet community needs; methods for developing, maintaining, extending, and coordinating social welfare agencies. Required of Social Work Majors.

*First and Second Terms, Each Year*

**S.W. 424. Group Work**

Three credit hours
Principles and concepts of group work as a method of social work; role of the worker with groups and individuals in groups; understanding the group process; use of program media. Required of Social Work Majors.

*First and Second Terms, Each Year*
SOC 432. SOCIAL WORK FIELD EXPERIENCE

Students majoring in Social Work are required to complete an internship involving 10 hours of service each week for two terms in a local community welfare agency or institution under the combined supervision of the University of Dayton's full-time Field Experience Program Director and a licensed agency staff member. The former will have frequent individual conferences with each student in the Field Experience Program during the first few weeks of placement to correct any difficulties as soon as possible. Field experience will enable the student to gain firsthand knowledge of the operation of health and welfare services; to observe social workers in their professional roles; to assess their own interest in, and motivation for, a career in Social Welfare; and to test their capacity to enter the Social Work profession directly after graduation or to undertake graduate social work education. Prerequisites: Soc 205, Soc 306, Soc 418, and Soc 424.

First and Second Terms, Each Year

Theological Studies (THL)

Rev. Matthew F. Kohmescher, S.M., Chairman
Professor: Cole
Associate Professors: Boulet, Burns, Kohmescher, Middendorf
Assistant Professors: Anderson, Barnes, Brady, Buby, Fox, Friedland, Griffin, Harrington, McDonald, Richards, Rolwing, Ryan, Van Hees, Vrasdonk, Weber
Instructors: Fellenz, Frick, Gasper, McBride, Maloney, Murray

The Department of Theological Studies, while not neglecting the scientific requirements of the intellectual discipline known as theology, purposes to meet actual needs of Christian students preparing for life in the 20th century. Hence, the Department strives in its curriculum of courses to offer the student that "broad knowledge" and to foster those "basic intellectual habits" in Theology which are relative to, and fundamental for, a Christian intellectual life.

Twelve credits in theology are required of all Catholic students. Freshmen take Thl 112 or Thl 195H. Transfer students who have not had the equivalent must take Thl 112. In addition students elect nine credits from the various courses offered. Majors (30 credits, including Thl 112) and minors (18 credits, including Thl 112) should consult the chairman. With permission specific courses from the Program of Judaic Studies and also Pol 471 may be counted.

THL 110. INTRODUCTION TO THEOLOGY

A study of the nature, sources and method of theology and its place in the Church today. Includes a practicum, i.e., an investigation of the theological process as it relates to selected current issues and problems.

THL 112. FOUNDATIONS IN THEOLOGY

The basic foundations and presuppositions in scripture and in theology which are necessary for all advanced work in scripture and in theology.

THL 152. INTRODUCTION TO SACRED SCRIPTURE

The Bible studied 1) As the Word of God in the words of men; and 2) As the chronicle of God's saving action in history. Place of the Bible in the Church, in Theology, in Christian living. Selected readings.
THEOLOGICAL STUDIES  313

THL 153.  INTRODUCTION TO OLD TESTAMENT  THREE CREDIT HOURS
Survey of the Old Testament—history of Israel, archaeology, institutions, literary traditions, nature of inspiration, literary forms. Selected readings.

THL 154.  INTRODUCTION TO THE NEW TESTAMENT  THREE CREDIT HOURS
Survey of the writings of the New Testament with a special emphasis on modern developments in Bible studies. Selected readings.

THL 195H.  THEOLOGY HONORS  THREE CREDIT HOURS
A seminar in which selected topics in theology are studied. By permission only.

THL 240.  WORLD RELIGIONS I  THREE CREDIT HOURS
A survey of the origins, literature, beliefs and practices of significant eastern Mediterranean religions including Christianity, Judaism, Gnosticism, Islam and others.

THL 241.  WORLD RELIGIONS II  THREE CREDIT HOURS
A survey of the origins, literature, beliefs and practices of important Far Eastern religions including Hinduism, Buddhism, Confucianism, Shinto and others.

THL 242.  PROTESTANT CHRISTIANITY  THREE CREDIT HOURS
A survey of the development of Protestant thought from the Reformation.

THL 265.  CHRISTIAN MORALITY  THREE CREDIT HOURS
Basic Christian morality seen as the personal response to the redemptive Word of God.

THL 268.  FAITH-MORAL PROBLEMS  THREE CREDIT HOURS
A layman in crisis with God in morals and in faith.

THL 295H.  THEOLOGY HONORS II  THREE CREDIT HOURS
A seminar in which selected topics in theology are studied. By permission only.

THL 320.  THEOLOGY OF CHRIST  THREE CREDIT HOURS
Study of Christ as the fulfillment of the Divine Plan—His coming, His life, His mission. Christ—the central mystery of Christianity.

THL 325.  SACRAMENTS  THREE CREDIT HOURS
Scriptural approach to the notion of sacramentality; sacramental types and sacrifices of the Old Testament; sacraments of the New Testament; contemporary developments in sacramental theology.

THL 340.  JUDAISM  THREE CREDIT HOURS
This course is a basic introduction to Judaism: its history, its faith, its worship.

THL 343.  EASTERN ORTHODOXY  THREE CREDIT HOURS
This course is a basic introduction to Eastern Orthodoxy: its history, its faith, its worship.

THL 355.  THE PENTATEUCH  THREE CREDIT HOURS
A critical, historical study of the books of the Pentateuch with special emphasis on their formation and with a consideration of pertinent problems and themes, especially from Genesis, Exodus, and Deuteronomy.
THL 358. THE GOSPELS
Findings of modern Bible scholars and recent pronouncements of the Church applied to the questions: How historical are the Gospels? What is their message? How relevant are they? Readings in Matthew, Mark and Luke-Acts.

THL 360. CHRISTIAN MORALITY
Basic Christian morality seen as the personal response to the redemptive Word of God.

THL 365. THEOLOGY OF MARRIAGE
Analysis of the sanctifying dignity of Christian marriage as a sacrament and commitment to share in the divine creative plan.

THL 369. CHURCH-GOD-WORLD
A frank and open discussion of the problems of Church, God and the World. Not open to those who have credit for Thl 268.

THL 371. CHURCH AND WORLD PEACE
Study of order among men in society and the principles needed for relationships between governments for the establishment of a world community.

THL 375. THEOLOGY OF REVOLUTION
Study and evaluation of current writings on the whole range of social change from individual change to the cataclysmic movement of revolution; relationship of change to the act of social justice and social charity.

THL 395H. THEOLOGY HONORS III
A seminar in which selected topics in theology are studied. By permission only.

THL 400. SPECIAL PROBLEMS IN THEOLOGY
Investigation and discussion of current problems in Christian belief and living, and of theology as an integrating factor in life. May be taken more than once.

THL 401. QUESTIONS IN THEOLOGY
A detailed treatment of specific areas of Catholic theology. Topics covered can vary from term to term. May be taken more than once.

THL 403. GREAT THEOLOGIANS
A study of the life, thought and times of a selected theologian. May be taken more than once.

