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1972-1973 Bulletin

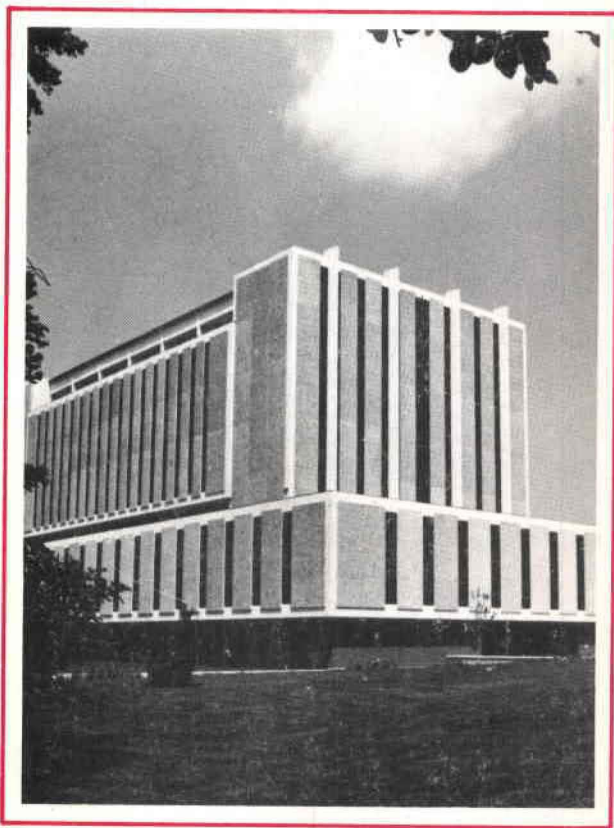
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University of Dayton Bulletin



UNDERGRADUATE
ISSUE

1972-1973



DAYTON, OHIO 45409

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VOLUME LXXXIII

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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.

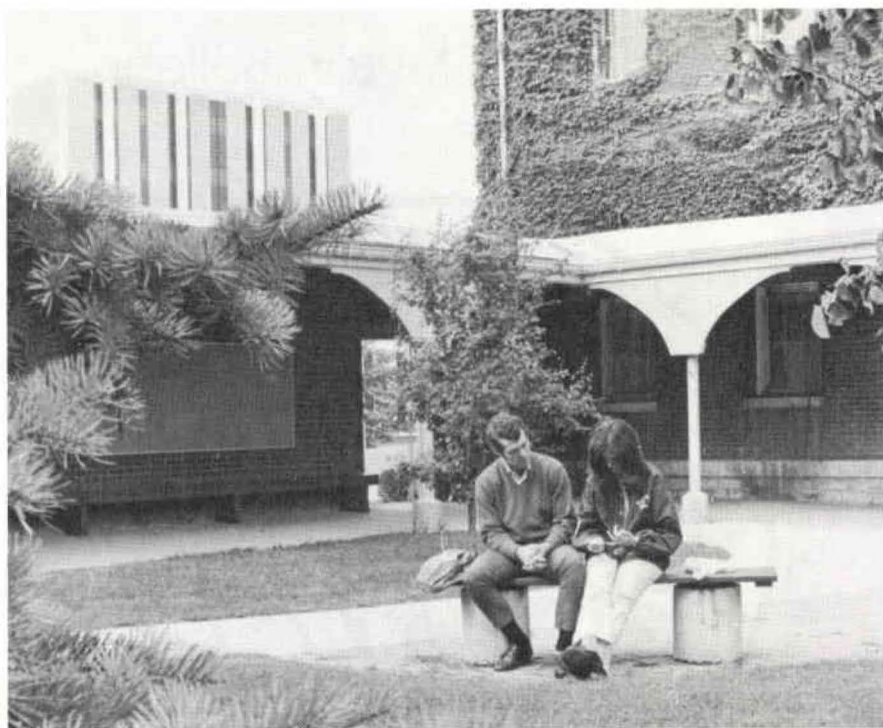
The current number of any of these publications may be obtained by applying to the Office of Admissions.

University of Dayton Bulletin



UNDERGRADUATE CATALOG ISSUE 1972-73

DAYTON, OHIO 45409



1972-1973 Academic Calendar

FIRST TERM

Aug. 25	Fri.	Last day to complete registration
Aug. 27	Sun.	Parents Day
Aug. 24-27	Thurs., Fri., Sat., Sun.	Orientation for freshmen
Aug. 28	Mon.	Classes begin at 8 a.m.
Sept. 4	Mon.	National Holiday—Labor Day—No class meetings
**Sept. 6	Wed.	Last day for change in schedules
**Sept. 16	Sat.	Last day to withdraw without record
**Sept. 16	Sat.	Last day to change grading option
Oct. 9	Mon.	National Holiday—Columbus Day—No day class meetings. Evening classes will meet.

1972-73

Oct. 16	Mon.	Mid-term progress grades due in the Registrar's Office for freshmen only
Oct. 23	Mon.	National Holiday—Veterans Day—Classes as usual
Oct. 27	Fri.	Last day to withdraw with record of W
Nov. 1	Wed.	All Saints Day—No class meetings
Nov. 4	Sat.	Homecoming—Saturday only classes meet
Nov. 22	Wed.	Thanksgiving recess begins after the last evening class
Nov. 27	Mon.	All classes resume
Dec. 8	Fri.	The Immaculate Conception—No class meetings
Dec. 11-15	Mon.-Fri.	Examinations in evening courses conducted during final class meeting
Dec. 9	Sat.	Examinations—Saturday courses
Dec. 11	Mon.	Last day to submit a withdrawal to Registrar
Dec. 12-15	Tues.-Fri.	Examinations 8:00-5:00
Dec. 15	Fri.	First Term ends after the last examination
Dec. 16	Sat.	Diploma Exercises

**Dates subject to change.

SECOND TERM

Jan. 2	Tues.	Last day to complete registration
Jan. 4	Thurs.	Classes begin at 8 a.m.
**Jan. 13	Sat.	Last day for change in schedules
**Jan. 25	Thurs.	Last day to withdraw without record
**Jan. 25	Thurs.	Last day to change grading option
Feb. 19	Mon.	National Holiday—Washington-Lincoln Birthdays No day class meetings. Evening classes will meet.
Feb. 20	Tues.	Mid-term progress grades due in the Registrar's Office for freshmen only
Mar. 2	Fri.	Last day to withdraw with record of W
Apr. 12-18	Thurs.-Wed.	Examinations in evening courses conducted during final class meeting
Apr. 12	Thurs.	Last day to submit a withdrawal to Registrar
Apr. 13	Fri.	Examinations 8:00-5:00
Apr. 16-18	Mon.-Wed.	Examinations 8:00-5:00
Apr. 18	Wed.	Second Term ends after the last examination
Apr. 21	Sat.	Commencement
Apr. 22	Sun.	Easter

**Dates subject to change.

THIRD TERM (FIRST SESSION)

May 2	Wed.	Last day to complete registration
May 3	Thurs.	Classes begin at 8 a.m.
**May 11	Fri.	Last day for change in schedules

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**May 14	Mon.	Last day to withdraw without record
**May 14	Mon.	Last day to change grading option
May 28	Mon.	National Holiday—Memorial Day—No class meetings
May 31	Thurs.	Ascension—No class meetings
June 1	Fri.	Last day to withdraw with a record of W
June 11-15	Mon.-Fri.	Examinations in evening courses conducted during final class meeting
June 12	Tues.	Last day to submit a withdrawal to Registrar
June 14-15	Thurs.-Fri.	Examinations 8:00-5:00
June 16	Sat.	Examinations—Saturday courses
June 16	Sat.	First Session ends after the last examination

***Dates subject to change.*

THIRD TERM (SECOND SESSION)

June 15	Fri.	Last day to complete registration
June 18	Mon.	Classes begin at 8 a.m.
**June 22	Fri.	Last day for change in schedules
**June 27	Wed.	Last day to withdraw without record
**June 27	Sat.	Last day to change grading option
July 4	Wed.	National Holiday—Independence Day—No class meetings
July 13	Fri.	Last day to withdraw with a record of W
July 23-27	Mon.-Fri.	Examinations in evening courses conducted during final class meeting
July 25	Wed.	Last day to submit a withdrawal to Registrar
July 26-27	Thurs.-Fri.	Examinations 8:00-5:00
July 28	Sat.	Examinations—Saturday courses
July 28	Sat.	Second Session ends after the last examination
July 29	Sun.	Diploma Exercises

***Dates subject to change.*

1973-1974 Academic Calendar

FIRST TERM

Aug. 26		Parents Day Orientation for Freshmen
Aug. 27	Monday	Classes begin at 8 a.m.
Sept. 3		National Holiday—Labor Day
Oct. 8		National Holiday—Columbus Day

1973-74

Oct. 15	Mid-term progress grades due in the Registrar's Office for Freshmen only
Oct. 22	National Holiday—Veterans Day
Nov. 1	All Saints Day
Nov. 21	Thanksgiving recess begins after the last evening class
Nov. 26	All classes resume
Dec. 8	The Immaculate Conception
Dec. 8	Examinations—Saturday courses
Dec. 10-14	Examinations—Evening courses
Dec. 11-14	Examinations 8:00-5:00
Dec. 14	First Term ends after the last examination
Dec. 15	Diploma exercises

SECOND TERM

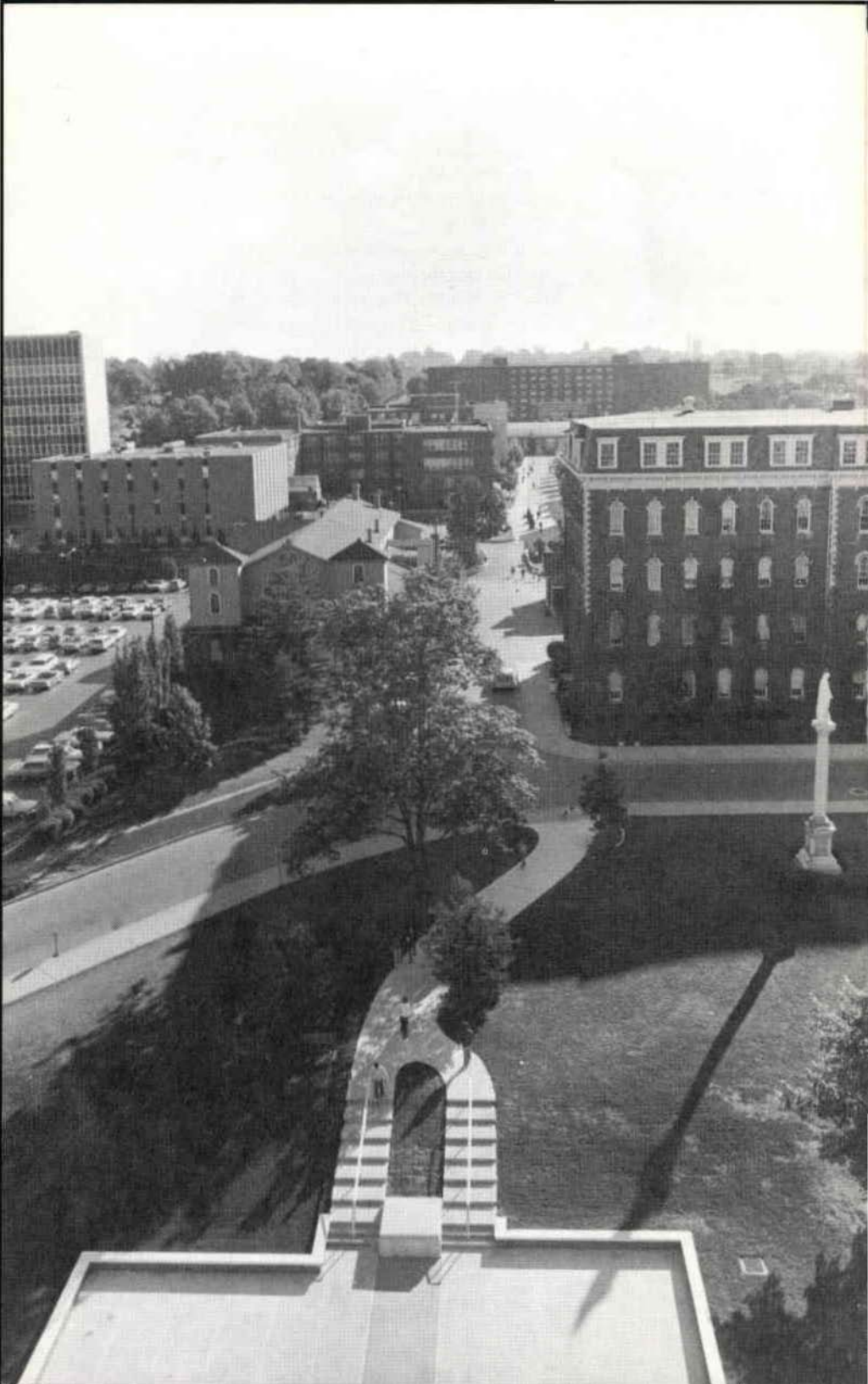
Jan. 3	Classes begin at 8 a.m.
Feb. 18	National Holiday—Lincoln-Washington Birthdays
Feb. 25	Mid-term progress grades due in the Registrar's Office for Freshmen only
Apr. 10	Easter recess begins after the last evening class
Apr. 15	All classes resume
Apr. 15-18	Examinations—Evening courses
Apr. 16-19	Examinations 8:00-5:00
Apr. 19	Second term ends after the last examination
Apr. 21	Commencement

THIRD TERM (FIRST SESSION)

May 2	Classes begin at 8 a.m.
May 23	Ascension
May 27	National Holiday—Memorial Day
June 10-14	Examinations—Evening courses
June 13-14	Examinations 8:00-5:00
June 15	Examinations—Saturday courses
June 15	First Session ends after the last examination

THIRD TERM (SECOND SESSION)

June 17	Classes begin at 8 a.m.
July 4	National Holiday—Independence Day
July 22-26	Examinations—Evening courses
July 25-27	Examinations 8:00-5:00
July 27	Examinations—Saturday courses
July 27	Second Session ends after the last examination
July 28	Diploma exercises



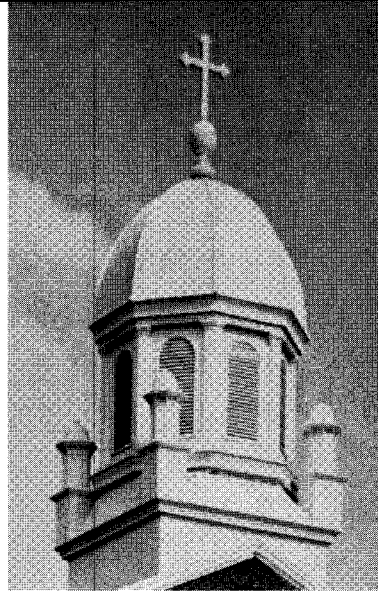


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I General Information

THE UNIVERSITY OF DAYTON

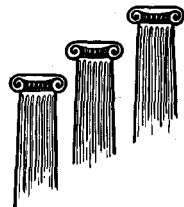
The University of Dayton is a medium-sized, private, coeducational school with a growing reputation for academic achievement. Located in the heart of the Midwest, it attracts its student body from the local community, the state of Ohio and other Midwestern and Eastern states, and a number of foreign lands. With a full-time student body of sixty-five hundred, the University of Dayton is ranked fifth in size among the nation's Catholic colleges. It includes three 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 fifteen 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 with competent instruction and prudent counseling. The University's policy of tempered discipline encourages students to accept responsibility for their own judgments and conduct.

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

The University of Dayton, by tradition, by legal charter, and by resolute intent, is a church-related institution of higher learning. As such, it seeks, in an environment of academic freedom, to foster principles and values consonant with Catholicism and with the living traditions of the Society of Mary. Operating in a pluralistic environment, it deliberately chooses the Christian world-view as its distinctive orientation in carrying out what it regards as four essential tasks: teaching, research, serving as a critic of society, and rendering public service.

The University of Dayton has as its primary task to teach—that is, to transmit the heritage of the past, to direct attention to the achievements of the present, and to alert students to the changes and challenges of the future. It regards teaching, however, as more than the mere imparting of knowledge; it attempts to develop in its students the ability to integrate knowledge gained from a variety of disciplines into a meaningful and viable synthesis.

The University of Dayton holds that there is harmony and unity between rationally discovered and divinely revealed truths. Accordingly, it commits its entire academic community to the pursuit of such truths. It provides a milieu favorable to scholarly research in all academic disciplines, while giving priority to studies which deal with problems of a fundamentally human and Christian concern. It upholds the principle of responsible freedom of inquiry, offers appropriate assistance to its scholars, and endeavors to provide the proper media for the dissemination of their discoveries.

The University of Dayton exercises its role as critic of society by creating an environment in which faculty and students are free to evaluate, in a scholarly manner, the strengths and weaknesses found in the institutions developed by man. While, as an organization, it remains politically neutral, objective and dispassionate, it encourages its members to judge for themselves how these institutions are performing their proper tasks; to expose deficiencies in their structure and operation; to propose and to actively promote improvements when these are deemed necessary.

The University of Dayton recognizes its responsibility to support, with means appropriate to its purposes, the legitimate goals and aspirations of the civic community and to cooperate with other agencies in striving to attain them. It assists in promoting the intellectual and cultural enrichment of the community; it makes available not only the resources of knowledge that it possesses, but also the skills and techniques used in the accumulation and dissemination of knowledge; and, above all, it strives to inspire persons with a sense of community and to encourage men of vision who can and will participate effectively in the quest for a more perfect human society.

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-twenty-second academic year, the University of Dayton includes the College of Arts and Sciences, School of Business Administration, School of Education, School of Engineering, including Engineering Technology. In all, thirty-eight departments of instruction function on the campus, awarding twenty-nine different degrees on the associate, baccalaureate, and graduate levels. These degrees are:

Bachelor of Arts	Associate in Technology
Bachelor of Science	Master of Arts
Bachelor of Fine Arts	Master of Business Administration
Bachelor of Music	Master of Public Administration
Bachelor of Social Science	Master of Science
Bachelor of Science in Home Economics	Master of Science in Education
Bachelor of Science in Medical Technology	Master of Science in Engineering
Bachelor of Science in Business	Management
Administration	Master of Science in Chemical
Associate in Business Administration	Engineering
Bachelor of Science in Education	Master of Science in Engineering
Bachelor of Chemical Engineering	Master of Science in
Bachelor of Civil Engineering	Civil Engineering
Bachelor of Electrical Engineering	Master of Science in
Bachelor of Industrial Engineering	Electrical Engineering
Bachelor of Mechanical Engineering	Master of Mechanical Engineering
Bachelor of Technology	Doctor of Philosophy in Biology

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 chemical, 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), and is an Associate Member of the National Association of Schools of Music. The School of Business Administration is an Assembly Member of American Association of Collegiate Schools of Business.

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 includes the following Departments and Programs: American Studies, Biology, Chemistry, Communication Arts, Computer Science, Criminal Justice, Economics, English, General Studies, Geology, History, Home Economics, Languages, Mathematics, Military Science, Performing and Visual Arts (Fine Arts, Music, Theatre), Philosophy, Physics, Political Science,



Psychology, Sociology, Anthropology and Social Work, Systems Science, Theological Studies, and Urban Life.

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, Kettering, 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 Youth 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, communication arts, English, history, mathematics, philosophy, physics, political science, psychology, and theological studies. The professional degree Master of Public Administration is also offered. The Department of Biology offers the Doctor of Philosophy degree.

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 and Systems Engineering, and Mechanical Engineering. The School offers graduate programs leading to the degrees of Master of Science in Engineering, Engineering Management, Chemical Engineering, Civil Engineering and Electrical Engineering and the Master of Mechanical Engineering.

The Engineering Technology Division 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. Engineering Technology 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

Through the Department of Languages, the University offers several programs of study abroad. These programs are available to students majoring in nearly all departments of the University. Interested majors from all disciplines may obtain information concerning these programs, and others, from the Director of Study Abroad, Miriam Hall 418.

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 inter-institutional 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.

CHERS

The University of Dayton is a participating member of the Consortium for Higher Education Religion Studies. This consortium makes possible cross-registration, shared library resources and lectureships, joint seminars and experimental programs among the following institutions: Antioch College, Central State University, Hamma Divinity School, Hebrew Union College, Payne Theological Seminary, St. Leonard Seminary, University of Dayton, Western College for Women, Wilberforce University, Wittenberg University, and United Theological Seminary.

United Seminary, Antioch College, University of Dayton and Wright State jointly employ and share a Professor of Judaic Studies under a grant from the Harriet Sanders Trust of Dayton, Ohio.

HEBREW UNION COLLEGE CONSORTIUM

The University of Dayton is likewise a member of the Consortium of the Hebrew Union College Biblical and Archaeological School of Jerusalem.

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.

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 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 Hall (1928)

The Albert Emanuel Hall, erected by the late Victor C. Emanuel, was the University's main library for forty-two years. It now is the home of the Department of Performing and Visual Arts, and also the Administrative Offices of the College of Arts and Sciences.

University Fieldhouse (1950)

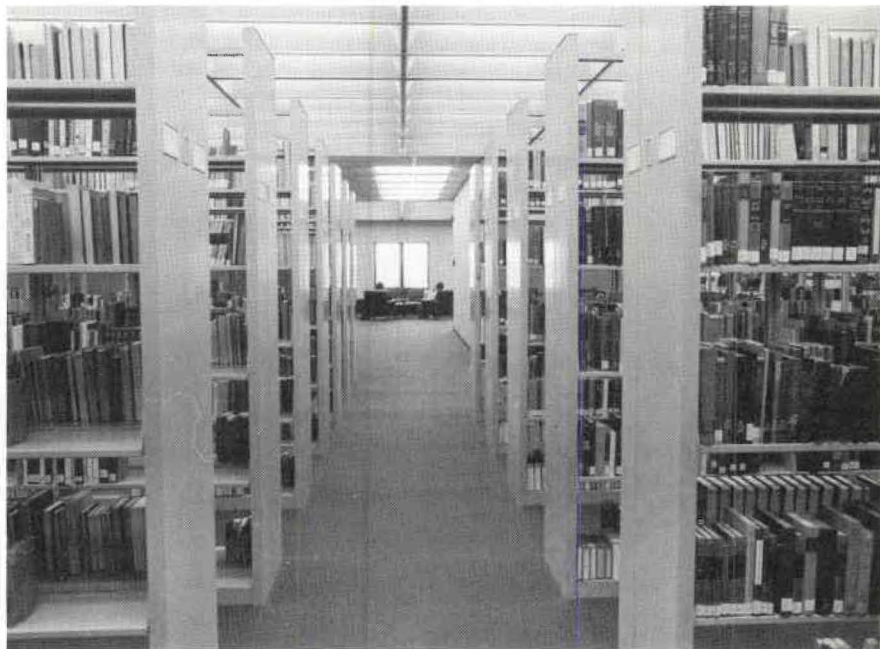
The Fieldhouse, with a seating capacity for six thousand, houses the offices of the Department of Athletics and the Department of Physical and Health Education. It also provides recreation facilities for students and members of the faculty.

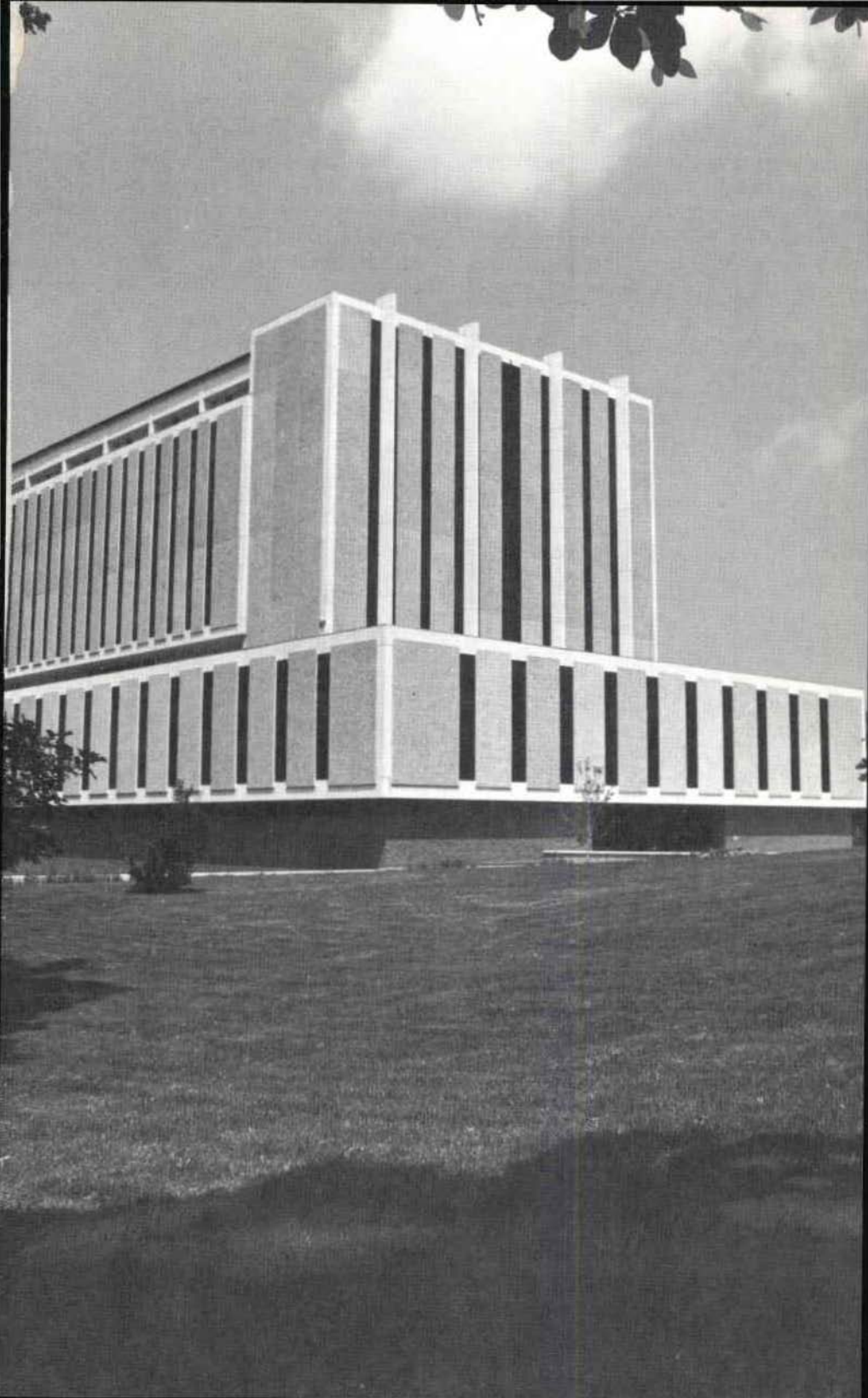
Flyers Hangar (1962)

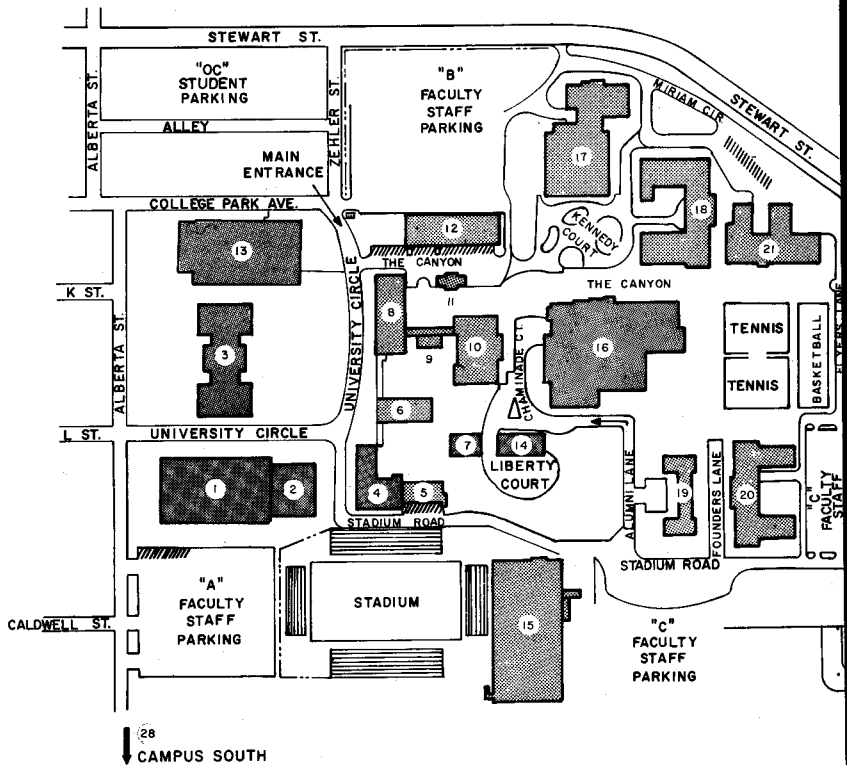
The "Hangar" is a popular gathering place for students, serving food and refreshments.

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.







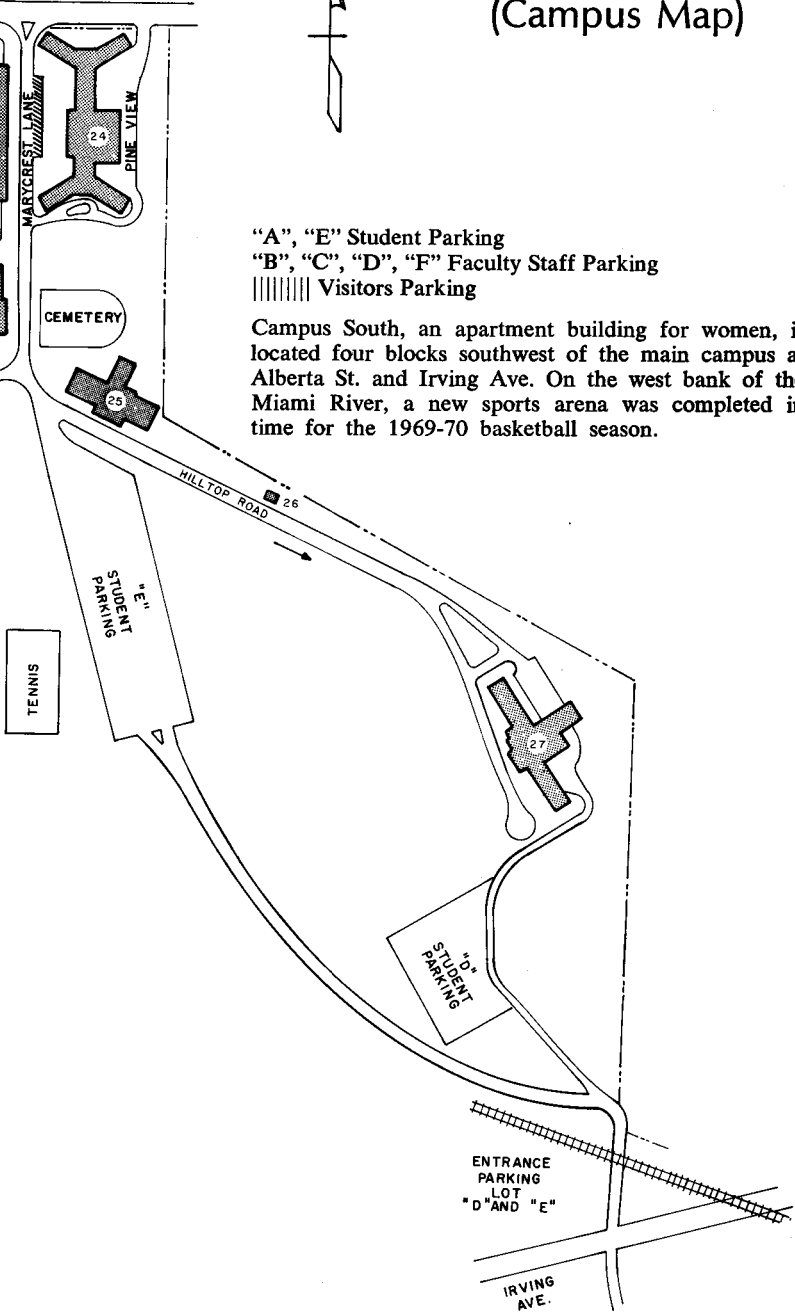
- | | |
|--|----------------------------------|
| 1. Fieldhouse | 16. J. F. Kennedy Memorial Union |
| 2. Flyer's Hangar | 17. Miriam Hall |
| 3. Albert Emanuel Center | 18. Sherman Hall |
| 4. St. Joseph's Hall | 19. Alumni Hall |
| 5. Zehler Hall | 20. Founders Hall |
| 6. Chapel of the Immaculate Conception | 21. Wohlleben Hall |
| 7. Liberty Hall | 22. Mechanical Engineering Bldg. |
| 8. St. Mary's Hall | 23. R.O.T.C. Bldg. |
| 9. Arcade | 24. Marycrest Hall |
| 10. Chaminade Hall | 25. Gosiger Health Center |
| 11. Post Office | 26. Telescope |
| 12. Women's Gymnasium | 27. Stuart Hall |
| 13. New Library | 28. Campus South |
| 14. Power House | |
| 15. Eugene W. Kettering Engineering
and Research Laboratories | |

University of Dayton (Campus Map)



"A", "E" Student Parking
"B", "C", "D", "F" Faculty Staff Parking
||||| Visitors Parking

Campus South, an apartment building for women, is located four blocks southwest of the main campus at Alberta St. and Irving Ave. On the west bank of the Miami River, a new sports arena was completed in time for the 1969-70 basketball season.



St. Joseph Hall (1884)

One of the oldest buildings on the campus, St. Joseph Hall has seen many uses. It now houses classrooms, faculty offices, and the Department of Political Science.

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. It was remodeled in 1971, retaining its historical beauty and, at the same time, making it conform to the modern liturgy.

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 (1874)

Headquarters of the women's physical education program, 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, and houses the Office of Admissions.

Liberty Hall (1866)

This small, two-story structure is headquarters for the campus ministry.

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. On the top floor is the office of the Dean of Students.

Zehler Hall (1865)

The oldest of the present campus buildings, Zehler Hall houses the Department of Theological Studies and the University Printing Service.

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 classrooms and laboratories of the departments of Biology, Physics, Home Economics, Psychology, and Mathematics.

Wohlleben Hall (1958)

The departments of Chemistry, Chemical Engineering, and Geology 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.

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.

Department of Military Science (1952)

Regarded as the finest ROTC facility in the First US Army area, the building is the headquarters for the Department of Military Science. Among its outstanding features is a large indoor rifle range.

Eugene W. Kettering Engineering and Research Laboratories (1969)

One of the newest buildings on campus, this facility is occupied by the Departments of Civil Engineering, Electrical Engineering, Electronic Engineering Technology, Industrial and Systems Engineering, Industrial Engineering Technology, and Mechanical Engineering and houses a broad spectrum of Research Institute activity.

The administrative offices of the Dean of Engineering and the Associate Dean for Engineering Technology are also located here.

Engineering Laboratory Building (1948)

This building was originally a drill hall at Camp Perry, Va. It was dismantled and brought to Dayton, rebuilt and bricked, and is now a Service Building.

New Library Building (1970)

In January, 1971, the University opened a new library building which, at the time of this writing, is still unnamed. Rising eight stories, it contains 180,000 square feet of space. Among other distinguishing features, the library has thirteen seminar rooms, seventy enclosed study carrels, a music-listening room, three special study rooms, and various types of seating interspersed with book stacks. The building is air conditioned, and every floor is carpeted.

Marian Library (1942)

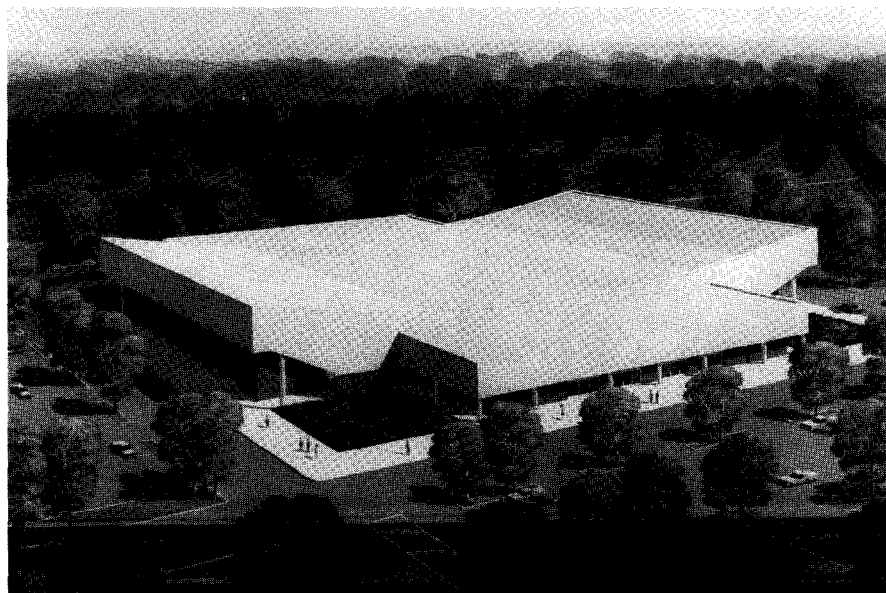
On the top floor of the new library building is located the Marian Library, formerly situated in an annex to the Albert Emanuel Library. It is the largest library in the world devoted to works about the Blessed Virgin Mary, containing approximately 33,000 different items.

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.

Campus South (1969)

Campus South, several blocks from campus, is a high-rise apartment building for upperclass women students. Fifty-four apartments accommodate over three hundred women.



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.

Sports Arena (1969)

Completed in time for the 1969-70 basketball season, the Sports Arena, on the west bank of the Miami River, is the home of the nationally famous Dayton Flyers. The arena accommodates over thirteen thousand.

West Campus, University Hall

In 1960, the University acquired a large property in the western section of Dayton, located approximately five miles from the Main Campus.

The building on this property was converted into University Hall; and the entire property, including housing facilities, cafeteria and indoor and outdoor recreational areas, is known as the West Campus. Residents of this campus are primarily freshman men. Regularly scheduled buses bring students to and from the Main Campus throughout the day and evening hours.

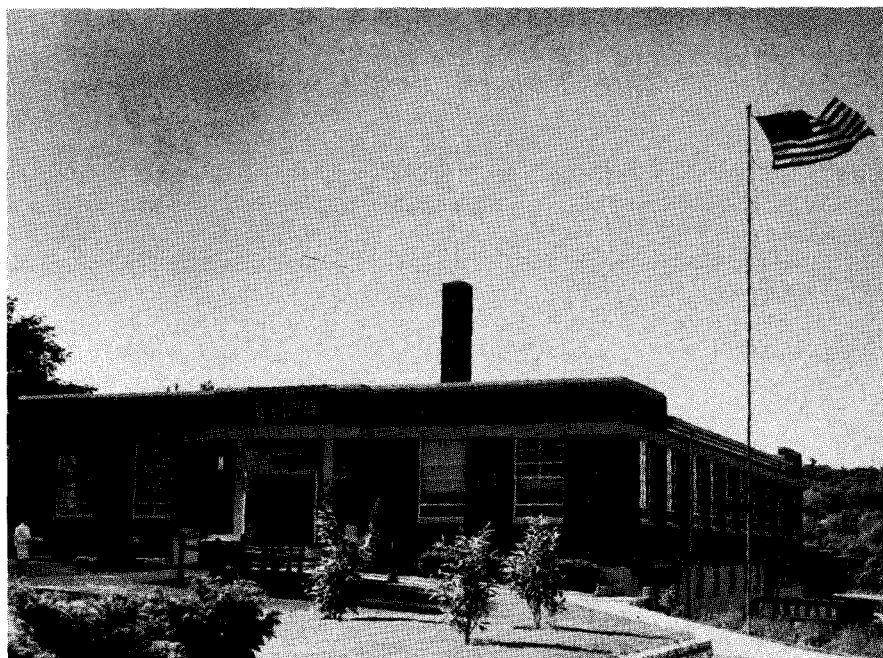
East Campus, Marianist College

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 offers 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 Military Science course is designed to develop a high degree of personal honor, self-reliance, and leadership and to provide the means of becoming a better informed student on matters of national defense. The program provides an opportunity to college men who complete the eight semesters of study, receive a baccalaureate degree, and display the ability to lead others, to become officers in the United States Army Reserve.