THL 409H. READINGS IN THEOLOGY (HONORS)
Directed readings in a specific area of theology are done under the supervision of a staff member. A written or oral report is required. May be taken more than once. By permission only.

THL 416. GOD: THE EVOLVING DIALECTIC
A study of some recent contributions made by theology, philosophy, psychology and the humanities to the current discussion of God's existence, nature and relationship to man.

THL 424. THEOLOGY OF MARY
Study of the place of the Mother of God in the great truths of faith in the light of chapter eight of the Constitution on the Church.
THL 431. THEOLOGY OF THE CHURCH
Contemporary theology of the mystery of the church: its nature, its constitution, its mission. Special treatment of current problems: authority, collegiality, membership, etc.

THL 436. THEOLOGY OF THE LITURGY
An historical and theological study of the worship life of the church with special consideration of current problems.

THL 455. THE PROPHETS
A study of the prophetic movement in Israel with special treatment of selected prophets.

THL 456. THE WISDOM LITERATURE
A study of the setting, development and insights of the wisdom movement in Israel. Selected writings of the Hebrew sages will be examined in light of their relevance for the Christian of today.

THL 457. STUDIES IN ST. JOHN
The Fourth Gospel, I John and the Apocalypse will be studied with special emphasis on St. John's style, literary characteristics, plan, symbolism, message and theology.

THL 458. STUDIES IN ST. PAUL
Selected Pauline epistles will be studied in detail with special emphasis on style, literary characteristics, plan, message and theology.

THL 461. FAITH AND DOUBT
A study of the modern problem of unbelief and of the role of doubt in the formation of an adult faith.

THL 475. CHRISTIAN COMMUNITY LIVING
An investigation into the problem of insecurity and its solution; the nature, functions and problems of the Christian community today.

THL 477. THE CHURCH AND THE MODERN WORLD
A careful study of the attitudes of the Christian of the future toward the world and its problems.

THL 479. THEOLOGY OF THE LAY LIFE
Meaning, structure, spirituality and apostolate of the lay Catholic living in the world; survey of Catholic social principles, a review of certain specialized problems as the relation of Religion and Science, Politics, History and Industry.

THL 482. RELEVANCE OF THEOLOGY
The relation between doctrines and systems of theology and the contemporary problems and issues of life; how theology applies to life and how it grows out of the human situation.

THL 485. ISSUES IN SCIENCE AND RELIGION
A study of the way in which science and religion have interacted in Western history and a theological understanding of some of the issues which arise from that interaction.
THL 486. THE SACRED IN MODERN WRITING  THREE CREDIT HOURS
A joint study of literature and theology, seeking the sacred in the secular, discussing
the doctrines of man and of God in major modern writings, especially those of
current collegiate interest. Prerequisite: English major or minor.

THL 492. INTERDISCIPLINARY SEMINAR  THREE TO SIX CREDIT HOURS
A seminar in which the perspectives of various academic disciplines are brought to bear
on specific issues. By permission only.

THL 494H. SEMINAR (HONORS)  THREE CREDIT HOURS
A seminar in which selected topics in theology are studied. It may be taken more than
once. By permission only.
1. Seminar—Dogma
2. Seminar—Moral
3. Seminar—Scripture
4. Seminar—Modern Theological Thought

THL 495H. THEOLOGY HONORS IV  THREE CREDIT HOURS
A seminar in which selected topics in theology are studied. By permission only.

Technical Institute

Director: James L. McGraw

Chemical Technology (CTI)

Instructors: Lawless, Shaw

CTI 101. INORGANIC CHEMISTRY  THREE CREDIT HOURS
A comprehensive treatment of the fundamentals of general chemistry, with emphasis on
their application to the essential groups of elements in the periodic table. Laboratory
work is devoted to semi-micro qualitative analysis. Prerequisite: Sti 122.

CTI 101L. INORGANIC CHEMISTRY LABORATORY  ONE CREDIT HOUR
To accompany CtI 101. Three hours of laboratory a week.

CTI 202. QUANTITATIVE ANALYSIS  THREE CREDIT HOURS
The fundamental principles and techniques involved in exact analysis. Gravimetric,
volumetric, and colorimetric analyses are stressed along with the techniques that ac-
company these operations such as weighings and separations. Prerequisite: CtI 101.

CTI 202L. QUANTITATIVE ANALYSIS LABORATORY  TWO CREDIT HOURS
To accompany CtI 202. Six hours of laboratory a week.

CTI 203. PHYSICAL CHEMISTRY  THREE CREDIT HOURS
A short course for chemical technicians. Application of the properties of matter in its
different states. Covers chemical equilibrium; thermochemistry; electrochemistry; re-
action kinetics; phase rule. Prerequisites: CtI 202, Sti 106.
Cti 203L. Physical Chemistry Laboratory
To accompany Cti 203. Three hours of laboratory a week.

Cti 206. Instrumentation
Study of various specialized instruments used in industry for analysis. Prerequisite: Cti 202.

Cti 208. Organic Chemistry I
A systematic study of the aliphatic classes of organic compounds. Prerequisite: Cti 101.

Cti 208L. Organic Chemistry Laboratory I
To accompany Cti 208. Three hours of laboratory a week.

Cti 209. Organic Chemistry II
A systematic study of the aromatic classes of organic compounds. Prerequisite: Cti 208.

Cti 209L. Organic Chemistry Laboratory II
To accompany Cti 209. Three hours of laboratory a week.

Cti 301. Metallurgy
An introduction to the basic fundamentals of metallurgy and metallurgical applications. Includes study of metallurgical processing, extractive metallurgy, and foundry technology.

Cti 302. Chemical Engineering Technology
Designed to acquaint the student in chemical technology with the fundamentals of chemical engineering including process variables, material balances, energy balances, and equilibrium conditions.

Cti 302L. Chemical Engineering Technology Laboratory
Designed to acquaint the student with Unit Operations equipment and its utilization. To accompany Cti 302.

Cti 307. Applied Chemistry
Practical applications of chemistry in various industries. Emphasis will be placed on plastics, powdered metallurgy, paper and other units as required. Prerequisite: Cti 206.

Cti 400. Selected Chemical Topics
Investigation and discussion of current technical topics in chemical technology. May be taken more than once. Prerequisite: Permission of the department chairman.

Electronic Engineering Technology (ETI)

Richard R. Hazen, Chairman
Associate Professor: Hazen
Assistant Professors: Farren, Hanneman
Instructors: Fischer, Rooney

ETI 102. Elements of Electrical Technology I
Practical concepts of D.C. Circuits; resistance, resistivity, power and magnetism. Circuit calculations using basic formulas. Prerequisite: Sti 105.
Eti 103. ELEMENTS OF ELECTRICAL TECHNOLOGY II
Practical concepts of A.C. Circuits; inductance, capacitance, reactance, impedance, phase, power and power factor. Circuit calculations utilizing vectors and complex quantities. Prerequisite: Eti 102, Sti 106.

Eti 103L. ELECTRICAL CIRCUITS LABORATORY
To accompany Eti 103. Three hours of laboratory a week.

Eti 201. FUNDAMENTALS OF ELECTRONIC TECHNOLOGY

Eti 204. ELECTRICAL MEASUREMENTS
Fundamentals of direct and alternating current measuring instruments and methods of measurement, with particular emphasis on industrial applications. Corequisite: Eti 103, Sti 205.

Eti 204L. ELECTRICAL MEASUREMENTS LABORATORY
To accompany Eti 204. Three hours of laboratory a week.

Eti 205. ELECTRONIC MEASUREMENTS
Study of modern electronic measuring instruments and systems including oscilloscopes, counters, and telemetry. Prerequisite: Eti 204. Corequisite: Eti 206.

Eti 205L. ELECTRONIC MEASUREMENTS LABORATORY
To accompany Eti 205. Three hours of laboratory a week.

Eti 206. ELECTRON DEVICES I
Fundamentals of vacuum tubes, gas tubes, semi-conductor diodes and their associated circuits. Prerequisite: Eti 103, Sti 205.

Eti 206L. ELECTRON DEVICES I LABORATORY
To accompany Eti 206. Three hours of laboratory a week.

Eti 210. ELECTRICAL MACHINERY
Fundamentals of the construction and application of direct current and alternating current machines and apparatus to industrial uses. Prerequisite: Eti 103. Evening classes only.

Eti 210L. ELECTRICAL MACHINERY LABORATORY
To accompany Eti 210. Three hours of laboratory a week. Evening classes only.

Eti 211. MOTOR CONTROL
Industrial uses of standard controllers for electric motors. Prerequisite: Eti 210. Evening classes only.

Eti 211L. MOTOR CONTROL LABORATORY
To accompany Eti 211. Three hours of laboratory a week. Evening classes only.

Eti 222L. ELECTRONIC CIRCUIT DIAGRAMS
Standards and symbols used on electronic circuit diagrams. Three hours of laboratory a week.
ELECTRONIC ENGINEERING TECHNOLOGY

Eti 226. INTRODUCTION TO ANALOG COMPUTERS AND SERVOMECHANISMS
THREE CREDIT HOURS
Fundamentals and design of synchos and related error detectors, rate generators, magnetic amplifiers and friction dampers. Prerequisite: Eti 206.

Eti 226L. ANALOG COMPUTER AND SERVOMECHANISM LABORATORY
ONE CREDIT HOUR
To accompany Eti 226. Three hours of laboratory a week.

Eti 300. SEMINAR
ZERO CREDIT HOURS
An exchange of ideas in the area of electronics which includes student lectures, guest lectures, and industrial visitations. Required of all Eti students enrolled in, or who have taken Eti 103.

Eti 306. ELECTRON DEVICES II
THREE CREDIT HOURS
Fundamentals of transistors, photoelectric devices, silicon controlled rectifiers and their associated circuits. Prerequisite: Eti 206.

Eti 306L. ELECTRON DEVICES II LABORATORY
ONE CREDIT HOUR
To accompany Eti 306. Three hours of laboratory a week.

Eti 324. DIGITAL COMPUTER FUNDAMENTALS
THREE CREDIT HOURS
Fundamental theory and techniques of electronic data-processing to include binary arithmetic, switching theory (Boolean algebra) and basic circuitry (gates, adders, registers and memory). Prerequisite: Eti 201 or Eti 206.

Eti 327. PULSE CIRCUITS
THREE CREDIT HOURS
Selected topics relating to radar, television, and computer circuits including integrators, differentiators, blocking oscillators, multivibrators and time-base generators. Prerequisite: Eti 206 and Eti 324.

Eti 327L. PULSE CIRCUITS LABORATORY
ONE CREDIT HOUR
To accompany Eti 327. Three hours of laboratory a week.

Eti 328. ELECTRONIC COMMUNICATIONS
THREE CREDIT HOURS
Principles of operation of filters, modulators, demodulators and converters. Prerequisite: Eti 206.

Eti 328L. ELECTRONIC COMMUNICATIONS LABORATORY
ONE CREDIT HOUR
To accompany Eti 328. Three hours of laboratory a week.

Eti 330. SPECIAL ELECTRICAL PROJECTS
ONE CREDIT HOUR
Laboratory work and outside reading associated with a phase of electricity selected by the student and approved by chairman of the department. Prerequisite: Eti 206.

Eti 400. SELECTED ELECTRONIC TOPICS
ONE-FOUR CREDIT HOURS
Investigation and discussion of current technical topics in Electronic Engineering Technology. May be taken more than once. Prerequisite: Permission of department chairman.
Industrial Engineering Technology (ITI)

Raymond B. Puckett, Chairman
Associate Professor: Puckett
Assistant Professor: Staudter

ITI 101. Industrial Organization and Production  THREE CREDIT HOURS
A survey of the operational, financial, marketing and accounting activities of industrial organization. Also included is a detailed survey of the duties of management as related to the production function of planning, control, personnel and human factors.

ITI 104. Industrial Materials and Processes  THREE CREDIT HOURS
A study of modern industrial materials with emphasis on their chemical and physical properties, and methods by which they may be processed.

ITI 108. Production Methods and Control  THREE CREDIT HOURS
Principles and the techniques used in production; current practices in production planning, routing, scheduling and dispatching; study of production standards, labor efficiency and costs; quantity and quality control. Prerequisites: Iti 101 and Iti 104.

ITI 203. Elements of Supervision  TWO CREDIT HOURS
A study of the supervisor's relation to his men and his place in developing an effective production team. Prerequisites: Iti 101.

ITI 215. Elements of Cost Control  TWO CREDIT HOURS
A survey of the methods of breakdown and cost analysis of labor, material and overhead. All related to modern industrial practices. Prerequisite: Iti 101.

ITI 216. Quantitative Methods in I.E.T.  THREE CREDIT HOURS
An introduction to the application of mathematics to decision-making in industry. Prerequisite: Sti 106.

ITI 217. Industrial Economic Analysis  THREE CREDIT HOURS
An introduction to the economics of tools, equipment and machinery, including an elementary study of compound interest and depreciation. Prerequisite: Sti 106.

ITI 230. Motion and Time Study  TWO CREDIT HOURS
Fundamentals of work simplification and motion economy using the techniques of motion and time study for the development of effective methods of production. Prerequisites: Iti 101 and Sti 105.

ITI 230L. Motion and Time Study Laboratory I  ONE CREDIT HOUR
To accompany Iti 230. Three hours of laboratory a week.

ITI 305. Labor and Wage Administration  THREE CREDIT HOURS
Brief history of labor unionism and labor legislation. Survey of collective bargaining contracts, grievances and arbitration. Wage administration including job evaluation, wage structures, wage incentives and employee evaluation. Prerequisite: Iti 101.

ITI 318. Statistical Quality Control  THREE CREDIT HOURS
An introduction to the techniques of industrial process control using statistical methods. Prerequisite: Sti 105.
IIT 331. Motion and Time Study II  
A study of the techniques used in work measurement and in setting time standards; including stop watch time study, and work sampling. An introduction to predetermined time systems and to standard data. Prerequisites: IIT 230.