The four year course is divided into a basic and an advanced course and is offered to all students male or female for academic credit.

The basic course emphasizes leadership development and techniques, national security, and military history.

The advanced instruction includes practical exercises in tactical training, management, leadership techniques and the exercise of command. Male students who have successfully completed the basic course requirements and have demonstrated a potential for becoming effective officers may be invited to pursue a commission. To receive a commission students must agree to complete the advanced course, accept a reserve commission as a Second Lieutenant, and serve two years active duty in the United States Army. Students who have completed the basic course requirements may enroll in the advanced program for credit. Students may also audit all courses without credit.

Male students who enroll in the advanced course and agree to pursue a commission will receive \$100.00 per month subsistence. While in attendance at summer camp, they will receive approximately \$300.00 a month.





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. Most freshmen reside in either University Hall, located on West Campus, or Stuart Hall.

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. *Upperclass* transfer students apply directly to the Housing Office for assignment to the men's residence halls.

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, washcloths and blankets.

A professional staff and a student staff coordinate with the Office of Residence Life 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. An elected Hall Council represents student opinion and initiates programs for residents in each residence hall.

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 upperclassmen and transfer students who prefer to live off-campus. For aid in securing accommodations off-campus, please contact by mail or in person the Housing Office 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 Director of Housing. University policy requires that freshmen who do not live within commuting distance secure housing in Marycrest Hall on the University campus. Upperclass women are assigned to Marycrest, The Campus South or to University-

approved off-campus housing, on a class priority basis. Communications regarding women's housing should be addressed to the Director of Housing.

Application/contracts for residence hall accommodations and instructions are forwarded by the Office of Admissions to all freshmen 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 Housing Office for assignment to Marycrest or approved 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 and washcloths and blankets.

A professional staff and a student staff coordinate with the Office of Residence Life and the Director of Housing in administering the management and personnel functions of women's housing. Chaplains appointed by the University maintain offices in Marycrest Hall and The Campus South and are available for counseling or religious direction. An elected Hall Council at Marycrest Hall 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 and coordinating units such as Student Government, Inter-Fraternity Council, Panhellenic Council, many religious clubs, social groups, service organizations, national and 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 most groups have faculty advisors.

At the beginning of each year, students are issued a handbook in which these organizations are listed. Early in the school term, new students are invited to become members of the various clubs.

THE CAMPUS MINISTRY

As a Catholic institution of higher learning, the University of Dayton chooses the Christian world-view as its distinctive orientation in carrying out its essential tasks. The campus ministry acts as a catalyst to students, faculty, staff and administrators in making clear this aspect of its operation.

More specifically the campus ministry seeks: 1) to make available the rich sacramental life of Christ and his Church; 2) to provide opportunities for Christian service, and especially 3) to foster a campus atmosphere conformable to the message of Christ and conducive to serving human and religious needs.

Mass is celebrated in the main chapel several times each morning during the week and at convenient times on Sunday. There is a daily Mass in each of the residence halls. The sacrament of Penance is available at scheduled times and upon request. Chaplains regularly provide needed counseling in the residence halls and in the campus ministry center.

A variety of group activities and organizations having humanitarian and religious goals is encouraged and facilitated by the chaplains.

Finally, with the assistance of competent and interested members of the total University community, the campus ministry strives to initiate and cooperate with special projects such as: formal and informal theological discussions, study groups, relevant social action efforts, lecture programs, and inter-disciplinary undertakings particularly related to Christ's message.

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 Division of Guidance and Testing, Ohio Department of Education to administer the Elementary and Secondary Education Act (ESEA) tests in private non-profit schools in the State of Ohio.

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.

GRADUATE AND ALUMNI PLACEMENT

The services of the Placement Office in St. Mary's Hall are available to seniors, graduate students and alumni seeking career positions in business, industry and government.

These services include:

- personal counseling
- campus interviews by representatives of business, industry and government
- a library of literature describing opportunities with more than 500 employers
- listings of current job openings
- direct referral of alumni to employers
- computerized referral of alumni through the College Placement Council

Campus interviews are conducted from October through March; and are announced in a monthly calendar which can be obtained in the Placement Office.

Part time and summer employment is the responsibility of the Personnel Services Office. Teacher Placement is the responsibility of the School of Education, Teacher Placement Office.



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.

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.

Infirmery or hospital costs are covered for the most part by the highly recommended student insurance program which is available to all full-time students. (Full information on this program will be sent to each student prior to the start of the school year.)

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. It also serves as a library card.

PARKING

Parking facilities are extremely limited on the Main Campus. Students living off the Main Campus may apply at the Traffic Office for Permits. Students residing on the West Campus are permitted to have cars and park them on campus, if a permit is obtained.

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, Allen Ginsberg,

and W. H. Auden, the Roger Wagner Chorale, the Dayton Civic Ballet, Turnau Opera Players, Salzburg Marionette Theatre, vocalist Miriam Makeba, renowned guitar ensemble the Romeros, flamenco Master Carlos Montoya, and the Eleo Pomare Dance Company.

In addition to this Series, many other continuing programs are offered for the student each year. Among these are

regular productions of the talented University Players of the Theatre Division

the Music Division series of recitals and concerts by students and faculty

Religion in Life Series, bringing to the campus outstanding theologians annual lectures sponsored by academic departments in which known scholars are brought to the University

an interesting variety of musical and discussion programs on WVUD-FM

lectures by prominent 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 student rates and are well advertised on the campus.

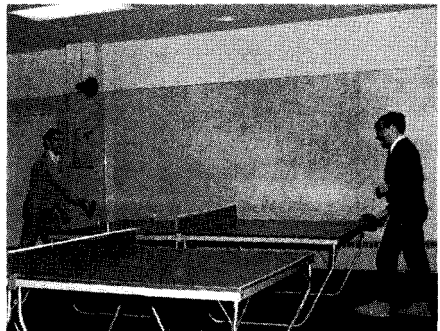
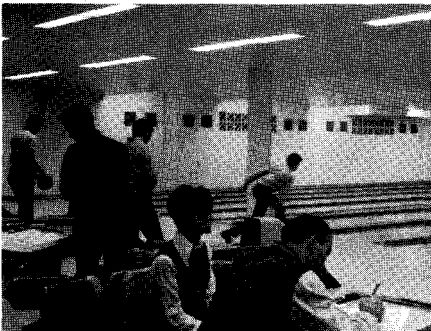
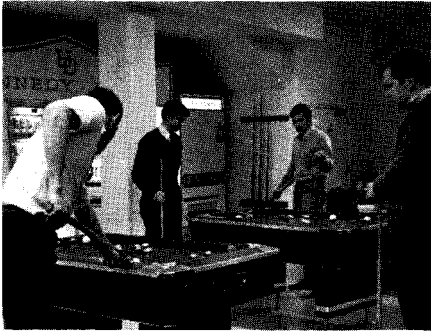


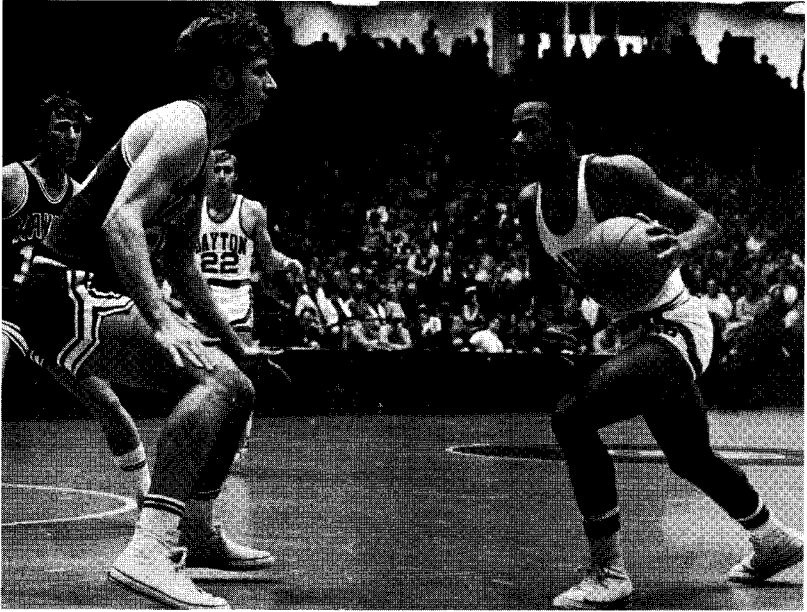
SOCIAL LIFE

A wide variety of social activities take place on and off campus. The Kennedy Union is the center for most activities which are more formally organized and scheduled for the benefit of students as well as other members of the University and the Dayton communities. There are many opportunities for students, individually and in groups to plan and arrange their own social functions, for which the University facilities and services are readily available.

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 sports and other recreational activities. The basketball Arena, the Fieldhouse on the Main Campus, and the gymnasium on the West Campus have facilities for indoor sports. The Kennedy Union includes bowling alleys, browsing rooms, music and art rooms and a theatre. Each residence hall has its own recreational facilities. 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 many theatres but many recent motion pictures are sponsored by campus organizations in University auditoriums as fund-raising ventures.





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 basketball 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, wrestling, 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.





III Admissions

REQUIREMENTS FOR ADMISSION

For admission to a freshman class, the applicant must submit a written application, a satisfactory high school record, and the results of either the Scholastic Aptitude Test (mathematical and verbal) of the College Entrance Examination Board (CEEB) or the American College Test (ACT). 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 RECOMMENDED

ARTS & SCIENCES: A well prepared candidate will have had from 15 to 18 units in English, Social Sciences, Mathematics, Foreign Language, and Laboratory Science. Those who plan to major in one of the Natural Sciences, Mathematics or Computer Science will find a strong mathematics background most helpful.

DEGREES	English	Language	Algebra	Geometry	Trigonometry	Mathematics	Chemistry	Physics	Science	History
Business degrees	4		2	1						
Education degrees:										
a) elementary	3		1	1					1	2*
b) secondary, art, music, and speech	4	2 or 1	**	1					1	2
c) physical education	4					1			1	2
d) home economics	4					1			1	2
Engineering degrees***	4				***					
Engineering Technology degrees	4		1			1				

*History or Social Studies.

**Two years of high school Mathematics required for Business Education.

***Appropriate Mathematics and 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 either the scholastic Aptitude Test or the American College Test (Junior SAT or ACT results accepted).

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.

COLLEGE OR SCHOOL	ENGLISH	MATH (LEVEL II)	FOREIGN LANGUAGE
Arts	required	required for those seeking registration in calculus during their first term	required
Business	required	optional	—
Education	required	required for those seeking registration in calculus during their first term	required for secondary teaching field in languages or language electives
Engineering	required	required for those seeking registration in calculus during their first term	—
Sciences	required	required for those seeking registration in calculus during their first term	optional
Engineering Technology	—	—	—

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 from each of the schools he has attended and a statement from the last school 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 will be usually accepted:

- (1) From a fully accredited school.
 - a) Holding an Associate Degree from that institution, or
 - b) Maintaining a cumulative average as stated above.

- (2) From ECPD (Engineers' Council for Professional Development) approved programs wishing to enter into Engineering Technology.
- (3) Holding an Associate Degree in Police Administration or Law Enforcement from a University of Dayton approved institution.

The number of credits that a transfer student will be awarded is determined after the applicant has been accepted into the University and has submitted the necessary deposits. First a preliminary evaluation of the applicant's transcript(s) is made, indicating the credits which will appear on his permanent record. Generally all "C" or better grades from fully accredited Colleges and Universities will be submitted. After this preliminary evaluation, the Dean of the division into which the applicant will enter makes a final evaluation to determine which of the credits will be applied toward particular degree requirements.

Students are not awarded advanced standing for correspondence courses, with the exception of college-level United States Armed Forces Institute courses. A maximum of 12 credit hours may be awarded.

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.

All completed applications are given immediate attention by the Committee on Admissions.

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, if vacancies still exist.
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.

EDUCATION OF VETERANS

All departments of the University have been approved by the Veterans Administration for training under the G.I. Bill. Veterans' affairs are handled by Robert Hildreth, Veteran's Office, Room 203, C. H. Gosiger Health Center. All veterans attending the University must contact his office. Counseling by the Veterans Administration is available in the Guidance Center.

PHYSICAL EXAMINATIONS

All incoming students are required to submit, on the form provided by the Office of Admissions, a report of physical examination and certain basic diagnostic tests and immunizations. These are to be performed by a private physician and sent **DIRECTLY TO THE HEALTH CENTER**. The report is strictly confidential and can in no way influence the student's acceptability for admission: however, until a properly completed report is on file at the Health Center, the student will not be permitted to register.

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.

**See Student Financial Aid on page



IV 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.

UNDERGRADUATE TUITION AND FEES
EDUCATIONAL CHARGES—August, 1972 through July, 1973

	<i>Charges</i>
Application Fee, payable once, upon application.....	\$ 15.00
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

TUITION CHARGES IN TERMS I AND II

Full-time Undergraduate Student (12-18 credit hours per term, but not over a total of 34 credit hours in both terms) per term.....	\$840.00
(Maximum tuition including laboratory and course fees: \$925.00 per term applicable to students not exceeding credit hour limitations stated above)	
Each credit hour over limitations stated above.....	50.00
¾-time Undergraduate student (8-11 credit hours), per term	630.00
Full-time Student Teacher (13 or more credit hours), including the Supervising Teacher Fee.....	840.00
¾-time Student Teacher (8-12 credit hours of student teaching), including the Supervising Teacher Fee.....	630.00
Part-time Student (1-7 credit hours), per credit hour.....	50.00

BASIC UNIVERSITY FEE, TERMS I AND II

Full-time and ¾-time student (8 or more credit hours), per term..	50.00
Part-time students (1-7 credit hours), per term.....	15.00

LABORATORY AND COURSE FEES, TERMS I AND II

Laboratory and Materials Fee, per laboratory clock hour.....	20.00
Studio Fee for certain courses in Fine Arts (see p. 305).....	15.00-25.00
Applied Music Fee (see p. 309).....	(10-80)
Computer Science course fee (see p. 239), per credit hour	5.00
Laboratory Breakage Deposit, each term.....	(5-10)

TUITION AND FEES, TERM III

Registration Fee	2.00
*Tuition, per credit hour	50.00
Basic University Fee, each Session of Term III.....	15.00
Laboratory and Course Fees—Same as in Terms I and II	

*A reduction of \$10.00 per credit hour for a maximum of 7 credit hours will be granted in each or both sessions of the Third Term to all students who were registered as full-time students in the preceding Terms I and II.

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
<i>Late Registration Service Charge—</i>	
Full-time Students	15.00
Part-time and Summer.....	5.00
Proficiency and Final Make-up Examinations.....	5.00
Graduation Fee, Undergraduate and Graduate Students.....	26.00
Books and Stationery	Variable

FULL-TIME AND 3/4-TIME STUDENTS

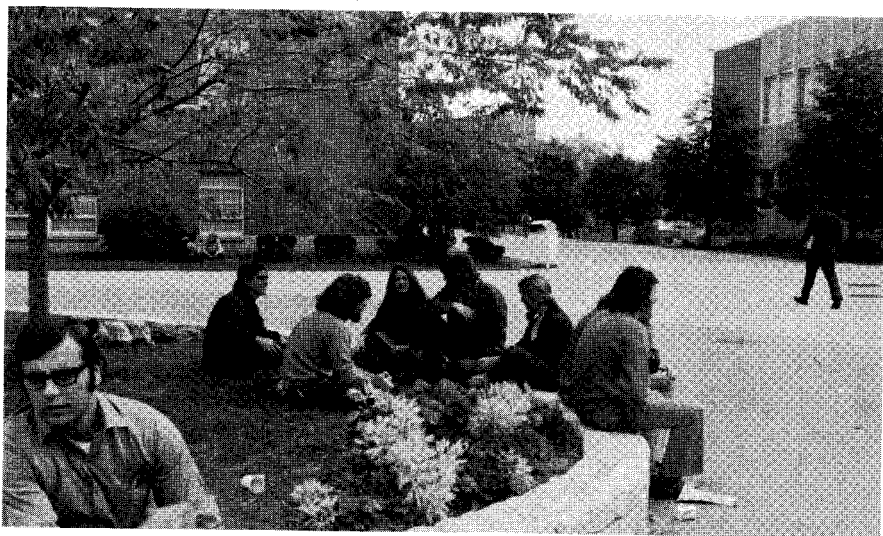
A student with an academic schedule of at least twelve credit hours is considered a full-time student. A student with an academic schedule of eight to eleven credit hours (8-12 for student teachers) is considered a $\frac{3}{4}$ -time student. With this status and upon payment of the tuition and applicable fees he is entitled to the benefits of the various activities and student services as available.

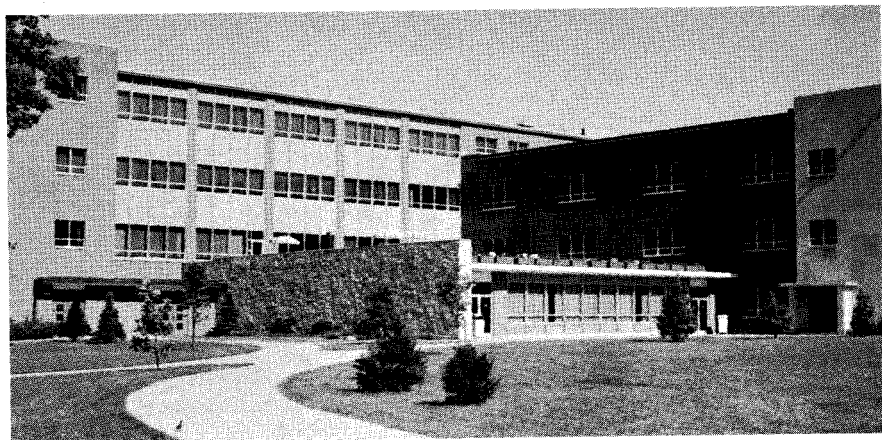
PART-TIME STUDENTS

A student with an academic schedule of less than eight credit hours is considered a part-time student and is not entitled to all the benefits of the various activities and student services.

SPECIAL STUDENTS

Special students, non-matriculated students, and auditors are subject to the various expenses outlined above for full-time, $\frac{3}{4}$ -time, or part-time students.





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, 1971 THROUGH APRIL, 1972**

	1st Split Term May-June, 1972	2nd Split Term June-Aug., 1972	1st Term Sept.-Dec., 1972	2nd Term Jan.-April, 1973		
FULL TIME STUDENTS—WOMEN						
Single Occupancy	\$86.00	\$86.00				
Single Occupancy (7 Day Meal Ticket)			\$512.00	\$512.00		
Double Occupancy	70.00	70.00				
Double Occupancy (7 Day Meal Ticket)			487.00	487.00		
Triple Occupancy (7 Day Meal Ticket)			462.00	462.00		
Room Deposit to Cover Possible Damage (refundable)	30.00	30.00	30.00	30.00		
FULL TIME STUDENTS—MEN						
Single Occupancy	86.00	86.00				
Double Occupancy	70.00	70.00				
Double Occupancy (7 Day Meal Ticket)			467.00	467.00		
Triple Occupancy (7 Day Meal Ticket)			442.00	442.00		
Room Deposit to Cover Possible Damage (refundable)	30.00	30.00	30.00	30.00		
MEAL TICKETS—DORMITORY STUDENTS						
5 Day Meal Service	88.00	88.00				
7 Day Meal Service	98.00	98.00				
OFF-CAMPUS HOUSING— U.D. OWNED						
	Low	Med.	High	Low	Med.	High
Room Only	72.00	77.00	83.00	198.00	215.00	231.00
Room Deposit to Cover Possible Damage (refundable)	30.00	30.00	30.00	30.00	30.00	30.00
MEAL TICKETS—OFF-CAMPUS FULL TIME STUDENTS						
5 Day Meal Service	88.00	88.00	225.00	225.00		
7 Day Meal Service	98.00	98.00	253.00	253.00		
WEEKLY RATES—ROOM AND BOARD						
(Institute Rates are available upon request from the Director of Housing.)						
Single	\$56.00 per week—(7 Day Meal Ticket)		\$49.00—(5 Day Meal Ticket)			
Double	46.00 per week—(7 Day Meal Ticket)		39.00—(5 Day Meal Ticket)			

All requests for accommodations in the residence halls or for approved housing in the vicinity of the University should be addressed to the Director of Housing.

Applications for room reservations must be accompanied by a fifty-dollar deposit. For those students who complete enrollment, thirty-dollars is reserved as a damage deposit.

The housing application-contract covers both terms of the academic year and cannot be cancelled after August 1 by students who attend the University during the fall term.

Students applying for January term admission, and who attend the University during that term, must cancel the housing application-contract by December 15.

After the above dates active enrolled students will be charged the full amount of the semester housing fee under terms of their contracts.

Student applicants can cancel the Housing Contract without penalty until the following dates:

1st term—June 15

3rd term, first session—April 1

2nd term—December 1

3rd term, second session—June 1

After these dates applicants forfeit the \$50.00 housing deposit.

All students living in residence halls are required to observe University regulations in general as well as the specific regulations of each hall, and will be held responsible for any damage done through their own negligence to the structure in which they are housed. The same conditions shall also hold for any loss or damage to the University grounds, fixtures, furnishings or personal property furnished by the University for use by the students.

Students may reside in their rooms without additional charge during the Thanksgiving and Easter vacation periods. However, all University residences are closed during the Christmas vacation period.

FINANCIAL AID POLICY

The University of Dayton desires to assist all qualified students who seek financial assistance in order to continue their education. In an effort to meet this goal, the University has established a complete and sound student aid program which includes: scholarships, loans, grants, tuition reductions, and part-time employment.

The allocation of financial assistance is closely related to the student's need. Financial need is the difference between the expense of attending college and the financial resources available to the student to meet expenses. It is the basic policy of every college to expect that the parents will make a reasonable effort to assist with the student's college expenses from the family's resources. The student is also expected to make a contribution from savings and employment.

To assure the most equitable distribution of financial assistance, the University of Dayton uses the financial need analysis information which is provided by the family on the Parents' Confidential Statement. The Parents' Confidential Statement may be obtained from the high school counselor or from this office upon request and is to be sent, by the family, to the College Scholarship Service.

The family's expected contribution to the educational expense is determined by considering their resources and factors influencing the use of these resources—number of dependents, current educational expenses of other family members, unusual medical expenses, retirement needs, and other special problems which deserve consideration.

Financial assistance from the University of Dayton must be viewed as supplemental to all other resources (parents' expected contribution, percentage of student's savings, student's summer earnings, state scholarships, state guaranteed loans, private scholarships, etc.) to meet the expenses of attending the University of Dayton. Financial aid awards are tailored to meet the particular needs of assistance. Eligibility for and interest of the applicant determines the type of assistance offered. If possible, you should arrange to meet with a representative of the Student Aid Office. This would provide an opportunity to discuss your particular situation with you and your parents so that the most appropriate assistance may be arranged.

All financial assistance, other than academic scholarships, is awarded for the academic year. A new application and a Parents' Confidential Statement must be submitted each year for students applying for loans, grants, or employment.

EXPENSES

The University of Dayton operates on a "Split Third-Term Calendar." Tuition and Fees for full-time students during the 1972-73 academic year (fall and winter terms) will total \$1780. Room and Board on campus for this period would be \$974 for female students and \$934 for male students. Books and supplies will cost approximately \$50 per term. In addition to this, the student will need funds to satisfy personal expenses.

Expenses for commuting students include tuition, supplies, and miscellaneous living costs. Transportation to and from the University as well as lunches should be considered in the budget.

APPLICATION PROCEDURE

Application for grants, tuition reductions, loans and employment may be obtained from the office of Scholarships and Student Aid, University of Dayton, Dayton, Ohio 45409. The following procedure must be completed each academic year:

1. Submit an application to the above mentioned office. Priority is given to those applications received prior to April 30 for the following year.
2. File a Parents' Confidential Statement with the College Scholarship Service. Forms may be obtained from the high school counselor or from this office upon request. Be sure to request that a copy of the results be sent to the University of Dayton.

Applications for scholarships may be obtained from the office of Scholarships and Student Aid, University of Dayton, Dayton, Ohio 45409. Specific information concerning scholarships may be found on the next page.

SCHOLARSHIPS

The scholarships 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 and service to the University.

President's Scholarship

The President's Scholarship Program at the University of Dayton rewards the academic excellence of high school seniors. Students in all curricula may apply for these scholarships which range in monetary value from \$200 per year to full tuition. Scholarship recipients are selected on the basis of scholastic achievement; stipends are adjusted in accordance with financial need.

Applicants receive consideration for these scholarships on the basis of: 1) high school academic performance; 2) S.A.T. or A.C.T. scores; 3) demonstrated service to school, community and church; 4) evidenced leadership ability; and 5) citizenship. The scholarship is renewable for eight consecutive undergraduate terms providing the recipient maintains at least a 3.0 (B) cumulative grade point average and participates in University sponsored extracurricular activities (other than social).

Application Procedure

1. Request an application for the President's Scholarship from the Office of Scholarships and Student Aid between September 15 and December 1. Complete the application and return it to the Office of Scholarships and Student Aid prior to December 30. Deliver the Recommendation insert to your principal or counselor and ask this school official to complete this form and send it to the Office of Scholarships and Student Aid prior to December 30.

2. Obtain a Parents' Confidential Statement from your principal or counselor and request your parents to complete this form and send it to the College Scholarship Service before the first of December. Designate the University of Dayton as a recipient of the financial analysis.

3. Arrange to take the Scholastic Aptitude Test (Math and Verbal Sections) or the American College Test no later than December of your senior year. Indicate that your scores are to be sent to the University of Dayton. Scores made in earlier tests are also acceptable if your high school forwards the results.

4. All forms: 1) Application; 2) Recommendation insert; 3) Parents' Confidential Statement should be filed on or before December 1, but must be available to the University of Dayton Scholarship Committee by December 30. Application, Recommendations, and Parents' Confidential Statements received after that date cannot receive consideration.

All scholarship applicants will be notified that they have or have not been selected as a recipient of a scholarship. You may expect to hear from this office by March 1.

Dayton Area Scholarship

Dayton Area Scholarships are offered to top ranking students from schools in the greater Dayton area. To be eligible the student must rank in the top 10% of their high school class. Students in all curricula may apply for these scholarships which range in monetary value from \$400 per year to full tuition. Scholarship recipients are selected on the basis of scholastic achievement; stipends are adjusted in accordance with financial need.

Applicants receive consideration for these scholarships on the basis of: 1) high school academic performance; 2) S.A.T. or A.C.T. scores; 3) demonstrated service to school, community and church; 4) evidenced leadership ability; and 5) citizenship. The scholarship is renewable for eight consecutive undergraduate terms providing the recipient maintains at least a 3.0 (B) cumulative grade point average and participates in University sponsored extracurricular activities (other than social.)

Application Procedure

1. Request an application for the Dayton Area Scholarship from the Office of Scholarships and Student Aid between September 15 and December 1. Complete the application and return it to the Office of Scholarships and Student Aid prior to December 30. Deliver the Recommendation insert to your principal or counselor and ask this school official to complete this form and send it to the Office of Scholarships and Student Aid prior to December 30.

2. Obtain a Parents' Confidential Statement from your principal or counselor and request your parents to complete this form and send it to the College Scholarship Service before the first of December. Designate the University of Dayton as a recipient of the financial analysis.

3. Arrange to take the Scholastic Aptitude Test (Math and Verbal sections) or the American College Test no later than December of your senior year. Indicate that your scores are to be sent to the University of Dayton. Scores made in earlier tests are also acceptable if your high school forwards the results.

4. All forms: 1) Application; 2) Recommendation insert; 3) Parents' Confidential Statement should be filed on or before December 1, but must be available to the University of Dayton Scholarship Committee by December 30. Application, Recommendations, and Parents' Confidential Statements received after that date cannot receive consideration.

All scholarship applicants will be notified that they have or have not been selected as a recipient of a scholarship. You may expect to hear from this office by March 1.

Marianist Scholarship

Marianist Scholarships are offered to top ranking students attending Marianist High Schools in the Cincinnati, New York, St. Louis, Pacific, and Canadian Provinces. To be eligible the student must rank in the top 10% of their high school class. Students in all curricula may apply for these scholarships which range in

monetary value from \$400 per year to full tuition. Scholarship recipients are selected on the basis of scholastic achievement; stipends are adjusted in accordance with financial need.

Applicants receive consideration for these scholarships on the basis of: 1) high school academic performance; 2) S.A.T. or A.C.T. scores; 3) demonstrated service to school, community and church; 4) evidenced leadership ability; and 5) citizenship. The scholarship is renewable for eight consecutive undergraduate terms providing the recipient maintains at least a 3.0 (B) cumulative grade point average and participates in University sponsored extracurricular activities (other than social.)

Application Procedure

1. Request an application for the Marianist Scholarship from the Office of Scholarships and Student Aid between September 15 and December 1. Complete the application and return it to the Office of Scholarships and Student Aid prior to December 30. Deliver the Recommendation insert to your principal or counselor and ask this school official to complete this form and send it to the Office of Scholarships and Student Aid prior to December 30.

2. Obtain a Parents' Confidential Statement from your principal or counselor and request your parents to complete this form and send it to the College Scholarship Service before the first of December. Designate the University of Dayton as a recipient of the financial analysis.

3. Arrange to take the Scholastic Aptitude Test (Math and Verbal Sections) or the American College Test no later than December of your senior year. Indicate that your scores are to be sent to the University of Dayton. Scores made in earlier tests are also acceptable if your high school forwards the results.

4. All forms: 1) Application; 2) Recommendation insert; 3) Parents' Confidential Statement should be filed on or before December 1, but must be available to the University of Dayton Scholarship Committee by December 30. Application, Recommendations, and Parents' Confidential Statements received after that date cannot receive consideration.

All scholarship applicants will be notified that they have or have not been selected as a recipient of a scholarship. You may expect to hear from this office by March 1.

Upperclass Scholarships

Upperclass students in full-time attendance, who have completed at least twelve credit hours on campus at the University of Dayton are eligible to apply for one of these scholarships. Primary emphasis in the selection of recipients is based upon academic achievement, character, campus leadership, service to the University community and recommendations.

Each year approximately forty students are selected to receive these scholarships which are awarded for a period of one academic year. The scholarships range from \$200-\$1000.

The General Motors Scholarship

The University of Dayton is proud to have been selected to participate in this outstanding scholastic program. Each year one incoming freshman is selected to receive General Motors Scholarships.

The recipient of the General Motors Scholarship is selected by the Scholarship Committee of the University of Dayton from the applicants for President's Scholarships. Preference is given to students entering the school of Engineering.

General Motors awards range from an honorary award carrying a stipend of \$200 per year to an award carrying a maximum stipend of \$2000 per year, depending upon demonstrated need. The scholarships are renewable for four years provided the recipient meets the high standards required of President's Scholarship recipients. Students receiving this scholarship are not permitted to hold other scholarships.

Scholarship holders are under no obligation to repay General Motors or work for the General Motors Corporation. They are expected to maintain a high academic standing and conduct themselves in a manner that will bring credit to themselves, their college, and the corporation.

Tom Prinz Memorial Scholarship

In 1968 a Memorial Scholarship was established to honor the memory of Tom Prinz, a 1967 graduate of the University of Dayton. The recipient of this scholarship must be a Dayton high school graduate who plans to attend the University of Dayton and major in Physical Education.

The Scholarship is co-sponsored by the Dayton Coaches Association, the University of Dayton Physical Education Major and Minors Club, and the U.D. Alumni Association and has a stipend of \$1000. The selection committee is composed of representatives of Dayton Coaches Association and a staff member from the University of Dayton Physical Education Department.

Dr. Maurice R. Reichard Music Scholarship

The Music Scholarship of \$500 per academic year is usually awarded to a music student for the junior year and may be renewed for the senior year. Recipients are nominated by Dr. Reichard with the approval of the Head of the Music Division.

Faculty Scholarship

The faculty at the University of Dayton has contributed to a scholarship fund which is designed for Negro graduates of Dayton area high schools who rank below the top five percent of their graduating class but possess sound academic potential and can demonstrate financial need.

Students may request an application from the University of Dayton Scholarship Office. Applications will be accepted until April 15. The recipients will be announced in May.

Merle Smith Scholarship

The Merle Smith Scholarship is made available by the Greater Dayton Area Chapter of the Alumni Association to a deserving incoming freshman from Mont-

gomery County who is a son or daughter of a University of Dayton Alumnus. This scholarship is intended for one academic year and has a stipend of \$400.

ROTC Scholarships

U.S. Army ROTC financial assistance scholarships are awarded to outstanding ROTC cadets in all four academic years. The scholarship includes all costs for tuition, fees, books, and supplies. Interested students should contact the Military Science Department for further information.

Athletic Scholarships

The Athletic Department offers scholarships to young men who demonstrated athletic and academic promise. Recommendations for scholarship awards are made to the scholarship committee by the coach who has the responsibility for administering the particular sport. Correspondence should be directed to the head coach of the sport in which the applicant is interested.

Additional Scholarships Administered By The University of Dayton

In addition to its own scholarships, the University is authorized to select students as nominees for scholarships offered by certain corporations, business firms, service groups, and friends of the University. These private groups include: Western Electric Company, Alcoa, Monsanto Chemical Company, The Association of General Contractors, and others who prefer to remain anonymous.

The amount of the scholarship award will vary with the financial need of the student, the terms under which the scholarship funds were established, and total amount of funds available for distribution.

Recipients are usually selected by a special committee which is formed to review nominees by Deans and Department Chairmen.

GRANTS

Educational Opportunity Grants

These federally-supported, University-administered grants are provided to full-time undergraduate students who have exceptional financial need. Eligibility for the grant and the stipend the recipient is to receive is governed by the rules and regulations of the United States Office of Education. The value of these grants range from \$200-\$1000 per year. The student must also receive assistance from certain other sources, in an amount at least as great as the amount of the grant. The following may be included as matching funds: 1) institutionally administered loans; 2) institutional, state, corporate, or other privately financed scholarships, tuition reductions, or grants; and 3) institutionally administered employment programs. The completion of an application for student aid assures applicants of consideration for this type of assistance.

Tuition Remission Grant

The University of Dayton offers a non-repayable grant to students with a financial need greater than can usually be solved by assuming a loan and employment. Need is defined as the difference between the family's expected contribution and anticipated educational expenses. The University assumes that the student can provide "self-help" in the form of a loan and employment, for \$1300 of his need. To determine eligibility for the remission grant all non-repayable assistance the student will receive is deducted from his established need. If, after this deduction, the student's need exceeds \$1300 the University will provide a remission grant for that amount up to a maximum of \$1000.

If, at a later date, the recipient receives a non-repayable award from another source, the University will adjust this remission so that it is within the described guidelines. The completion of an application for student aid assures eligible applicants of consideration for this type of assistance.

Merit Grant

The University of Dayton provides non-repayable Merit Grants to entering freshmen who have graduated within the top fifteen percent of their high school class and have demonstrated a financial need greater than \$1000. Financial need is the difference between student resources (expected parents' contribution, student's expected summer earnings, percentage of student's assets, and other gift assistance) and the commonly accepted educational expenses. The student is responsible for the first \$1000 of the financial need in "self-help" (loan/school year employment) and the University of Dayton will provide the remaining need, up to \$1000, in the form of the Merit Grant. If the recipient receives additional non-repayable assistance from another source after the award has been made, the University will adjust the Grant so that it is within the described guidelines.

Renewal of the Merit Grant is dependent upon continued financial need in excess of \$1000 and the student's maintaining a cumulative grade average of at least 2.50.

Ohio Instructional Grants 1972-73

The Ohio Instructional Grant is intended to assist Ohio residents who have demonstrated need for financial assistance in order to attend an institution of higher education within the state of Ohio. Awards are made on the basis of financial need and not on the basis of academic performance.

Eligibility Requirements

Recipients of the Ohio Instructional Grant must:

- 1) be a resident of Ohio.
- 2) be enrolled or accepted for enrollment as a full-time undergraduate student in an Ohio institution of higher education.
- 3) be making "appropriate progress" toward an associate or bachelor's degree.
- 4) meet the financial guidelines established by the Ohio Board of Regents.

Students enrolled in a course of study leading to a degree in Theology, Religion, or other field of preparation for a religious profession are not eligible.

If the amounts available for support of the program are inadequate to provide grants to all eligible students, preference in the payment of grants shall be in the following order: 1) freshmen; 2) sophomores; 3) juniors; and 4) seniors.

Application Procedure

An application packet may be obtained from the high school counselor or the Financial Aid Office at the University of Dayton. It is strongly recommended that students arrange an interview with the Financial Aid Office so that the application can be discussed and tentative eligibility be determined.

The completed Ohio Instructional Grant application and notarized family income statement is to be sent to: Ohio Board of Regents, Student Aid Office, 88 East Broad Street, Columbus, Ohio 43215.

The first deadline for accepting applications is February 1, 1972 and the last deadline is August 11, 1972. Applicants are urged to meet the February 1, 1972 deadline. All forms must be carefully completed. Incomplete applications and income statements will be returned or rejected.

OHIO INSTRUCTIONAL GRANT TABLE 1971-1973 FOR U.D. STUDENTS

<i>Adjusted Effective Income</i>	<i>Dependent Children</i>				
	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5 or more</i>
\$4,000 and under	1,200	1,200	1,200	1,200	1,200
4,001-4,999	1,050	1,200	1,200	1,200	1,200
5,000-5,999	900	1,050	1,200	1,200	1,200
6,000-6,999	750	900	1,050	1,200	1,200
7,000-7,999	600	750	900	1,050	1,200
8,000-8,999	450	600	750	900	1,050
9,000-9,999	300	450	600	750	900
10,000-10,999	150	300	450	600	750
11,000-over	—	—	—	—	—

University of Dayton Grant

The University has funds available which are reserved for students in extreme or exceptional financial need. Grants of this nature are usually included in the package of assistance arranged by the Student Aid Office and no special application is necessary.

The grant is a gift and, although the student is not required to repay the grant, those who receive the grant should accept the obligation when they attain a sufficient financial status, to reimburse the University so that other deserving students may stay in school.

John Westendorf Scholarship Fund

The John Westendorf Scholarship Fund was established to assist deserving students who have graduated from Dayton high schools.

The Director of Student Aid will use funds from this source to supplement financial assistance offered to a student. Each graduate of a Dayton high school that applies for financial assistance will be considered. The parents' and student's responsibility to finance an education will be considered and when unusual circumstances prevail. The Director of Student Aid may utilize funds from the John Westendorf Scholarship Fund to assist those deemed worthy of this fund.