IIT 331L. Motion and Time Study Laboratory II  
To accompany IIT 331. Three hours of laboratory a week.

IIT 332. Plant Layout  
A study of the economical arrangement of stocks, machines and layout of aisles for efficient material handling and production. Prerequisites: IIT 108 and MtI 101 or MtI 103L.

IIT 332L. Plant Layout Laboratory  
To accompany IIT 332. Three hours of laboratory a week.

IIT 400. Selected Industrial Topics  
Investigation and discussion of current technical topics in industrial engineering technology. May be taken more than once. Prerequisite: Permission of department chairman.

Mechanical Engineering Technology (MTI)

Jesse H. Wilder, Chairman
Professor: Wilder
Associate Professor: Golden
Assistant Professors: Morgana, Mott, Wolff
Instructors: Kretzler, Rolle

MtI 103L. Technical Drawing  
An introduction to technical drawing with emphasis on orthographic projection and conventional industrial practices in producing technical sketches and completed detail drawings. Six hours of laboratory a week.

MtI 104L. Graphical Computations  
Descriptive geometry drawing problems involving points, lines, planes and geometric shapes presented and solved in orthographic projection form. Six hours of laboratory per week. Prerequisites: MtI 103L, Sti 105.

MtI 106L. Testing and Measurements  
The use of measuring instruments and standard mechanical testing equipment. Three hours of laboratory a week. Corequisite: IIT 104, Sti 114.

MtI 107L. Machine Tool Operation  
The use of hand tools and standard production machine tools. Three hours of laboratory a week. Prerequisites: MtI 103L, Sti 105.

MtI 213. Industrial Mechanisms  
Applications and mechanical advantages of gears, cams, pulleys, linkages and levers as used in industrial work simplification devices. For industrial engineering technology. Prerequisite: Sti 114.
MTI 220. MECHANICS: STATICS AND DYNAMICS           THREE CREDIT HOURS
Principles of applied engineering mechanics. Three hours of class per week. Prerequisites: Sti 106 and Sti 114.

MTI 221. STRENGTH OF MATERIALS            THREE CREDIT HOURS
Principles of applied strength of materials primarily with reference to mechanical design. Three hours of class per week. Prerequisites: MTI 220 or MTI 224, Sti 206.

MTI 224. STATICS           TWO CREDIT HOURS
Force systems, resultants and equilibrium, centroids of areas and centers of gravity of bodies, trusses, frames, beams, friction and moments of inertia of areas and bodies. Two hours of class per week. Prerequisite: Sti 114.

MTI 225. DYNAMICS           TWO CREDIT HOURS
Principles of applied engineering dynamics. Two hours of class per week. Corequisite: MTI 224.

MTI 226L. MECHANISM         TWO CREDIT HOURS
Motions, displacements, velocities, friction wheels, flexible connectors, cams, linkages and gears. One hour of class and three hours of laboratory a week. Prerequisite: MTI 103L; Corequisite: MTI 220 or MTI 225.

MTI 230. THERMODYNAMICS         TWO CREDIT HOURS
General laws of thermodynamics, properties and processes of gases, vapor and gas-vapor mixtures; cycles; and the flow of fluids, application of thermodynamics to machines such as engines. Prerequisites: Sti 214, Sti 205 or Sti 206.

MTI 231. FLUID MECHANICS        THREE CREDIT HOURS
Property of fluids, hydrostatic and buoyant forces, Bernoulli's equation, energy equation, flow of real fluids in pipes, friction losses, measurement flow. Prerequisite: Sti 205 or Sti 206.

MTI 321L. DIES, JIGS AND FIXTURES   TWO CREDIT HOURS
Design calculation and sketching of dies, jigs and fixtures used in industrial production. One hour of class and three hours of laboratory a week. Corequisite: MTI 221.

MTI 323. MACHINE DESIGN        THREE CREDIT HOURS
Analytical design of springs, shafts, couplings, bearings, gears; applying laws governing simple, variable and combined stresses. Two hours class and three hours laboratory a week. Prerequisites: MTI 221, MTI 226L, MTI 231 and Sti 205 or Sti 206.

MTI 328. INDUSTRIAL AUTOMATION ACTUATION   THREE CREDIT HOURS
Application of hydraulic, pneumatic, and electric actuators in the design of industrial automation for production systems. Two hours class and three hours laboratory a week. Prerequisites: MTI 226L, MTI 231. Corequisite: Sti 213.

MTI 400. SELECTED MECHANICAL TOPICS          ONE TO FOUR CREDIT HOURS
Investigations and discussion of current technical optics in mechanical engineering technology. May be taken more than once. Prerequisite: Permission of the department chairman.
Technical Institute Service Courses

*Associate Professor*: Averdick  
*Assistant Professors*: Fehlmann, Patrick, Staub, Strange  
*Instructor*: Croy

**STI 100. TECHNICAL INSTITUTE SURVEY**  
NO CREDIT HOURS
A general view of the engineering technician and his place on the engineering team. Also includes such subjects as "How to Study," use of the slide rule and general University orientation. One hour of class a week.

**STI 101. INDUSTRIAL MATHEMATICS**  
THREE CREDIT HOURS
A review of the fundamentals of arithmetic and a study of selected topics from geometry and algebra with application to industrial problems.

**STI 105. TECHNICAL INSTITUTE MATHEMATICS**  
THREE CREDIT HOURS
Fundamental processes of algebra to include factoring, fractions, exponents and radicals, linear and quadratic equations, determinants, and logarithms. Introduction to trigonometry to include angular measure, interpolation, identities, and graphs.

**STI 106. ADVANCED TECHNICAL INSTITUTE MATHEMATICS**  
THREE CREDIT HOURS
Additional topics in trigonometry to include: solution of right triangles, solution of oblique triangles, and functions of composite angles. Selected topics in analytic geometry and differential calculus. Prerequisite: STI 105.

**STI 114. PHYSICS: MECHANICS**  
TWO CREDIT HOURS
A study of the laws of simple machines, forces, linear and angular motion, conditions of equilibrium and fluids. Corequisite: STI 106.

**STI 114L. PHYSICS: MECHANICS LABORATORY**  
ONE-HALF CREDIT HOUR
To accompany STI 114. Two hours of laboratory a week.

**STI 122. INDUSTRIAL CHEMISTRY**  
THREE CREDIT HOURS
A survey of the general principles of chemistry including elements and their simpler compounds. Special emphasis on topics of importance in industrial activities.

**STI 122L. INDUSTRIAL CHEMISTRY LABORATORY**  
ONE CREDIT HOUR
To accompany STI 122. Three hours of laboratory a week.

**STI 134. EFFECTIVE SPEAKING**  
TWO CREDIT HOURS
Organization and presentation of spoken materials with special emphasis on voice and physical delivery and audience reaction.

**STI 205. MATHEMATICS FOR ELECTRICAL TECHNOLOGY**  
THREE CREDIT HOURS
Practical applications of selected topics of calculus and differential equations to Electrical Technology. Prerequisite: STI 106.

**STI 206. MATHEMATICS FOR MECHANICAL ENGINEERING TECHNOLOGY**  
THREE CREDIT HOURS
Practical applications of selected topics in differential and integral calculus to Mechanical Technology. Prerequisite: STI 106.
<table>
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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>STI 213</td>
<td><strong>Physics: Electricity</strong></td>
<td>TWO CREDIT HOURS</td>
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<td>The basic principles of electricity and their application in industry. Prerequisite: Sti 114.</td>
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<td>STI 213L</td>
<td><strong>Physics: Electricity Laboratory</strong></td>
<td>ONE-HALF CREDIT HOUR</td>
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<td>To accompany STI 213. Two hours of laboratory a week.</td>
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<td>STI 214</td>
<td><strong>Physics: Heat, Light and Sound</strong></td>
<td>TWO CREDIT HOURS</td>
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<td>The elementary principles of heat, light and sound with particular emphasis on industrial application. Prerequisite: Sti 114.</td>
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<td>STI 214L</td>
<td><strong>Physics: Heat, Light and Sound Laboratory</strong></td>
<td>ONE-HALF CREDIT HOUR</td>
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<td>To accompany STI 214. Two hours of laboratory a week.</td>
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<td>STI 234</td>
<td><strong>Report Writing</strong></td>
<td>TWO CREDIT HOURS</td>
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<td>The preparation and presentation of industrial reports. Prerequisite: Eng 101.</td>
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<td>STI 251</td>
<td><strong>Economics of Industry</strong></td>
<td>THREE CREDIT HOURS</td>
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<td></td>
<td>Basic economic principles as applied to major industrial problems.</td>
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<td>STI 252</td>
<td><strong>American Political Ideas and Practices</strong></td>
<td>THREE CREDIT HOURS</td>
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<td>Fundamentals of democratic processes in government and the practices in which they function.</td>
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<td>STI 305</td>
<td><strong>Advanced Technical Institute Mathematics II</strong></td>
<td>THREE CREDIT HOURS</td>
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<td>Selected topics from ordinary differential equations with an emphasis on operational methods of solution. Stresses problems encountered in engineering technology. Prerequisite: STI 205 or STI 206.</td>
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<td>STI 499A</td>
<td><strong>Seminar</strong></td>
<td>ONE CREDIT HOUR</td>
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<td>Selected technical and occupational topics. Required of all Bachelor of Technology students in the second term of their senior year.</td>
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<tr>
<td>STI 499B</td>
<td><strong>Seminar</strong></td>
<td>ZERO CREDIT HOURS</td>
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<td>Selected technical and occupational topics. Required of all Bachelor of Technology students in the first term of their senior year.</td>
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<tr>
<th>Academic Affairs</th>
<th>Chairman, Academic Council</th>
<th>Rev. Charles J. Lees, S.M.</th>
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<td>Dean for Graduate Studies</td>
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<td>and Research</td>
<td>Bro. Austin J. Holian, S.M.</td>
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<td>Sciences</td>
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<td>Dean, School of Business</td>
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<td>Administration</td>
<td>William J. Hoben</td>
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<td>Director, MBA Program</td>
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<td>Bro. Joseph J. Panzer, S.M.</td>
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<td>Evaluation and Research</td>
<td>Bro. Louis J. Faerber, S.M.</td>
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<td>Leo P. Traen</td>
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<td>Dean, School of Engineering</td>
<td>Dr. Maurice R. Graney</td>
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<td>Registrar</td>
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<td>Assistant to the Registrar in charge of Records</td>
<td>Robert E. Donovan</td>
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<td>Assistant to the Registrar in charge of Registration</td>
<td>Gladys M. Clement</td>
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<td>Assistant to the Director</td>
<td>Gerald W. Bergeron</td>
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<td>Assistant to the Director</td>
<td>Theresa M. Marinella</td>
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<td>Director of the University</td>
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<td>Bro. Raymond H. Nartker, S.M.</td>
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<td>George C. Biersack</td>
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<td>Joe Burns</td>
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<td>Chairman, Honors Program</td>
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<td>Committee</td>
<td>Bro. George J. Ruppel, S.M.</td>
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<td>Representative, Dayton-Miami Valley Consortium</td>
<td>Rev. Joseph H. Zeinz, S.M.</td>
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Associate Chaplain
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Catherine E. Kirk, R.N.

Administrative Director of
Athletics
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RELIGIOUS
ACTIVITIES

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Rev. Charles J. Lees, S.M., Chairman; Respective Dean, Respective Chairman.

SALARY
(ADMINISTRATIVE)

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ACADEMIC
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EDUCATION
(SAUSAGE)
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STUDENT
AID

TRAFFIC
APPEALS
Raymond B. Puckett, Chairman; Dr. C. Richard Horwedel, Lynn T. Mead, Bro. Thomas A. Brennan, S.M., Ex officio.

INSTRUCTIONAL STAFF

Emeriti
Belz, S.M., Charles John, Civil Engineering, Professor—B.S., University of Dayton, 1912; B.C.E., University of Dayton, 1928; M.C.E., Catholic University of America, 1934; Reg. Prof. Eng.
Geisler, S.M., J. George, Chemistry, Professor—B.S., University of Dayton, 1921; Lic. Sc., University of Fribourg, 1924.

Hagenhoff, Sister Mary Pelagia, M.S.C., Education, Associate Professor—A.B., Villanova University, 1927; M.A., Villanova University 1935; Ph.D., Catholic University of America, 1946.
Poitras, S.M., Thomas Leo, Languages, Professor—B.S., University of Dayton, 1907; A.B., University of Dayton, 1911; B.S. Music, Extension Conservatory of Chicago, 1928; M.A., The Catholic University of America, 1934;
Diplome de professeur de francais a l'Etranger, The Sorbonne (Paris), 1938, Diplome d'Etudes francaises superieures, University of Besancon, 1938; Diplome d'Etudes de Civilisation francaise, The Sorbonne, 1939.


**Ranked Faculty**


Anderson, Gladys M. (1960), *Education*, Assistant Professor—B.S., Ball State Teachers College, 1945; M.A., Indiana University, 1946.


Arons, Peter L. (1965), *English*, Assistant Professor—A.B., New York University, 1957; M.A., Yale University, 1958; Ph.D., Yale University, 1964.


Back, Stanley J. (1959), *Mathematics*, Associate Professor—B.S., University of Dayton, 1957; M.S., Purdue University, 1959.


Baker, Richard R. (1947), *Philosophy*, Professor—A.B., University of Notre Dame, 1931; M.A., University of Notre Dame, 1934; Ph.D., University of Notre Dame, 1941.


Barnes, Michael H. (1968), *Theological
Biersack, George (1952), *Communication Arts*, Associate Professor—B.S., University of Dayton, 1952; M.A., Miami University, 1956.


Bobal, Michael A. (1962), *Chemical Engineering*, Professor—B.S., University of Dayton, 1934; M.S., Ohio State University, 1945; Ph.D., Ohio State University, 1947; Reg. Prof. Eng.


Boenninghofen, Jack J. (1967), *Languages*, Assistant Professor—B.A., University of Virginia, 1948; M.A., Yale University, 1953; Ph.D., Syracuse University, 1966.