Students receiving assistance from this fund are expected to achieve a 2.0 cumulative grade point average and participate in at least one extracurricular activity. Renewal of this grant will be at the discretion of the Director of Student Aid.

Harry F. Finke Scholarship Fund

This fund was established by Harry F. Finke, Sr. to assist a deserving needy boy in his pursuit of an education. Priority is to be given to a worthy young man pursuing a degree in Engineering.

Approximately \$400 is available each year from this fund. The Director of Student Aid will solicit names from the Dean of Engineering and will supplement this list with names obtained from the evaluation of financial aid applications. These prospective recipients will be reviewed by the Student Aid Committee and the selection is the responsibility of this group.

Band Grants

The Music Division of the Performing and Visual Arts Department administers Band Grants. Additional information may be obtained from Mr. Charles Ritter, Music Dept., University of Dayton.

LOANS

National Defense Student Loan

The National Defense Student Loan is available to those applicants who have demonstrated genuine need for assistance to pay the actual costs of attending school. A student is eligible to borrow only that amount which is needed to supplement other resources to meet expenses. The maximum amount available to an undergraduate student in one academic year is \$1000 and for graduate students is \$1500 in an academic year.

The recipient enters the repayment cycle nine months after he ceases to carry at least one-half the normal full-time academic load. The loan bears simple interest commencing nine months after the end of student status. The loan and interest of any borrower who serves as a full-time teacher in any elementary and secondary school or in a college or university will be cancelled at the rate of ten percent (10%) per year of service up to a maximum of fifty percent (50%). Fifteen percent (15%) per year cancellations are available to students who teach in low-income areas or who teach in the area of special education.

Service in the Armed Forces after receiving this loan will result in a twelve and one-half percent (12½%) cancellation of the loan and interest for each complete year of service. The maximum cancellation will be fifty percent (50%). The cancellation provisions are currently being reviewed by Congress.

State Guaranteed Loans

The Federal Government, in cooperation with State Agencies, private non-profit agencies, and participating lenders has designed a loan program to enable students to borrow from commercial sources such as banks, savings and loan associations, and credit unions, at a low interest rate.

The guaranteed loans are particularly useful to students from middle and uppermiddle income families who may not qualify on the basis of need for assistance from other sources. Loans are made directly to students by banks and other lending institutions and the loan will be repaid directly to the lender. The size of the loan depends on the state policies. Federal guidelines allow for a maximum of \$1500 each academic year.

If you have difficulty in locating a lending institution, please contact the Student Aid Office and it will assist in locating a source for the loan.

United Student Aid Funds Loan

Students who have been accepted for enrollment or are currently enrolled in good standing are eligible for loans under this program. The provisions and terms are the same as under the Guaranteed Loan Program. Please refer to this section for information concerning the amount which may be borrowed, repayment, and interest benefits.

A student interested in this program should contact the Student Aid Office to secure an application.

The major difference between this program and the Guaranteed Loan Program is that these loans may be used as matching for Educational Opportunity Grants. A Guaranteed Loan may not be used as a match for an Educational Opportunity Grant.

Emergency Loans

The Student Financial Aid Office administers an emergency loan program for students who encounter unexpected financial problems during the year. No interest is charged on the loans and the student has a one year repayment period. These emergency funds may be secured at any time during the year when there are sufficient funds.

DEFERRED PAYMENT PLANS

For those who prefer to budget annual school costs out of monthly income, the University of Dayton makes three approved financing programs available to those who prefer to make monthly payments.

The Tuition Plan, Incorporated

The family may borrow that part of the college expenses they feel necessary and distribute the payments over a period of months. This loan program has conventional interest rates. Correspondence related to this plan should be directed to the Assistant to the Bursar, University of Dayton.

BankAmericard

Application and specific information about the BankAmericard may be obtained at your local bank. The card may be used to meet all University collectable expenses within the limits of the Line O' Credit for that card.

Master Charge

Application and specific information about the Master Charge may be obtained at your local bank. The card may be used to meet all university collectable expenses within the credit limits for that card.

TUITION REDUCTIONS

The University of Dayton awards tuition reductions to qualified, full-time, undergraduate students in good standing. No student or his family is eligible to benefit from more than one of these reductions at the same time.

These reductions are not automatic. A student must complete an application each academic year in the Office of Student Aid. It is preferred that a student make application by April 30 for the following academic year. Applications will be accepted not later than three weeks after the first day of classes for the term for which the tuition reduction is requested.

Sibling Reduction

A reduction of \$200 per term is available to families who are supporting two or more unmarried dependents simultaneously at the University of Dayton. The second member of the family and each additional member in attendance shall be eligible for this reduction.

Marianist Reduction

A \$200 per term reduction is granted for relatives, including only brothers and sisters and their children (nephews and nieces), of active members of the Society of Mary (nonscholastic) and the Institute of the Daughters of Mary.

EMPLOYMENT

Under the federally supported COLLEGE WORK-STUDY PROGRAM, on-campus and off-campus work opportunities are provided for full-time students who request employment and demonstrate a financial need for employment to meet educational expenses. Students may work up to fifteen hours per week during the

school term and will receive a payroll check semi-monthly for his services. When possible, a student will be employed by the University in a job related to his educational objectives.

For students who do not qualify for this program, INSTITUTIONAL EMPLOYMENT opportunities are available in the Personnel Office located in Room 215 of St. Mary's Hall. Applications should be made to that office as soon as the student knows what his schedule will be for the period of employment.

ADDITIONAL OPPORTUNITIES

G. I. Bill

To be eligible for benefits under the G.I. Bill any veteran of the Army, Navy, Marine Corps, Air Force or Coast Guard must have served continuously on active duty for at least 181 days ending after January 31, 1955 and have received an honorable discharge. If the veteran's active duty was ended by a service-connected disability they do not need to meet the 181 day requirement. Persons still in the service are eligible if they have had at least two years of active duty. Applications may be obtained from the Office of Student Aid or from any Veterans Administration Office.

Junior G. I. Bill

Educational opportunities are available to children of veterans who died or were permanently and totally disabled in or as the result of service in the Armed Forces of the United States during specified time periods. Application must be filed by a parent or guardian with the Veterans Administration.

Vocational Rehabilitation

Training of handicapped persons for gainful employment is arranged through state vocational rehabilitation agencies. Request for information about rehabilitation services should be directed to the State Director, Vocational Rehabilitation Agency, the State Capitol.

Social Security

Sons and daughters of retired, disabled, or deceased workers may be eligible for Social Security benefits up to the age of 22 if they are unmarried, full-time students. Information pertaining to eligibility and procedure may be obtained from the Social Security Office serving your community.





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.

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.

When a student has completed all the requirements for a degree, the University will grant the degree.

Every student, unless he is listed as a special student, is required to pursue a program that leads to a 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, 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.

INNOVATIVE AND INTERDISCIPLINARY STUDIES

The Office of the Assistant Provost fosters innovative education throughout the University. One means is the Center for Interdisciplinary Studies which administers UDI courses designed to accommodate inter-school offerings and experimental programs drawing resources from the entire University. (When interdisciplinary studies involve disciplines that lie entirely within one of the Schools of the University or the College of Arts and Sciences, the programs are handled by the respective School or College.)

The Office of the Assistant Provost also serves as a clearinghouse for information on innovative and experimental programs within UD and at other colleges and universities. An extensive collection of materials is housed in the Second Story (old Music Building); a newsletter is circulated monthly; the Assistant Provost encourages and furthers coordination of new programs and proposals by virtue of his acquaintance with proposals originating anywhere in the University.

The Second Story also provides meeting, classroom, and office space for experimental programs, primarily directed by students. Among programs with offices there are Project Interface, Peace, Future and Environmental Studies; and the Program for Self-Directed Learning. Projects aimed at developing educational alternatives and needing space may apply for facilities.

The overriding concern of the Office of the Assistant Provost is to diversify and increase the range of educational alternatives—all of which are efforts to more effectively relate the University and its resources to the newly emerged needs of a highly complex society. Toward implementation of this goal, the Office of the Assistant Provost seeks to encourage efforts to develop ways to speak to significant problems not met by the usual range of University offerings. For example, areas

receiving direct support recently include Peace, Environmental, and Futurist studies. Each of these offers courses, workshops, seminars, and other programs. Project Interface is another example of an effort directed primarily to the problem of University-community relations and the educational value of continual interfacing. Similarly, the Center for Afro-American Affairs, described more fully elsewhere, is related to the Office by virtue of its efforts to fill a lacunae in University offerings as well as to meet the shortage of channels for persons from minority groups.

There are no limits on the kinds of programs which might be developed save the following:

1. programs must involve UD students and faculty;
2. programs must be directed to a problem of major significance.
3. programs must be commensurate with University resources and/or attract support from outside funds; and
4. they must enhance and further the recognized goals and purposes of the University of Dayton.

CENTER FOR AFRO-AMERICAN AFFAIRS

"The ideas which we hold about people affect us in dealing with them. Our perceptions of the nature of man and his capacities determine the goals we seek, the judgments we make and even the experiments we are willing to try. Our beliefs and perceptions can imprison us and limit our movement at every turn or they can liberate us to explore and confront new possibilities."

Center for Urban Studies brochure
Harvard Graduate School of Education

The Center for Afro-American Affairs has been established to provide a multi-dimensional educational experience for University of Dayton students, the academic community and the urban community of Dayton. The Center hopes to bridge the gaps between the urban community, the University, the world of skilled work and professional services.

With the city of Dayton as one of twenty Model Cities in the United States, the Center for Afro-American Affairs utilizes many of the community organizations, public schools, urban leaders and federally funded projects as resources for its students and University programs.

The African and Afro-American Studies Program began in January, 1970, concentrating its efforts in the areas of curriculum development, community action, research and student activities. The prime objective was to develop a Center for Afro-American Affairs, that would initiate programs to meet a wide spectrum of needs of students, especially minority students, and to institute change that would make the University more responsive to urban problems.

The four components of the program are: 1) Undergraduate Academic Program, 2) Graduate Fellowship Program, 3) Cultural and Special Service Programs, 4) Urban and Community Projects.

Undergraduate Academic Program

The Undergraduate Academic Program is designed to provide an Urban and Afro-American perspective on such disciplines as History, Political Science, Sociology, English, Education, and Economics. The Courses of the Center are accessible to all students. The relationship of the Center to other departments of the University is cooperative.

Students who wish to obtain a Minor in Afro-American Studies must successfully complete between 15-25 hours of course work. While there are no standard course requirements for a minor, each student must select a faculty advisor to consult about his program. A student may also take courses applicable to his major area of study.

Graduate Fellowship Program

During the 1970-71 academic year, the Office of Human Relations, in cooperation with the African and Afro-American Studies Program, submitted a proposal to the University of Dayton with the purpose of establishing a "Black Graduate Student Affairs Committee."

Once established, this committee's primary purpose and responsibility concerned itself with the total aspect of recruiting and retaining outstanding Black Graduate Students through a combination of graduate program incentives and financial assistance.

After generating support and some enthusiasm for the program among various Departments, the Black Graduate Student Affairs Committee served as a team of recruiters who personally visited and actively recruited students from a number of selected predominantly Black colleges and universities.

Financial assistance is available to Black students selected for the Graduate Fellowship Program. In addition to their studies in a regular discipline, they are involved in various programs of the Center through teaching and directing courses, seminars, workshops, and other involvements in the urban community.

Cultural and Special Service Programs

The Cultural and Special Programs provides programs and services to meet the socio-cultural needs of University of Dayton students, focusing upon minority students and the urban community.

The programs and services offered supplement existing University student activities. The primary objective of the Cultural and Special Service Programs is to establish the type of atmosphere conducive to recruiting minority students to the University of Dayton and enabling them to succeed socially as well as academically.

Urban and Community Projects

In order to promote greater University involvement in the urban community, the Center has become involved in various urban and community projects.

Students may be involved as interns in urban and community projects through courses offered by the Center. These internships place students in urban and educational agencies throughout the greater Dayton area.

Other programs and activities of the Center include a newsletter, high school seminars and an Urban and Afro-American Collection Room.

GRADES AND SCHOLARSHIP

Final grades are submitted at the end of the term and these are made part of a student's permanent record in accord with the option chosen by the student. Copies of these reports are given to the students and deans and are sent to the parents and or guardians. 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. The final grades of freshman students are also sent to their high school principals.

Undergraduate students are permitted a selection from three alternative grading options. The course grading options are as follows:

No. 1—A, B, C, D, F; No. 2—A, B, C, No Credit (NC-less than "C" grade); No. 3—Satisfactory (S-"C" grade or better), No Credit (NC-less than "C" grade).

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

- A—Excellent; *options 1 and 2*; for each semester credit hour, four quality points are allowed.
- B—Good; *options 1 and 2*; for each semester credit hour, three quality points are allowed.
- C—Fair; *options 1 and 2*; for each semester credit hour, two quality points are allowed.
- D—Poor but passing; *option 1 only*; for each semester credit hour, one quality point is allowed.
- F—Failed; *option 1 only*. This mark indicates poor scholastic work, or failure to report withdrawal from a course. In such cases, required courses must be repeated, preferably at the next opportunity. A student may not take the course a third time unless at the time of the second failure he has a *standard* cumulative point average of 2.50 or higher. Under no circumstances will he be permitted to take a course a fourth time.
- S—Satisfactory. *This mark indicates credit given for a course taken under grading option 3 and is granted for passing work, "C" grade or better. The "S" credit shall be counted as hours only and shall not be considered in determining a student's option cumulative point average.*
- NC—No Credit. *This mark indicates no credit given for a course taken under either grading options 2 or 3 and is granted for grades lower than "C" or for failure to report withdrawal from a course. In such cases, required courses must be retaken, preferably at the next opportunity. The student may not take the course*

a third time unless at the time of the second failure he has a standard cumulative point average of 2.50 or higher. Under no circumstances will he be permitted to take a course a fourth time.

- I—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" (*option 1 only*) or "NC" (*options 2 and 3*) on the student's permanent record card. No quality point is allowed.
- W—Withdraw. During the first three weeks of a full term (or the first eight class days of a split term) a student may withdraw from a class without record. Beginning with the fourth week and continuing through the second week after mid-term (or ninth class day and continuing through the fourth week) a student may withdraw with a "W." For the remainder of the term until the last day of classes (final withdrawal date as posted in the University calendar) a student may withdraw and obtain a "W" only by making a formal request to his Dean. During this period a "W" will be permitted only for special nonacademic reasons, which include, but are not limited to, poor personal health, financial difficulties, family matters of health, and change in career objectives. When a student finds it necessary to withdraw from 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 only for work credited from other institutions by the Office of Admissions. 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 University reserves the right to change the grading system if so directed by the Academic Senate, which has it under study.



GRADE POINT AVERAGES

The SEMESTER grade point average is the total number of quality points divided by the number of semester credit hours carried by the student.

The STANDARD cumulative grade point average is computed from the grades submitted by the instructors except those for sub-college work; in such cases where courses are repeated, both the original grades and the new grades are computed. Marks of W, K, X, S, NC and Em are disregarded in the computation of the standard CGPA, but a course for which an "F" or an "I" is received is included in the usual manner.

The OPTION cumulative grade point average is computed from the grades A, B, C, D, F under option 1 and the grades A, B, C under option 2.

ACADEMIC STANDING

The student's academic standing is determined by using the standard cumulative point average and applying the following rules:

1. To be in good academic standing a student must have a *standard* 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 *standard* 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 standard cumulative point average, will be dismissed from the University. *The Registrar's Office will post the statement, "Subject to Dismissal" on the student's permanent record.*

3. A *standard* cumulative point average below those required will automatically place the student on academic probation for the next term. *The Registrar's*

Office will post the statement "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 to 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 *standard* 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

Beginning with the Second Term, January 1971, the option cumulative point average will be used in computing honors and awards for scholarships. Honors and awards for scholarships are announced at the Honors Convocation.

To be eligible for consideration for honors graduation, students must have completed seventy-five per cent (75%) of their hours under either grading options 1 or 2.

To be graduated "With Honors" a student must have an *option* 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 institution he attended prior to coming to the University of Dayton.

The notation of honors is made in the commencement program, on the diploma, on the student's permanent record, and on transcript, as follows:

Cum Laude—if the *option* cumulative point average is between 3.5 and 3.69;

Magna Cum Laude—if the *option* cumulative point average is between 3.7 and 3.89;

Summa Cum Laude—if the *option* 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 an *option* 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.

Business Administration — The Delta Sigma Pi Scholarship Key, awarded by the Epsilon Tau Chapter to the male senior in commerce and business administration who ranks highest in his class.

Business Administration — The Charles Huston Brown '20 Award of Excellence to Outstanding Senior in Business Administration in memory of Brother, William Haebe, S.M.—donated by C. Huston Brown '20.

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.

Chemical Engineering — The Robert G. Schenck Memorial Award of Excellence to the outstanding Junior in Chemical Engineering—donated by Stanley L. Lopata.

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 Si Burick Award of Excellence for Outstanding Academic and Cocurricular Achievement in Mass Media Arts—donated by the University of Dayton.

Current Problem Award—The Very Reverend 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 Thomas R. Armstrong '38 Award of Excellence for Outstanding Electrical Engineering

Achievement in memory of Brother Ulrich Rappel, S.M., and W. Frank Armstrong—donated by Thomas R. Armstrong '38.

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.

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

Engineering Technology—The Tau Alpha Pi Award of Excellence to the Outstanding Senior in the Bachelor of Technology Program—donated by Gamma Beta Chapter, University of Dayton.

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-Men—The Mary M. Shay Award of Excellence in both academic and extracurricular activities (Senior men only)—donated by the Poelking family.

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 Senior 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 and Systems Engineering—The American Institute of Industrial Engineers Award of Excellence to Outstanding Student in Industrial and Systems 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. Kieffaber '05—donated by Michael J. Gibbons '02.

Mechanical Engineering—The Brother Andrew R. Weber, S.M. Award of Excellence for outstanding service and achievement in Mechanical Engineering—donated by the Poelking family.

Mechanical Engineering Technology—The Dayton Chapter, No. 18, Society of Manufacturing Engineers, Award of Excellence to the Outstanding Freshman in Mechanical Engineering Technology.

Military Science—Department of the Army Award. The superior cadet award, provided by the Department of the Army, is presented to the outstanding cadet of each academic year.

Military Science—The Lt. Robert M. Wallace '65 Memorial Award to the Outstanding Junior ROTC Scholarship Cadet—donated by his family and friends.

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.

Psychology—The Rev. Raymond A. Roesch, S.M., Award of Excellence to Outstanding Student in Psychology—donated by Rev. Raymond A. Roesch '36.

Public Relations—The Public Relations Department Award of Excellence to a student organization for an outstanding contribution of service to the community—donated by the Poelking family.

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 Joseph Zusman '65 Award of Excellence to Outstanding Senior in Social Work Studies—donated by Joseph Zusman '65.

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.

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.

Theological Studies—The Msgr. J. Dean McFarland Award of Excellence to the outstanding Junior majoring in Theological Studies—donated by the Poelking family.

CLASS ATTENDANCE

FOREWARD

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 twice the number of class meetings per week, i.e., six absences for a class meeting three times a week. 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.

The handling of tardiness is left to the discretion of the instructor.

TRANSCRIPTS

A transcript of the permanent academic record is a confidential document to be released only with the permission of the student except under due process of law. A transcript of record will be issued by the Registrar upon receipt of a request in writing. The student may request his transcript to be mailed to himself, another institution, or organization. The first copy of a transcript requested after graduation is a complimentary copy. All transcripts except the complimentary copy will require advanced payment of a dollar. The charge for transcripts ordered in lots of two or more is a dollar for the first copy and fifty cents for each additional copy.





VI College of Arts and Sciences

DR. LEONARD A. MANN, S.M., *Dean*
DR. ROCCO M. DONATELLI, *Associate Dean*
MISS ANN FRANKLIN, *Assistant Dean*
MR. RICHARD PETERSON, *Assistant Dean*

The College of Arts and Sciences strives to help students developing habits of clear thinking and critical reasoning, a recognition and respect for the role of each person in society, and an appreciation of the aesthetic and spiritual values in life. Ideally, the student has achieved this development when he understands and loves his fellow man, and when he can confront the issues and problems that arise in every walk of life with a wisdom that never loses sight of his final destiny.

It is assumed that the student enrolls in the College of Arts and Sciences because he wants to avail himself of all the assistance possible to achieve this goal; he shapes his curriculum with faculty guidance, and he is eager to take advantage of the many other opportunities that the formal curriculum does not provide: the social and professional clubs and societies, the campus publications and radio station, the guest artist and lecture series, and the spiritual retreats and other religious programs. It is especially important that the student recognize the opportunity provided by membership on the committees that exist throughout the campus, and especially in the academic departments. It is through these that he can learn to work with fellow students, faculty members, and administrators on projects that have basic meaning to the department or to the College. And it is through these that he can share in decision making at every level.

DEGREE REQUIREMENTS

For the Bachelor of Arts or Bachelor of Science degree, it is necessary to complete all of the requirements listed in one of the programs on the following pages. Programs ordinarily include the four following components: a) tool courses involving skills appropriate to the particular programs, such as mathematics, English, speech, or languages; b) a breadth requirement involving introductory courses in the major areas of knowledge, such as the natural sciences, the social sciences, and the humanities and fine arts; c) student electives involving hours which must be taken but the selection of which is completely the option of the student; and d) a concentration requirement involving advanced work in two or more disciplines along with the necessary prerequisites. Ideally the student program each term would not be limited to any one of the components. The concentration requirement ordinarily occupies about half of the total degree program.

CONCENTRATION REQUIREMENT

The concentration requirement may currently be satisfied in any of the three following ways:

1. *Departmental Concentrations.*

The departmental area of concentration (or major) requires a bloc of courses in a single discipline with supporting courses in a related discipline or disciplines. The departmental bloc of courses usually does not exceed 39 hours. Only six specialized programs in the College presently require more than 39 hours in a single discipline.

Supporting courses do not include tool courses or distribution requirements. Supporting courses, usually ranging from 12-18 hours, may be from one or more disciplines as the major department provides.

For the Bachelor of Arts degree, the possible concentrations (majors) are:

American Studies	Geology	Political Science
Chemistry	History	Psychology
Communication Arts	Languages	Sociology or Anthropology
Economics	Mathematics	Theatre
English	Music	Theological Studies
Fine Arts	Philosophy	

For the Bachelor of Science degree, the possible concentrations (majors) are:

Biology	Home Economics (the general	Premedical Program
Chemistry	or the dietetics program)	Psychology
Computer Science	Mathematics	Social Work
Criminal Justice	Medical Technology	Systems Science
Geology	Physics	Urban Life
	Physical Science	

Other programs leading to the Bachelor's degree:

Bachelor of General Studies	Bachelor of Fine Arts	Bachelor of Music
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2. *Established Interdisciplinary Concentrations.*

American Studies, the Premedical, and the predental programs are present examples of established interdisciplinary concentrations. Other interdisciplinary concentrations are in various stages of preparation. Such programs are established by an interdisciplinary committee and administered by the chairman of the committee.

3. *Individually Designed Interdisciplinary Concentrations.*

Students demonstrating extraordinary interest, special skills or needs, and sound academic status may initiate individually designed concentrations. Such concentrations are negotiated between the student and the chairmen of the relevant departments. Long-range plans for the individually designed concentration are

submitted to the student's Dean for final approval. Such long-range plans may be altered with appropriate supporting rationale and after the approval of chairmen and Dean.

ACADEMIC STANDING

As a requirement for graduation, it is necessary that the standard grade point average be at least 2.00 in the major 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.

SPECIAL EDUCATIONAL OPTIONS

1. *B.A. or B.S. Degree Program with Teacher Certification*

This program is designed for students in the College who wish to pursue secondary school certification concurrent with their major program of studies. Students admitted to the program must satisfy all the requirements for their degree in the College as well as the requirements designated by the School of Education and the State of Ohio for secondary school certification.

Application for admission to the program is made through the Office of the Dean of the College no later than three weeks prior to the beginning of scheduling. Applicants should normally have a cumulative grade point average of at least 2.9 at the time of their application.

COMMENTS: Counseling relative to the degree program is given by the major department; counseling relative to certification is given by the Chairman of the Department of Secondary Education.

Additional information is given in this Bulletin, page 82.

2. *Bachelor of General Studies*

The Bachelor of General Studies degree is designed to provide a maximum of flexibility for undergraduates in planning their program of studies. It will permit students more latitude in utilizing university resources for acquiring an education which serves their individual needs. Since there are no specific requirements, the student may plan his entire program to the best advantage of his particular educational objectives. The program is designed for those students who do not wish to pursue the traditional degree programs with a departmental major.

3. *Arts and Sciences Interdisciplinary (ASI) Courses*

The College of Arts and Sciences constantly strives to present meaningful and significant innovative learning experience to its students. Courses and programs or activities which are interdisciplinary or multidisciplinary in nature and therefore not offered through the traditional departmental structure are possible through authorization by the Academic Affairs Committee of the College. There are two main types of ASI course offerings as follows:

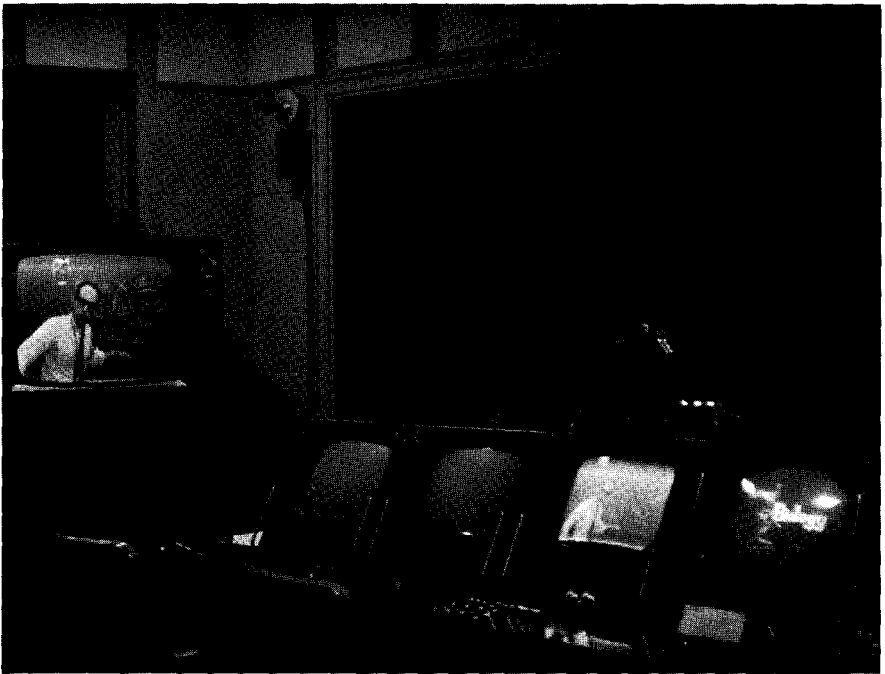
a) Student Initiated Interdisciplinary Courses: Such courses are credited

and formulated by a group of students sharing a similar interest in a theme. They spend one term developing the course and then register for it the following term. Only students who assist in the planning may register for the course.

- b) Extradepartmental Academic Activity: Such activities are created and formulated by students and/or faculty members to assist *others* in an educationally significant activity not otherwise possible within departmental structure. Such activities are open to any student who qualifies.

All ASI credit applies toward the student's general elective requirements, but a student may petition the chairman of a department to apply such credit to specific departmental requirements.

Additional information is available in the Office of the Dean of the College of Arts and Sciences.



TYPICAL PROGRAM FOR BACHELOR OF ARTS STUDENTS

<i>Dept.</i>	<i>No.</i>	<i>Course</i>	<i>1st Term¹</i>	<i>2nd Term</i>	<i>3rd Term</i>
<i>Freshman Year</i>					
ASI	100	Arts and Sciences Seminar	1-0-0		
ENG	101-6	Freshman English	3-0-3	3-0-3	
HST ²	—	History Electives	3-0-3	3-0-3	
PHL	101	Basic Problems in Philosophy	3-0-3		
SPE ⁴	101	Fundamentals of Effective Speaking			3-0-3
THL ⁵	—	Theology 100-200 Elective		3-0-3	
— ⁶	—	Foreign Language Course	3-0-3	3-0-3	
—	—	Science Course	3-3-4	3-3-4	
			16	16	
<i>Sophomore Year</i>					
HST ²	—	American History Electives	3-0-3	3-0-3	
PHL	201	Basic Problems in Philosophy II	3-0-3		
THL ⁵	—	Theology Elective		3-0-3	
—	—	Foreign Language Course	3-0-3	3-0-3	
Soc ⁷	—	Sociology Elective		3-0-3	
ENG ⁸	—	Sophomore English	3-0-3	3-0-3	
PSY ⁹	201	Introduction to Psychology	3-0-3		
			15	15	

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

²Some programs offer options in lieu of the History requirement. If required, Freshmen elect 6 hrs. from Hst 101, 102, 120, 125, 130, 135. Sophomores elect 6 hrs. from Hst 251, 252, 260, 265, 270, 275.

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 exemptions from further language study. Freshmen not exempted will be placed at the proper level. Freshmen who begin a new language take 101. Transfer students consult department chairman. Some programs offer options in lieu of the language requirement.

⁷Some programs do not require Sociology.

⁸Some programs offer options in lieu of the English requirement.

⁹Some programs do not require Psychology.

For further details: See specific programs on the following pages or consult chairman of Department.

TYPICAL PROGRAM FOR BACHELOR OF ARTS STUDENTS—Cont.

<i>Dept.</i>	<i>No.</i>	<i>Course</i>	<i>1st Term¹</i>	<i>2nd Term</i>	<i>3rd Term</i>
<i>Junior Year</i>					
PHL	—	Philosophy Elective	3-0-3		
THL	—	Theology Elective		3-0-3	
		Concentration Requirements	6-0-6	6-0-6	
		Electives	3-0-3	3-0-3	
		Minor	3-0-3	3-0-3	
			15	15	
<i>Senior Year</i>					
PHL	—	Philosophy Elective	3-0-3		
THL	—	Theology Elective		3-0-3	
		Concentration Requirements	6-0-6	6-0-6	
		Electives	3-0-3	3-0-3	
		Minor	3-0-3	3-0-3	
			15	15	

B.A. OR B.S. DEGREE PROGRAM WITH TEACHER CERTIFICATION

Students admitted to this Program must satisfy all the requirements for their degree program in addition to the Education courses listed below. These courses constitute the minor concentration in the degree program.

Term A

EDS 109	<i>Personal Professional Development</i>	1 credit hour
EDF 206	<i>Adolescent Growth and Development</i>	3 credit hours
	Art and Music majors take Edf 207	

Term B

EDF 110	<i>Personal Professional Development</i>	1 credit hour
EDF 208	<i>The Learning Process</i>	3 credit hours

Term C

EDS 351	<i>The Secondary School, Self, and Society</i>	2 credit hours
EDS 4—	<i>Methods Course</i>	3 credit hours
	This course is taken in the principal teaching field	

Term D

EDS 414	<i>Student Teaching (Secondary)</i>	9 credit hours
	Twelve weeks in actual classroom situation under supervision	
EDF 419	<i>Philosophy of Education</i>	3 credit hours

BACHELOR OF GENERAL STUDIES PROGRAM

The specific requirements for the Bachelor of General Studies are as follows:

1. Admission requirements for the B.G.S. degree are the same as those for any other degree now offered in the College of Arts and Sciences. At the outset of the program, a limited number of students will be accepted into this program.

2. Candidacy for the B.G.S. may be declared in the first year, but students in good academic standing may transfer from one program to another, provided they meet the requirements of, and can be accommodated by the program into which they transfer.
3. The candidate must complete:
 - a. 120 semester hours with an overall G.P.A. of 2.00
 - b. A minimum of 54 semester hours selected from 300-400 level courses with a G.P.A. of 2.00 or better
 - c. Additional courses to attain the required 120 hours, with a G.P.A. of 2.00 or better.
4. Not more than 40 semester hours of work from any one academic discipline may be counted toward the 120 semester hours required for graduation.
5. First year students in the B.G.S. degree program will be required to seek approval of course elections under the direction of the appropriate official of the College of Arts and Sciences. Thereafter, students will be required to plan an academic program satisfying requirements for graduation in consultation with their advisors. A special advisory program will be set up for the B.G.S. Program by the administration of the College of Arts and Sciences.
6. The usual policy regarding prerequisites remains in effect in this program.

**PROGRAM—A1: BACHELOR OF ARTS WITH AN
INTERDISCIPLINARY MAJOR IN AMERICAN
STUDIES**

American Studies 300-1, 400	9 semester hours
First Area Electives	24 semester hours
These courses are chosen from Group A, B, or C, as listed under American Studies courses of instruction, p. 000 of the Undergraduate Bulletin 1971-72.	
Second Area Electives	9 semester hours
These courses are chosen from one of the two remaining Groups A, B, or C, as listed under American Studies, p. 000.	
Third Area Electives	6 semester hours
These courses are chosen from the remaining Group A, B, or C, as listed under American Studies, p. 000.	
English 101-6, 204, 200-level elective	12 semester hours
² Foreign Language	3-12 semester hours
History (6 hours of 100-level, 6 hours of 200-level).....	12 semester hours
Philosophy 101-201, electives	12 semester hours
¹ Theology (3 hours 100-200 level, electives).....	12 semester hours
Science	8 semester hours
Social Studies Prerequisite Electives.....	6 semester hours
Students choose six or more hours in departments in which they plan to take upper level courses, i.e. Eco 201-2, Pol 201, Psy 201, Soc 205.	
Speech 101	3 semester hours
General Academic Electives to a total of at least.....	120 semester hours

¹Non-Catholic students substitute general academic electives.

²Proficiency through the intermediate level (202) must be achieved.

**PROGRAM—A2: BACHELOR OF ARTS WITH A MAJOR IN
CHEMISTRY**

<i>Dept.</i>	<i>No.</i>	<i>Course</i>	<i>1st Term</i> ¹	<i>2nd Term</i>	<i>3rd Term</i>
<i>Freshman Year</i>					
ENG	101-6	Freshman English	3-0-3	3-0-3	
CHM ²	123-4	General Chemistry	3-3-4	3-3-4	
MTH ³	112-3	Intro. Math. Anal.	3-0-3	3-0-3	
— ⁶	—	Humanities/Soc. Sc. Elective			3-0-3
THL	100-200	Theology Elective	3-0-3		
—	—	Electives	3-0-3	3-0-3	
CHM	100	Arts and Sciences Orientation	1-0-0		
			16	16	
<i>Sophomore Year</i>					
CHM ²	201	Quantitative Analysis	2-4-4		
MTH ³	215	Basic Statistics		3-0-3	
PHYS ²	201-2	General Physics	3-3-4	3-3-4	
— ⁹	—	Foreign Language	3-0-3	3-0-3	
THL	—	Theology Elective	3-0-3		
— ⁶	—	Humanities/Soc. Sc. Elective			3-0-3
—	—	Elective			3-0-3
			14	16	
<i>Junior Year</i>					
CHM ⁴	313-4	Organic Chemistry	3-3-4	3-3-4	
—	—	Elective	3-0-3		
— ⁵	—	Science Electives	3-0-3	3-0-3	
— ⁶	—	Humanities/Soc. Sc. Electives	6-0-6	9-0-9	
			16	16	
<i>Senior Year</i>					
CHM ⁷	302	Physical Chemistry	3-0-3		
CHM	309	Chemical Literature		1-0-1	
—	—	Elective	3-0-3		
— ⁸	—	Science Electives	3-0-3	3-0-3	
— ⁶	—	Humanities/Soc. Sc. Electives	6-0-6	12-0-12	
			15	16	

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

²May substitute more advanced course depending on background, placement test, or permission of department head.

³May substitute Mth 128-9 for Mth 112, 113 and 215.

⁴May substitute Chm 315-6.

⁵Must include two of the following courses: Chm 405, 412, 415, 420, 417, 404.

⁶Humanities 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.

⁷May substitute Chm 303-4.

⁸Must include either two or more of the above in footnote 5, or two of the following: Bio 313, 310, 312, 325, 340, 407, 411, certain computer science, geology, etc.

⁹See footnote 6, under Typical Program for Bachelor of Arts students.

PROGRAM—A3: BACHELOR OF ARTS WITH A MAJOR IN COMMUNICATION ARTS

Major Program	30 semester hours
Mathematics and/or Sciences Unit	12 semester hours
Two Units of 12 hours each selected from the Departments of Psychology, Sociology and Anthropology, Economics, Political Science, Languages, Marketing, Accounting, Business Management, Education. (At least 6 hours in each Unit must be 300-400 level.)	24 semester hours
Two Units of 12 hours each selected from the Departments of English, History, Philosophy, Theological Studies, Performing and Visual Arts. (If English, Philosophy, and/or Theological Studies is chosen, then the Unit of 12 hours excludes the hours already required by the University. At least 6 hours in each unit must be 300-400 level)	24 semester hours
University Requirements	18 semester hours
English 101-6	(6)
Philosophy 101-201	(6)
¹ Theology (3 hours 100-200 level, elective)....	(6)
General Academic Electives to total at least.....	120 semester hours

¹Non-Catholic students may substitute general academic electives.

PROGRAM—A4: BACHELOR OF ARTS WITH A MAJOR IN ECONOMICS

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

1. *Economics*—30 hrs. Eco. 201-2, Eco. 340-1, and 18 hrs. upper division electives.
2. *Minor Area*. Must satisfy requirements of minor department, but at least 12 upper division hours are needed.
3. Math 112-3.
4. Psy. 201
5. Lab. Science, 8 hrs.
6. *Humanities*. History, 12 hrs.; Philosophy 101-201 and 6 upper division hrs.; Catholic students take 12 hrs. of Theology including 3 hrs. at 100 or 200 level, Foreign Language competency required at the intermediate level (see note 6, page 81).
7. *General Requirements*. Freshman and Sophomore English (12 hrs.); Spe. 101.
8. *Electives*. Sufficient hrs. to attain a minimum of 120 semester hrs. credit for graduation.
9. *Departmental Requirements for Minor in Economics*. Eco. 201-2, Eco. 340-1, and six upper division hours in acceptable area.

The following curriculum is offered as a sample.

PROGRAM—A4—Continued

<i>Dept.</i>	<i>No.</i>	<i>Course</i>	<i>1st Term</i> ¹	<i>2nd Term</i>	<i>3rd Term</i>
<i>Freshman Year</i>					
ORI	100	Arts and Sciences Orientation	1-0-0		
ENG	101-6	Freshman English	3-0-3	3-0-3	
HST ²	—	History electives	3-0-3	3-0-3	
PHL	101	Basic Problems in Philosophy I	3-0-3		
THL ³	—	Theology 100-200 elective		3-0-3	
—	—	Modern Language course	3-0-3	3-0-3	
—	—	Science course	3-2-4	3-2-4	
			16	16	
<i>Sophomore Year</i>					
ECO	201-2	Principles of Economics	3-0-3	3-0-3	
ENG	—	Sophomore English	3-0-3	3-0-3	
MTH	112-3	Introductory Mathematical Analysis	3-0-3	3-0-3	
HST ²	—	American History electives	3-0-3	3-0-3	
PHL	201	Basic Problems in Philosophy II	3-0-3		
THL ³	—	Theology elective		3-0-3	
—	—	Modern Language course	3-0-3	3-0-3	
			16	16	
<i>Junior Year</i>					
HST ²	—	American History Elective	3-0-3	3-0-3	
ECO	340	Micro Economic Analysis	3-0-3		
ECO	341	Macro Economic Analysis		3-0-3	
—	—	Economics Elective		3-0-3	
PHL	—	Philosophy elective	3-0-3		
PSY	201	Introductory Psychology		3-0-3	
THL ³	—	Theology elective		3-0-3	
—	—	General	3-0-3		
—	—	Minor		3-0-3	
SPE	101	Fundamentals of Effective Speaking	3-0-3		
			15	18	
<i>Senior Year</i>					
PHL	—	Philosophy elective		3-0-3	
THL ³	—	Theology elective	3-0-3		
—	—	Economics elective	6-0-6	9-0-9	
—	—	Minor	6-0-6	3-0-3	
			15	15	

¹Under "Term" 3-0-3 means 3 hours class, 0 hours laboratory, and 3 hours credit.²See footnote 2, p. 81.³Non-Catholic students may take an elective.