Boll, S.M., Lawrence L. (1919), *English*, Professor—A.B., University of Dayton, 1912; M.A., Catholic University of America, 1925; Ph.D., Catholic University of America, 1929.


Bourgeois, Sister M. Audrey, C.P.P.S.
(1961), *Education*, Associate Professor—B.S., University of Dayton, 1942; M.A., University of Dayton, 1948; Ph.D., Catholic University of America, 1961.

Bower, Samuel M. (1966), *Psychology*, Assistant Professor—B.A., Mexico City College, 1957; Ph.D., Vanderbilt University, 1963.

Bowman, Judith R. (1965), *Physical and Health Education*, Assistant Professor—B.S., Bowling Green State University, 1959; M.E., Miami University, 1962.


Bridgewater, Marion J. (1966), *Library*, Assistant Professor—A.B., Trinity College, 1939; B.L.S., Carnegie Institute of Technology, 1940.


Bueche, Frederick J., (1961), *Physics*, Professor—B.S., University of Michigan, 1944; Ph.D., Cornell University, 1948.


Cameron, Alex J. (1964), *English*, Assistant Professor—A.B., University of Notre Dame, 1959.

Campanelle, Estelle (1962), *Library*, Instructor—B.A., Muhlenberg College,
Cathell, Larry L. (1966), *Physical and Health Education*, Instructor — B.S., West Virginia University, 1964; M.S., West Virginia University, 1966.
Cella, Mary Anne (1968), *Geology*, Assistant Instructor—B.S., University of Dayton, 1967.
Chamberlain, Jr., Joseph J. (1937), *Civil Engineering*, Distinguished lecturer with rank of Professor—C.E., Cornell University, 1911; M.C.E., Harvard University, 1912; Reg. Prof. Eng.
Chantell, Charles J. (1965), *Biology*, Assistant Professor—B.S., University of Illinois, 1961; M.S., University of Notre Dame, 1963; Ph.D., University of Notre Dame, 1965.
Chuang, Henry N. (1965), *Mechanical Engineering*, Assistant Professor—B.S., National Taiwan University, 1958; M.S., University of Maryland, 1962; Ph.D., Carnegie Institute of Technology, 1966.
Chudd, S.M., Cletus C. (1947), *Chemistry*, Professor — B.S., University of Dayton, 1935; M.S., Western Reserve University, 1948; Ph.D., Western Reserve University, 1952.
Civille, Mary C. (1947), *Secretarial Studies*, Associate Professor — B.S., Ohio University, 1934; M.Ed., University of Cincinnati, 1952.
Collins, S.M., Rev. Charles L. (1941), *Psychology*, Professor—A.B., University of Dayton, 1925; Ph.D., Fordham University, 1941.


Cothern, Charles R. (1965), *Physics*, Assistant Professor—B.A., Miami University, 1959; M.S., Yale University, 1960; Ph.D., University of Manitoba, 1965.


Dailey, Alan D. (1967), *Economics*, Associate Professor—B.S., Kansas State University, 1924; M.A. Indiana University, 1947; Ph.D., University of Illinois, 1953.


Darby, Lilian L. (1962), *Languages*, Assistant Professor—M.Ph., University of Latvia, 1944.


Deibel, S.M., Francis A. (1954), *Circulation and Departmental Librarian*, Assistant Professor—A.B., University of Dayton, 1929; B.S., in L.S., Western Reserve University, 1943.


Dieska, Joseph (1960), *Philosophy*, Professor—B.A., State Gymnasium, 1931; M.A., Slovak University, 1939; Ph.D., Slovak University, 1940.

Diethorn, S.M., Bernard C. (1966), *School Administration and Counseling*, Assistant Professor—B.A., University of Dayton, 1942; M.A., Western Reserve University, 1952; D.Ed., Western Reserve University, 1966.

Dombro, S.M., Rev. Richard J. (1952), *Philosophy*, Assistant Professor—B.A., University of Dayton, 1929; M.A.,
Fordham University, 1952; Ph.D., Fordham University, 1958.

Donatelli, Rocco M. (1954), *History*, Associate Professor—B.S., St. John's University, 1949; M.A., Rutgers University, 1952; Ph.D., Western Reserve University, 1965.


Drees, Doris A. (1956), *Physical and Health Education*, Associate Professor B.S., University of Dayton, 1954; M.A., Ohio State University, 1959; Ph.D., University of Iowa, 1968.

Drerup, S.M., John J. (1960), Assistant Professor—A.B., University of Dayton, 1935; M.S., Western Reserve University, 1943.

Driscoll, George F. (1958), *Civil Engineering*, Professor—B.S.C.E., University of Notre Dame, 1925; C.E., University of Notre Dame, 1929; Reg. Prof. Eng. and Surveyor.

Duffy, Nora (1961), *Director*, Special Sessions, Associate Professor.


Edginton, Orman R. (1965), *Secondary Education*, Associate Professor—A.B., Muskingum College, 1928; M.A., Ohio State University, 1943; Ph.D., Ohio State University, 1960.


Eid, S.M., Leroy V. (1961), *History*, Assistant Professor—B.S., University of Dayton, 1953; M.A., St. John's University, 1958; Ph.D., St. John's University, 1961.


Emling, S.M., John F. (1958), *Education*, Assistant Professor — B.S., University of Dayton, 1940; M.A., Western Reserve University, 1944; Ed.D., Western Reserve University, 1949.


Eveslage, Sylvester L. (1948), *Chemistry*, Professor—B.S., University of Notre Dame, 1944; M.S., University of Notre Dame, 1945; Ph.D., University of Notre Dame, 1953.


Fakhouri, Hani (1966), Sociology, Assistant Professor—B.A., Wayne State University, 1953; M.A., Wayne State University, 1961.


Faso, Peter J. (1946), Biology, Associate Professor—B.S., Villanova College, 1936; M.S., Villanova College, 1941; Sc.D. (H.C.) Des Moines College of Medicine and Surgery, 1965.


Fecher, Con John (1932), Economics, Professor (on leave)—A.B., Miami University, 1924; M.A., The Catholic University of America, 1925; Ph.D., The Catholic University of America, 1927.

Fehlmann, Jr., Alfred B., (1956), Technical Institute, Assistant Professor—B.A., Cedarville College, 1946; M.A., Ohio State University, 1948.


Ferrigno, James M. (1963), Languages, Professor—A.B., Boston University, 1932; M.A., Boston University, 1934; Ph.D., Boston University, 1951.


Fitz, David A. (1968), Accounting, Instructor—B.S., Northwestern University, 1967.

Fox, B. Lawrence (1966), Chemistry, Assistant Professor—B.S., John Carroll University, 1962; Ph.D., Ohio State University, 1966.


Frank, S.M., Eugene N. (1966), Physics, Assistant Professor—B.S., University of California, 1955; M.A., University of California, 1960; Ph.D., Case Institute of Technology, 1965.

Franklin, Ann (1958), Assistant Dean, Associate Professor—R.N., Buffalo General Hospital School of Nursing, 1940; B.S., Washington University, 1949; M.S., St. Louis University, 1952.


Fratini, Albert V. (1967), Chemistry, Assistant Professor—B.S., University of Rhode Island, 1960; Ph.D., Yale University, 1966.


Frye, Helen B. (1967), *Education*, Assistant Professor — B.A., Ohio Wesleyan University, 1944; M.Ed., Wittenberg University, 1962; Ph.D., Ohio State University, 1967.


Galeano, Carlos E. (1965), *Languages*, Assistant Professor—Licenciado, University de Antioquia, 1948; Diploma, Instituto Caro y Cuervo, 1960; M.A., Ohio State University, 1965.


Gantner, Thomas E. (1966), *Mathematics*, Assistant Professor—B.S., University of Dayton, 1962; M.S., Purdue University, 1964; Ph.D., Purdue University, 1966.


Golden, L. Duke (1956), *Mechanical Engineering Technology*, Lecturer with rank of Associate Professor—B.S.M.E., Texas University, 1926; Reg. Prof. Eng.


Graney, Maurice R. (1956), *Engineering*, Professor — B.S.I.E., Purdue University, 1935; M.S., Purdue University,
1937; Ph.D., Purdue University, 1942; Reg. Prof. Eng.

Grant, Jr., Philip A. (1966), *History*, Assistant Professor—B.S., Boston College, 1954; M.A., Fordham University, 1956; Ph.D., Georgetown University, 1960.


Harwood, Philip J. (1966), *Communication Arts*, Instructor (on leave)—B.S., Butler University, 1960; M.S., Butler University, 1961.


Hayat, M. Arif (1967), *Biology*, Assistant Professor—M.A., University of Texas; Ph.D., Indiana University, 1962.


Holian, S.M., Austin J. (1944), *Electrical Engineering*, Professor—B.S., University of Dayton, 1931; B.S.E.E., Case Institute of Technology, 1942; M.S. E.E., Case Institute of Technology, 1944.

Holland, Margaret M. (1960), *Dean of Women*, Assistant Professor—B.S., Marywood College, 1943; M.A., University of Scranton, 1954.


Horvath, Allan L. (1960), *Geology*, Assistant Professor—B.S., University of Dayton, 1956; M.S., University of Michigan, 1957; Ph.D., Ohio State University, 1964.

Horwedel, C. Richard (1962), *Engineering*, Assistant Professor—B.Ch.E., University of Dayton, 1924; M.S., University of Alabama, 1925; Ph.D., Ohio State University, 1929; Met.E., Ohio State University, 1935; Reg. Prof. Eng.


Hovey, Capt. Roy A. (1968), *Military Science*, Assistant Professor—B.S., University of Nebraska, 1962.


Huth, Edward A. (1939), *Sociology*, Professor—A.B., Heidelberg College, 1921; M.A., University of Notre Dame, 1928; Ph.D., Western Reserve University, 1943.


Jeremiah, Maryalyce (1967), *Physical and Health Education*, Instructor—
B.A., Cedarville College, 1965; B.S., Central State University, 1965; M.A., Ohio State University, 1967.


Joly, S.M., Russell A. (1941), Biology, Associate Professor — B.S., University of Dayton, 1930; M.S., Institutum Divi Thomae, 1940.


Jukes, Vincent J. (1966), Communication Arts, Associate Professor—A.B., Ohio University, 1930; A.M., Western Reserve University, 1938.


Katchman, Bernard J. (1967), Chemistry, Associate Professor—B.A., New York University, 1938; M.S., New York University, 1942; Ph.D., Polytechnic Institute of Brooklyn, 1950.

Keith, Roger H. (1964), Chemical Engineering, Assistant Professor — B.Che., University of Dayton, 1954; Reg. Prof. Eng.


Kepes, Joseph J. (1962), Physics, Associate Professor—B.S., Case Institute of Technology, 1953; Ph.D., University of Notre Dame, 1958.


Kester, Jack E. (1966), Computer Science, Assistant Professor — B.S., University of Dayton, 1952; M.S., Ohio State University, 1958.


King, Edwin R. (1953), History, Associate Professor — B.S., University of Dayton, 1949; M.A., Western Reserve University, 1950.

Klein, I.H.M., Sister Mary Grace (1965), Education, Assistant Professor — B.A., Immaculate Heart College, 1941; M.S., Immaculate Heart College, 1951; Ph.D., Fordham University, 1965.


Klosterman, C.P.P.S., Sister Rita (1960), Education, Assistant Professor—B.A., Immaculate Heart College, 1942;
M.A., St. John College, 1956; Ph.D., Indiana University, 1968.

Knittel, Bernard J. (1967), Communication Arts, Associate Professor—B.A., Western Michigan University, 1929; M.A., University of Wisconsin, 1934; Ph.D., University of Denver, 1950.


Kraft, David C. (1965) Civil Engineering, Associate Professor—B.C.E., University of Dayton, 1959; M.S., University of Notre Dame, 1961; Ph.D., Ohio State University, 1964.


Kreider, Morris J. (1947), Business Management, Associate Professor—B.S., Miami University, 1933; M.A., Miami University, 1941.

Kreitman, Marshall M. (1966), Physics, Assistant Professor—B.A., University of Louisville, 1952; M.S., University of Louisville, 1956.


Kumar, Kanwal (1967), Economics, Assistant Professor—B.A., Punjab University, India, 1956; M.A., Ohio State University, 1963; Ph.D., Ohio State University, 1966.

Kunkel, Joseph C. (1964), Philosophy, Assistant Professor—A.B., Loyola University, 1958; A.M., Loyola University, 1962.


Lachapelle, Rene C. (1966), Biology, Associate Professor—B.A., Seminaire de Joliette, 1950; B.S., University of Montreal, 1953; M.S., Syracuse University, 1957; Ph. D., Syracuse University, 1962.

Lackner, S.M., Elmer C. (1940), History, Associate Professor—A.B., University of Dayton, 1927; M.A., Western Reserve University, 1941.


Laufersweiler, Joseph D. (1963), Biology, Assistant Professor—B.S., University of Notre Dame, 1952; M.Sc., Ohio State University, 1954; Ph.D., Ohio State University, 1960.
LaVanche, James B. (1957), Physical and Health Education, Associate Professor—B.A., Emory and Henry College 1948; M.S., West Virginia University, 1952.


Leary, Daniel L. (1937), Education, Professor—A.B., Creighton University, 1917; M.A., Peabody College, 1928; Ph.D., Colorado State University, 1934.

Lee, Shu-Ching (1968), Sociology, Professor—B.A., National Tsing Hua University, 1935; M.A., University of Wisconsin, 1938; Ph.D., University of Chicago, 1950.


Leimkuhler, S.M., Rev. Edwin M. (1934), Theological Studies, Professor—A.B., Catholic University of America, 1927; M.A., Catholic University of America, 1940.

Lewis, Donald E. (1965), Electrical Engineering, Associate Professor—E.E., University of Cincinnati, 1954; M.S., Ohio State University, 1957; Ph.D., Ohio State University, 1964.