PROGRAM—A5: BACHELOR OF ARTS WITH A MAJOR IN ENGLISH

¹ English	36 semester hours
Minor requirement—excludes major (300-400 level).....	12 semester hours
Philosophy 101-201, electives	12 semester hours
¹ Theology (3 hours 100-200 level, electives).....	12 semester hours
History (6 hours of 100-level, 6 hours of 200-level).....	12 semester hours
³ Modern Language	3-12 semester hours

¹English 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.

²Non-Catholic students may substitute general academic electives.

³French or German preferred. Proficiency through the intermediate level (202) must be achieved.

Speech 101	3 semester hours
Sociology elective	3 semester hours
Psychology 201	3 semester hours
Science	8 semester hours
General Academic Electives to total at least.....	120 semester hours

PROGRAM—A6: BACHELOR OF ARTS WITH A MAJOR IN FINE ARTS

University Requirements

Speech	(3)	
English 101-6	(6)	
Philosophy 101-201	(6)	
Theology ¹ (3 hours 100-200 level, elective)	(6)	21 semester hours
Science Unit		8 semester hours
Major Program ² Required courses 103-4, 111-2, 191, 226-7, 371, 372, 471, 472		28 semester hours
Art electives		16 semester hours
		Total..... 44 semester hours

Two units of 12 hours each selected from the Departments of Psychology, Sociology/Anthropology, Business Administration Core Program, Economics, Political Science, Language, Marketing, Business Management, Education. (At least 6 hours in each unit must be 300-400 level)..... 24 semester hours

Two units of 12 hours each selected from the Departments of English, Communication Arts, History, Philosophy, Theological Studies, Performing and Visual Arts (other than major). At least 6 hours in each unit must be 300-400 level. (If English, Philosophy, Theological Studies and/or Communication Arts then the unit of 12 hours excludes the hours already required by the University)..... 24 semester hours

General Academic Electives to total at least.....120 semester hours

¹Non-Catholic students may substitute general academic electives.

²Portfolio required before program placement for regular as well as transfer students. Portfolio is also a requirement for graduation.



PROGRAM—A7: BACHELOR OF FINE ARTS

University Requirements

Speech 101	(3)	
English 101-106	(6)	
Philosophy 101-201	(6)	
Theology ¹ (3 hours 100-200 level, elective)	(6)	21 semester hours

Major Program ² Required courses Art 103-4, 111-2, 191, 208-9, C221-2, 226-7, 231-2, 261, 263, 371, 372, 411, 471, 472....	44 semester hours
Art Electives	44 semester hours

Total..... 88 semester hours

Breadth Requirement

Two units of 6-9 hours each selected from the Departments of Psychology, Sociology/Anthropology, Political Science, Mathematics, Science, Economics, Marketing, Business Management, Education, Home Economics, Business Administration Core Program, (12 hours required)12-15 semester hours

Two units of 6-9 hours each selected from the Departments of Language, English, History, Performing and Visual Arts (other than major field), Communication Arts, Philosophy, Theological Studies.

PROGRAM—A7—Continued

(If English, Philosophy, Theological Studies or Communication Arts is chosen, then the 6 hour requirements excludes the hours already required by the University).....12-15 semester hours

Total..... 27 semester hours

General Academic Electives to total at least.....136 semester hours

¹Non-Catholic students may substitute general academic electives.

²Portfolio required before program placement for regular as well as transfer students. Portfolio is also required for graduation.

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

History	38 semester hours
Minor requirement—excludes major (300-400 level).....	12 semester hours
English 101-6, 200-level electives	12 semester hours
Philosophy 101-201, electives	12 semester hours
¹ Theology (3 hours 100-200 level, electives).....	12 semester hours
² Language	3-12 semester hours
Science	8 semester hours
Psychology 201	3 semester hours
Sociology elective	3 semester hours
Speech 101	3 semester hours
General academic electives to total at least	120 semester hours

¹Non-Catholic students may substitute general academic electives.

²Proficiency through the intermediate level (202) must be achieved.

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

Language	36 semester hours
One of two options is available with the approval of the department chairman.	
1. Major in a single language—24 hours of 300-400 level courses	
2. Composite Major—minimum of 18 hours in each of two languages (any level).	
Concentration requirement—excludes major (300-400 level).....	12 semester hours
It is recommended but not required that students of either option 1 or 2 above elect a minor in languages as well.	
For Option 1—12 hours of 300-400 level work not in the major language.	
For option 2—18 hours (any level) in a language or languages preferably other than those of the composite major	
English 101-6, 200-level electives	12 semester hours
History (6 hours of 100-level, 6 hours of 200-level).....	12 semester hours

PROGRAM—A9—Continued

Philosophy 101-201, electives	12 semester hours
¹ Theology (3 hours 100-200 level, electives).....	12 semester hours
Science	8 semester hours
Speech 101	3 semester hours
Psychology 201	3 semester hours
Sociology elective	3 semester hours
General Academic Electives to total at least.....	120 semester hours

<i>Dept.</i>	<i>No.</i>	<i>Course</i>	<i>1st Term²</i>	<i>2nd Term</i>	<i>3rd Term</i>
<i>Freshman and Sophomore Years</i>					
Follow typical program (p. 81)					
<i>Junior Year³</i>					
PHL	—	Philosophy elective		3-0-3	
THL ¹	—	Theology elective	3-0-3		
—	—	General elective	3-0-3	3-0-3	
—	—	Language courses	6-0-6	6-0-6	
—	—	Minor	3-0-3	3-0-3	
			15	15	
<i>Senior Year⁴</i>					
PHL	—	Philosophy elective		3-0-3	
THL ¹	—	Theology elective	3-0-3		
—	—	General elective	3-0-3	3-0-3	
—	—	Language courses	6-0-6	6-0-6	
—	—	Minor	3-0-3	3-0-3	
			15	15	

¹Non-Catholic students may substitute general academic electives.

²Under "Term," 3-0-3 means 3 hrs. class, 0 hrs. laboratory, and 3 hrs. credit.

³Students 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.

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 a least two terms.

PROGRAM—A10: BACHELOR OF ARTS WITH A MAJOR IN MATHEMATICS

A. MAJOR FIELD—Qualified students elect Mth 128 upon entering; those with weaker backgrounds elect Mth 101. Upon completion of 15 credit hours in calculus and differential equations (or demonstration of proficiency) a student will, with the approval of the department, elect 24 credit hours of upper-level

PROGRAM—A10—Continued

course work. Students with strong mathematical ability may be invited to satisfy these requirements in the honors program offered by the department.

B. MINOR FIELD—The requirement for the minor normally consists of 12 upper-level credit hours. The chosen field may require prerequisite knowledge that could extend the total number of hours beyond 12. The minor is to be chosen in any area of the humanities or in secondary education, subject to approval by the department.

C. COURSES IN OTHER AREAS

1. In addition to Eng 101, Eng 106, and Spe 101, which are university requirements, a course in computer programming is required of all majors, and everyone is required to attain 202 level proficiency in a foreign language approved by the department.

2. **FINE ARTS, HUMANITIES AND BEHAVIORAL SCIENCE**—A minimum of 36 credit hours, including 6 in theology for Catholic students, and 6 in philosophy. Eng 101, Eng 106 and Spe 101 may not be counted toward the fulfillment of this requirement. Course selections may be made from the following disciplines: economics, English, fine arts, history, languages, performing and liberal arts, philosophy, psychology, sociology and theology.

3. **SCIENCE**—A minimum of 8 credit hours which may be chosen in biology, chemistry, geology or physics.

4. **UNIVERSITY REQUIREMENTS AND ELECTIVES**—Students are subject to all general requirements of the University. (For example, all students must have a minimum of 120 academic credit hours for graduation.)

More detailed information will be provided by the Department upon request. All majors are encouraged to cooperate closely with their departmental advisor in planning their course work.

PROGRAM—A11: BACHELOR OF ARTS WITH A MAJOR IN MUSIC**University Requirements**

Speech	(3)	
English 101-6	(6)	
Philosophy 101-201	(6)	
Theology ¹ (3 hours 100-200 level, elective)	(6)	21 semester hours
Science Unit		8 semester hours
Major Program ² Required courses Music 108, 151-2, 301 or 302, 308, 321, 351, Applied Music 10 to 16 credit hours (296-9 required if keyboard proficiency is low)		28-38 semester hours
Music Electives		7-16 semester hours
	Total	44 semester hours

Two units of 12 hours each selected from the Departments of Psychology, Sociology/Anthropology, Business Administration Core Program, Economics, Political Science, Language, Marketing, Business

PROGRAM—A11—Continued

Management, Education (at least 6 hours in each unit must be 300-400 level) 24 semester hours

Two units of 12 hours each selected from the Departments of Communication Arts, English, History, Philosophy, Theological Studies, Performing and Visual Arts (other than major). At least 6 hours in each unit must be 300-400 level. (If English, Philosophy, Theological Studies and/or Communication Arts then the unit of 12 hours excludes the hours already required by the University)..... 24 semester hours

General Academic Electives to total at least.....120 semester hours

¹Non-Catholic students may substitute general academic electives.

²Prospective candidates will be auditioned by the Music faculty for placement in a degree program.

Note: Applied Music students are required to perform at least once each term.

PROGRAM—A12: BACHELOR OF MUSIC

University Requirements

Speech	(3)	
English 101-106	(6)	
Philosophy 101-201	(6)	
Theology ¹ (3 hours 100-200 level, elective)	(6)	21 semester hours
Major Program ²		

Applied Music Major

Theory	.....20
Lit. and Conducting (Piano majors: 361-2 & 371-2 req.)	.....20
Applied Music Major	.....24
Applied Music Minor	.....12
Ensemble	.....4-8
Music Electives	.....4-8
Total	..... 88 semester hours

All Applied Music Majors will present 1/3 or 1/2 of a recital in the junior year, and a full recital in the senior year.

Theory or Composition Major

First Year Theory	.....8
Theory/Composition above 100 level	.....24
Literature and Conducting	.....20
Applied Music Minor	.....12
Ensemble	.....4-8
Music Electives	.....12-16
Total	..... 88 semester hours

Theory Major: The student will submit a research project in the senior year, specified by the faculty and subject to its approval.

Composition Major: The student will have a specified amount of original composition performed in the junior and senior years.

Music Electives: will be selected to provide a balanced program in the

PROGRAM—A12—Continued

areas of Theory/Composition, Applied Music, and Literature. Music 425-6, 431-2 and certain Music Education courses may be selected on advice from counselor and approval of instructor.

The student may select any combination of the following academic areas but must take at least 6 hours in each selection: Psychology, Sociology/Anthropology, Economics, Political Science, Language, Business Administration Core Program (12 hours req.), Marketing, Business Management, Education, Science, Mathematics, English, History, Philosophy, Theological Studies, Performing and Visual Arts (other than the major program), Communication Arts. (If English, Philosophy, Theological Studies and/or Communication Arts is chosen, then the 6 hour requirement excludes the hours already required by the University)..... 27 semester hours
 General Academic electives to total at least.....136 semester hours

- ¹Non-Catholic students may substitute general academic electives.
 - ²Prospective candidates will be auditioned by the Music faculty for placement in a degree program. The candidate must demonstrate a high level of performance in his chosen instrument or in voice. Audition and faculty screening is required before student is assigned to this degree program.
- Note: Applied Music students are required to perform at least once each term.

PROGRAM—A13: BACHELOR OF ARTS WITH A MAJOR IN PHILOSOPHY

Philosophy 30 semester hours
 Concentration requirement—excludes major (300-400 level)..... 12 semester hours
 English 101-6, 200-level electives 12 semester hours
 History (6 hours of 100-level, 6 hours of 200 level)..... 12 semester hours
¹Theology (3 hours 100-200 level, electives)..... 12 semester hours
²Language3-12 semester hours
 Science 8 semester hours
 Speech 101 3 semester hours
 Psychology 201 3 semester hours
 Sociology Elective 3 semester hours
 General Academic Electives to total at least.....120 semester hours

- ¹Non-Catholic students may substitute general academic electives.
- ²Proficiency through the intermediate level (202) must be achieved.

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*. 30 semester hours chosen from the courses offered by the Departments of American Studies, Communication Arts, English, History, Languages, Performing and Visual Arts, Philosophy, and Theological Studies. These must include 6 hours in Philosophy and Catholic students must take 6 hours in Theology. Credits earned in English 101-106 and Speech 101 are not included in the number of hours stated above.
2. *Social Sciences*. 12 semester hours chosen from courses offered in Anthropology, Economics, Psychology, and Sociology.
3. *Science*. 8 semester hours of laboratory science.
4. *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 semesters of the following, in any combination:
 1. Two semesters of a foreign language
 2. Two semesters of accounting selected from the following: (207, 208, 301, 340 and 407)
 3. Two semesters of computer science (107 and one programming course)
 4. Two semesters of mathematics and statistics (Math 101 or 107 and Math 207)
5. *Political Science*. 30 semester hours which must include Pol 201, 202, 418, and 421 or 431. The other 18 hours must be chosen by the student from 300-400 level courses in the Department in consultation with his advisor and in accordance with his academic or career objective.
6. *Minor Subject or Area Concentration*. A student has the option of taking a minor subject or an area concentration to broaden his academic background.

Minor Subject. The course requirements for a minor are established by the individual Department concerned. Students who are accepted in the School of Education's E-11 program may minor in Secondary Education.

Area concentration. A student interested in a multi-disciplinary approach in the field of urban affairs, pre-legal training, or international affairs is encouraged to take an area concentration in lieu of a minor. The Political Science Department has developed area concentration programs in *urban affairs*, *pre-law*, and *international affairs*. Each program requires 15-18 semester hours in political science and other academic disciplines. Specific description for each of the three programs are available in the Political Science Department.

PROGRAM—A14—Continued

<i>Dept.</i>	<i>No.</i>	<i>Course</i>	<i>1st Term</i>	<i>2nd Term</i>
<i>Freshman Year</i>				
POL	100	Freshman Seminar	1-0-0	
ENG	101-6	Freshman English	3-0-3	3-0-3
—	—	Humanities Electives ¹	3-0-3	3-0-3
PHL	101	Basic Problems in Philosophy I	3-0-3	
THL	—	Theology 100-200 Elective ²		3-0-3
—	—	Tool of Research Electives ³	3-0-3	3-0-3
—	—	Science Course	3-3-4	3-3-4
			16	16
<i>Sophomore Year</i>				
POL	201-2	The American Political System and Introduction to Comparative Politics	3-0-3	3-0-3
—	—	Humanities Electives ¹	3-0-3	3-0-3
PHL	201	Basic Problems in Philosophy II	3-0-3	
—	—	Social Science Electives ⁴	3-0-3	3-0-3
THL	—	Theology Elective ²		3-0-3
—	—	Tool of Research Electives ³	3-0-3	3-0-3
SPE	101	Fundamentals of Effective Speaking		3-0-3
			15	18
<i>Junior and Senior Years</i>				
See Political Science Program (A14)				

¹See Political Science Program (A14) No. 1
²Non-Catholic students take Humanities electives
³See Political Science Program (A14) No. 6
⁴See Political Science Program (A14) No. 2

PROGRAM—A16: BACHELOR OF ARTS WITH A MAJOR IN PSYCHOLOGY

Psychology—201, 302, 310, electives.....	31 semester hours
May substitute Mth 207 or Mth 215 for Psy 302	
Minor (300-400 level)	12 semester hours
Science (Bio. Chm. Geo. Phys.)	8 semester hours
English 101-6, 6 hours of 200-level.....	12 semester hours
³ Language	12 semester hours
History (6 hours 100 level, 6 hours 200 level).....	12 semester hours
Philosophy (101-201, electives)	12 semester hours
¹ Theology (3 cr. hrs.-100 or 200 level, electives).....	12 semester hours
Speech 101	3 semester hours
² General Academic Electives to total at least.....	120 semester hours

¹Non-Catholic students substitute general academic electives.
²Certain Mathematics courses are recommended for students planning to pursue graduate study.
³French, German or Russian preferred. However, student may substitute General Electives in lieu of a language. See advisor as graduate study often requires language. See footnote 6 under Typical Program for Bachelor of Art students.

PROGRAM—A17: BACHELOR OF ARTS WITH A MAJOR IN SOCIOLOGY

Sociology: Soc. 205, 401, 415, 420 or 422.....	12 semester hours
Sociology/Anthropology/Social Work electives	18 semester hours
Minor: (300-400 level)	12 semester hours
Philosophy 101, 201, electives	12 semester hours
¹ Theology, electives	12 semester hours
English 101-6, 6 hrs. 200-level	12 semester hours
History: 6 hrs. 100-level, 6 hrs. 200-level.....	12 semester hours
² Language: (101-102, 201-202)	12 semester hours
Laboratory Science	8 semester hours
Psychology 201	3 semester hours
Speech 101	3 semester hours
General Academic electives to total at least.....	120 semester hours

PROGRAM—A17: BACHELOR OF ARTS WITH A MAJOR IN ANTHROPOLOGY

Anthropology: Ant 210, 321, 322, 408	12 semester hours
Sociology: Soc 401 and Soc 415 or Soc/Ant 439	6 semester hours
Anthropology/Sociology/Social Work electives	12 semester hours
Minor: (300-400 level)	12 semester hours
Philosophy 101, 201, electives	12 semester hours
¹ Theology, electives	12 semester hours
English 101-6, 6 hrs. 200-level	12 semester hours
History: 6 hrs. 100-level, 6 hrs. 200-level	12 semester hours
² Language: (101-102, 201-202)	12 semester hours
Laboratory Science	8 semester hours
Psychology 201	3 semester hours
Speech 101	3 semester hours
General Academic electives to total at least.....	120 semester hours

¹Non-Catholic students substitute general academic electives.
²Proficiency through the intermediate level (202) must be achieved.

PROGRAM—A18: BACHELOR OF ARTS WITH A MAJOR IN THEATRE

University Requirements	
Speech	(3)
English 101-6	(6)
Philosophy 101-201	(6)
Theology ¹ (3 hours 100-200 level, elective)	(6)
Science Unit	21 semester hours
Major Program ² Required courses Theatre 100 and/or 300, 105, 205, 210, 211, 325 or 326, 330, 340, 415 or 425, 485 or 490	26 semester hours
Theatre electives	12 semester hours
Total.....	38 semester hours

Two units of 12 hours each selected from the Department of Psychology, Sociology/Anthropology, Business Administration Core

PROGRAM—A18—Continued

- Program, Economics, Political Science, Language, Marketing, Business Management, Education (at least 6 hours in each unit must be 300-400 level) 24 semester hours
- Two units of 12 hours each selected from the Departments of Communication Arts, English, History, Philosophy, Theological Studies, Performing and Visual Arts (other than major). At least 6 hours in each unit must be 300-400 level. (If English, Philosophy, Theological Studies and/or Communication Arts then the unit of 12 hours excludes the hours already required by the University)..... 24 semester hours
- General Academic Electives to total at least.....120 semester hours

¹Non-Catholic students substitute general academic electives.

²All theatre majors must audition for placement in the degree program.

Note: Participation in each major production is required of all theatre majors for the Bachelor's Degree. Credit for participation is received in Thr 100 and Thr 300.

PROGRAM—A19: BACHELOR OF ARTS WITH A MAJOR IN THEOLOGICAL STUDIES

- Theological Studies 33 semester hours
 - a. Thl 210 and one other 200 level course
 - b. One course in each of the 5 areas:
 - History of Religions (00-09)
 - Biblical Studies (10-19)
 - Historical Theology (20-29)
 - Systematic Theology (30-49)
 - Christian Ethics/Religion and Culture (60-79)
 - c. Seminar (Thl 490)
 - d. Electives
- Concentration requirement—excludes major (300-400 level)..... 12 semester hours
- Humanities30 semester hours
 - Philosophy 101-201, electives.....(12)
 - Electives from Literature, History¹, Performing and Visual Arts, Communication Arts, American Studies.....(18)
- Social and Behavioral Science 12 semester hours
 - Electives from Economics, Political Science, Psychology
 - Sociology/Anthropology
- Communication Skills12-21 semester hours
 - English 101-106(6)
 - Language²(3-12)
 - Speech 101(3)
- Laboratory Science 8 semester hours
- General Academic Electives to total at least.....120 semester hours

¹Hst 101, 102 or 306, 260 recommended.

²Proficiency through the intermediate level (202) must be achieved.

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

Biology Curriculum Description

Biology core courses (as listed in Program S-1).....	25
Supporting science courses (Chm, Mth, Phy).....	30
Science electives (Bio, Chm, Mth, Phy, CpS).....	15
Humanities electives (see below but normally include Speech, three English, two Language, two Philosophy and two Theology courses)	43
Social Science electives (see below).....	<u>12</u>
	125 hours minimum

Humanities electives are meant to broaden an individual's approach to life and may be selected from American Studies, Art, Communication Arts, English, History, Language, Music, Philosophy, Theater, Theology, etc.

Social Science electives are meant to add flexibility to an individual's program and may be selected from Anthropology, Administration, Economics, Education, Marketing, Political Science, Psychology, Social Work, Sociology, etc.

Science electives may be selected from Physics, Mathematics, Computer Science, Chemistry and the following biology courses:

- Bio 209 Comparative Anatomy
- Bio 303 Physiology
- Bio 310 Microtechnique and Histology
- Bio 325 Parasitology
- Bio 361 Invertebrate Zoology
- Bio 407 Embryology
- Bio 411 General Bacteriology
- Bio 434 Higher Plants
- Bio 436 Lower Plants
- Bio 466 Pathogenic Bacteriology and Serology
- Bio 421-2 Biological Problems. These are courses wherein a student, in arrangement with a faculty member, carries out a library or laboratory research problem.
- Bio 423 Mini-Topics in Biology. Specialized, short-term offerings in areas dictated by student interest. Such courses may run from one to several weeks.

For full descriptions of Biology Department course offerings see Courses of Instruction in this Bulletin.

With permission of the Chairman, students may select one or more of their science electives from graduate courses in the specialization areas of *Ecology and Evolutionary Biology*, *Biofunction* and *Microbiology and Cell Biology* (see Graduate Catalog for course listings).

The Biology Honors Program offers superior students the opportunity to become engaged in independent study and research projects.

PROGRAM—S1—Continued

<i>Dept.</i>	<i>No.</i>	<i>Course</i>	<i>1st Term</i> ¹	<i>2nd Term</i>	<i>3rd Term</i>
<i>Freshman Year</i>					
BIO	100	Freshman Seminar	1-0-0		
BIO	151-2*	Concepts of Biology	3-0-3	3-3-4	
CHM	123-4	General Chemistry	3-3-4	3-3-4	
MTH ²	—	Calculus	3-0-3	3-0-3	
ENG	101-6	English	3-0-3	3-0-3	
— ³	—	Humanities/Soc. Sci. elective	3-0-3	3-0-3	
			16	17	
<i>Sophomore Year</i>					
BIO	201L	Bio Lab Investigations	0-3-1		
BIO	340	Cell Biology		3-0-3	
CHM	313-4	Organic Chemistry	3-3-4	3-3-4	
PHY ⁴	—	Physics	3-2-4	3-2-4	
ENG	—	English elective		3-0-3	
— ³	—	Humanities/Soc. Sci. electives	8-0-8	3-0-3	
			17	17	
<i>Junior Year</i>					
BIO	312	General Genetics	3-0-3		
BIO	342	Developmental Biology		3-0-3	
BIO	344L	Cell and Genetic Lab	0-3-2		
BIO	345L	Growth and Environment Lab		0-3-2	
— ⁵	—	Science elective	3-0-3		
— ³	—	Humanities/Soc. Sci. elective	9-0-9	12-0-12	
			17	17	
<i>Senior Year</i>					
BIO	420	Seminar	1-0-1		
BIO	440	Environmental Biology	3-0-3		
— ⁵	—	Science elective	3-3-4	6-6-8	
— ³	—	Humanities/Soc. Sci. elective	9-0-9	9-0-9	
			17	17	

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

²Placement test may necessitate initial course in precalculus (Mth 101). Depending on background and interests, three calculus sequences are available, Mth 112-3, Mth 118-9, Math 128-9 (see Math Department Courses of Instruction).

³See information under Biology Curriculum Description. Courses to satisfy University requirements: Spe 101, Phl 6 cr., Thl (if Catholic), 6 cr.

⁴Depending on math background and interests, two physics sequences are available, Phy 201-2, Phy 196 and 207-8 (see Physics Department Courses of Instruction).

⁵See information under Biology Curriculum Description.

*Qualified students may be invited to take part in Honors Sections of Bio 152 Lab.

**PROGRAM—S2: BACHELOR OF SCIENCE WITH A MAJOR IN
CHEMISTRY**

<i>Dept.</i>	<i>No.</i>	<i>Course</i>	<i>1st Term¹</i>	<i>2nd Term</i>	<i>3rd Term</i>
<i>Freshman Year</i>					
CHM	100	Freshman Seminar	1-0-0		
CHM	123-4	General Chemistry	3-0-3	3-0-3	
CHM	123L	General Chemistry Lab	1-3-1		
CHM	126L	Quantitative Analysis Lab		1-4-2	
MTH	128-9	Analytical Geometry & Calculus I & II	4-0-4	4-0-4	
PHYS	196	General Physics I		3-2-4	
ENG	101-6	Freshman English	3-0-3	3-0-3	
SPE	101	Fundamentals of Effective Speaking	3-0-3		
			14	16	
<i>Sophomore Year</i>					
CHM ²	315-6	Organic Chemistry	3-6-5	3-6-5	
GER ³	—	German	3-0-3	3-0-3	
MTH	228	Analytical Geometry & Calculus III	4-0-4		
PHYS	207-8	General Physics II & III	3-2-4	3-2-4	
—	—4	Elective		3-0-3	
			16	15	
<i>Junior Year</i>					
CHM	303-4	Physical Chemistry	3-3-4	3-3-4	
CHM	309	Chemical Literature		1-0-1	
CHM	405	Qualitative Organic Analysis	1-6-3		
CHM	415	Analytical Chemistry		2-6-4	
THL ⁵	—	Theology Elective	3-0-3		
—	—6	Humanities/Soc. Sc. Electives	3-0-3	3-0-3	
—	—4	Elective	3-0-3		
—	—7	Chemistry Elective		3-0-3	
			16	15	

PROGRAM—S2—Continued

Dept.	No.	Course	1st Term ¹	2nd Term	3rd Term
<i>Senior Year</i>					
CHM	417	Inorganic Chemistry	3-0-3		
CHM	497	Seminar	1-0-1		
—	—7	Chemistry Electives	3-0-3	3-0-3	
—	—5	Theology		3-0-3	
—	—	Philosophy	3-0-3	3-0-3	
—	—6	Humanities/Soc. Sc. Electives	3-0-3	3-0-3	
—	—4	Electives	3-0-3	3-0-3	
			16	15	

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

²Chm 313-314 may be substituted with permission of the Department Chairman.

³Students with 2 or more years of high school German take Ger 201-2; all others take Ger 101-2.

⁴Elective: Any course for which the student has the necessary prerequisites.

⁵Non-Catholic students take an elective.

⁶Humanities/Soc. Sc. electives: These may include courses in Art, Music, Economics, Sociology, Psychology, and others.

⁷Chemistry electives: Chm 404, 412, 416, 420, 498, 499.



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**—Two courses in basic programming, normally Cps 144, and Cps 245, and 24 credits in upper-level courses, normally including two courses in the area of numerical methods or analysis, and Cps 342 in the area of programming.
 2. **MATHEMATICS**—basic calculus and normally 12 credits beyond calculus, including linear algebra. Differential equations, abstract algebra and statistics are recommended.
- 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 concentrated in one area of the humanities. 100-level Eng and Spe courses do not apply to this requirement.
 4. **SCIENCES**—normally 12 credits, including Phy 196, 207.
 5. **COMPOSITION AND SPEECH SKILLS**—a certain level of proficiency is required in these skills. 100-level Eng and Spe courses may be prescribed by the department or elected by the student to assist in attaining the minimum proficiency.
- C. ELECTIVES** (about 25 credits)
6. Additional courses to attain the required 120.
- More detailed information may be obtained from the department.

PROGRAM—S4: BACHELOR OF SCIENCE WITH A MAJOR IN CRIMINAL JUSTICE

Option A—Total Program

A student must successfully complete a minimum of 122 semester hours for the degree.

1. *Humanities*. 33 semester hours chosen from the courses offered by the Departments of Communication Arts, English, History, Languages, Performing and Visual Arts, Philosophy, and Theological Studies. These must include Eng 101 and 106, Phl 101 and 201, Spe 101, and six semester credits in Theology for Catholic students.
2. *Social and Behavioral Sciences*. 42 semester hours chosen from courses offered in Anthropology, Economics, Political Science, Psychology and Sociology. These must include Eco 201, Pol 201, 301, 305, 360, 450 and 475, Psy 200, 408, Soc 307 and 332.
3. *Criminal Justice*. A minimal of 30 semester hours, which must include CrJ 200, 213 and 320.
4. A criminal justice major in Option A is also required to take 8 hours in science, Acc 301, Cps 107 and a Math elective.

PROGRAM—S4—Continued**Option A: Bachelor of Science with a Major in Criminal Justice**

<i>Dept.</i>	<i>No.</i>	<i>Course</i>	<i>1st Term</i>	<i>2nd Term</i>	<i>3rd Term</i>
<i>Freshman Year</i>					
—	—	Science Course	3-3-4		
CRJ	200	Principles of Criminal Justice	2-0-2		
CRJ	213	Criminal Law		3-0-3	
ENG	101-106	Freshman English	3-0-3	3-0-3	
—	—	Humanities Elective	3-0-3		
MTH	—	Math Elective		3-0-3	
PHL	101-201	Basic Problems in Phl I-II	3-0-3	3-0-3	
SPE	101	Fundamentals of Effective Speaking		3-0-3	
			15	15	
<i>Sophomore Year</i>					
ACC	301	Financial Reporting and Adm.	3-0-3		
CRJ	320	Law of Evidence and Proc.		2-0-2	
CRJ	—	Criminal Justice Electives	3-0-3	3-0-3	
ECO	201	Principles of Economics	3-0-3		
—	—	Humanities Electives		6-0-6	
—	—	Science Course	3-3-4		
POL	201	American Political Systems		3-0-3	
—	—	Social Science Elective		3-0-3	
SOC	307	Criminology and Penology	3-0-3		
			16	17	
<i>Junior Year</i>					
CPS	107	Computing—General Survey	2-0-2		
CRJ	—	Criminal Justice Electives	3-0-3	6-0-6	
POL	301	American Judicial Proc.		3-0-3	
POL	475	American Political Thought	3-0-3		
POL	305	Intro. to Public Adm.	3-0-3		
PSY	201	Intro. to Psychology		3-0-3	
SOC	332	Urban Sociology	3-0-3		
THL ¹	—	Theology Electives	3-0-3	3-0-3	
			17	15	
<i>Senior Year</i>					
CRJ	—	Criminal Justice Electives	6-0-6	3-0-3	
—	—	Humanities Elective	3-0-3		
POL	360	Urban Politics	3-0-3		
POL	450	Civil Liberties	3-0-3		
PSY	408	Social Psychology		3-0-3	
—	—	Social Science Electives		6-0-6	
			15	12	

¹Catholic students are required to take six credits in Theology; Non-Catholic students may substitute six credit hours of Humanities electives.

Option B—Transfer Program

- To be admitted as a major in this program under Option B, a student must have received an Associate Degree in Police Science, Corrections, Law Enforcement, or a similar field of criminal justice, and achieved a 2.50 cumulative average on

PROGRAM—S4—Continued

- a 4.00 grading system. A candidate is required to complete a minimum of 65 semester hours beyond the Associate degree to receive the B.S. degree.
2. *Prerequisites:* One year of college English and courses in Criminology, Juvenile Delinquency, Introduction to Sociology, Introduction to Psychology and American Government are required in addition to 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, History, Languages, Performing and Visual Arts, Philosophy and Theological Studies. This must include Spe 101, Fundamentals of Effective Speaking and six credits in Philosophy. Catholic students are also required to take six credits in Theology.
 4. *Social and Behavioral Sciences:* A minimum of 30 hours is required in the program, chosen from courses in Economics, Political Science, Psychology, Sociology and Anthropology. These must include: Eco 201, Principles of Economics I; Pol 301, American Judicial Process; Pol 360, Urban Politics; Pol 450, Civil Liberties; Psy 408, Social Psychology; Soc 332, Urban Sociology; Pol 305, Introduction to Public Administration; and Pol 475, American Political Thought.
 5. A criminal justice major is also required to take Cps 107, Computing—General Survey.
 6. *Criminal Justice:* A minimum of 15 hours is required in the program including CrJ 200, Principles of Criminal Justice; CrJ 213, Criminal Law and CrJ 320, Law of Evidence and Procedure. The rest of the fifteen credits is determined by the student in consultation with his advisor in the Criminal Justice program. A Criminal Justice major does not have to register for CrJ 213, Criminal Law, if this course was included in the associate degree program and the student has maintained a "C" grade in the course.

Option B—Complete Transferability

<i>Dept.</i>	<i>No.</i>	<i>Course</i>	<i>1st Term</i>	<i>2nd Term</i>	<i>3rd Term</i>
<i>Junior Year</i>					
CPS	107	Computing—General Survey	2-0-2		
CRJ	200	Principles of Criminal Just.	2-0-2		
CRJ	—	Criminal Justice Elective	3-0-3		
ECO	201	Principles of Economics		3-0-3	
PHL	101-201	Basic Problems of Phl I-II	3-0-3	3-0-3	
POL	301	American Judicial Process		3-0-3	
POL	305	Intro. to Public Adm.	3-0-3		
PSY	408	Social Psychology		3-0-3	
SOC	332	Urban Sociology	3-0-3		
SPE	101	Fundamentals of Effective Speaking		3-0-3	
			16	15	

PROGRAM—S4—Continued

<i>Dept.</i>	<i>No.</i>	<i>Courses</i>	<i>1st Term¹</i>	<i>2nd Term</i>	<i>3rd Term</i>
<i>Senior Year</i>					
CRJ	—	Criminal Justice Electives	5-0-5	3-0-3	
CRJ	320	Law of Evidence and Proc.		2-0-2	
—	—	Humanities Electives	3-0-3		
POL	360	Urban Politics	3-0-3		
POL	450	Civil Liberties		3-0-3	
POL	475	American Political Thought		3-0-3	
—	—	Social Science Electives		6-0-6	
THL ¹	—	Theology Electives	3-0-3	3-0-3	
			17	17	

¹Catholic students are required to take six credits in Theology; Non-catholic students may substitute six credit hours of Humanities electives.

PROGRAM—S5: BACHELOR OF SCIENCE WITH A MAJOR IN GEOLOGY

Geology	38 semester hours
¹ Mathematics 128-9	8 semester hours
Chemistry 123-4	8 semester hours
² Physics 201-2	8 semester hours
³ Science Electives	16 semester hours
Philosophy 101-201	6 semester hours
⁴ Theology Electives (100-200 level)	6 semester hours
English 101-6	6 semester hours
Speech 101	3 semester hours
Non-Science Electives	6 semester hours
General Academic Electives to total at least.....	120 semester hours

¹May substitute Mth 112-3, 118-9, with permission of department.

²May substitute Phy 196, 207 if Mth 128-9 is taken.

³Choose from courses in Chemistry, Mathematics, Physics, Biology, Geology, or Engineering.

⁴Non-Catholic students substitute non-science electives.

HOME ECONOMICS

The undergraduate program in Home Economics at the University of Dayton has as its primary purpose to utilize principles from many disciplines in solving problems faced by individuals, families and communities in day by day living. The B.S. degree in Home Economics is currently awarded in General Home Economics and Dietetics.

The flexible curriculum in the General Program allows for a wide choice of electives. The student majoring in this program may elect courses in Home Economics, Marketing, Communications, Fine Arts, and the natural and social sciences to emphasize Home Economics areas in Human Relations, Research, Applied Art, and Consumer Behavior. The Education E-11 program, as a minor, qualifies the

student for Vocational Home Economics certification. The department accreditation offers the possibility of Vocational certification in the School of Education and the E-11 program.

BACHELOR OF SCIENCE WITH A MAJOR IN HOME ECONOMICS (GENERAL HOME ECONOMICS)

Home Economics	46 semester hours
¹ Biology 101-2 or Chm 123-4	8 semester hours
English 101-6, 200-level elective	9 semester hours
Social Sciences, Language or History	18 semester hours
Philosophy 101-201	6 semester hours
² Theology 112, elective	6 semester hours
Speech 101	3 semester hours
³ Major, Minor, or electives to total at least.....	120 semester hours

¹May substitute Chm 123-4.

²Non-Catholic students substitute general academic electives.

³Can be in Home Economics, Fine Arts, Marketing, History, English or the Education E-11 program. The E-11 program requires one course in Chemistry and 51 hours in Home Economics to be vocationally certified. Total academic hours must total 120.

PROGRAM—S6: BACHELOR OF SCIENCE WITH A MAJOR IN HOME ECONOMICS (General Home Economics)

<i>Dept.</i>	<i>No.</i>	<i>Course</i>	<i>1st Term¹</i>	<i>2nd Term</i>	<i>3rd Term</i>
<i>Freshman Year</i>					
Bio ²	101-2	General Biology	3-3-4	3-3-4	
ENG	101-6	Freshman English	3-0-3	3-0-3	
HEC	101	Clothing (I)		2-3-3	
HEC	105	Intro. to Related Art	2-3-3		
— ⁴	—	Electives	3-0-3	3-0-3	
PHL	106	Basic Problems in Philosophy I		3-0-3	
THL ⁵	—	Theology Elective	3-0-3		
HEC	100	Freshman Seminar	1-0-0		
			16	16	
<i>Sophomore Year</i>					
ENG	—	Sophomore English Elective		3-0-3	
HEC	200	Introductory Foods		2-4-4	
HEC	211	Clothing (II)	3-0-3		
HEC	214	Textiles		3-0-3	
—	—	Social Sciences, Language or History	3-0-3	3-0-3	
PHL	201	Basic Problems in Philosophy II		3-0-3	
— ³	—	Electives	6-0-6		
THL ⁵	—	Theology Elective	3-0-3		
			15	16	



PROGRAM—S6—Continued

<i>Dept.</i>	<i>No.</i>	<i>Course</i>	<i>1st Term¹</i>	<i>2nd Term</i>	<i>3rd Term</i>
<i>Junior Year</i>					
HEC	221	Consumer Education & Home Mgmt.	3-0-3		
HEC	225	Child Development	3-0-3		
HEC	303	Nutrition and Health		3-0-3	
HEC	309	Household Equipment	3-0-3		
HEC	318	Family Living		3-0-3	
HEC	328	Housing and Home Furnishings		3-0-3	
— ³		Electives	3-0-3		
SPE	101	Fundamentals of Effective Speech		3-0-3	
— ⁶	—	Minor, Major, Elective	3-0-3	3-0-3	
			15	15	
<i>Senior Year</i>					
HEC	406	Home Management II	1-4-3		
HEC	—	Home Economics electives	3-0-3	6-0-6	
— ⁶	—	Minor, Major, Elective	9-0-9	9-0-9	
			15	15	

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

²May substitute Chm 123-4.

³Social Sciences, Language or History.

⁴Non-Catholic students substitute general academic electives.

⁵Can be in Home Economics, Fine Arts, Marketing, History, English or the Education E-11 program. The E-11 program requires one course in Chemistry and 51 hours in Home Economics to be Vocationally certified. Total academic hours must total 120.

The B.S. degree in Dietetics prepares the student to function as a professional in some phase of nutritional care. The uniqueness of the profession is to improve the nutrition of human beings, to advance the science of dietetics and nutrition and to promote education in these and allied areas. The department meets the standards of the American Dietetic Association for the preparation of students to enter a fifth year of study in a dietetics internship program.

Bachelor of Science with a major in Home Economics (Dietetic Internship)

Home Economics	36 semester hours
Biology 101-2, 411	13 semester hours
Chemistry 123-4, 313-4, 420	19 semester hours
¹ Physical Education 205-6	6 semester hours
Psychology 201, 420 or.....	6 semester hours
Philosophy 101-201	6 semester hours
² Theology elective (100-200 level)	6 semester hours
English 101-6, 200-level elective	9 semester hours
Speech 101	3 semester hours
Accounting 207	3 semester hours
³ General Academic Electives to total at least.....	120 semester hours

¹With permission Bio 303 may be substituted for Edp 205-6.

²Non-Catholic students substitute general academic electives.

³American Dietetic Association requires one course in Learning Theory either Methods of Teaching (Hec 405) or Learning Theory (EdF 208).

PROGRAM—S7: BACHELOR OF SCIENCE WITH A MAJOR IN HOME ECONOMICS (Dietetic Internship)

<i>Dept.</i>	<i>No.</i>	<i>Course</i>	<i>1st Term¹</i>	<i>2nd Term</i>	<i>3rd Term</i>
<i>Freshman Year</i>					
HEC	100	Freshman Seminar	1-0-0		
BIO	101	General Biology		3-3-4	
CHM	123-4	General Chemistry	3-3-4	3-3-4	
ENG	101-6	Freshman English	3-0-3	3-0-3	
HEC	200	Introductory Foods		2-4-4	
PHL	101	Basic Problems in Philosophy I	3-0-3		
THL ²	—	Theology elective	3-0-3		
ORI	100	Arts and Sciences Orientation	1-0-0		
SPE	101	Fundamentals of Effective Speaking	3-0-3		
			16	15	
<i>Sophomore Year</i>					
BIO	102	General Biology	3-3-4		
CHM	313-4	Organic Chemistry	3-3-4	3-3-4	
ENG	—	English elective		3-0-3	
HEC	303	Nutrition and Health	3-0-3		
HEC	225	Child Development I	3-0-3		
PHL	201	Basic Problems in Philosophy II		3-0-3	
PSY	201	General Psychology		3-0-3	
THL ²	—	Theology elective		3-0-3	
—	—	Elective	3-0-3		
			17	16	

PROGRAM—S7—Continued

<i>Dept.</i>	<i>No.</i>	<i>Course</i>	<i>1st Term¹</i>	<i>2nd Term</i>	<i>3rd Term</i>
<i>Junior Year</i>					
ACC	301	Fin. Reporting and Admin.	3-0-3		
EdP ³	205-6	Anatomy and Physiology	3-0-3	3-0-3	
HEC	—	Home Economics Elective	3-0-3		
HEC	304	Quantity Food Production		1-4-3	
HEC	308	Institutional Buying	3-0-3		
HEC	323	Demonstration Techniques		2-0-2	
—	—	Electives	3-0-3	6-0-6	
			15	14	
<i>Senior Year</i>					
BIO	411	General Bacteriology	3-4-5		
HEC	—	Family Living or Child Development		3-0-3	
HEC	401	Advanced Nutrition		3-0-3	
HEC	402	Diet Therapy		3-0-3	
HEC	407	Organization and Management		3-0-3	
PSY	420	Industrial Psychology	3-0-3		
CHM	420	Biochemistry		3-0-3	
HEC ⁴	405	Methods of Teaching	3-0-3		
—	—	Elective	3-0-3		
			14	15	

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

²Non-Catholic students substitute general academic electives.

³May take Bio 303 with permission.

⁴American Dietetic Association requires one course in Learning Theory EdF 208 or Methods of Teaching Hec 405.

**PROGRAM—S8: BACHELOR OF SCIENCE WITH A MAJOR IN
MATHEMATICS, MATHEMATICAL STATISTICS
OR APPLIED MATHEMATICS**

A. MAJOR FIELD—Qualified students elect Mth 128 upon entering; those with weaker backgrounds elect Mth 101. Upon completion of 15 credit hours in calculus and differential equations (or demonstration of proficiency), a student will, with the approval of the department, elect 24 credit hours of upper-level course work. Students with strong mathematical ability may be invited to satisfy these requirements in the honors program offered by the department.

B. MINOR FIELD—The requirement for the minor normally consists in 12 upper-level credit hours. The chosen field may require pre-requisite knowledge that could extend the total number of hours beyond 12. The choice of a minor and the supporting course work must be approved by the student's advisor.

C. COURSES IN OTHER AREAS

1. **COMMUNICATION SKILLS**—In addition to Eng 101, Eng 106, and Spe 101, which are university requirements, a course in programming is required of all majors, and those looking forward to research are strongly advised to elect some foreign language.

HUMANITIES—A minimum of 30 credit hours, including 6 in theology for Catholic students, and 6 in philosophy. Twelve hours should be concentrated in one area of the humanities. Eng 101, 106, and Spe 101 may not be counted toward the fulfillment of this requirement.

3. **SCIENCE REQUIREMENT**—This requirement is fulfilled by electing the sequence of basic courses in two science areas approved by the department. (physics and chemistry, for example)

4. **UNIVERSITY REQUIREMENTS, ELECTIVES**—Students are subject to all general requirements of the university. (For example, all students must have a minimum of 120 academic credit hours for graduation).

More detailed information will be provided by the department upon request. All majors are encouraged to cooperate closely with their departmental advisor in planning their course work.

PROGRAM—S9: BACHELOR OF SCIENCE WITH A MAJOR IN MEDICAL TECHNOLOGY

The Program leading to a Bachelor of Science degree with a major in Medical Technology consists of three years of instruction at the University of Dayton and a twelve or thirteen month course offered by the Diagnostic Laboratories of St. Elizabeth Hospital, Good Samaritan Hospital, Miami Valley Hospital and Kettering Memorial Hospital. 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.

Requirements for the academic years:

Biology	20
Chemistry	20
Mathematics	3
Science electives	8
Humanities	36
(Including Philosophy, Theology, English, Language, Speech)	
General electives	9
Total	<u>96</u> credit hours

A minimum of 90 hours must be completed before entering the clinical courses at one of the Hospitals. Graduation from the University of Dayton will require completion of the above 96 credit hours (or its equivalent) and 28 credit hours from the clinical courses.

METHODS OF INSTRUCTION: SENIOR YEAR

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.

HOSPITAL 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 usually 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—S9: BACHELOR OF SCIENCE WITH A MAJOR IN MEDICAL TECHNOLOGY

<i>Dept.</i>	<i>No.</i>	<i>Course</i>	<i>1st Term</i> ¹	<i>2nd Term</i>	<i>3rd Term</i>
<i>Freshman Year</i>					
BIO	100	Freshman Seminar	1-0-0		
BIO	151-2	Concepts of Biology	3-0-3	3-3-4	
CHM	123-4	General Chemistry	3-3-4	3-3-4	
MTH ²	—	Calculus	3-0-3		
ENG	101-6	English	3-0-3	3-0-3	
— ³	—	Humanities	3-0-3	6-0-6	
			16	17	
<i>Sophomore Year</i>					
BIO	340	Cell Biology		3-0-3	
BIO	201L	Bio Lab Investigations (optional)	0-3-1		
BIO	207L	Human Anatomy		0-3-1	
CHM	313-4	Organic Chemistry	3-3-4	3-3-4	
ENG	—	English elective		3-0-3	
— ⁴	—	Modern Language	3-0-3	3-0-3	
CHM	201	Quantitative Analysis	2-4-4		
— ³	—	Humanities	3-0-3	3-0-3	
			14 or 15	17	

PROGRAM—S9—Continued

<i>Dept.</i>	<i>No.</i>	<i>Course</i>	<i>1st Term¹</i>	<i>2nd Term</i>	<i>3rd Term</i>
<i>Junior Year</i>					
BIO	411	Bacteriology	3-4-5		
BIO	325	Parasitology		2-3-3	
—5	—	Science elective	3-3-4	3-3-4	
—3	—	Humanities	3-0-3	3-0-3	
—6	—	General electives	3-0-3	6-0-6	
MET	380	Seminar		1-0-1	
			15	17	

*Senior Year**Miami Valley Hospital*

MET	481	Introduction to Medical Technology.....	4 credit hours
MET	482	Urinalysis and Renal Function	4 credit hours
MET	483	Hematology	6 credit hours
MET	484	Bacteriology, Parasitology, Mycology	7 credit hours
MET	485	Chemistry and Gastric Analysis.....	8 credit hours
MET	486	Histology and Cytology	3 credit hours
MET	487	Serology and Spinal Fluids.....	3 credit hours
MET	488	Blood Banking	3 credit hours
MET	489	Laboratory Management	0 credit hours
MET	490	Normal and Pathologic Physiology	0 credit hours
		Total	38 credit hours

Good Samaritan Hospital

MET	451	Introduction to Medical Technology	4 credit hours
MET	452	Urinalysis	4 credit hours
MET	453	Hematology	6 credit hours
MET	454	Microbiology	7 credit hours
MET	455	Chemistry	8 credit hours
MET	456	Histology	3 credit hours
MET	457	Serology	3 credit hours
MET	458	Blood Banking	3 credit hours
		Total	38 credit hours

Kettering Memorial Hospital

MET	471	Orientation	1 credit hour
MET	472	Ethics	1 credit hour
MET	473	Histopathologic Technic	3 credit hours
MET	474	Serology and Immunology	4 credit hours
MET	475	Microbiology	11 credit hours
MET	476	Parasitology	3 credit hours
MET	477	Hematology	11 credit hours
MET	478	Blood Banking	4 credit hours
MET	479	Clinical Chemistry	15 credit hours
		Total	53 credit hours

PROGRAM—S9—Continued

<i>Dept.</i>	<i>No.</i>	<i>Course</i>	<i>1st Term</i> ¹	<i>2nd Term</i>	<i>3rd Term</i>
<i>St. Elizabeth Hospital</i>					
MET	461	Urinalysis and Renal Function			4 credit hours
MET	462	Hematology			6 credit hours
MET	463	Bacteriology, Parasitology, Mycology			7 credit hours
MET	464	Chemistry			8 credit hours
MET	465	Serology and Spinal Fluids			3 credit hours
MET	466	Histology and Cytology			3 credit hours
MET	467	Blood Bank			3 credit hours
		Total			34 credit hours

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

²Placement may necessitate initial course in precalculus (Mth 101). Normally, students should take Mth 112, Mth 118 or Mth 128.

³Courses to satisfy university requirements: Spe 101, Philosophy (6 cr. hrs.) and, if Catholic, Theology (6 cr. hrs.); additional hours are electives.

⁴Depending on placement test, language begun in secondary school should be started at 200 level. A new language may start at 100 level.

⁵The following are recommended: Bio 303, Bio 466, Phy 201-202, Chm 420.

⁶At least one science elective recommended.

PROGRAM—S10: BACHELOR OF SCIENCE WITH A MAJOR IN PHYSICAL SCIENCE

The primary 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, call 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.

A second goal 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.

¹ Physics 196, 207-8, 451-2-3	24 semester hours
Physics or Chemistry elective (upper level)	4 semester hours
Chemistry 123-4, 201, 302, 313	19 semester hours
Mathematics 101, 118-9, 218, 219	19 semester hours
Computer Science 144	2 semester hours
Minor (300-400 level)	12 semester hours
English 101-6	6 semester hours
Philosophy 101-201	6 semester hours

PROGRAM—S10—Continued

² Theology 100-200 elective	6 semester hours
Speech 101	3 semester hours
General Academic Electives to total at least.....	120 semester hours

¹Phy 451-2-3 may be replaced with 12 hrs. of upper-level Physics after consultation with Chairman.

²Non-Catholic students substitute general academic electives.

**A SAMPLE PROGRAM
BACHELOR OF SCIENCE IN PHYSICAL SCIENCE**

<i>Dept.</i>	<i>No.</i>	<i>Course</i>	<i>1st Term</i> ¹	<i>2nd Term</i>	<i>3rd Term</i>
<i>Freshman Year</i>					
PHY	100	Freshman Seminar	1-0-0		
CHM	123-4	General Chemistry	3-3-4	3-3-4	
ENG	101-6	Freshman English	3-0-3	3-0-3	
MTH	101	Pre-Calculus Math	4-0-4		
MTH	118	Analytical Geometry & Calculus I		4-0-4	
PHL	101	Basic Problems in Philosophy I	3-0-3		
THL	—	Theology elective	3-0-3		
SPE	101	Fundamentals of Effective Speaking		3-0-3	
—	—	Elective ²		3-0-3	
			17	17	
<i>Sophomore Year</i>					
CPS	—	Basic Programming	2-0-2		
CHM	201	Quantitative Analysis		2-4-4	
MTH	119-218	Analytical Geometry & Calculus II, III	4-0-4	4-0-4	
PHY	196-207	General Physics, I, II	3-1½-3	3-1½-3	
PHY	196L-				
	207L	General Physics Lab I, II	0-3-1	0-3-1	
THL	—	Theology elective	3-0-3		
—	—	Elective ³	3-0-3	3-0-3	
			16	15	
<i>Junior Year</i>					
CHM	313-302	Organic & Physical Chemistry	3-3-4	3-0-3	
MTH	219	Applied Differential Equations	3-0-3		
PHL	201	Basic Problems in Philosophy II	3-0-3		
PHY	208	General Physics III	3-0-3		
PHY	208L	General Physics III Lab	0-3-1		
PHY	451	Intermediate Physics I		3-3-4	
PHY	452	Intermediate Physics II		3-3-4	
—	—	Minor	3-0-3	3-0-3	
THL	—	Theology Elective		3-0-3	
			17	17	

PROGRAM—S10—Continued

<i>Dept.</i>	<i>No.</i>	<i>Course</i>	<i>1st Term</i> ¹	<i>2nd Term</i>	<i>3rd Term</i>
<i>Senior Year</i>					
PHY	453	Intermediate Physics III	3-3-4		
—	—	Minor	3-0-3	3-0-3	
THL	—	Theology Elective	3-0-3		
—	—	Elective ³	2-0-2	12-0-12	
—	—	Physical Science Elective ⁴	3-3-4		
			16	15	

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

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

³Electives can be used to complete teacher certification.

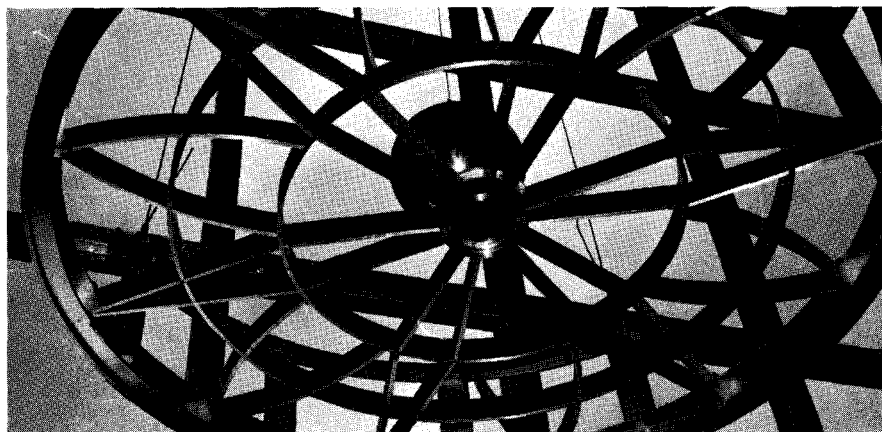
⁴Upper level physics or chemistry course.

PROGRAM—S11: BACHELOR OF SCIENCE WITH A MAJOR IN PHYSICS

¹S-10 Bachelor of Science with a major in Physics

Physics	36 semester hours
Phy 196, 207, 208 and the associated laboratories.....(12)	
Physics courses at the 300-400 level	(24)
Mathematics 128-9, 228-9	15 semester hours
Chemistry 123-4	8 semester hours
² Minor (300-400 level)	12 semester hours
Humanities	24 semester hours

At least 12 of the 24 hours to be in Theology and Philosophy. It is strongly recommended that 12 hours be in one area of the humanities to encourage some depth. The introductory courses in Philosophy are Phl 101-201.



PROGRAM—S11—Continued

Basic Skill Courses 11 semester hours

English Composition, Eng 101-6, Speech 101 and Computer Programming Cps 144. Some of these requirements can be waived if the student has demonstrated ability in a given area.

General Academic Electives to total at least.....120 semester hours

¹Prospective students are encouraged to write or visit the Department for more detailed information. New students should contact the Chairman of the Dept. to plan individual programs.

²This can be in any academic University subject if a minor is chosen. See p. 318 of the 1972-73 University Bulletin for additional details.

<i>Dept.</i>	<i>No.</i>	<i>Course</i>	<i>1st Term</i> ¹	<i>2nd Term</i>	<i>3rd Term</i>
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Freshman Year

CHM	123-4	Chemistry	3-3-4 ¹	3-3-4	
MTH	128-92	Math-Calculus	4-0-4	4-0-4	
PHY	196-207	Physics I, II	3-1½-3	3-1½-3	
PHY	196L	Laboratory		0-3-1	
—	—	Humanities ³	3-0-3	3-0-3	
—	—	Basic Skill and Electives ⁴	3-0-3	2-0-2	
			17	17	

Sophomore Year

MTH	228-9	Mathematics	4-0-4	3-0-3	
PHY	208	Mechanics of Waves	3-0-3		
PHY	207L-8L	Physics Lab	0-3-1	0-3-1	
PHY	301 ⁵	Statistical Mech-Thermo		3-0-3	
—	—	Electives and Basic Skills	3-0-3	6-0-6	
—	—	Humanities	6-0-6	3-0-3	
			17	16	

Junior Year

PHY	303	Intermediate Mechanics	3-0-3		
PHY	390	Quantum Mechanics		3-0-3	
PHY	430-1	Advanced Lab	0-4-2	0-4-2	
PHY	460	Seminar	2-0-1	2-0-1	
—	—	Minor ⁶	3-0-3	3-0-3	
—	—	Electives ⁷	3-0-3	3-0-3	
—	—	Humanities ³	3-0-3	3-0-3	
			15	15	

PROGRAM—S11—Continued

<i>Dept.</i>	<i>No.</i>	<i>Courses</i>	<i>1st Term</i> ¹	<i>2nd Term</i>	<i>3rd Term</i>
<i>Senior Year</i>					
PHY	408	Intermediate Elect. Mag.	3-0-3		
PHY	420	Solid State Physics		3-0-3	
PHY	421	Nuclear Physics	3-0-3		
PHY	432	Advanced Lab	0-4-2		
PHY	460	Seminar	2-0-1	2-0-1	
—	—	Minor ⁶	3-0-3	3-0-3	
—	—	Electives ⁷	3-0-3	9-0-9	
			15	16 ⁸	

¹The 3-3-4 signifies 3 hours of lecture, 3 hours of lab (or recitation), 4 semester hours credit.

²Students who do not start with Mth 128 must delay Phy 196 until the second term.

³The 24 hours in Humanities should include 6 hours of Theology and 6 hours of Philosophy for Catholic students. Normally 12 hours should be concentrated in one area of Humanities.

⁴Students should show proficiency in composition by end of freshman year and facility in computer programming by the end of their sophomore year.

⁵In this example, 28 upper level credit hours in the major are shown.

⁶Consult Department Chairman concerning minor.

⁷Electives can be used for strengthening the major, a second minor, or be a "free" elective.

⁸In this example, 128 total hours are shown; the minimum required is 120.

PREMEDICAL AND PREDENTAL

Students who intend to continue their education at the professional school level (medical, dental, osteopathic) should choose an undergraduate major that holds the greatest interest for them. The minimum academic requirements for admission to professional schools are met by a number of science degree programs at the University of Dayton. Students with strong interests in biology or chemistry should enroll in Program—S1 (B.S. in Biology), Program—A2 (B.A. in Chemistry) or Program—S9 (B.S. in Physical Science). From an academic standpoint students in these science programs are as fully qualified for admission to professional schools as are those students who follow the formal premed curriculum. These students may utilize all the premedical counseling and advisory facilities available at the University.

Program S12, the B.S. for Premedical and Predental students is recommended for 1) students who have no strong interest in a conventional major, and 2) students who wish to follow an abbreviated program prior to entrance to schools of Occupational Therapy, Optometry, Pharmacy, Physical Therapy, Veterinary Medicine, etc. The full four year program meets the admission criteria (required and recommended courses) of all approved medical and dental schools. In addition to the

basic sciences, it includes an adequate study of the humanities and the social sciences. 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.

Sixteen hours of science electives are available in Program—S11. While these electives can be chosen from any science area (biology, chemistry, computer science, mathematics, physics) current medical school catalogs indicate that the most frequently required and/or recommended advanced science courses are Physical Chemistry, Embryology, Genetics, Biochemistry and Comparative Anatomy. As such, it is strongly recommended that at least three of the four science electives be selected from this group.

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 (Chemistry); Dr. Carl I. Michaelis (Chemistry); Prof. James M. Ramsey (Biology); Dr. Charles J. Chantell (Biology), *Chairman*. Upon admission to Program—S12 each student will be assigned a permanent faculty advisor.

A premedical recommendation board exists and is charged with making the joint recommendations that are required for students who apply for admission to the professional 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 pre dental students should attend the chapter meetings and are urged to join this society.

Both the Medical College Admissions Test and the Dental Aptitude Testing Program are administered on this campus each year in the spring and fall. All prospective medical, dental and osteopathic 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 professional schools make it imperative that the premedical and pre dental 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 3.0 for most dental schools 2.8. For this reason, the Premedical Faculty Committee conducts a sophomore evaluation on all students enrolled in Program—S12. Any student whose cumulative average after 2 years is below 2.7 will be directed to change his major.

Premedical-Pre dental Curriculum

Sixteen science courses (58 to 64 hours) eleven of which are specified (e.g. Bio 151, Chm 313, etc.) and the remainder are elective (in Bio, Chm, Cps, Mth, Phy, see footnotes 2, 4, 7)

Two Philosophy courses (6 hours).

Two Theology courses (6 hours). Non-Catholic students replace with other humanities electives.

One Speech course (3 hours).

Two Language courses (6 hours, see footnote 5).

Four Behavioral Science-Social Science courses (12 hours in Psy, Soc, Ant).

Three English courses (9 hours).

Ten humanities-general elective courses (28 to 34 hours) from Com, Eco, Eng, Hst, Art, Mus, Phl, Pol, Psy, Soc, Thl, etc.

Depending on elective course selection total credit hours will range from 128 to 134 hours.

**PROGRAM—S12: BACHELOR OF SCIENCE WITH A
CONCENTRATION IN PREMEDICAL AND
PRE-DENTAL STUDENTS**

<i>Dept.</i>	<i>No.</i>	<i>Course</i>	<i>1st Term</i> ¹	<i>2nd Term</i>	<i>3rd Term</i>
<i>Freshman Year</i>					
BIO	151-2	Concepts of Biology	3-0-3	3-3-4	
CHM	123-4	General Chemistry	3-3-4	3-3-4	
MTH ²	—	Calculus	3-0-3	3-0-3	
ENG	101-6	English	3-0-3	3-0-3	
— ³	—	Humanities	3-0-3	3-0-3	
BIO	100	Premed Seminar	1-0-0		
			16	17	
<i>Sophomore Year</i>					
BIO	201L	Bio Lab Investigations (optional)	0-3-1		
BIO	340	Cell Biology		3-0-3	
CHM	313-4	Organic Chemistry	3-3-4	3-3-4	
PHY ⁴	—	Physics	3-2-4	3-2-4	
ENG	—	English elective	3-0-3		
— ⁵	—	Language	3-0-3	3-0-3	
— ⁶	—	Beh-Soc. Sci. elective	3-0-3	3-0-3	
			17-18	17	
<i>Junior Year</i>					
CHM	201	Quantitative Analysis		2-4-4	
— ⁷	—	Science elective	3-3-4	3-3-4	
— ⁶	—	Beh-Soc. Sci. elective	3-0-3	3-0-3	
— ⁸	—	General electives	9-0-9	6-0-6	
			16	17	

PROGRAM—S12—Continued

<i>Dept.</i>	<i>No.</i>	<i>Courses</i>	<i>1st Term</i> ¹	<i>2nd Term</i>	<i>3rd Term</i>
<i>Senior Year</i>					
—7	—	Science elective	3-3-4	3-3-4	
—9	—	Humanities	3-0-3	3-0-3	
—8	—	General electives	9-0-9	9-0-9	
			16	16	

- ¹Under "Term," 3-0-3 means 3 hrs. class, 0 hrs. laboratory, and 3 hrs. credit.
- ²Depending on background, interests and placement scores, three calculus sequences are available, Mth 112-3, Mth 118-9, Mth 128-9. (See Math Department Courses of Instruction). Placement scores may necessitate initial course in precalculus (Mth 101).
- ³Phl 101, Thl, non-Catholics take Phl, Eng, Hst, Soc, Psy, etc in place of Thl.
- ⁴Depending on math background and interests, two physics sequences are available, Phy 201-2, Phy 196 and 207-8 (See Physics Department Courses of Instruction).
- ⁵Any modern language will suffice. Language begun in secondary school must be started at 200 level, new language may start at 100 level.
- ⁶Psy 201, 301, 306, Soc. 204, 301, 320, etc.
- ⁷Recommended that science electives be chosen from among Bio 209, 303, 312, 407, 411; Chm 302, 420; Mth 215.
- ⁸Eco, Eng, Hst, Phl, Pol, Psy, Soc, Thl, etc. Should include Spe 101.
- ⁹Phl 201, Thl, non-Catholics take elective for Thl.

PROGRAM—S13: BACHELOR OF SCIENCE WITH A MAJOR IN PSYCHOLOGY

Psychology—201 302, 310, electives.....	31 semester hours
May substitute Math 207 or Mth 215 for Psy 302	
Science (Bio, Chm, Cps, Geo, Phys)	40 semester hours
¹ Mathematics 112-3	6 semester hours
English 101-6, electives.....	6 semester hours
² Language	6 semester hours
Philosophy 101-201	6 semester hours
³ Theology (3 cr. hrs.—100-200 level, electives).....	6 semester hours
Speech 101	3 semester hours
General Academic Electives to total at least.....	120 semester hours

- ¹May substitute Mth 101 for Mth 112 and Mth 112 for 113.
- ²French, German or Russian preferred. However, student may substitute General Electives in lieu of a language. See advisor as graduate study often requires language. See footnote 6 under Typical Program for Bachelor of Arts Student.
- ³Non-Catholic students substitute general academic electives.

PROGRAM—S14: BACHELOR OF SCIENCE WITH A MAJOR IN SOCIAL WORK

Social Work: Swk 206, 206L, 304, 337, 376, 418, 421, 431.....	25 semester hours
Sociology 205, 401	6 semester hours
Anthropology 210	3 semester hours
Social Work/Sociology/Anthropology electives	12 semester hours
Minor: (300-400 level)	12 semester hours
Psychology 201	3 semester hours

PROGRAM—S14—Continued

Political Science 201, 303	6 semester hours
Economics 201	3 semester hours
Philosophy 101, 201	6 semester hours
¹ Theology electives	6 semester hours
History electives	6 semester hours
English 101-6, 200-level electives	12 semester hours
Speech 101	3 semester hours
Science laboratory	8 semester hours
² General Academic electives to total at least.....	120 semester hours

¹Non-Catholic students substitute general academic electives.

²Electives may not be taken in the Department of Sociology, Anthropology and Social Work.

PROGRAM—S15: BACHELOR OF SCIENCE WITH A MAJOR IN SYSTEMS SCIENCE

Industrial and Systems Engineering (upper level).....	24 semester hours
¹ Mathematics 112-113, 367-368	12 semester hours
² Physics 201-202	8 semester hours
Computer Science	6 semester hours
Psychology 201, elective	6 semester hours
English, 101, 106	6 semester hours
Philosophy 101-201	6 semester hours
³ Theology 100-200 electives	6 semester hours
Speech 101	3 semester hours
Humanities and/or Social Science electives.....	9 semester hours
Sciences and/or Mathematics electives	8 semester hours
General academic electives to total at least.....	120 semester hours

¹May substitute Mth 118-119 or Mth 128-129 for Mth 112-113.

²May substitute Phy 196-207-208

³Non-Catholic students substitute Humanities electives.

PROGRAM—S16: BACHELOR OF SCIENCE WITH A MAJOR IN URBAN LIFE¹

Urban Life Courses.....	78 semester hours
Philosophy 101, 201	6 semester hours
Theology electives	6 semester hours
English 101-6, 6 hours 200-level.....	12 semester hours
History	6 semester hours
Science Laboratory	8 semester hours
Psychology 201	3 semester hours
Speech 101	3 semester hours

¹Program planning in consultation with the Sociology Department.



SHERMAN HALL



VII

School of Business Administration

WILLIAM J. HOBEN, *Dean*

JOSEPH F. UPDYKE, *Assistant to the Dean*

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 the overall average in the total credits required for the degree and in the major.
3. Each candidate must complete at least 62 credits upper level with a minimum of thirty-six credits in 300-400 level courses in the School of Business Administration consisting of the following:
 - a) Eighteen 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. Business courses listed in the program shown below should be taken in the sequence listed because they are pre-requisites to core and major courses.

FRESHMAN-SOPHOMORE BUSINESS ADMINISTRATION PROGRAM

<i>Dept.</i>	<i>No.</i>	<i>Course</i>	<i>1st Term¹</i>	<i>2nd Term</i>	<i>3rd Term</i>
<i>Freshman Year</i>					
BUS ²	102	<i>American Business Environment</i>	3-0-3		
BUS*	110-1	Quantitative Analysis	3-0-3	3-0-3	
ENG	101	<i>Language and Thought</i>	3-0-3		
ENG	106	Language and Literature			3-0-3
HST ³	—	<i>History Elective</i>			3-0-3
PHL	101	<i>Basic Problems in Philosophy I</i>			3-0-3
SPE	101	<i>Fundamentals of Effective Speaking</i>	3-0-3		
THL	—	Theology 100-200 elective	3-0-3		
— ⁴	—	<i>Natural Science Course</i>			3-1-4
			15	16	
<i>Sophomore Year</i>					
BUS	210-1	Quantitative Analysis	3-0-3	3-0-3	
BUS	215	<i>Principles of Management</i>	3-0-3		
ACC	207-8	Principles of Accounting	3-0-3	3-0-3	
ECO	201-2	Principles of Economics	3-0-3	3-0-3	
PHL	201	<i>Basic Problems in Philosophy II</i>			3-0-3
MKT	205	Principles of Marketing			3-0-3
PSY	201	<i>Introduction to Psychology</i>	3-0-3		
			15	15	

*Bus 108 is recommended for students with insufficient knowledge of secondary mathematics. This would be an additional course for those taking it.

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.

⁴Choose one of these courses: Bio 114, Chm 110, Geo 109, Phy 105.

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 accounting profession 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 use to evaluate investments and loans.

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.

Graduates of the accounting program enter careers in public accounting practice, in business enterprises, or in federal, state or local government.

PROGRAM—B1: BACHELOR OF SCIENCE WITH A MAJOR IN ACCOUNTING¹

<i>Dept.</i>	<i>No.</i>	<i>Course</i>	<i>1st Term¹</i>	<i>2nd Term</i>	<i>3rd Term</i>
<i>Junior Year</i>					
ACC	303	Cost Accounting		3-0-3	
ACC	305-6	Intermediate Accounting	3-0-3	3-0-3	
BUS ²	301	Corporation Finance		3-0-3	
BUS	303	Business Law I		3-0-3	
ECO	341	Macro Economic Analysis	3-0-3		
ENG	382	Directed Readings		2-0-2	
BUS	409	Business Communications and Report Writing	3-0-3		
ACC	340	Fundamentals of Business Data Processing	3-0-3		
THL ³	—	Theology elective	3-0-3		
— ⁴	—	Elective			3-0-3
			15	17	

PROGRAM—B1—Continued

<i>Dept.</i>	<i>No.</i>	<i>Course</i>	<i>1st Term</i> ¹	<i>2nd Term</i>	<i>3rd Term</i>
<i>Senior Year</i>					
ACC	407	Federal Income Tax Accounting	3-0-3		
ACC	401	Auditing Principles		3-0-3	
ACC ⁵	—	Accounting electives	3-0-3	3-0-3	
—	—	Humanities Electives	3-0-3	3-0-3	
BUS	423	Business Policies and Management		3-0-3	
— ⁴	—	Electives	6-0-6	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.

³Non-Catholic students take philosophy elective.

⁴Choose any 300 or 400 level business or non-business courses. The following are specially recommended: Bus 304, Bus 316, Bus 401, Eco 340, Eco 342, Eco 430, Mkt 340 and Mkt 405.

⁵Select 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 administrative 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'

<i>Dept.</i>	<i>No.</i>	<i>Course</i>	<i>1st Term</i> ¹	<i>2nd Term</i>	<i>3rd Term</i>
<i>Junior Year</i>					
BUS ²	301	<i>Corporation Finance</i>	3-0-3		
BUS	303	<i>Business Law I</i>		3-0-3	
BUS	318	<i>Human Relations for Management</i>		3-0-3	
BUS	316	<i>Production Management</i>	3-0-3		
ENG	382	Directed Readings		2-0-2	
ACC	340	<i>Fundamentals of Business</i> <i>Data Processing</i>		3-0-3	
Eco	341	<i>Macro Economic Analysis</i>	3-0-3		
THL ³	—	Theology elective		3-0-3	
— ⁴	—	Elective	3-0-3	3-0-3	
— ⁶	—	Elective	3-0-3		
			15	17	

PROGRAM—B3—Continued

Dept.	No.	Course	1st Term ¹	2nd Term	3rd Term
<i>Senior Year</i>					
Eco	340	<i>Micro Economic Analysis</i>	3-0-3		
BUS	409	<i>Bus. Communication and Rpt. Writing</i>		3-0-3	
BUS	423	<i>Business Policies and Management</i>		3-0-3	
BUS ⁵	—	Business electives	6-0-6	3-0-3	
— ⁴	—	Elective	3-0-3	6-0-6	
— ⁶	—	Elective	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.

³Non-Catholic students take philosophy elective.

⁴Choose general electives.

⁵Select three business courses in consultation with the program advisor.

⁶Choose humanities electives.

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 Micro Economic Analysis (Eco 340).

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, eighteen hours of economics courses, in addition to Economics 340, and 341, are required of the Business Administration student. After consultation with the Chairman of the Department, the major may select these eighteen 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—B3: BACHELOR OF SCIENCE WITH A MAJOR IN
ECONOMICS**

<i>Dept.</i>	<i>No.</i>	<i>Course</i>	<i>1st Term¹</i>	<i>2nd Term</i>	<i>3rd Term</i>
<i>Junior Year</i>					
BUS	301	Corporation Finance	3-0-3		
BUS	303	Business Law I		3-0-3	
ACC	340	Fundamentals of Business Data Processing		3-0-3	
ECO	340	Micro Economic Analysis	3-0-3		
ECO	341	Macro Economic Analysis		3-0-3	
—	—	Economics Elective		3-0-3	
ENG	382	Directed Readings III-IV	2-0-2		
THL ²	—	Theology elective	3-0-3		
— ³	—	Elective	3-0-3	3-0-3	
—	—	Humanities elective	3-0-3		
			17	15	
<i>Senior Year</i>					
BUS	409	Business Communication and Report Writing		3-0-3	
BUS	423	Business Policies and Management		3-0-3	
Eco ⁴	—	Economics electives	9-0-9	6-0-6	
—	—	General elective	3-0-3	3-0-3	
—	—	Humanities elective	3-0-3		
			15	15	

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

²Non-Catholic students take Phl elective.

³Choose general electives.

⁴Choose electives in Economics. Consult program advisor.

MARKETING

Recent years have witnessed emergence of a broad marketing management concept. It retains as its central thrust a systematic approach to the discovery and satisfaction of consumer wants as a pervasive and cohesive basis for successful administration. The concept is now broadened to include the development of organizational members to their fullest potential and the achievement of social purpose within the total environment.

Although the student often enters with an interest in a single phase of marketing, the emphasis in the curriculum is on the marketing concept as stated above. Thus, any specialized activity is studied as a part of 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 goal is to add limited specialization to a base made up of the general education required for all students and a core of business administration courses required of 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. Communication 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.

Industrial Marketing

Students interested in industrial marketing as a concentrated area of study take the following sequence of courses: Mkt 340 Industrial Marketing, Mkt 411, Sales Management, 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—B4: BACHELOR OF SCIENCE WITH A MAJOR IN MARKETING

Dept.	No.	Course	1st Term ¹	2nd Term	3rd Term
<i>Junior Year</i>					
BUS ²	301	<i>Corporation Finance</i>		3-0-3	
BUS	303	<i>Business Law I</i>		3-0-3	
ACC	340	<i>Fundamentals of Business</i>			
		<i>Data Processing</i>	3-0-3		
ENG	382	<i>Directed Readings</i>	2-0-2		
MKT ³	—	Marketing courses	6-0-6	3-0-3	
THL ⁴	—	Theology elective			3-0-3
—	—	Electives	3-0-3		3-0-3
— ⁵	—	Elective	3-0-3		
			17	15	
<i>Senior Year</i>					
ECO	341	<i>Macro Economic Analysis</i>	3-0-3		
BUS	409	<i>Business Communication and Report</i>			
		<i>Writing</i>	3-0-3		
BUS	423	Business Policies and Management			3-0-3
MKT ³	—	Marketing courses	3-0-3	6-0-6	
—	—	Electives	6-0-6		3-0-3
— ⁵	—	Elective			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 elective.

⁵Take humanities elective.

ASSOCIATE DEGREE IN BUSINESS ADMINISTRATION

The Associate Degree in the Business Administration program specializing in executive 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 typewriting, shorthand, accounting, business machines, and office procedures, will prepare graduates for responsible positions in commerce and industry.