Liebler, S.M., Richard A. (1948), Political Science, Associate Professor—B.S., University of Dayton, 1939; M.A., Western Reserve University, 1947.


Lucier, S.M., John J. (1945), Chemistry, Professor—B.S., University of Dayton, 1937; M.S., Western Reserve University, 1950; Ph.D., Western Reserve University, 1951.

Luming, Henry (1968), Mechanical Engineering, Assistant Professor—B.S. M.E., Purdue University, 1958; M.S., Engr. Science, California Institute of Technology, 1961; Ph.D., University of Alberta (Canada), 1966.


McCloskey, John W. (1965), Mathematics, Assistant Professor—B.S., University of Dayton, 1960; M.S., Michigan State University, 1962; Ph.D., Michigan State University, 1965.


McDaniel, Thomas J. (1968), Civil Engineering, Assistant Professor—B.S., University of Illinois, 1962; M.S., University of Illinois, 1964; Ph.D., University of Illinois, 1968.

McDougall, Kenneth J. (1966), Biology, Assistant Professor—B.A., Northland College, 1957; M.S., Marquette University, 1959; Ph.D., Kansas State University, 1964.

McKenzie, S.M., George J. (1959), *Languages*, Associate Professor—B.A., University of Dayton, 1933; M.A., Ohio State University, 1948; Ph.D., Western Reserve University, 1961.


Manos, Patricia V. (1968), *Assistant Dean of Women*, Instructor—B.A., Miami University, 1965; M.S., University of Dayton, 1968.


Mathews, S.N.D., Sister Julia Agnes (1960), *Elementary Education*, Assistant Professor—Ph.B., Xavier University, 1938; B.S. in Ed., University of Cincinnati, 1941; M.Ed., University of Cincinnati, 1943.

Mathias, Frank F. (1963), *History*, Assistant Professor—A.B., University of Kentucky, 1950; M.A., University of Kentucky, 1961; Ph.D., University of Kentucky, 1966.


Meiser, John H. (1966), *Chemistry*, Assistant Professor—B.S., Xavier University, 1961; Ph.D., University of Cincinnati, 1966.

Merker, Margaret C. (1968), *Chemistry*, Assistant Instructor—B.S., City College of New York, 1966; M.S., Alfred University, 1968.

Mervar, S.M., Joseph J. (1951), *Business Manager*, Associate Professor—B.S., University of Dayton, 1945; M.A., Catholic University of America, 1944.


Miles, Mildred H. (1966), *Elementary Education*, Assistant Professor—B.S. Wittenberg University, 1930; M.A., Ohio State University, 1939.


Miller, Velma M. (1940), *Secretarial Studies*, Associate Professor—B.C.S., Ohio Northern University, 1930; M.Ed., University of Cincinnati, 1937.


Mitchell, Robert I. (1949), *Industrial Engineering*, Associate Professor—B.S., University of Cincinnati, 1942; M.S. Ball State Teachers College; 1951; Reg. Prof Eng.


Morgan, Adrian J. (1948), *Electrical Engineering*, Professor—B.S.E.E., Purdue University, 1948; M.S., University of Cincinnati, 1958; Reg. Prof Eng.

Morgana, S.M., Emil J. (1953), *Mechanical Engineering Technology*, Lecturer with rank of Assistant Professor—B.S. in M.E., University of Michigan, 1927.

Morton, M. Byron (1967), Education, Associate Professor—B.A., Wittenberg University, 1929; M.A., Ohio State University, 1935.

Mott, Robert L. (1966), Mechanical Engineering Technology, Assistant Professor—B.M.E., General Motors Institute, 1963; M.S.M.E., Purdue University, 1965; Reg. Prof. Eng.

Moulin, Eugene K. (1968), Counselor Education, Assistant Professor—B.A., Mount Union College, 1956; M.E., Kent State University, 1959; Ph.D., University of Toledo, 1968.


Murphy, Harry C. (1950), Marketing, Professor—B.B.A., University of Minnesota, 1948; B.S., University of Minnesota, 1949; M.A., University of Minnesota, 1951.

Murphy, Lorraine M. (1953), English, Assistant Professor—B.A., Augustana College, 1946; M.A., Miami University, 1962.


Murtaugh, John G. (1968), Geology, Assistant Professor—B.S., University of Dayton, 1959; M.S., University of Idaho, 1967.


Nartker, S.M., Raymond H. (1962), Director of the University Libraries, Associate Professor—B.A., University of Dayton, 1942; M.S. in L.S., Western Reserve University, 1955.

Nason, Mary B. (1968), Assistant Dean of Women, Instructor—B.A., Trinity College, 1965; M.S., Purdue University, 1968.

Nersoyan, H. James (1967), Philosophy, Assistant Professor — Baccalaureate, College Champagnat des Freres Maristes, 1939; S.T.B., Berkeley Divinity School, 1949; Ph.D., Columbia University, 1966.

Neuendorf, S.M., Edward J. (1968), Mathematics, Assistant Professor — B.S., University of Dayton, 1957; M.S., University of Pittsburgh, 1961; Ph.D., University of Pittsburgh, 1968.


Nielsen, Harold (1946), Mechanical Engineering, Associate Professor (on leave) — B.S., U.S. Naval Academy, 1929; Reg. Prof. Eng.

Noland, George B. (1955), Biology, Professor — B.S., University of Detroit, 1950; M.S., University of Detroit, 1952; Ph.D., Michigan State University, 1955.

Noland, Robert L. (1953), Psychology. Associate Professor—Ph.B., University of Detroit, 1952; M.A., University of Detroit, 1954; D.Ed., University of Cincinnati, 1966.


O'Donnell, Robert B. (1951), English, Professor — A.B., St. Mary's College, 1927; M.A., Fordham University, 1930.


O'Hare, J. Michael (1966), Physics, Assistant Professor — B.S., Loras College, 1960; M.S., Purdue University, 1962; Ph.D., State University of New York, at Buffalo, 1966.

Olinger, John L. (1968), Chemical Engineering, Assistant Professor — B.A., St. Joseph's College, 1961; B.S., Rose Polytechnic Institute, 1962; M.S., University of Oklahoma, 1965; Ph.D., University of Oklahoma, 1969.

Opalek, M.S.C., Rev. John C. (1967), Philosophy, Assistant Professor — S.T.L., Gregorian University, Rome, 1951; Ph.D., Gregorian University, Rome, 1962.


Panzer, S.M., Joseph J. (1938), Education, Professor — B.S., University of Dayton, 1931; M.A., Catholic University, 1938; Ph.D., Fordham University, 1954.

Patrick, Phillip (1959), Technical Institute, Assistant Professor — A.B., Earlham College, 1950; M.Ed., Xavier University, 1966.


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Administration Director: Rev. Charles Collins, S.M.
Medical Director: John H. Dirckx, M.D.
Religious Services: Fr. Francis Langshirt, S.M.
Supervisor: Catherine Kirk, R.N.


SUPPORTING STAFF: Ruth Aldridge, Helen Berning, Georgia Bowen, Alice Edmonson, Helen Heindl, Ruth Norris, Bertha Simpkins, Theresa Wartinger.
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