PROGRAM—B5: ASSOCIATE DEGREE IN BUSINESS ADMINISTRATION

<i>Dept.</i>	<i>No.</i>	<i>Course</i>	<i>1st Term¹</i>	<i>2nd Term</i>	<i>3rd Term</i>
<i>Freshman Year</i>					
—	—	Elective		3-0-3	
ENG	101	English Composition	3-0-3		
PHL	101	Basic Problems in Philosophy I		3-0-3	
SEC	101 or	Fundamental Shorthand			
SEC ³	101A	Refresher	5-0-3		
SEC	102	Intermediate Shorthand		5-0-3	
SEC	103 or	Fundamental Typing			
SEC ³	103A	Refresher	5-0-3		
SEC	104	Intermediate Typing		5-0-3	
SEC	110	Secretarial Mathematics	3-0-3		
SPE	101	<i>Fundamentals of Effective Speaking</i>		3-0-3	
THL	—	Theology Elective 100-200		3-0-3	
			15	15	
<i>Sophomore Year</i>					
SEC	201	Dictation and Transcription	5-0-3		
SEC	202	Advanced Dictation and Transcription		5-0-3	
SEC	203	Advanced Typing	5-0-3		
SEC	204	Production Typing		5-0-3	
SEC	205	Administrative Secretarial Practicum	4-0-3		
SEC	206	Advanced Administrative Secretarial Practicum		4-0-3	
SEC	207	Business Machines	3-0-3		
SEC	208-9	Secretarial Accounting	3-0-3	3-0-3	
SEC	210	Introduction to Business Data Processing			3-0-3
			15	15	

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

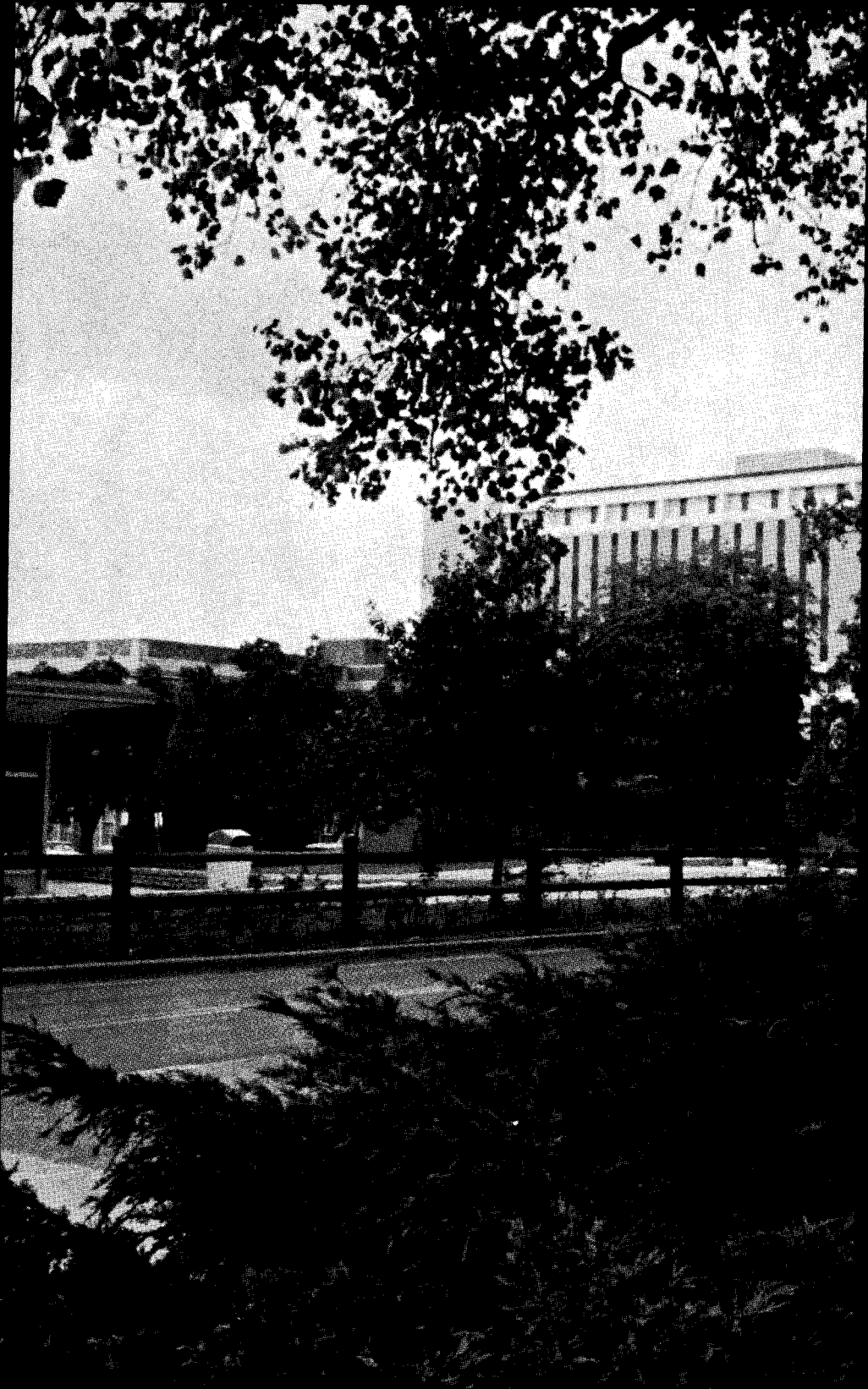
²Courses listed in italics may be taken in either the first or second term as directed by the program advisor.

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.







VIII School of Education

DR. JOSEPH J. PANZER, S.M., *Dean*
JOSEPH E. WHITE, *Assistant Dean*

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 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, educable mentally retarded, secondary, and special (music, art, physical education, health education) certification are outlined in the following pages. All of these programs lead to the same degree—Bachelor of Science in Education (B.S. in Ed.)

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 they desire 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.)

Requirements for graduation and 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.
3. Successful completion of a minimum of one hundred and twenty-four semester credit hours in approved courses.
4. An over-all cumulative point average of at least 2.00 (C average) and a cumulative point average of at least 2.50 (C+ average) for the professional education courses and for the principal teaching field.
5. Successful completion of the following professional education sequence:

	<i>Credit Hours</i>
A. Personal and Professional Development of the Teacher	2-4
B. Human Growth and Development	3
C. The Learning Process	3
D. Teaching in the Elementary School (or)	3
The Secondary School: Self and Society	3
¹ E. Special Methods	3
F. Philosophy of Education	3
G. Student Teaching	6-12

¹Students 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.

With the possible exception of A and B, all courses in the above 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.

6. Completion of University requirements in General Education, including the following courses in theology and philosophy:

Catholic students—12 semester hours:

6 elective credits in Theology; Phl 101, 201.

Other students — 12 semester hours:

Phl 101, 201, and 6 hours of Humanities electives.

7. Acceptable scores in the *National Teacher Examination*, a comprehensive examination involving the following: General Education, Professional Education, and Specialization (principal teaching field). The examination **MUST** be taken *no later than* one term prior to the term in which the student expects to be graduated. Delay in taking the examination will lead to postponement of graduation and certification. Students should be sure to consult the Education Office regarding dates on which the examination will be administered.

COUNSELING

Each freshman education student is assigned a faculty counselor from the department in which he is enrolled. 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 (at least a 2.5 for professional education courses and for principal teaching field and at least a 2.0 for second teaching field), (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) 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.

Students who register for 12 sem. hrs. of student teaching are involved in full-day sessions for an entire semester. Students who register for less than 12 sem. hrs. must continue their student teaching for a minimum of twelve weeks.

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 through the School of Education are aided in securing teaching positions by the School's placement service located in Chaminade Hall, 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 Placement Center and are announced in advance.

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 a 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, Maine, Maryland, Mississippi, Missouri, Nebraska, North Carolina, North Dakota, Oklahoma, Oregon, Pennsylvania, Rhode Island, South Dakota, Tennessee, Texas, Utah, Vermont, Washington and West Virginia.

The State of Ohio also has reciprocity arrangements with the following States, enabling teachers with Ohio provisional certificates to qualify for the regular initial teaching certificates issued by these States: Alaska, California, Connecticut, Delaware, Florida, Hawaii, Kentucky, Maine, Maryland, Massachusetts, New Hampshire, New York, North Carolina, Pennsylvania, Rhode Island, South Dakota, Utah, Vermont, Virginia, Washington, and Wisconsin.

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, music, and the teaching of the educable mentally retarded.

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, and Veteran's Hospital Brecksville) 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 400 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: ELEMENTARY EDUCATION
 (Leading to Ohio Provisional Elementary Certificate; grades 1-8)

<i>Dept.</i>	<i>No.</i>	<i>Courses</i>	<i>1st Term</i> ¹	<i>2nd Term</i>	<i>3rd Term</i>
<i>Freshman Year</i>					
BIO ²	114	Biological Science (and Lab)	3-2-4		
EDE	109-10	Personal and Professional Development	2-0-2	2-0-2	
EDF ³	205	Child Growth and Development		3-0-3	
ENG	101	Language and Thought	3-0-3		
ENG	106	Language and Literature		3-0-3	
HST ⁴	—	Elective on Western Culture	3-0-3		
PHL	101	Basic Problems in Philosophy I		3-0-3	
PHY	105	The Physical Sciences		4-0-4	
THL ⁵	—	Elective	3-0-3		
ART	101	Foundations and Materials in Art	2-0-2		
MUS ⁶	101	Fundamentals of Music		2-0-2	
			17	17	
<i>Sophomore Year</i>					
EDF	208	Learning Process	3-0-3		
EDP ⁷	102	Personal and Community Health	2-0-2		
ENG ⁸	—	Communications Elective		3-0-3	
HST ⁹	—	American Studies Elective	3-0-3		
HST ¹⁰	—	Non-Western Culture		3-0-3	
MTH	204	Math Concepts I		3-0-3	
PHL	201	Basic Problems in Philosophy II		3-0-3	
— ¹¹	—	Social Science Elective	3-0-3		
THL	—	Elective	3-0-3		
EDE	296	Teaching in the Elementary School	3-0-3		
— ¹²	—	Elective in Area of Specialization		3-0-3	
			17	15	
<i>Junior Year</i>					
EDE	320	Reading and Language Arts	6-0-6		
EDE	325	Interdisciplinary Approach to Social Studies	3-0-3		
EDE	360	Children's Literature	3-0-3		
EDE	403	Mathematics in the Elementary School	3-0-3		
EDE	481	Art in Elementary Education	2-0-2		
EDE	413	Student Teaching		x-x-12	
— ¹²	—	Elective in Area of Specialization		3-0-3	
			17	15	

<i>Dept.</i>	<i>No.</i>	<i>Course</i>	<i>1st Term</i> ¹	<i>2nd Term</i>	<i>3rd Term</i>
<i>Senior Year</i>					
EdF	419	Philosophy of Education	3-0-3		
— ¹³	—	Humanities Elective	3-0-3	3-0-3	
— ¹¹	—	Social Science Elective		3-0-3	
EdE ¹⁷	482-3	Music in Elementary Education	2-0-2		
— ¹²	—	Elective in Area of Specialization	6-0-6	3-0-3	
EdP ¹⁴	414	Physical Education in the Elementary School		3-0-3	
			14	12	

PROGRAM—E1a: ELEMENTARY EDUCATION
(Leading to Ohio Provisional Kindergarten-Primary Certificate;
Kindergarten-3)

EdE ¹⁵	219	Kindergarten-Primary Instruction	3-0-3
EdE ¹⁶	410	Student Teaching-Kindergarten	x-x-6
EdE ¹⁶	413	Student Teaching	x-x-6

PROGRAM—E1b: ELEMENTARY EDUCATION
(Leading to Ohio Certificate for Teaching Educable Mentally Retarded)

EdE ¹⁵	390	Learning and Behavior Disorders	3-0-3
EdE ¹⁵	480	Psychology and Education of the Retarded	3-0-3
EdE ¹⁵	487	Occupational Orientation and Job Training	2-0-2
EdE ¹⁵	489	Educational Practices for EMR	3-0-3
EdE ¹⁵	490	Educational Practices for EMR	3-0-3
EdE ¹⁶	411	Student Teaching-EMR	x-x-6
EdE ¹⁶	413	Student Teaching	x-x-6

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

²Most courses can be taken in terms other than listed. Consult advisor.

³Evening students may substitute EdF 207.

⁴Possible choices: Hst 101, 102, 120, 275, 329, 357, 306.

⁵Or Humanities Elective for non-Catholics.

⁶Or Mus 103 if proficient in Mus 101.

⁷Or EdP 101 plus EdP 130.

⁸Possible choices: Eng 100-200, 307, Spe 101, 201.

⁹Possible choices: Hst 260, 270, 396, Pol 201.

¹⁰Possible choices: Hst 130, 135, 332, 432, 443.

¹¹Possible choices: Ant 210, 321, 325, Soc 204, 435, EdE 325, Pol 360, 407, Eco 201, Aas 332.

¹²A specialization of twelve or more hours, above other course requirements, in a teaching field or area of interest. Courses in EMR can also count for second certificate.

¹³Six hours of Humanities required. Can be used for area of specialization.

¹⁴Or EdP 413.

¹⁵Course requirements are in excess of Program E1.

¹⁶Substitute for twelve hours required in program E1.

¹⁷EdE 482 is for primary level; EdE 483 is for intermediate level.

PROGRAM—E2: SECONDARY EDUCATION

<i>Dept.</i>	<i>No.</i>	<i>Courses</i>	<i>1st Term</i> ¹	<i>2nd Term</i>	<i>3rd Term</i>
<i>Freshman Year</i>					
EDP	101	Cultural and Personal Aspects of Physical Education	1-1-1		
EDP	130	Physical Education Activities	0-2-1		
EDS	109-10	Personal and Professional Development	2-0-2	2-0-2	
EDF	206	Adolescent Growth and Development		3-0-3	
ENG	101	Language and Thought	3-0-3		
ENG	106	Language and Literature		3-0-3	
HST	—	100 Level Elective	3-0-3		
PHL	101	Basic Problems in Philosophy I	3-0-3		
THL ²	—	Elective		3-0-3	
— ³	—	Science	3-2-4		
MTH ⁴	—	Mathematics Course		3-0-3	
—	—	Teaching Field Elective		3-0-3	
			17	17	
<i>Sophomore Year</i>					
EDP	102	Personal and Community Health	1-0-2		
EDF	208	Learning Process	3-0-3		
PHL	201	Basic Problems in Philosophy II	3-0-3		
THL ²	—	Elective		3-0-3	
—	—	Teaching Field Electives	9-0-9	9-0-9	
Soc ⁵	—	Elective		3-0-3	
			17	15	
<i>Junior Year</i>					
EDS	351	The Secondary School, Self and Society	3-0-3		
EDS ⁶	—	Special Methods in Teaching Field		3-0-3	
—	—	Teaching Field or Humanities Electives	3-0-3	3-0-3	
—	—	Teaching Field Electives	9-0-9	9-0-9	
			15	15	
<i>Senior Year</i>					
EDS ⁷	414	Student Teaching	x-x-12		
EDF	419	Philosophy of Education		3-0-3	
—	—	Teaching Field Electives	3-0-3	12-0-12	
			15	15	

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

²Non-Catholic students take Humanities elective.

³Students may choose from the following: Phy 105 or 151 and Lab, Geo 109 and Lab, Chm 110 and Lab, Bio 114 and Lab.

⁴Students may choose from Mth 101, 107, or 111.

⁵Students may elect any 200 level course in Soc, Ant, or Social Work.

⁶Students should leave one-half day free for teacher aide activities.

⁷Students will have seminar on campus once a week.

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 ordinarily a minimum of twenty-four hours for the second teaching field; or, instead of two teaching fields, they may take a single comprehensive field totalling at least fifty-one to sixty 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 student teaching and certification, the student must earn a quality point average of at least 2.500 in the principal field for which he seeks certification. Certification is valid for teaching in grades seven through twelve.

(For detailed course requirements in each field, secure copy of checklist for each teaching field in the Education Office, Room C-104.)

Teaching Fields

Art
 Biological Science
 Bookkeeping—Basic Business
 Chemistry and Physics
 English
 Economics
 General Science
 Physical Education
 Health Education
 History
 Home Economics
 Language:
 Latin
 French
 German
 Spanish
 Russian

Teaching Fields

Mathematics
 Music
 Political Science
 Sales Communication
 Sociology
 Social Psychology
 Speech
 Stenography—Typing
 Theology

Comprehensive Fields

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

Art
 Business Education
 Chemistry and Physics
 English
 History

Home Economics
 Mathematics
 Music
 Social Studies
 Speech

PROGRAM—E3: PHYSICAL EDUCATION

<i>Dept.</i>	<i>No.</i>	<i>Courses</i>	<i>1st Term¹</i>	<i>2nd Term</i>	<i>3rd Term</i>
<i>Freshman Year</i>					
BIO	114	Biological Science (and Lab)		3-2-4	
MTH	—	Mathematics Course	3-0-3		
ENG	101	Language and Thought	3-0-3		
ENG	106	Language and Literature		3-0-3	
THL ²	—	Elective	3-0-3		
PHL ³	101	Basic Problems in Philosophy I		3-0-3	
EDP	109-10	Personal and Professional Develop.	2-0-2	2-0-2	
EDP	—	Physical Education Activities	0-8-2	0-4-1	
HST	—	100-200 Level Electives	3-0-3	3-0-3	
			16	16	
<i>Sophomore Year</i>					
EDF	207	Human Growth and Development	3-0-3		
EDF	208	Learning Process		3-0-3	
THL ⁴	—	Elective	3-0-3		
PHL ⁴	201	Basic Problems in Philosophy II		3-0-3	
EDP	223	Movement Education	2-2-3		
EDP	213	Principles & Hist. of Physical Ed.		2-0-2	
EDP	251	School Health Program		3-0-3	
EDP	—	Physical Education Activities	0-8-2	0-4-1	
—	—	General Electives	5-0-5	2-0-2	
EDP	—	Electives		2-0-2	
			16	16	
<i>Junior Year</i>					
EDP	305-6	Anatomy and Physiology	3-0-3	3-0-3	
EDP	301	Motor Learning	2-0-2		
EDP	336	Safety Education and First Aid		2-0-2	
EDS	351	The Secondary School, Self, & Society	3-0-3		
EDF	419	Philosophy of Education		3-0-3	
EDP	300	Methods of Teaching Phys. Ed.	3-0-3		
EDP	324	Elementary Physical Education		3-0-3	
EDP	—	Electives		2-0-2	
—	—	General Electives	3-0-3	3-0-3	
			16	16	
<i>Senior Year</i>					
EDP	409	Kinesiology	3-0-3		
EDP	408	Physiology of Exercise	2-0-2		
EDP	410	Adapted Physical Education	2-0-2		
EDP	402	Organization and Administration of Physical Education	2-0-2		
EDP	405	Tests and Measurements	2-0-2		
—	—	General Electives	5-0-5		
EDP	417	Student Teaching (Special Field)		x-x-12	
OR					
EDP	418	Student Teaching (Principal Field)		x-x-12	
			16	12	

PROGRAM—E3—Continued¹Under "Term," 3-0-3 means 3 hrs. class, 0 hrs. laboratory, and 3 hrs. credit.²Non-Catholic students will take Phl 101.³Non-Catholic students will take Phl 201.⁴Non-Catholic students take elective in Humanities.**PROGRAM—E4: HEALTH EDUCATION**

<i>Dept.</i>	<i>No.</i>	<i>Courses</i>	<i>1st Term¹</i>	<i>2nd Term</i>	<i>3rd Term</i>
<i>Freshman Year</i>					
BIO	114	Biological Science (and Lab)		3-2-4	
MTH	—	Mathematics Course	3-0-3		
ENG	101	Language and Thought	3-0-3		
ENG	106	Language and Literature		3-0-3	
THL ²	—	Elective	3-0-3		
PHL ³	101	Basic Problems in Philosophy I		3-0-3	
EDP	109-10	Personal and Professional Development	2-0-2	2-0-2	
EDP	116	Personal Health	2-0-2		
EDP	118	Community Health		2-0-2	
HST	—	100-200 Level Electives	3-0-3	3-0-3	
			16	17	
<i>Sophomore Year</i>					
EDF	207	Human Growth and Development	3-0-3		
EDF	208	Learning Process		3-0-3	
EDP ⁴	130	Physical Education Activities	0-2-1	0-2-1	
EDP	251	School Health Program		3-0-3	
THL ⁵	—	Elective	3-0-3		
PHL ⁵	201	Basic Problems in Philosophy II		3-0-3	
SOC	204	Modern Social Problems	3-0-3		
EDP	—	Electives	2-0-2	2-0-2	
—	—	General Electives	4-0-4	4-0-4	
			16	16	
<i>Junior Year</i>					
EDP	305-6	Anatomy and Physiology	3-0-3	3-0-3	
EDP	309	School Health Instruction		3-0-3	
EDP	336	Safety Education and First Aid	3-0-3		
EDS	351	The Secondary School, Self, and Society		3-0-3	
EDP	—	Electives	2-0-2	2-0-2	
—	—	General Electives	8-0-8	4-0-4	
			16	15	
<i>Senior Year</i>					
EDP	430	Principles of Health Education	2-0-2		
EDP	407	Current Issues in Health Education	2-0-2		
EDF	419	Philosophy of Education	3-0-3		
EDP	419	Student Teaching (Health)		x-x-12	
—	—	General Electives	9-0-9		
			16	12	

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

PROGRAM—E4—Continued²Non-Catholic students will take Phl 101.³Non-Catholic students will take Phl 201.⁴For a Teaching Field in Physical Education, take EdP 150-162.⁵Non-Catholic students take elective in Humanities.**PROGRAM—E5: MUSIC EDUCATION**

<i>Dept.</i>	<i>No.</i>	<i>Courses</i>	<i>1st Term</i> ¹	<i>2nd Term</i>	<i>3rd Term</i>
<i>Freshman Year</i>					
EdS	109-10	Personal and Professional Development	2-0-2	2-0-2	
ENG	101	Language and Thought	3-0-3		
ENG	106	Language and Literature		3-0-3	
EdP	101	Cultural and Personal Aspects of Physical Education		1-1-1	
EdP	130	Physical Education Activities		0-1-1	
MUS	108	Introduction to Music Literature		2-0-2	
MUS	151-2	First Year Theory	5-0-4	5-0-4	
MUS ²	—	Applied Music	1-0-1	1-0-1	
THL ³	—	Elective	3-0-3		
PHL	101	Basic Problems in Philosophy I		3-0-3	
— ⁴	—	Science Course	3-2-4		
			17	17	
<i>Sophomore Year</i>					
EdF	207	Human Growth and Development	3-0-3		
EdF	208	Learning Process		3-0-3	
HST	101-2	History of Civilization	3-0-3	3-0-3	
MUS	251	Second Year Theory	5-0-4		
MUS	262	Musical Form		3-0-2	
MUS	272	Keyboard Harmony		2-0-2	
MUS	335	Music in Elementary Grades	3-0-3		
MUS	331	Vocal Music in High School		2-0-2	
THL ³	—	Elective	3-0-3		
PHL	201	Basic Problems in Philosophy II		3-0-3	
MUS ²	—	Applied Music	1-0-1	2-0-2	
			17	17	
<i>Junior Year</i>					
MUS	301-2	History of Music	3-0-3	3-0-3	
MUS	322	Instrumentation and Orchestration		3-0-3	
MUS	321	Instrumental Conducting	2-0-2		
		OR			
MUS	351	Choral Conducting	2-0-2		
MUS	332	School Band and Orchestra		2-0-2	
MUS ⁵	—	Music Education Electives		3-0-3	
MUS ⁶	—	Music Theory Electives	2-0-2	4-0-4	
MTH	111	Mathematics and Its Cultural Aspects	3-0-3		
EdP	102	Personal and Community Health	2-0-2		
EdS	351	Secondary School	3-0-3		
MUS ²	399	Applied Music	2-0-2	2-0-2	
			17	17	
<i>Senior Year</i>					
—	—	General Education Electives	3-0-3		

PROGRAM—E5—Continued

No.	Dept.	Courses	1st Term ¹	2nd Term	3rd Term
EdF	419	Philosophy of Education	3-0-3		
EdS	415	Student Teaching		x-x-12	
MUS ⁷	429	Marching Band Techniques	2-0-2		
MUS ⁵	—	Music Education Electives	4-0-4		
MUS ⁶	—	Music Theory Electives	4-0-4		
			16	12	

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

²Applied 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.

³Non-Catholic students take Humanities elective.

⁴Take Bio 114 or Phy 105 or Geo 109.

⁵Music Education Electives: Mus 235-6, 325-6-7-8, 425-6, 431-2.

⁶Music Theory Electives: Mus 311-2, 411-2, 415-6, 4178, 441-2, 451-2.

⁷Required of students planning to teach instrumental music in secondary schools.

NOTE: MUSIC EDUCATION PROGRAM

An audition is required before a student is admitted to this program. Applied Music students are required to perform at least once each term. If the student is approved for an Applied Music major, he will present not less than one-half of a recital as the Senior requirement.

PROGRAM—E6: ART EDUCATION

Dept.	No.	Course	1st Term ¹	2nd Term	3rd Term
<i>Freshman Year</i>					
ART	103-4	Introductory Drawing	2-0-2	2-0-2	
ART	111-12	Principles of Design	2-0-2	2-0-2	
ART	226	Introductory Painting	2-0-2		
ART ²	—	Electives		2-0-2	
EdS	109-10	Personal and Professional Development	2-0-2	2-0-2	
ENG	101	Language and Thought	3-0-3		
ENG	106	Language and Literature		3-0-3	
EDP	101	Cultural and Personal Aspects of Physical Education		1-1-1	
EDP	130	Physical Education Activities		0-1-1	
PHL	101	Basic Problems in Philosophy I		3-0-3	
THL ³	—	Elective	3-0-3		
MTH	111	Mathematics and Its Cultural Aspects	3-0-3		
			17	16	
<i>Sophomore Year</i>					
ART	231	Sculpture	2-0-2		
ART	251	Graphics		2-0-2	
ART ²	—	Electives	4-0-4	4-0-4	
ART	281-2	Practical Arts		2-0-2	
EdF	207	Growth and Development	3-0-3		



PROGRAM—E6—Continued

<i>No.</i>	<i>Dept.</i>	<i>Course</i>	<i>1st Term</i> ¹	<i>2nd Term</i>	<i>3rd Term</i>
EdF	208	Learning Process		3-0-3	
EdP	102	Personal and Community Health	2-0-2		
PHL	201	Basic Problems in Philosophy II		3-0-3	
THL ³	—	Elective	3-0-3		
HST	101-2	History of Civilization	3-0-3	3-0-3	
			17	17	
<i>Junior Year</i>					
ART	—	Crafts	2-0-2		
ART	372	Renaissance Art	3-0-3		
ART	472	Art in Twentieth Century		3-0-3	
ART ²	—	Electives	2-0-2	6-0-6	
EdE ⁵	481	Art in Elementary Education	2-0-2		
EdS ⁵	482	Teaching Art in Secondary School		2-0-2	
EdS	351	Secondary School	3-0-3		
— ⁴	—	Science Course	3-2-4		
—	—	General Education Electives		6-0-6	
			16	17	
<i>Senior Year</i>					
ART	—	Art History or Appreciation		6-0-6	
ART ²	—	Electives		7-0-7	
EdF	419	Philosophy of Education		3-0-3	
EdS	415	Student Teaching	x-x-12		
			12	16	

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

²Art electives must include 18 hours of 300-400 level courses.

³Non-Catholic students take a Humanities elective.

⁴Take Bio 114 or Phy 105 or Geo 109.

⁵See Art 481-2 for course descriptions.

PROGRAM—E8: 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: *Cr. Hrs.*

- 1. Teaching in the Elementary School 3
- 2. Reading in the Elementary School 3
- 3. Arithmetic in the Elementary School 3
- 4. Growth and Development 3

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. Conversion to a Standard 4-Year Provisional Elementary Certificate is possible when the appropriate pattern of training has been completed.

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 approximately 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: 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:

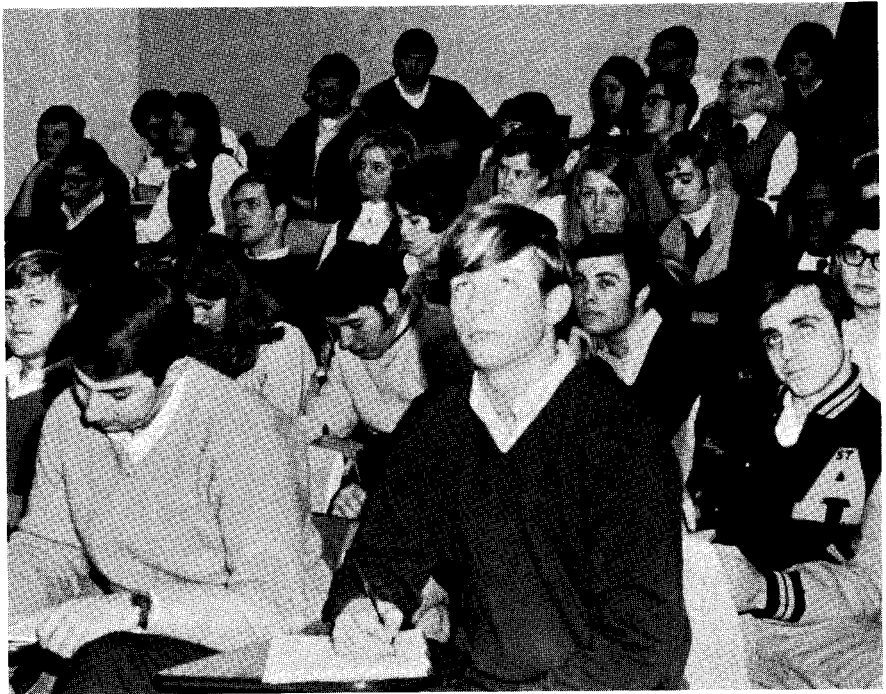
1. complete a *minimum* of 30 semester credit hours beyond the first degree;
2. qualify for the Provisional Elementary Certificate by completing a pattern of courses substantially equivalent to the curriculum outlined in Program—E1, OR qualify for the Provisional High School Certificate by completing a pattern of courses substantially equivalent to the curriculum outlined in Program—E2, including the prescribed minimum requirements for a principal and a second teaching field, both of which must be certifiable.
3. complete the general curriculum requirements prescribed by the University for all undergraduate degrees.

PROGRAM—E11A: B.A. or B.S. DEGREE WITH TEACHER CERTIFICATION**PROGRAM—E11B: B.S. in BUS. ADM. WITH TEACHER CERTIFICATION**

Students matriculating in the College of Arts and Sciences or in the School of Business Administration may enroll in the teacher education program (Secondary Education 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 these programs 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 2.50 average in the principal teaching field and taking the comprehensive National Teacher Examination (NTE). During the semester prior to 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 or the School of Business Administration 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. The requirements for the College of Arts and Sciences or the School of Business Administration and those of the School of Education must be completed before any degree is granted.

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.

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IX School of Engineering

DR. MAURICE GRANNEY, *Dean*

MR. JAMES L. MCGRAW, *Associate Dean*

DR. DAVID C. KRAFT, *Assistant Dean*

DR. C. RICHARD HORWEDEL, *Assistant to the Dean*

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 systems, 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 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

A student enrolls in the curriculum prescribed for the academic year in which he is registered as a freshman at the University of Dayton or elsewhere. If for any reason it is necessary or desirable to change to a subsequently established curriculum, a student must accept the new curriculum in toto.

The Degrees—Bachelor of Chemical, Civil, Electrical, Industrial and Systems, 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

<i>Dept.</i>	<i>No.</i>	<i>Course</i>	<i>1st Term</i> ¹	<i>2nd Term</i>	<i>3rd Term</i>
CHM	123	General Chemistry		3-3-4	
CPS	144	Fortran Programming		2-0-2	
EGR	101	Mechanics I		3-0-3	
EGR ²	101-2	Introduction to Engineering	1-0-1	1-0-1	
ENG	101	Language and Thought	3-0-3		
MTH	118-9	Analytical Geometry and Calculus	4-0-4	4-0-4	
MEE	106L	Engineering Graphics I	0-6-2		
PHL	101	Basic Problems in Philosophy I	3-0-3		
PHY	196	General Physics I	3-0-3		
THL ³	—	Theology Elective		3-0-3	
			16	17	

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

²An introduction to the School of Engineering, the profession of engineering, and related topics.

³Non-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, 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

<i>Dept.</i>	<i>No.</i>	<i>Course</i>	<i>1st Term¹</i>	<i>2nd Term</i>	<i>3rd Term</i>
<i>Sophomore Year</i>					
CHM	124	General Chemistry	3-3-4		
CME	203	Material and Energy Balances	3-0-3		
CHM	315	Organic Chemistry		3-0-3	
CHM	313L	Organic Chemistry Lab		0-3-1	
ENG	106	Language and Literature	3-0-3		
MTH	218	Analytic Geometry and Calculus III	4-0-4		
MTH	219	Applied Differential Equations		3-0-3	
PHL	201	Basic Problems in Philosophy II		3-0-3	
PHY	207-8	General Physics	3-0-3	3-0-3	
SPE	101	Fundamentals of Effective Speaking		3-0-3	
			17	16	
<i>Junior Year</i>					
CME	305	Thermodynamics		3-0-3	
CME	324-5	Transport Phenomena	3-0-3	3-0-3	
CME	326L	Transport Phenomena Lab		0-3-1	
CME	381	Applied Math for Chemical Engineers	3-0-3		
CHM	303-4	Physical Chemistry	3-3-4	3-3-4	
CHM	316	Organic Chemistry	3-0-3		
CHM	314L	Organic Chemistry Lab	0-3-1		
ELE	321	Basic Electric Theory		3-0-3	
H-S	—	Humanistic-Social Studies Elective	3-0-3		
THL ²	—	Theology Elective		3-0-3	
			17	17	

PROGRAM—EN1—Continued

<i>Dept.</i>	<i>No.</i>	<i>Course</i>	<i>1st Term</i> ¹	<i>2nd Term</i>	<i>3rd Term</i>
<i>Senior Year</i>					
CME	306	Kinetics	3-0-3		
CME	411-2	Unit Operations	3-0-3	3-0-3	
CME	413L-4L	Unit Operations Laboratory	0-5-2	0-5-2	
CME	430	Chemical Engineering Design		3-0-3	
CME	452	Process Control	3-0-3		
CME	453L	Process Control Laboratory		0-3-1	
CME ³	—	Technical Electives	3-0-3	6-0-6	
H-S	—	Humanistic-Social Studies Electives	3-0-3	3-0-3	
			17	18	

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

²Non-Catholic students take H-S Elective.

³In the senior year, students who are academically qualified may register for graduate level courses as Technical Electives. If a student, after graduation with a BChE degree from the University of Dayton, is admitted to Graduate Studies at the University of Dayton, the graduate level courses taken in the senior year may be accepted as part of the requirement for a Master's degree in the Chemical Engineering Department.

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.

At the end of their Junior year, students who appear to be qualified for graduate study may elect to plan their programs so as to complete certain prerequisite courses during their Senior year for graduate credit, thus it is possible to complete the requirements for the bachelor's degree and the master's degree in a total of five years.

PROGRAM—EN2: BACHELOR OF CIVIL ENGINEERING

<i>Dept.</i>	<i>No.</i>	<i>Course</i>	<i>1st Term</i> ¹	<i>2nd Term</i>	<i>3rd Term</i>
<i>Sophomore Year</i>					
CIE ²	205L	Surveying Field Practice			3-0-3
CIE	207-8	Surveying	4-0-4	3-0-3	
CIE	310L	Civil Engineering Laboratory		0-3-1	
CIE	408B	Seminar	1-0-0	1-0-0	
EGM	301	Dynamics		3-0-3	
EGM	303	Strength of Materials	3-0-3		
ENG	106	Language and Literature	3-0-3		
GEO	218	Engineering Geology		3-0-3	
MTH	218	Analytic Geometry and Calculus III	4-0-4		
MTH	219	Applied Differential Equations			3-0-3
PHL	201	Basic Problems in Philosophy II			3-0-3
PHY	207-8	General Physics	3-0-3	3-0-3	
MEE	227L	Engineering Graphics II		0-3-1	
			17	14	9
<i>Junior Year</i>					
CHM	124	General Chemistry		3-3-4	
CIE	312	Soil Mechanics		3-3-4	
CIE	313	Hydraulics	3-3-4		
CIE	315	Theory of Structures	2-3-3		
CIE	408B	Seminar	1-0-0	1-0-0	
EGM	304	Advanced Strength of Materials	3-0-3		
H-S	—	Humanistic-Social Studies Electives	2-0-2	3-0-3	
SPE	101	Fundamentals of Effective Speaking	3-0-3		
THL ³	—	Theology Elective		3-0-3	
			15	14	
<i>Senior Year</i>					
CIE	405	Highway Engineering	3-0-3		
CIE	406	Indeterminate Structures		3-0-3	
CIE	408B-A	Seminar	1-0-0	1-0-1	
CIE	415	Structural Design I	3-0-3		
CIE	417	Reinforced Concrete	2-3-3		
CIE	418	Structural Design II		0-8-3	
CIE	433-4	Sanitary Engineering	3-0-3	3-0-3	
CIE ⁴	—	Technical Electives	3-0-3	3-0-3	
H-S	—	Humanistic-Social Studies Elective		3-0-3	
			15	16	

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

²Three weeks special summer schedule which does not conflict with regular third term.

³Non-Catholic students take H-S Elective.

⁴May select from list of elective courses or by departmental approval select courses listed in Graduate Catalog. A senior student may apply to take additional 500 level courses for graduate credit toward a Master of Science in Civil Engineering degree at the University of Dayton.

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 the student an understanding of basic principles and practices common to the various fields of electrical engineering so that he is prepared to begin specialization in the field of his choice or to pursue advanced study.

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

<i>Dept.</i>	<i>No.</i>	<i>Course</i>	<i>1st Term</i> ¹	<i>2nd Term</i>	<i>3rd Term</i>
<i>Sophomore Year</i> ²					
ENG	106	Language and Literature		3-0-3	
ELE	231-2	Circuit Theory I & II	3-0-3	3-0-3	
ELE	233	Field Theory I		3-0-3	
MTH	218	Analytic Geometry and Calculus III	4-0-4		
MTH	219	Applied Differential Equations		3-0-3	
PHL	201	Basic Problems in Philosophy II	3-0-3		
PHY	207-8	General Physics	3-0-3	3-0-3	
SPE	101	Fundamentals of Effective Speaking	3-0-3		
			16	15	
<i>Junior Year</i> ²					
EGM	301	Dynamics	3-0-3		
ELE	312-3	Electronics I & II	3-0-3	3-0-3	
ELE	331-2	Circuit Theory III & IV	3-0-3	3-0-3	
ELE	333-4	Field Theory II & III	3-0-3	3-0-3	
ELE	335L-6L	Electrical Engineering Laboratory I & II	0-2-1	0-2-1	
ELE	338L	Electrical Engineering Laboratory III		0-2-1	
ELE	410B	Seminar	1-0-0	1-0-0	
H-S	—	Humanistic Social Studies Elective	3-0-3		
MTH ³	—	Mathematics Elective		3-0-3	
THL ⁴	—	Theology Elective		3-0-3	
			16	17	

PROGRAM—EN3—Continued

<i>Dept.</i>	<i>No.</i>	<i>Course</i>	<i>1st Term</i> ¹	<i>2nd Term</i>	<i>3rd Term</i>
<i>Senior Year</i> ²					
CME	305	Thermodynamics	3-0-3		
ELE	410B-A	Seminar	1-0-0	1-0-1	
ELE	413	Communication Engineering	3-0-3		
ELE	431	Energy Conversion	3-0-3		
ELE	432	Automatic Control Systems		3-0-3	
ELE	435L-6L	Electrical Engineering Lab. IV & V	0-2-1	0-2-1	
ELE	437L	Electrical Engineering Laboratory VI		0-2-1	
ELE	—	Technical Electives	3-0-3	3-0-3	
H-S	—	Humanistic Social Studies Electives	3-0-3	3-0-3	
INE	313	Engineering Law		2-0-2	
			16	14	

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

²Courses may be scheduled in terms other than listed.

³Selected from list approved by the Department of Electrical Engineering.

⁴Non-Catholic students take H-S Elective.

INDUSTRIAL AND SYSTEMS ENGINEERING

The question, "what is Industrial and Systems Engineering?", is not easily answered. No single definition will satisfy everyone. Through the years a definition has been formulated by Industrial Engineering leaders in various fields and was adopted by the American Institute of Industrial Engineers about ten years ago. This was before most schools changed the name of the Department of Industrial Engineering to Industrial and Systems Engineering. This definition reflects the then new, and now common "new direction in Industrial Engineering" as follows:

"Industrial (and Systems) 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."

It is apparent from the definition that Industrial and Systems Engineering differs from other branches of engineering in two fundamental ways. First, it is the only major branch of engineering that is equally concerned with people as it is with things. Second, it is applicable to all types of commercial and industrial activities.

Management now looks upon the Industrial and Systems engineer as one concerned not only with his traditional role in work measurement, cost studies, wage administration, etc., but also concerned with:

1. Analyzing, developing, and implementing entirely new systems consistent with modern decision methods and computer technology.

2. Improving the performance and output of existing systems of men, machines, materials, and information whether he is in the manufacturing function, or in the budgetary, legal, or sales functions of industry, commerce or government.
3. Improving the design of existing systems.

Many students major in Industrial and Systems Engineering because they are management oriented but still desire an engineering background and degree. Others do so because they are people oriented, or interested in computer utilization. All of these are valid reasons for choosing Industrial and Systems Engineering. Whatever the reason, the student should be reminded that it is a rigorous engineering discipline.

The program of study leading to the Bachelor of Industrial and Systems Engineering degree represents the combined knowledge and experience of the faculty of the Department of Industrial and Systems Engineering working within the constraints of the University and the engineering profession. It is designed to allow considerable latitude in the selection of a student's program of study. The principal constraints on elective courses are that they be relevant to the overall program and pertinent to achieving educational and professional goals.

PROGRAM—EN4: BACHELOR OF INDUSTRIAL AND SYSTEMS ENGINEERING

<i>Dept.</i>	<i>No.</i>	<i>Course</i>	<i>1st Term</i> ²	<i>2nd Term</i>	<i>3rd Term</i>
<i>Sophomore Year</i>					
ENG	106	Language and Literature	3-0-3		
ISE	202	Engineering Economy	3-0-3		
ISE	222	Management Information and Control Systems			2-0-2
ISE	251	Work Design and Simplification			2-2-3
ISE	290	Introduction to Industrial and Systems Engineering	2-0-1		
MTH	218	Analytic Geometry and Calculus III	4-0-4		
MTH	219	Applied Differential Equations			3-0-3
MTH	367-8	Statistical Methods I & II	3-0-3		3-0-3
PHY	207-8	General Physics	3-0-3		3-0-3
SPE	101	Fundamentals of Effective Speaking			3-0-3
			17	17	

PROGRAM—EN4—Continued

<i>Dept.</i>	<i>No.</i>	<i>Courses</i>	<i>1st Term</i> ¹	<i>2nd Term</i>	<i>3rd Term</i>
<i>Junior Year</i> ³					
CME	305	Thermodynamics	3-0-3		
EGM	301	Dynamics		3-0-3	
ELE	321	Basic Electric Theory	3-0-3		
ELE	322	Fundamentals of Engineering Electronics		2-2-3	
ISE	323	Design Strategy for Management Systems	2-0-2		
ISE	324	Behavioral Dimensions in Management		2-0-2	
ISE	334	Machine Computing Elements in Engineering Systems		2-2-3	
ISE	351	Work Standards	2-2-3		
PHL	201	Basic Problems in Philosophy II	3-0-3		
G-E	—	General Elective		3-0-3	
H-S	—	Humanistic-Social Studies Elective	3-0-3		
THL ²	—	Theology Elective		3-0-3	
			17	17	
<i>Senior Year</i> ^{3,4}					
ISE ⁵	421	Reliability and Maintainability	3-0-3		
ISE ⁵	423	Quality Assurance		2-2-3	
ISE ⁵	428	Design and Analysis of Engineering Experiments	2-2-3		
ISE ⁵	451	Production and Inventory Planning and Control	2-2-3		
ISE	452-3	Operations Research I & II	3-0-3	3-0-3	
ISE ⁵	454	Cybernetics and Control Theory		3-0-3	
ISE ⁵	455	Principles of Systems		3-0-3	
ISE	490-1	Senior Seminar	2-0-1	2-0-1	
H-S	—	Humanistic-Social Studies Electives	3-0-3	3-0-3	
T E	—	Technical Electives	3-0-3	3-0-3	
			16	16	

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

²Non-Catholic students take H-S Elective.

³An Honors Course may be added each term for students designated by the department chairman.

⁴In the senior year, students who are academically qualified may register for two graduate level courses as technical electives. If a student, after graduation with a B.I.S.E. degree from the University of Dayton, is admitted to graduate studies at the University of Dayton, the graduate level courses taken in the senior year for graduate credit may be accepted as part of the requirement for a Master's degree in the Engineering Management Program.

⁵Elect four out of six Ise Courses.

MECHANICAL ENGINEERING

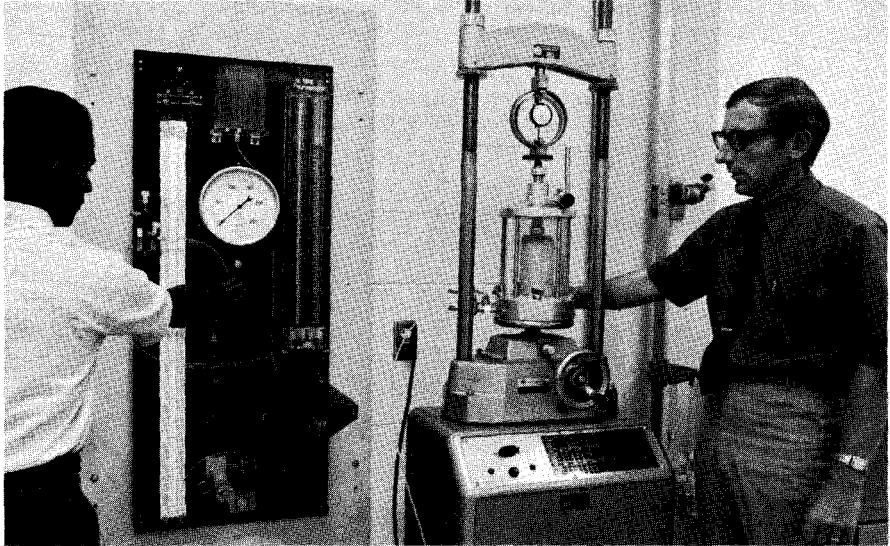
The curriculum of Mechanical Engineering is designed to give the student thorough training in the fundamental principles of the mechanical engineering profession and the application of these principles to pertinent problems.

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

<i>Dept.</i>	<i>No.</i>	<i>Course</i>	<i>1st Term</i> ¹	<i>2nd Term</i>	<i>3rd Term</i>
<i>Sophomore Year</i>					
EGM	301	Dynamics	3-0-3		
ELE	321	Basic Electric Theory		3-0-3	
ENG	106	Language and Literature	3-0-3		
MTH	218	Analytic Geometry and Calculus III	4-0-4		
MTH	219	Applied Differential Equations		3-0-3	
MEE	211	Materials and Processes	2-3-3		
MEE	227L	Engineering Graphics II	0-3-1		
MEE	301	Thermodynamics I		3-0-3	
MEE	304	Theory of Engineering Experimentation		1-0-1	
MEE	321	Theory of Machines		2-3-3	
PHY	207-8	General Physics	3-0-3	3-0-3	
			17	16	
<i>Junior Year</i>					
EGM	303	Strength of Materials	3-0-3		
ELE	322	Fund. of Engineering Electronics	2-2-3		
H-S	—	Humanistic-Social Studies Elective		3-0-3	
MEE	302	Thermodynamics II	3-0-3		
MEE	303	Metallurgy		2-3-3	
MEE	308	Fluid Mechanics	3-0-3		
MEE	316	Mechanical Engineering Analysis	3-0-3		
MEE	319	Mechanical Vibrations		3-0-3	
MEE	341L	Instrumentation Laboratory		0-3-1	
MEE	410	Heat Transfer		3-0-3	
MEE	414B	Seminar	1-0-0	1-0-0	
MEE	427	Mechanical Design I		3-3-4	
			15	17	



PROGRAM—EN5—Continued

<i>Dept.</i>	<i>No.</i>	<i>Course</i>	<i>1st Term</i> ¹	<i>2nd Term</i>	<i>3rd Term</i>
<i>Senior Year</i>					
MEE	330	Engineering Economics	1-0-1		
MEE	402	Energy Conversion Systems	3-0-3		
MEE	414B-A	Seminar	1-0-0	1-0-1	
MEE	418	Advanced Fluid Mechanics	3-0-3		
MEE	424L	Mechanical Engineering Lab.	0-3-1		
MEE	435	Feedback Control Systems	3-0-3		
MEE	450L	Mechanical Engineering Lab. Project		0-3-1	
MEE ³	—	Technical Electives	3-0-3	3-0-3	
PHL	201	Basic Problems in Philosophy II		3-0-3	
SPE	101	Fundamentals of Effective Speaking	3-0-3		
THL ²	—	Theology Elective		3-0-3	
—	—	Science Elective		3-0-3	
H-S	—	Humanistic-Social Studies Elective		3-0-3	
			17	17	

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

In the senior year, students who are academically qualified may register for two graduate level courses as technical electives. If a student, after graduation with a B.M.E. degree from the University of Dayton, is admitted to graduate studies at the University of Dayton, the graduate level courses taken in the senior year for graduate credit may be accepted as part of the requirement for a Master's degree in the School of Engineering.



Engineering Technology

MR. JAMES L. MCGRAW, *Associate Dean of Engineering*

OBJECTIVES

The Engineering Technology Division of the School of Engineering 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 Engineering Technology Division 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, Engineering Technology 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 Engineering Technology Division 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.

TRANSFER STUDENTS

The Engineering Technology Division welcomes transfer students from Associate Degree programs in Engineering Technology who wish to pursue the Bachelor of Technology degree. Graduates of two-year Associate Degree programs in Engineering Technology should normally expect to undertake at least two additional years of work for the Bachelor of Technology degree.

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—T1: ASSOCIATE IN TECHNOLOGY WITH MAJOR IN CHEMICAL TECHNOLOGY

<i>Dept.</i>	<i>No.</i>	<i>Course</i>	<i>1st Term¹</i>	<i>2nd Term</i>	<i>3rd Term</i>
<i>Freshman Year</i>					
CTI	122	General Chemistry	3-3-4		
STI	107-8	Engineering Technology Math I, II	5-0-4	5-0-4	
STI	151	Intro. to Engineering Technology	3-0-3		
ENG	101	Language and Thought	3-0-3		
THL ²	112	Foundations in Theology	3-0-3		
CTI	125	Inorganic Chemistry		3-3-4	
STI	115	Physics: Mechanics		2-2-3	
PHL	101	Basic Problems in Philosophy I		3-0-3	
MTI	103L	Technical Drawing		0-6-2	
			17	16	

PROGRAM—T1—Continued

<i>Dept.</i>	<i>No.</i>	<i>Course</i>	<i>1st Term¹</i>	<i>2nd Term</i>	<i>3rd Term</i>
<i>Sophomore Year</i>					
CTI	202	Quantitative Analysis	3-6-5		
CTI	208-9	Organic Chemistry	3-3-4	3-3-4	
STI	134	Effective Speaking	2-0-2		
STI	215	Physics: Electricity	2-2-3		
STI	251	Economics of Industry	3-0-3		
STI	252	American Political Ideas		3-0-3	
CTI	305	Materials Science		3-0-3	
STI	216	Physics: Heat, Light, Sound		2-2-3	
STI	334	Technical Writing		2-0-2	
			17	15	
<i>Junior Year</i>					
CTI	308	Chemical Engineering Technology	2-3-3		
CTI	309	Chemical Engineering Technology Calculations	3-0-3		
CTI	313	Topics in Physical Chemistry	3-3-4		
CTI	316	Analytical Instrumentation	3-0-3		
ITI	315	Organization and Management	3-0-3		
			16		

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

²Non-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**

<i>Dept.</i>	<i>No.</i>	<i>Course</i>	<i>1st Term</i> ¹	<i>2nd Term</i>	<i>3rd Term</i>
<i>Freshman Year</i>					
CTI	122	General Chemistry		3-3-4	
ENG	101	Language and Thought	3-0-3		
ETI	110	Electrical Circuits I		3-0-3	
PHL	101	Basic Problems in Philosophy I	3-0-3		
STI	107	Engineering Technology Math I	5-0-4		
STI	108	Engineering Technology Math II		5-0-4	
STI	115	Physics: Mechanics		2-3-3	
STI	150	Introduction to Engineering Technology	3-0-3		
STI	252	American Political Ideas		3-0-3	
THL ²	—	100-200 Elective	3-0-3		
			16	17	
<i>Sophomore Year</i>					
ETI	111	Electrical Circuits II	3-3-4		
ETI	204	Electrical Measurements	2-3-3		
ETI	205	Electronic Measurements		3-3-4	
ETI	206	Electron Devices I		3-3-4	
ETI	222L	Electronic Circuit Diagrams	0-3-1		
ETI	300	Seminar	1-0-0	1-0-0	
ETI	324	Digital Computer Fundamentals		3-0-3	
ITI	315	Organization and Management		3-0-3	
STI	207	Engineering Technology Math III	5-0-4		
STI	134	Effective Speaking	2-0-2		
STI	216	Physics: Heat, Light, and Sound	2-2-3		
STI	251	Economics of Industry		3-0-3	
			17	17	
<i>Junior Year</i>					
ETI	300	Seminar	1-0-0		
ETI	306	Electron Devices II	3-3-4		
ETI	327	Pulse Circuit Fundamentals	3-3-4		
ETI	328	Electronic Communications	3-3-4		
ETI	330	Special Electronic Projects	1-0-1		
ETI	—	Elective	3-0-3		
STI	334	Technical Writing	2-0-2		
			18		

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

²Non-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

<i>Dept.</i>	<i>No.</i>	<i>Course</i>	<i>1st Term¹</i>	<i>2nd Term</i>	<i>3rd Term</i>
<i>Freshman Year</i>					
ITI	104	Industrial Material and Processes		3-0-3	
MTI	103L	Technical Drawing		0-6-2	
MTI	106L	Testing and Measurements		0-3-1	
MTI	108L	Manufacturing Processes I		0-3-1	
STI	107-8	Engineering Technology Math I, II	5-0-4	5-0-4	
STI	115	Physics: Mechanics		2-2-3	
STI	134	Effective Speaking		2-0-2	
STI	151	Introduction to Engineering Technology	3-0-3		
ENG	101	Language and Thought	3-0-3		
PHL	101	Basic Problems in Philosophy I	3-0-3		
THL ²	—	Theology 100-200 Elective	3-0-3		
			16	16	
<i>Sophomore Year</i>					
ITI	108	Production Methods and Control	3-0-3		
ITI	215	Elements of Cost Control		2-0-2	
ITI	216	Quantitative Methods in Industrial Engineering Technology		3-0-3	
ITI	217	Industrial Economic Analysis		3-0-3	
ITI	230	Motion and Time Study I		2-3-3	
CTI	122	General Chemistry	3-3-4		
MTI	213	Industrial Mechanism	3-0-3		
STI	215	Physics: Electricity		2-2-3	
STI	216	Physics: Heat, Light, Sound	2-2-3		
STI	251	Economics of Industry		3-0-3	
STI	252	American Political Ideas	3-0-3		
			16	17	

PROGRAM—T3—Continued

<i>Dept.</i>	<i>No.</i>	<i>Course</i>	<i>1st Term</i> ¹	<i>2nd Term</i>	<i>3rd Term</i>
<i>Junior Year</i>					
ITI	305	Labor and Wage Administration	3-0-3		
ITI	315	Organization and Management	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		
STI	334	Technical Writing	2-0-2		
			17		

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

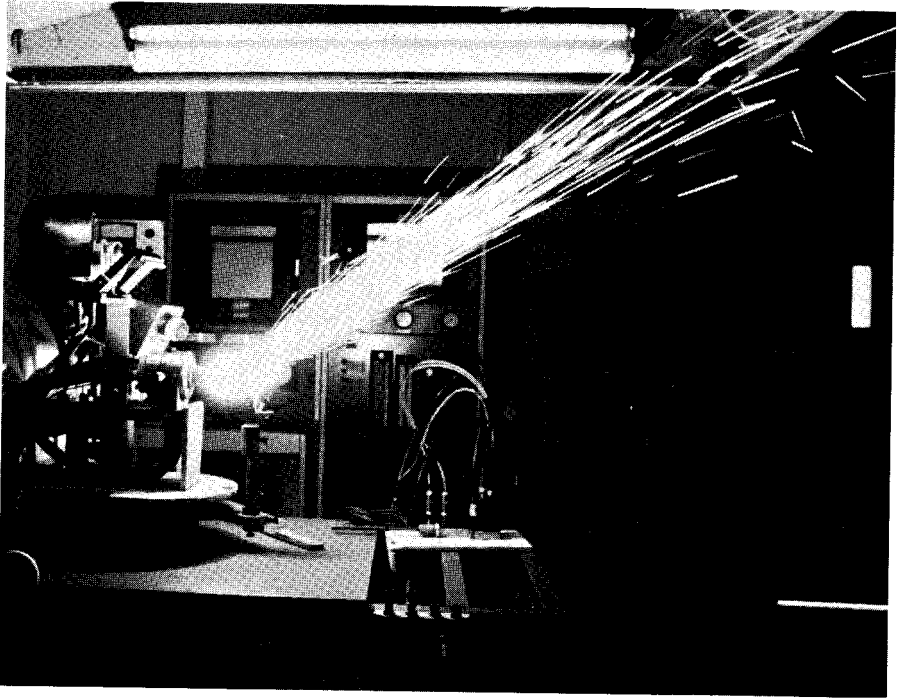
Emphasis is placed on courses in applied mechanics; strength of materials; mechanisms; thermodynamics; fluid mechanics; fluid power; machines design; design for manufacturing, and basic technical courses such as technical drawing, physics, mathematics and chemistry.

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

Career opportunities exist for young men and women as engineering technicians in: research and development, design of machines, design of processes and systems, manufacturing engineering, technical sales, customer relations and field service, fluid power and controls, supervision and management. An E. C. P. D. accredited Engineering Technology curriculum.

PROGRAM—T4: ASSOCIATE IN TECHNOLOGY WITH MAJOR IN MECHANICAL ENGINEERING TECHNOLOGY

<i>Dept.</i>	<i>No.</i>	<i>Course</i>	<i>1st Term</i> ¹	<i>2nd Term</i>	<i>3rd Term</i>
<i>Freshman Year</i>					
ITI	104	Industrial Materials and Processes		3-0-3	
MTI	103L	Technical Drawing		0-6-2	
STI	151	Introduction to Engineering Technology	3-0-3		
PHL	101	Basic Problems in Philosophy I	3-0-3		
STI	107-8	Engineering Technology Math I, II	5-0-4	5-0-4	
STI	115	Physics: Mechanics		2-2-3	
CTI	122	General Chemistry		3-3-4	
ENG	101	Language and Thought	3-0-3		
MTI	106L	Testing and Measurements		0-3-1	
THL ²	—	100-200 Elective	3-0-3		
			16	17	



PROGRAM—T4—Continued

<i>Dept.</i>	<i>No.</i>	<i>Course</i>	<i>1st Term</i> ¹	<i>2nd Term</i>	<i>3rd Term</i>
<i>Sophomore Year</i>					
MTI	104L	Graphical Computations	0-6-2		
STI	134	Effective Speaking		2-0-2	
MTI	108L	Manufacturing Processes I Lab		0-3-1	
MTI	221	Strength of Materials		3-0-3	
MTI	215	Statics	3-0-3		
MTI	217	Dynamics	3-0-3		
MTI	226L	Mechanisms	1-3-2		
MTI	324L	Design for Manufacturing		1-3-2	
MTI	232	Thermodynamics		3-0-3	
MTI	231	Fluid Mechanics		3-0-3	
STI	207	Engineering Technology Math III	5-0-4		
STI	215	Physics: Electricity		2-2-3	
STI	216	Physics: Heat, Light, Sound	2-2-3		
			17	17	

PROGRAM—T4—Continued

<i>Dept.</i>	<i>No.</i>	<i>Course</i>	<i>1st Term</i> ¹	<i>2nd Term</i>	<i>3rd Term</i>
MTI	329	Fluid Power	2-3-3		
MTI	323	Machine Design	2-3-3		
ITI	315	Organization and Management	3-0-3		
STI	251	Economics of Industry	3-0-3		
STI	252	American Political Ideas	3-0-3		
STI	334	Technical Writing	2-0-2		
					17

¹Under "Term," 3-0-3 means 3 hrs. class, 0 hrs. laboratory, and 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 46 additional credit hours distributed as follows:

<i>Dept.</i>	<i>No.</i>	<i>Course</i>	<i>Credits</i>
ENG	—	English Elective	3
STI	306	Engineering Technology Mathematics IV	3
—	—	General Elective	3
PHL	—	Philosophy Elective	3
THL	—	Theology Elective	3
—	—	Humanistic-Social Electives	6
—	—	Approved Technical Electives (Min. 6 cr. in major)	24
STI	499	Seminar	1
			46

$E_1 = 90$

$$\frac{R_1}{R_1 + R_2} \cdot E_1 = E_2$$

$$\frac{100}{100 + R_2} \cdot 90 = 30$$

$$9000 = 30(R_2 + 100)$$



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Emeriti

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.

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.

Csaky, Thaddeus G. (1955), *Mechanical Engineering*, Professor—B.S., Humanistic State Gymnasium, Poland, 1921; DIPL. ING., Technical University of Warsaw, 1928; A.M.I. Mech E. Chartered Mechanical Engineer, Institution of Mechanical Engineers, London, 1946.

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.

Ruhlman, S.M., Francis, *Library*, Associate Professor—B.A., University of Dayton, 1924; M.A., Our Lady of the Lake, 1936.

Ranked Faculty

Abbott, Lyndon E. (1966), *Political Science*, Associate Professor—B.A., Ohio Wesleyan University, 1931; M.A., University of Wisconsin, 1932.

Adamitis, James A. (1970), *Criminal Justice*, Assistant Professor—B.A., Kent State University, 1965; M.A., Kent State University, 1967.

Alexander, Roberta S. (1969), *History*, Instructor—B.A., University of California at Los Angeles, 1964; M.A., University of Chicago, 1966.

Anderson, Gladys M. (1960), *Education*, Associate Professor—B.S., Ball State Teachers College, 1945; M.A., Indiana University, 1946; Ph.D., Ohio State University, 1970.

Anderson, Gordon S. (1969), *Elementary Education*, Assistant Professor—B.A., Bethany College, 1953; M.S., State University of New York, 1959; Ed.D., Case Western Reserve University, 1969.

Anderson, Thomas W. (1970), *Assistant Dean of Students*, Assistant Professor—B.A., Iowa Wesleyan College, 1965; M.A., Michigan State University, 1970.

Anderson, Rev. William P. (1968), *Theological Studies*, Assistant Professor—A.B., Bloomfield College, 1961; B.D., Princeton Theological Seminary, 1964; Th.D., Princeton Theological Seminary, 1968.

Arons, Peter L. (1965), *English*, Associate Professor—A.B., New York University, 1957; M.A., Yale University, 1958; Ph.D., Yale University, 1964.

August, Eugene R. (1966), *English*, Associate Professor—B.A., Rutgers University, 1958; M.A., University of Connecticut, 1960; Ph.D., University of Pittsburgh, 1965.

- August, Robert J. (1971), *Military Science*, Assistant Professor—B.S. in Ed., Pennsylvania State University, 1964.
- Back, Stanley J. (1959), *Mathematics*, Associate Professor—B.S., University of Dayton, 1957; M.S., Purdue University, 1959.
- Bajpai, Praphulla K. (1964), *Biology*, Associate Professor—B.V.Sc. & Am., Agra University, 1958; M.V.Sc., Agra University, 1960; M.Sc., Ohio State University, 1963; Ph.D., Ohio State University, 1965.
- 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.
- Balachandran, Venkataraman (1969), *Industrial and Systems Engineering*, Assistant Professor (on leave)—B.S., Annamalai University, 1959; M.S., Annamalai University, 1963; M.S.E., University of Dayton, 1968.
- Balata, Barbara M. (1967), *Physical and Health Education*, Assistant Professor—B.S., Bowling Green State University, 1965; M.A., Northwestern University, 1966.
- Bannan, Alfred J. (1962), *History*, Assistant Professor—B.A., Manhattan College, 1958; M.A., University of Notre Dame, 1961.
- Barna, James D. (1969), *Psychology*, Assistant Professor—B.A., Mount St. Mary's, 1962; M.A., University of Detroit, 1964; Ph.D., St. Louis University, 1969.
- Barnes, Michael H. (1968), *Theological Studies*, Assistant Professor—A.B., St. Louis University, 1961; Ph.L., St. Louis University, 1962.
- Barrett, Charles F. (1970), *Economics*, Assistant Professor—A.A., Corning Community College, 1960; B.S., Memphis State University, 1963; M.A., State University of New York at Buffalo, 1966; Ph.D., State University of New York at Buffalo, 1969.
- Barrett, S.M., Rev. George B. (1952), *Education*, Professor—B.A., University of Dayton, 1932; M.S. in Ed., Fordham University, 1946; Ph.D., Fordham University, 1958.
- Barrish, S.M., Andrew J. (1968), *Performing and Visual Arts-Art*, Assistant Professor—B.S. in Ed., University of Dayton, 1950; M.A., Ohio State University, 1957.
- Barsalou, Donald B. (1969), *Engineering Technology*, Instructor—B.E.E., University of Dayton, 1965; M.S.E.E., University of Dayton, 1970.
- Bauer, Paul T. (1967), *Mechanical Engineering*, Assistant Professor—B.S., Parks College of St. Louis University, 1963; M.S. in M.E.; Oklahoma State University, 1965; Ph.D., Oklahoma State University, 1968.
- Baxter, Carol J. (1970), *Performing and Visual Arts-Music*, Instructor—B.M., and B.M.E., Wichita State University, 1957; M.M., Miami University, 1970.
- Beauregard, Erving E. (1947), *History*, Professor—A.B., University of Chicago, 1942; M.A., University of Massachusetts, 1944.
- Bedard, Bernard J. (1962), *English*, Professor—A.B., University of Notre Dame, 1949; M.A., University of Michigan, 1950; Ph.D., University of Michigan, 1959.
- Berger, Robert N. (1964), *Economics*, Assistant Professor—B.S., University of Dayton, 1960; M.A., Ohio University, 1963.
- Berk, Betty J. Thomas (1942), *Performing and Visual Arts-Music*, Professor—B. Mus., University of Dayton, 1944; M. Mus., Eastman School of Music, 1950; Ph.D., Eastman School of Music, 1963.
- Biersack, George C. (1952), *Communication Arts*, Professor—B.S., University of Dayton, 1952; M.A., Miami University, 1956.
- Blatt, Stephen J. (1971), *Communication Arts*, Assistant Professor—B.A., Morehead State University, 1964; M.A., Ohio University, 1967; Ph.D., Ohio University, 1969.

- Bloemer, S.M., Rev. Charles C. (1948), *Philosophy*, Assistant Professor—A.B., University of Dayton, 1930; M.A., University of Fribourg, 1936; M.A., Catholic University of America, 1949.
- 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.
- Boehman, Louis I. (1967), *Mechanical Engineering*, Associate Professor — B.S.M.E., University of Dayton, 1960; M.S.T.E., Illinois Institute of Technology, 1963; Ph.D., Illinois Institute of Technology, 1967.
- Bogner, Fred K. (1969), *Mechanical Engineering*, Assistant Professor — B.S.C.E., Case Institute of Technology, 1961; M.S.E. Mech., Case Institute of Technology, 1964; Ph.D., Case Institute of Technology, 1967.
- Boulet, Richard A. (1968), *Theological Studies*, Associate Professor — A.B., Providence College, 1954; S.T.B., S.T.L., S.T.Lr., Immaculate Conception College, 1956-1958; S.T.D., University of Montreal, 1965.
- Bourgeois, M. Audrey (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*, Associate Professor — B.A., Mexico City College, 1957; Ph.D., Vanderbilt University, 1963.
- Bozdech, James O. (1968), *English*, Instructor—A.B., University of Dayton, 1964; A.M., University of Dayton, 1966.
- Brady, S.M., Rev. Charles J. (1962), *Theological Studies*, Assistant Professor—B.S., Ed., University of Dayton, 1950; S.T.L., University of Fribourg, 1959.
- Bregenzler, John M. (1968), *Sociology*, Assistant Professor — B.A., Carleton College, 1961; M.A., University of Minnesota, 1967.
- Bridgewater, Marion J. (1966), *Library*, Assistant Professor—A.B., Trinity College, 1939; B.S., Carnegie Institute of Technology, 1940.
- Britt, John F. (1966), *Education*, Associate Professor—B.A., St. Paul Seminary, 1950; M.A., St. Louis University, 1954; Ph.D., St. Louis University, 1962.
- Brockman, S.M., Norbert C. (1962), *Political Science*, Associate Professor (on leave)—B.A., University of Dayton, 1955; M.A., Catholic University of America, 1958; Ph.D., Catholic University of America, 1963.
- Brown, Lt. Col. Harold (1970), *Military Science*, Assistant Professor — B.S., Central State University, 1955.
- Brown, Thomas V. (1970), *Psychology*, Assistant Professor — B.S., Massachusetts Institute of Technology, 1960.
- Brown, Vance d'A (1970), *Mechanical Engineering*, Assistant Professor—B.S.M.E., University of Maryland, 1964; Ph.D., University of Maryland, 1970; Reg. Prof. Engr.
- Bruce, Essie L. (1966), *Library*, Assistant Professor—B.A., Philander Smith College, 1943; B.S.L.S., University of Illinois Library School, 1945.
- Buckenmyer, James A. (1965), *Business Management*, Associate Professor — Ph.B., University of Notre Dame, 1954; M.B.A., University of Toledo, 1962; D.B.A., Washington University, 1970.
- Buckley, David M. (1968), *Library*, Instructor — B.A., Miami University, 1966; M.A. in L.S., Western Michigan University, 1968.
- Bueche, Frederick J., (1961), *Physics*, Professor—B.S., University of Michigan, 1944; Ph.D., Cornell University, 1948.
- Burns, S.M., Rev. Norbert C. (1959), *Theological Studies*, Associate Professor—B.A., University of Dayton, 1945; S.T.L., University of Fribourg, 1954; S.T.D., The Angelicum, 1955.
- Butter, Eliot J. (1971), *Psychology*, Assistant Professor—B.A., Brooklyn College, 1965; M.A., Brooklyn College,

- 1969; Ph.D., University of Massachusetts, 1971.
- Caggiano, Christian R. (1971), *Communication Arts*, Instructor—B.A., University of Dayton.
- Cameron, Alex J. (1964), *English*, Assistant Professor—A.B., University of Notre Dame, 1959.
- Campanelle, Thomas C., (1962), *Education*, Professor—A.B., St. Bonaventure University, 1935; M.A., St. Bonaventure University, 1936; Ph.D., Fordham University, 1952.
- Carlson, John E. (1969), *Performing and Visual Arts-Music*, Instructor — B. Mus., University of Michigan, 1965; M. Mus., University of Michigan, 1967; M. Mus., (Composition) University of Michigan, 1969.
- Cartagenova, Gonzalo C. (1965), *Philosophy*, Associate Professor — Ph.L., Catholic University in Quito, 1953; S.T.B., Woodstock College, 1960; Ph.D., Pontifical Catholic University, 1966.
- Casey, Anthony L. (1969), *Business Management*, Assistant Professor — Ph.D., Havana University, 1955.
- Castello-Lamas, Maria J. (1964), *Languages*, Assistant Professor — A.B., Hogar de Estudios Femenino, Spain, 1956; M.A., Tulane University, 1960.
- Cella, Mary Anne (1968), *Geology*, Assistant Instructor—B.S., University of Dayton, 1967.
- Chantell, Charles J. (1965), *Biology*, Associate Professor—B.S., University of Illinois, 1961; M.S., University of Notre Dame, 1963; Ph.D., University of Notre Dame, 1965.
- Chavez, Simon J. (1954), *Education*, Professor—A.B., Adams State College, 1938; M.Ed., University of Colorado, 1947; D.Ed., University of Colorado, 1952.
- Chiodo, Andria J. (1968), *Languages*, Instructor—B.A., University of Oregon, 1966; M.A., University of Oregon, 1968.
- Chrisman, John M. (1961), *Philosophy*, Assistant Professor—B.A., University of Portland, 1956; M.A., University of Toronto, 1960; Ph.D., University of Toronto, 1971.
- Chuang, Henry N. (1965), *Mechanical Engineering*, Associate 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), *Executive Secretarial Studies*, Associate Professor—B.S., Ohio University, 1934; M.Ed., University of Cincinnati, 1952.
- Clark, Jr., Willard C. (1963), *Accounting*, Associate Professor—B.S., University of Dayton, 1959; M.B.A., Miami University, 1960; C.P.A., Ohio, 1953.
- Cochran, Bud T. (1958), *English*, Associate Professor—B.A., College of Steubenville, 1955; M.A., Ohio State University, 1957; Ph.D., Ohio State University, 1967.
- Cole, S.M., Rev. William J. (1956), *Theological Studies*, Professor—B.S., University of Dayton, 1947; S.T.B., University of Fribourg, 1952; S.T.L., University of Fribourg, 1954; S.T.D., University of Fribourg, 1955.
- Collins, S.M., Rev. Charles L. (1941), *Psychology*, Professor—A.B., University of Dayton, 1925; Ph.D., Fordham University, 1941.
- Columbus, Thomas M. (1967), *English*, Instructor—B.A. College of the Holy Cross, 1966; M.A., University of Virginia, 1967.
- Comer, Orville L. (1950), *Marketing*, Associate Professor — B.S., Washington University, 1948; M.S., Washington University, 1949.
- Conard, Robert C. (1967), *Languages*, Associate Professor—B.A., University of Cincinnati, 1956; M.A., University of Cincinnati, 1962; Ph.D., University of Cincinnati, 1969.

- Conway, Bernard C. (1969), *Library*, Instructor—B.A., Immaculate Conception Seminary, 1965; M.L.S., University of Pittsburgh, 1968.
- Cooney, Joseph J. (1965), *Biology*, Professor — B.S., Lemoine College, 1956; M.S., Syracuse University 1958; Ph.D., Syracuse University 1961.
- Cornelisse, G. Lois (1962), *Library*, Instructor—A.B. in L.S., University of Michigan, 1930.
- Cothern Charles R. (1965), *Physics*, Associate Professor—B.A., Miami University, 1959; M.S., Yale University, 1960; Ph.D., University of Manitoba, 1965.
- Crissey, Mona J. (1968), *Physical and Health Education*, Assistant Professor —B.S.R.E., State University of New York, 1956; M.A., University of Kentucky, 1958.
- Crivello, Mariano P. (1956), *Physics*, Assistant Professor—Laurea, University of Palermo, 1945.
- Crouch, Jack G. (1969), *Mechanical Engineering*, Associate Professor — B.S., U.S. Military Academy, 1945; M.S.E., University of Michigan, 1951; Ph.D., University of Michigan, 1969.
- Daily, Frances M. (1970), *Elementary Education*, Assistant Professor—B.A., University of Washington, 1937; Ph.D., Kent State University, 1970.
- Damico, James A. (1968), *Library*, Assistant Professor—B.S., C. W. Post College, 1959; M.L.S., Rutgers State University, 1961.
- DaPolito, Frank J. (1970), *Psychology*, Assistant Professor — B.A., Bowling Green State University, 1959; Ph.D., Indiana University, 1966.
- Dapore, Gene D. (1971), *Home Economics*, Instructor — B.A., Meredith College, 1963; M.S., University of Tennessee, 1964.
- Darr, John W. (1969), *Business Management*, Professor — B.S., Indiana University, 1949; M.B.A., Indiana University, 1950; Ph.D., University of Alabama, 1957.
- Davison, Joseph E. (1969), *Mechanical Engineering*, Assistant Professor of Materials Engineering — B.S., St. Louis University, 1960; M.S., Iowa State University, 1964; Ph.D., Iowa State University, 1966.
- DeBoo-Marre, Kitayun E. (1966), *English*, Associate Professor—B.A., University of Bombay, 1958; M.A., University of Bombay, 1960; Ph.D., State University of New York at Buffalo, 1966.
- 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.
- Densmore, Max L. (1965), *Marketing*, Associate Professor—B.A., Michigan State University, 1957; M.B.A., Western Michigan University, 1963; Ph.D., Michigan State University, 1965.
- Detterman, Douglas K. (1970), *Psychology*, Assistant Professor—B.A., Boston University, 1967; M.A., University of Alabama, 1969; Ph.D., University of Alabama, 1970.
- Devine, Mary J. (1964), *Communication Arts*, Instructor — Ph.B., Marquette University, 1945; M.A., University of Dayton, 1968.
- Devlin, Capt. Donald L., Jr. (1970), *Military Science*, Assistant Professor—B.S., North Georgia College, 1966.
- Deye, James A. (1970), *Physics*, Assistant Professor — B.A., Villa Madonna College, 1965; M.S., Vanderbilt University, 1969; Ph.D., Vanderbilt University, 1970.
- Dickson, S.M., Rev. John G. (1957), *Sociology*, Associate Professor—B.A. University of Dayton, 1937; M.A., University of Dayton, 1947; Ph.D., St. John's University, 1956.
- 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*, Associate Professor—B.A., University of Dayton, 1942; M.A., Western Re-

- serve University, 1952; D.Ed., Western Reserve University, 1966.
- DiSanto, Ronald L. (1971), *Theological Studies*, Assistant Professor — B.A., Borromeo Seminary College, 1964; S.T.B., Gregorian University, 1966; M.A., University of Dayton, 1968.
- 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*, Professor—B.S., St. John's University, 1949; M.A., Rutgers University, 1952; Ph.D., Western Reserve University, 1965.
- Donoher, Donald J., (1964), *Physical and Health Education*, Instructor — B.S., University of Dayton, 1954.
- Donovan, Robert E. (1946), *Registrar*, Assistant Professor — B.S., University of Dayton, 1932.
- 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.
- Dreidame, R. Elaine (1970), *Physical and Health Education*, Assistant Professor—B.S. in Ed., University of Cincinnati, 1964; M.Ed., University of Cincinnati, 1966.
- 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.
- Edelenyi, Rev. Achilles (1964), *Philosophy*, Assistant Professor—A.B., Franz Leopold Universitaet, Austria, 1932; M.A., Franz Leopold Universitaet, Austria, 1934; S.T.D., Franz Leopold Universitaet, 1936.
- Edgington, Orman R. (1965), *Secondary Education*, Associate Professor—A.B., Muskingum College, 1928; M.A., Ohio State University, 1943; Ph.D., Ohio State University, 1960.
- Edwards, David H. (1968), *History*, Instructor—B.S., Iowa State University, 1966; M.A., University of Virginia, 1968.
- Effertz, Lt. Col. Edward H. (1969), *Military Science*, Assistant Professor—B.S. in Ed., Bowling Green State University, 1950.
- Eid, Leroy V. (1961), *History*, Assistant Professor—B.S., University of Dayton, 1953; M.A., St. John's University, 1958; M.A., University of Toronto, 1968; Ph.D., St. John's University, 1961.
- Eley, Marion J. (1961), *Accounting*, Associate Professor—B.S., University of Dayton, 1959; M.B.A., Xavier University, 1964, C.P.A., Ohio, 1966.
- Ellerbrock, Geraldine B. (1970), *Business Management*, Assistant Professor —B.S. in Ed., Ohio State University, 1941; M.A., Ohio State University, 1967.
- Ellis, Jr., John E. (1966), *Accounting*, Associate Professor — B.C.S., Bowling Green College of Commerce, 1934; M.B.A., University of Michigan, 1951.
- Emling, S.M., John F. (1958), *Education*, Assistant Professor (on leave)—B.S., University of Dayton, 1940; M.A., Western Reserve University, 1944; Ed.D., Western Reserve University, 1949.
- Engler, Nicholas A. (1971), *Industrial and Systems Engineering*, Associate Professor of Systems Engineering — B.S., University of Dayton, 1947; M.S., University of Cincinnati, 1949.
- Esser, Martinus H. M. (1958), *Mathematics*, Associate Professor — Ecole Polytechnique, 1939; Ph.D., Northwestern University, 1946.
- Evers, Anthony J. (1966), *Electrical Engineering*, Associate Professor—B.E.E., University of Dayton, 1953; M.S.E.E., University of Notre Dame, 1955.
- 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.

- Fackovec, S.M., William M. (1960), *Library*, Assistant Professor — B.S. in Ed., University of Dayton, 1949; M.S. in L.S., Western Reserve University, 1959.
- Faerber, S.M., Louis J. (1948), *Education*, Professor — B.A., University of Dayton, 1930; M.A., Catholic University of America, 1938; Ph.D., Catholic University of America, 1948.
- Fakhouri, Hani (1966), *Sociology*, Associate Professor — B.A., Wayne State University, 1953; M.A., Wayne State University, 1961; Ph.D., Michigan State University, 1969.
- Farrelly, James P. (1967), *English*, Assistant Professor (on leave) — B.A., Providence College, 1964; M.A., University of Dayton, 1966.
- Farren, Joseph M. (1966), *Electronic Engineering Technology*, Assistant Professor — B.S., Bluffton College, 1959; B.E.E., University of Dayton, 1961; M.S., University of Dayton, 1966, Reg. Prof. Eng.
- 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.
- Faust, Carolyn I. (1967), *Performing and Visual Arts-Music*, Assistant Professor — B.A., Ohio State University, 1953; M.A., Ohio State University, 1966.
- Fawcett, Maj. Gordon R. (1969), *Military Science*, Assistant Professor — B.A., Norwich University, 1959.
- 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), *Engineering Technology*, 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.
- Fiehler, Joann E. (1969), *Performing and Visual Arts-Art*, Instructor — B.A., Indiana University, 1965.
- Floriti, Andrew A. (1965), *Accounting*, Associate Professor — B.S., University of Scranton, 1956; M.B.A., University of Detroit, 1958; C.P.A., State of New Jersey, 1964.
- Fischer, Theodore W. (1968), *Electronic Engineering Technology*, Assistant Professor — B.E.E., University of Dayton, 1965; M.S.E.E., University of Dayton, 1969.
- Fitz, S.M., Raymond L. (1969), *Electrical Engineering*, Assistant Professor — B.E.E., University of Dayton, 1964; M.S., Polytechnic Institute of Brooklyn, 1967; Ph.D., Polytechnic Institute of Brooklyn, 1970.
- Fogel, Norman L. (1971), *Political Science*, Assistant Professor — B.S., Millersville State College, 1960; M.A., University of Delaware, 1968.
- Fornaciari, Gilbert M. (1970), *Sociology*, Instructor — B.A., George Williams College, 1969; M.A., Ball State University, 1970.
- Fox, B. Lawrence (1966), *Chemistry*, Associate Professor — B.S., John Carroll University, 1962; Ph.D., Ohio State University, 1966.
- Fox, Harold G. (1967), *Theological Studies*, Assistant Professor — B.S., A. & M. College of Texas, 1955; M.S., Iowa State College, 1959; M.A., Northwestern University, 1962.
- 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.
- Frederick, Ted A. (1969), *Languages*, Instructor — B.A., Indiana State University, 1967; M.A., Indiana State University, 1968.

- Frericks, Thomas J. (1964), *Physical and Health Education*, Instructor — B.S., University of Dayton, 1953.
- Friel, J. William (1963), *Mathematics*, Assistant Professor—B.S., Loras College, 1959; M.A., Duquesne University, 1962.
- Frye, Helen B. (1967), *Education*, Associate Professor — B.A., Ohio Wesleyan University, 1944; M.Ed., Wittenberg University, 1962; Ph.D., Ohio State University, 1967.
- Fuchs, Gordon E. (1967), *Education*, Assistant Professor (on leave)—B.S., University of Wisconsin, 1958; M.S., University of Wisconsin, 1961.
- Fuchs, Walter P. (1971), *Industrial and Systems Engineering*, Assistant Professor of Engineering Management—B.S., University of Dayton, 1962; M.S., Case Institute of Technology, 1965; Ph.D., University of Pennsylvania, 1970.
- Fuszara, Lester T. (1961), *Business Management*, Assistant Professor — B.S., Alfred University, 1948.
- 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*, Associate Professor—B.S., University of Dayton, 1962; M.S., Purdue University, 1964; Ph.D., Purdue University, 1966.
- Gay, Alvin C. (1970), *African and Afro-American Studies Program*, Instructor — B.A., University of Santa Clara, 1970.
- Gay, James E. (1968), *Secondary Education*, Assistant Professor — B.A., Ohio University, 1951; M.A., University of Wisconsin, 1956.
- Geibel, James W. (1969), *English*, Assistant Professor—B.A., West Virginia University, 1962; M.A., West Virginia University, 1963; Ph.D., Ohio State University, 1969.
- Geiger, S.M., Donald R. (1964), *Biology*, Associate Professor—B.S., University of Dayton, 1955; M.S., Ohio State University, 1960; Ph.D., Ohio State University, 1963.
- Geiger, John O. (1970), *Foundations of Education*, Instructor — B.A., Marquette University, 1966.
- George, Norman (1962), *Business Management*, Professor—B.A., Ohio State University, 1950; M.B.A., University of Pittsburgh, 1954; Ph.D., Ohio State University, 1962; J.D. Salmon Chase College, 1967.
- Gephart, Landis S. (1967), *Industrial and Systems Engineering*, Professor of Management Science—B.S., University of Dayton, 1940; M.A., University of Dayton, 1948; M.S., Miami University, 1949; Ph.D., University of Florida, 1955.
- Gilvary, Patrick S. (1955), *Performing and Visual Arts*, Associate Professor—B.S., University of Dayton, 1950; M.A., Xavier University, 1963.
- Goldhaber, Dale E. (1969), *Psychology*, Assistant Professor—B.S., Roosevelt University, 1965; M.A., Syracuse University, 1969; Ph.D., Syracuse University, 1969.
- Gorie, S.M., Edward J. (1967), *History*, Instructor—B.S., University of Dayton, 1947; M.A., Western Reserve University, 1959.
- Gorton, Robert B. (1969), *Mathematics*, Assistant Professor—B.S., Illinois Institute of Technology, 1964; M.S., Illinois Institute of Technology, 1966; Ph.D., Illinois Institute of Technology, 1970.
- Graham, Thomas P. (1964), *Physics*, Assistant Professor — B.S., Providence College, 1956; Ph.D., Iowa State University, 1967.
- 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.
- Gray, Kathryn H. (1953), *Geology*, Assistant Professor (on leave) — A.B., Wooster College, 1947.

- Greely, John M. (1967), *Languages*, Instructor — B.A., University of Detroit, 1959; M.A., Wayne State University, 1963.
- Greene, Robert W. (1965), *Philosophy*, Assistant Professor—B.A., University of Notre Dame, 1955; M.A., University of Toronto, 1961.
- Griesemer, William F., Jr. (1970), *Secondary Education*, Instructor—B.M.E., Rensselaer Polytechnic Institute, 1951; M.S.T., Union College, 1969.
- Griffin, David R. (1968), *Theological Studies*, Assistant Professor — B.A., Northwest Christian College, 1962; M.A., University of Oregon, 1963; Ph.D., Claremont Graduate School, 1970.
- Hall, Capt. Donald Z. (1971), *Military Science*, Assistant Professor — B.S., Ohio Northern University, 1962.
- Hanneman, Douglas A. (1956), *Electronic Engineering Technology*, Associate Professor—B.E.E., University of Dayton, 1956; Reg. Prof. Eng.
- Harmer, Richard S. (1971), *Mechanical Engineering*, Assistant Professor of Materials Engineering—B.S., University of Illinois, 1963; M.S., University of Illinois, 1967; Ph.D., University of Illinois, 1971.
- Harwood, Philip J. (1966), *Communication Arts*, Assistant Professor — B.S., Butler University, 1960; M.S., Butler University, 1961.
- Hary, Nicoletta C. (1964), *Library*, Associate Professor — Litt.D., Istituto Universitario Orientale, (Italy), 1952; Diploma in Library Science, Vatican Library School, Rome, 1952.
- Hasham, Kathryn A. (1969), *Languages*, Instructor—B.A., College of Wooster, 1965; M.A., University of Kansas, 1968.
- Hazen, Richard R. (1953), *Electronic Engineering Technology*, Professor — B.E.E., University of Dayton, 1953; M.S., University of Cincinnati, 1962; Reg. Prof. Engr.
- Henninger, Francis J. (1965), *English*, Assistant Professor — B.A., St. John's University, 1956; M.A., University of Notre Dame, 1958; M.A., University of Pennsylvania, 1962; Ph.D., University of Pennsylvania, 1965.
- Herbenick, Raymond M. (1968), *Philosophy*, Assistant Professor — B.A., Duquesne University, 1964; M.A., DePaul University, 1965; M.B.A., University of Pittsburgh, 1968; Ph.D., Georgetown University, 1968.
- Hetzler, Stanley A. (1969), *Sociology*, Professor—B.A., Ohio State University, 1940; Ph.D., Ohio State University, 1952.
- Hoben, William J. (1956), *Accounting*, Professor—B.S., University of Dayton, 1950; M.B.A., Xavier University, 1960; C.P.A., Ohio, 1960.
- Holland, Margaret M. (1965), *Dean of Students*, Associate Professor — B.S., Marywood College, 1943; M.A., University of Scranton, 1954.
- Holt, Arthur L. (1968), *Business Management*, Associate Professor—B.B.A., University of Texas, 1946; M.B.A., University of Texas, 1948; Ph.D., Ohio State University, 1967.
- Hoover, James W. (1966), *Director Student Aid and Scholarships*, Assistant Professor—B.S. in Ed., Miami University, 1951; M.S., University of Dayton, 1965.
- Hoover, William J. (1971), *Accounting*, Instructor — B.S., Miami University, 1963.
- Hoppenjans, Richard J. (1971), *Civil Engineering*, Instructor—B.C.E., University of Dayton, 1968; M.S.C.E., University of Dayton, 1970.
- Horst, S.M., Rev. Bernard L. (1965), *English*, Assistant Professor — B.S. in Ed., University of Dayton, 1938; M.A., University of Cincinnati, 1952.
- Horvath, Allan L. (1960), *Geology*, Associate 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., Univer-

- sity of Alabama, 1925; Ph.D., Ohio State University, 1929; Met.E., Ohio State University, 1935; Reg. Prof. Eng.
- Howard, W. Kenneth (1971), *Political Science*, Assistant Professor — B.A., Loyola University, 1964; M.A., University of Arizona, 1967.
- Huff, Janice R. (1968), *Executive Secretarial Studies*, Instructor—B.S., University of Dayton, 1966.
- Huth, Edward A. (1939), *Sociology*, Professor — A.B., Heidelberg College, 1921; M.A., University of Notre Dame, 1928; Ph.D., Western Reserve University, 1943.
- Huth, Mary Jo (1962), *Sociology*, Associate Professor — B.S., University of Dayton, 1950; M.A., Indiana University, 1951; Ph.D., Saint Louis University, 1955.
- Iselin, Earl C., Jr. (1970), *Industrial Engineering Technology*, Instructor — B.M.E., Marquette University, 1946; B.S.E.E., Massachusetts Institute of Technology, 1947.
- Jaffee, Oscar C. (1966), *Biology*, Professor—B.A., New York University, 1946; M.S., New York University, 1948; Ph.D., Indiana University, 1952.
- Jain, Subhash C. (1966), *Marketing*, Associate Professor—B.A., University of Rajasthan, 1957; M.A., University of Rajasthan, 1959; Ph.D., University of Oregon, 1966.
- Jehn, Lawrence A. (1946), *Computer Science*, Associate Professor—B.M.E., University of Dayton, 1943; M.S., University of Michigan, 1949; Reg. Prof. Engr.
- Johnston, George T., III (1969), *Physics*, Assistant Professor—B.S., Michigan State University, 1962; M.S., Michigan State University, 1965; Ph.D., Michigan State University, 1967.
- Joly, S.M., Russell A. (1941), *Biology*, Professor—B.S., University of Dayton, 1930; M.S., Institutum Divi Thomae, 1940.
- Joseph, Ellis A. (1961), *Education*, Professor — A.B., University of Notre Dame, 1955; M.A., University of Notre Dame, 1956; Ph.D., University of Notre Dame, 1962.
- Kalmey, Donald L. (1970), *Computer Science*, Assistant Professor (on leave) — B.A., Bellarmine College, 1964; M.A., Arizona State University, 1966; M.S., Ohio State University, 1970.
- Kaufflin, John F. (1966), *Mathematics*, Assistant Professor — B.S., University of Dayton, 1962; M.S., Michigan State University; Ph.D., Georgetown University, 1970.
- Keil, Robert G. (1969), *Chemistry*, Assistant Professor—B.S., Villanova University, 1963; Ph.D., Temple University, 1967.
- Keim, Joseph W. (1969), *Computer Science*, Instructor—B.S., University of Dayton, 1968; M.S., Purdue University, 1969.
- Kelber, Werner H. (1970), *Theological Studies*, Assistant Professor — B.D., University of Munich, 1962; Th. M., Princeton Theological Seminary, 1963; A.M., University of Chicago, 1967; Ph.D., University of Chicago, 1970.
- Kenney, S.M., Rev. Francis (1969), *Associate Dean of Students*, Assistant Professor—B.A., University of Dayton, 1943; S.T.D., Catholic University of America, 1956.
- Kepes, Joseph J. (1962), *Physics*, Professor—B.S., Case Institute of Technology, 1953; Ph.D., University of Notre Dame, 1958.
- Kerns, Gerald E. (1967), *Political Science*, Assistant Professor — B.A., University of Wichita, 1961; Ph.D., Indiana University, 1969.
- Kester, Jack E. (1966), *Computer Science*, Assistant Professor — B.S., University of Dayton, 1952; M.S., Ohio State University, 1958.
- Kiernan, Gene E. (1967), *Communication Arts*, Assistant Professor—B.S., University of Dayton, 1965; M.A., University of Dayton, 1969; Ph.D., Ohio State University, 1971.
- Kimbrough, R. Alan (1969), *English*, Assistant Professor—B.A., Carthage College, 1965; M.A., Brown University, 1966.

- King, Edwin R. (1953), *History*, Associate Professor — B.S., University of Dayton, 1949; M.A., Western Reserve University, 1950.
- Kleine-Kreutzmann, Alfred H. (1967), *English*, Instructor—B.A., Xavier University, 1963; M.A., University of Cincinnati, 1967.
- Kline, Jr., Raymond A. (1967), *Marketing*, Assistant Professor—B.A., Wittenberg University, 1957; M.B.A., Indiana University, 1959.
- Klosterman, Rita (1960), *Education*, Associate Professor — B.A., Immaculate Heart College, 1942; M.A., St. John College, 1956; Ph.D., Indiana University, 1968.
- Knachel, Howard C. (1972), *Chemistry*, Assistant Professor — B.S., University of Dayton, 1963; M.S., Ohio State University, 1969; Ph.D., Ohio State University, 1971.
- Koehler, S.M., Rev. Theodore A. (1969), *Library*, Associate Professor — Lic. Litt., University of Strasbourg, 1934; Lic. Thl., University of Fribourg, 1942.
- Kohmescher, S.M., Rev. Matthew F. (1951), *Theological Studies*, Professor — A.B., University of Dayton, 1942; S.T.D., University of Fribourg, 1950; M.A., Western Reserve University, 1956.
- Kovacs, Arthur Z. (1968), *Industrial and Systems Engineering*, Associate Professor — A.B., Wabash College, 1957; Ph.D., Duke University, 1963.
- 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.
- Krall, Edward J. (1967), *Computer Science*, Assistant Professor — B.S., University of Dayton, 1966; M.S., Pennsylvania State University, 1970; Ph.D., University of Texas, 1971.
- Kretzler, Frederick J. (1958), *Mechanical Engineering Technology*, Assistant Professor — A.T., University of Dayton, 1961; B.T., University of Dayton, 1969.
- Kriegbaum, Robert E. (1950), *Education*, Associate Professor — A.B., Wittenberg College, 1939; M.A., Ohio State University, 1950.
- Kubach, Reinhold W. (1958), *Electrical Engineering*, Associate Professor — B.E.E., Staatliche Ingenieurschule, Esslingen, 1947; M.S.E. University of Dayton, 1966.
- Kunkel, Joseph C. (1964), *Philosophy*, Assistant Professor—A.B., Loyola University, 1958; A.M., Loyola University, 1962; Ph.D., St. Bonaventure University, 1968.
- Kuntz, Kenneth J. (1969), *Psychology*, Assistant Professor—B.A., Washington University, 1956; M.A., University of Cincinnati, 1963.
- Kussman, John C. (1966), *Business Management*, Assistant Professor—B.S., University of Dayton, 1939; M.B.A., University of Dayton, 1966.
- Labadie, Patricia B. (1959), *English*, Assistant Professor—B.A., University of Washington, 1946; M.A., Miami University, 1961.
- LaBriola, Joseph C. (1968), *English*, Assistant Professor—B.A., LaSalle College, 1963; M.A., Notre Dame University, 1965.
- 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.
- Landis, James M. (1967), *Physical and Health Education*, Assistant Professor — B.S., University of Dayton, 1957; M.Ed., Miami University, 1958; M.A., University of Michigan, 1966.
- Lapitan, Antonio E. (1969), *Political Science*, Associate Professor — A.B., University of the Philippines, 1954; M.A., Lehigh University, 1957; Ph.D., University of Oregon, 1968.

- 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.
- Lawless, Garth W. (1967), *Chemical Technology*, Assistant Professor—B.S., University of Dayton, 1957; M.S., University of Dayton, 1970.
- Leary, Daniel L. (1937), *Education*, Professor—A.B., Creighton University, 1917; M.A., Peabody College, 1928; Ph.D., Colorado State University, 1934.
- Lees, S.M., Rev. Charles J. (1962), *English*, Professor—B.A., University of Dayton, 1943; M.A., University of Pittsburgh, 1950; Ph.D., Ohio State University, 1961.
- Lefler, JoAnn P. (1969), *Home Economics*, Instructor—B.B.A., University of Cincinnati, 1950; M.Ed., Miami University, 1968.
- L'Heureux, Conrad E. (1970), *Theological Studies*, Instructor—B.A., St. Paul's College, 1962; M.A., Catholic University of America, 1966.
- Leimkuhler, S.M., Rev. Edwin M. (1934), *Theological Studies*, Professor—A.B., Catholic University of America, 1927; M.A., Catholic University of America, 1940.
- Leonard, Thomas J. (1969), *Library*, Assistant Professor—B.A., St. John's University, 1951; M.S., Kansas State Teachers College, 1956.
- 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.
- Lindqvist, Ossi V. (1970), *Biology*, Assistant Professor — B.S. University of Turku, 1962; M.S., University of Turku, 1963; Lic. Phil., University of Turku, 1967; Ph.D., University of Turku, 1968.
- Louis, Msgr. Paul P. (1964), *Economics*, Associate Professor—B.S., University of San Francisco, 1955; M.B.A., University of Detroit, 1956; D.Ed., Michigan State University, 1960.
- 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*, Associate Professor — B.S. M.E., Purdue University, 1958; M.S., Engr. Science, California Institute of Technology, 1961; Ph.D., University of Alberta (Canada), 1966.
- Lumpp, Randolph F. (1965), *Theological Studies*, Assistant Professor — A.B., Seattle University, 1963.
- Luthman, Robert R. (1965), *Research*, Assistant Professor—B.S., University of Dayton, 1950; M.B.A., Xavier University, 1963.
- Lutz, Paul N. (1970), *Elementary Education*, Assistant Professor—B.S., University of Washington, 1955; B.A., University of Washington, 1955; M. Ed., University of Oregon, 1967; Ph.D., University of Oregon, 1970.
- McCarthy, S.M., Rev. Adrian J. (1958), *English*, Associate Professor—A.B., University of Dayton, 1934; M.A., New York University, 1953; Ph.D., Fordham University, 1961.
- McCauley, Richard C. (1969), *Administrative Assistant to the Dean of Students*, Assistant Professor — B.A., Gettysburg College, 1967; M.A., Florida State University, 1968.
- McCloskey, John W. (1965), *Mathematics*, Associate Professor — B.S., University of Dayton, 1960; M.S., Michigan State University, 1962; Ph.D., Michigan State University, 1965.
- McConochie, William A. (1971), *Psychology*, Assistant Professor — B.A.,

- Carleton College, 1961; M.S., Illinois Institute of Technology, 1968; Ph.D., Illinois Institute of Technology, 1970.
- McDaniel, Thomas J. (1968), *Engineering Mechanics*, Assistant Professor—B.S., University of Illinois, 1962; M.S., University of Illinois, 1964; Ph.D., University of Illinois, 1968.
- McDonald, Jack P. (1969), *Sociology*, Assistant Professor—B.S., University of Dayton, 1956; M.A., Indiana University, 1958.
- McDougall, Kenneth J. (1966), *Biology*, Associate Professor—B.A., Northland College, 1957; M.S., Marquette University, 1959; Ph.D., Kansas State University, 1964.
- McGraw, James L. (1952), *Engineering Technology*, Professor—B.S.I.E., Lafayette College, 1951; M.B.A., Xavier University, 1960.
- 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.
- McKinney, Charles O. (1971), *Biology*, Assistant Professor—B.A., University of Texas, 1964; M.S., Texas Technological College, 1966; Ph.D., University of Michigan, 1969.
- McNally, John J. (1966), *English*, Assistant Professor—B.A., Glassboro State College, 1961; M.A., University of Dayton, 1966.
- McVay, John E. (1965), *Physical and Health Education*, Instructor—B.S., Miami University, 1953; M.S. in Ed., Kent State University, 1964.
- Macklin, F. Anthony (1962), *English*, Associate Professor—A.B., Villanova University, 1960; M.A., Villanova University, 1963.
- MacLellan, Maj. Norman A. (1969), *Military Science*, Assistant Professor—B.S., Eastern Michigan University, 1963.
- Mann, S.M., Leonard A. (1945), *Physics*, Professor—B.S., University of Dayton, 1937; M.S., Ohio State University, 1945; Ph.D., Carnegie Institute of Technology, 1954.
- Mann, Ronald A. (1964), *Physics*, Associate Professor—A.B., Villa Madonna College, 1957; M.S., University of Cincinnati, 1960; Ph.D., University of Cincinnati, 1964.
- Maras, Raymond J. (1959), *History*, Professor—B.A., University of California, 1946; M.A., Catholic University of America, 1948; Ph.D., University of California, 1955.
- Marre, Louis A. (1965), *English*, Assistant Professor—A.B., University of Notre Dame, 1961; M.A., University of Notre Dame, 1963.
- Marrinan, Jr., Edward L. (1965), *Business Management*, Assistant Professor—B.A., University of Dayton, 1948; M.S. in Ed., University of Dayton, 1963; M.B.A., University of Dayton, 1966.
- Martin, Herbert W. (1970), *English*, Assistant Professor—B.A., University of Toledo, 1964; M.A., State University of New York at Buffalo, 1967.
- Martin, Thomas M. (1965), *Theological Studies*, Assistant Professor—B.S., Spring Hill College, 1962; M.A., Fordham University, 1965.
- 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*, Associate Professor—A.B., University of Kentucky, 1950; M.A., University of Kentucky, 1961; Ph.D., University of Kentucky, 1966.
- Matlin, George E. (1965), *Economics*, Professor—B.A., St. Francis College, 1942; Ph.D., Pennsylvania State University, 1953.
- Means, Michael H. (1963), *English*, Associate Professor—B.A., Wisconsin State College, 1955; M.A., Ohio State University, 1957; Ph.D., University of Florida, 1963.
- Mellert, S.M., Rev. Robert B. (1971), *Theological Studies*, Assistant Professor—B.A., John Carroll University, 1958;

- S.T.L., University of Fribourg, 1968.
- Mervar, S.M., Joseph J. (1951), *Business Manager*, Associate Professor—B.S., University of Dayton, 1934; M.A., Catholic University of America, 1945.
- Metzger, Pauline E. (1958), *Home Economics*, Associate Professor—A.B., Wittenberg College, 1937; M.A., Ohio State University, 1953.
- Michaelis, Carl I. (1954), *Chemistry*, Professor—A.B., University of Kansas, 1947; Ph.D., University of Florida, 1953.
- Michitsch, Capt. John F. (1971), *Military Science*, Assistant Professor—B.A., University of Dayton, 1965; M.S., Case Western Reserve University, 1968.
- Middendorf, S.M., Rev. Cyril G. (1965), *Theological Studies*, Associate Professor—B.A., University of Dayton, 1944; M.A., Catholic University of America, 1960; Ph.D., Ottawa University, 1966.
- Miles, Mildred H. (1966), *Elementary Education*, Assistant Professor—B.S. Wittenberg University, 1930; M.A., Ohio State University, 1939.
- Miller, Richard L. (1968), *Business Management*, Assistant Professor—B.S., Ohio State University, 1947; M.B.A., Ohio State University, 1959.
- Miller, Velma M. (1940), *Executive Secretarial Studies*, Associate Professor—B.C.S., Ohio Northern University, 1930; M.Ed., University of Cincinnati, 1937.
- Minardi, John E. (1964), *Mechanical Engineering*, Associate Professor—B.M.E., University of Dayton, 1955; M.S.M.E., University of Southern California, 1957.
- Minarik, James (1971), *Communication Arts*, Instructor—B.A., University of Dayton, 1971.
- Minton, Charles R. (1971), *Business Management*, Professor—B.A., University of Kentucky, 1949; M.S., University of Kentucky, 1952; Ph.D., University of Kentucky, 1960.
- Minton, Constance L. (1969), *Performing and Visual Arts-Music*, Instructor—B. Mus., University of Dayton, 1960.
- Mitchell, Robert I. (1949), *Industrial and Systems Engineering*, Associate Professor—B.S., University of Cincinnati, 1942; M.S., Ball State Teachers College, 1951; Reg. Prof. Engr.
- Monasterio, Xavier O. (1966), *Philosophy*, Associate Professor—B.A., Instituto Oriente, Mexico, 1944; M.A., Ysleta College, 1951; Ph.D., Université de Paris, France, 1964.
- Montavon, Robert E. (1966), *Library*, Assistant Professor—B.A., St. Charles College, 1955; M.A., Catholic University of America, 1962; M.S. in L.S., Catholic University of America, 1965
- Moon, Donald L. (1967), *Electrical Engineering*, Assistant Professor (on leave)—B.S.E.E., West Virginia Institute of Technology, 1963; M.S.E.E., University of Toledo, 1965.
- Morefield, Donald W. (1969), *Physical and Health Education*, Assistant Professor—B.S., in Ed., University of Dayton, 1957; M.A. in Ed., Ball State University, 1967.
- Morgan, Adrian J. (1948), *Electrical Engineering*, Professor—B.S.E.E., Purdue University, 1948; M.S., University of Cincinnati, 1958; Reg. Prof. Eng.
- 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*, Associate Professor—B.A., Mount Union College, 1956; M.E., Kent State University, 1959; Ph.D., University of Toledo, 1968.
- Mravintz, S.M., Ralph A. (1965), *Director of Admissions*, Assistant Professor—B.S., University of Dayton, 1950; M.S. in Ed., University of Pittsburgh, 1955.

- Mundell, Gordon H. (1970), *English*, Assistant Professor—B.A., University of Colorado, 1963; M.A., American University, 1967.
- Murphy, Harry C. (1950), *Marketing*, Professor—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.
- Murray, S.M., Leo J. (1966), *Theological Studies*, Assistant Professor—B.S., in Ed., University of Dayton, 1939; M.A., Catholic University, 1947; L.R.S., St. John Lateran University, Rome, 1962.
- Murtaugh, John G. (1968), *Geology*, Assistant Professor—B.S., University of Dayton, 1959; M.S., University of Idaho, 1967.
- Mushenheim, S.M., Harold G. (1965), *Mathematics*, Associate Professor — B.S., University of Dayton, 1955; M.A., University of Cincinnati, 1960; Ph.D., University of Cincinnati, 1963.
- Myers, Leonard R. (1969), *Business Management*, Instructor—B.S., Bluffton College, 1961.
- Nartker, 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*, Associate Professor — Baccalaureate, College Champagnat des Freres Maristes, 1939; S.T.B., Berkeley Divinity School, 1949; Ph.D., Columbia University, 1966.
- Nesmith, James N. (1971), *Sociology*, Associate Professor — B.A., Birmingham Southern College, 1949; M.A., Vanderbilt University, 1951; B.D., Vanderbilt University, 1953; S.T.M., Yale University, 1958.
- 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.
- Neufang, Gordon A., Jr. (1969), *Languages*, Assistant Professor — B.A., University of Michigan, 1953; M.A., University of Michigan, 1957; Ph.D., University of Michigan, 1970.
- 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*, Professor—Ph.B., University of Detroit, 1952; M.A., University of Detroit, 1955; D. Ed., University of Cincinnati, 1966.
- Nykolyshyn, Helen (1970), *Library*, Instructor—B.A., Kent State University, 1967; M.L.S., Kent State University, 1969.
- O'Donnell, John R. (1964), *Education*, Professor — B.S., Pennsylvania State University, 1951; M.Ed., Pennsylvania State University, 1952; Ed.D., Pennsylvania State University, 1958.
- 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*, Associate 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*, Associate 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.

- Ou, Chau-fei C. (1969), *Economics*, Assistant Professor—B.A., National Taiwan University, 1959; Ph.D., University of North Carolina, 1969.
- Oyen, Duane B. (1971), *Economics*, Assistant Professor—B.A., Luther College, 1966; M.A., University of Iowa, 1969.
- Palermo, Patrick F. (1971), *History*, Instructor—B.A., Fordham College, 1966; M.A., State University of New York, 1967.
- Palumbo, Suzanne D. (1965), *English*, Assistant Professor—B.A., Northwestern University, 1957; M.A., University of Dayton, 1965.
- Panzer, S.M., Joseph J. (1938), *Education*, Professor—B.S., University of Dayton, 1931; M.A., Catholic University, 1938; Ph.D., Fordham University, 1954.
- Paperman, Jacob B. (1970), *Accounting*, Assistant Professor—B.S., Drexel Institute of Technology, 1950; M.B.A., Air Force Institute of Technology, 1960.
- Patrick, Phillip (1959), *Engineering Technology*, Assistant Professor—A.B., Earlham College, 1950; M.Ed., Xavier University, 1966.
- Patrouch, Joseph F. (1964), *English*, Associate Professor—A.B., University of Cincinnati, 1958; M.A., University of Cincinnati, 1960; Ph.D., University of Wisconsin, 1965.
- Patyk, Jozef (1963), *Political Science*, Associate Professor—Certificate, School of Public Administration, Poland, 1935; LL.M., Jagiellonski University, Poland, 1945; Ph.D., University of Colorado, 1965.
- Pavelka, Frederic L. (1970), *Sociology*, Instructor—B.A., University of Dayton, 1959; M.A., Indiana University, 1965.
- Payne, Elizabeth (1950), *Home Economics*, Associate Professor—B.S., Mount Joseph-on-the-Ohio, 1942; M.S., Ohio State University, 1958.
- Payne, Elmer H. (1961), *Civil Engineering*, Assistant Professor—B.S.C.E., Washington University, 1958; M.S., Washington University 1961; Reg. Prof. Eng.
- Peck, Susan V. (1968), *Library*, Instructor—B.A., University of Rochester, 1967; M.L.S., State University of New York at Geneseo, 1968.
- Pedretti, Michael A. (1971), *Performing and Visual Arts*, Instructor—B.S., University of Wisconsin, 1965; M.A., University of Kansas, 1969.
- Perlmutter, Lorraine J. (1971), *Psychology*, Assistant Professor—B.A., Wagner College, 1965; M.A., Xavier University, 1968; Ph.D., Pennsylvania State University, 1971.
- Perz, S.M., John R. (1926), *Languages*, Professor—A.B., University of Dayton, 1921; M.A., Catholic University of America, 1929; Ph.D., Catholic University of America, 1934.
- Peterson, Richard E. (1957), *Mathematics*, Associate Professor—B.A., Hiram College, 1955; M.S., Purdue University, 1957.
- Petit, O.P., Sister Loretta M. (1968), *Education*, Associate Professor—B.A., Siena Heights College, 1942; M.A., Catholic University of America, 1949; D. Ed., Western Reserve University, 1966.
- Pici, Joseph R. (1965), *English*, Assistant Professor, B.S., University of Dayton, 1962; M.A., University of Dayton, 1964.
- Pinson, Jay D. (1971), *Mechanical Engineering*, Associate Professor—B.S., Ohio University, 1950; M.S., Oklahoma State University, 1965; Ph.D., Oklahoma State University, 1966.
- Plogman, Bernard E. (1967), *Performing and Visual Arts-Art*, Associate Professor—B.S. in Ed., University of Dayton, 1944; M.Litt., University of Pittsburgh, 1951; D.Ed., University of Cincinnati, 1967.
- Potoczny, Henry B. (1969), *Mathematics*, Assistant Professor—B.A., LaSalle College, 1965; M.A., University of Kentucky, 1967; Ph.D., University of Kentucky, 1969.

- Puckett, Raymond B. (1957), *Industrial Engineering Technology*, Associate Professor—B.I.E., General Motors Institute, 1950; M.B.A., Xavier, 1961; Reg. Prof. Eng.
- Purcell, Sylvia S. (1967), *Library*, Assistant Professor—B.A., University of Illinois, 1940; M.A.L.S., Kent State University, 1955.
- Quinn, John F. (1970), *Philosophy*, Assistant Professor—B.A., Gonzaga University, 1965; Ph.L., Mount St. Michael's, 1965; M.A., Gonzaga University, 1966; M.A., University of Washington, 1968.
- Quirk, Brian W. (1971), *Communication Arts*, Instructor — B.S., University of Dayton, 1971.
- Ramsey, James M. (1964), *Biology*, Associate Professor — B.S., Wilmington College, 1948; M.S., Miami University, 1951.
- Rancurello, Antos C. (1954), *Psychology*, Professor—A.B., St. Michael College, 1942; Ph.D., Pontificio Ateneo Salesiano, 1946; Ph.D., Loyola, 1967.
- Raney, Russell R. (1969), *Economics*, Associate Professor — B.S.M.E., University of Michigan, 1934; M.B.A., University of Chicago, 1949; Ph.D., Ohio State University, 1970.
- Ray, Alden E. (1961), *Mechanical Engineering*, Professor of Materials Engineering—B.A., Southern Illinois University, 1953; Ph.D., Iowa State University, 1959.
- Ray, Nancy L. (1970), *Communication Arts*, Instructor—B.A., University of Dayton, 1963; M.A., University of Dayton, 1970.
- Reichard, Maurice R. (1929), *Performing and Visual Arts-Music*, Professor—A.B., University of Dayton, 1935; M.A., Ohio State University, 1945.
- Reiling, M. Patricia (1968), *Assistant Dean of Women*, Instructor — B.S., Akron University, 1961; M.S., Purdue University, 1968.
- Rhee, Tong-Chin (1967), *History*, Associate Professor—B.A., Seoul National University, 1959; M.P.A., School of Public Administration, Seoul National University, 1961; M.A., Lehigh University, 1962; Ph.D., Clark University, 1967.
- Rhodes, S.M., Rev. Edmund L. (1947), *Philosophy*, Associate Professor—A.B., University of Dayton, 1934; S.T.L., Catholic University of America, 1942.
- Rice, Bernard J. (1960), *Mathematics*, Associate Professor — B.S., St. Louis University, 1955; M.S., Ohio State University, 1961.
- Richards, Arthur H. (1971), *Chemistry*, Assistant Professor — B.S., Rochester Institute of Technology, 1958; M.S., University of Rochester, 1965; Ph.D., University of Rochester, 1971.
- Richards, Kent H. (1968), *Theological Studies*, Assistant Professor — B.A., Fresno State College, 1961; M. Th., 1964; Ph.D., Claremont Graduate School, 1968.
- Richards, William M. (1970), *Philosophy*, Assistant Professor — B.A., LeMoyne College, 1966; Ph.D., Georgetown University, 1970.
- Richardson, S.M., Gordon R. (1970), *Performing and Visual Arts-Art*, Instructor—B.S. in Ed., University of Dayton, 1964; M.F.A., Pratt Institute, 1970.
- Ridgway, Warren A. (1968), *History*, Instructor—B.A., Texas Technological University, 1965; M.A., Vanderbilt University, 1967.
- Rinderly, Allen V. (1966), *Philosophy*, Assistant Professor—A.B., Xavier University, 1950; A.M., Xavier University, 1952.
- Ritter, Charles J. (1967), *Geology*, Assistant Professor—B.S., University of Dayton, 1959; M.S., Massachusetts Institute of Technology, 1962; Ph.D., University of Michigan, 1971.
- Ritter, Charles W. (1964), *Performing and Visual Arts-Music*, Assistant Professor—B.S.Me., University of Dayton, 1958; M.A., Morehead State College, 1961.
- Roberts, Carole L. (1968), *Physical and Health Education*, Assistant Professor — B.S. in Ed., Ohio State University,

- 1964; M.A., Ohio State University, 1968.
- Rodgers, Edward W. (1963), *Accounting*, Associate Professor — B.B.A., Northwestern University, 1945; C.P.A., Illinois, 1944; M.B.A., University of Dayton, 1967.
- Roesch, S.M., Rev. Raymond A. (1951), *Psychology*, Professor—A.B., University of Dayton, 1936; M.A., Catholic University of America, 1945; Ph.D., Fordham University, 1954.
- Rogers, Francis E. (1967), *Chemistry*, Assistant Professor — B.S., St. Francis College, 1951; M.A., Brooklyn College, 1954; Ph.D., University of Colorado, 1958.
- Rolle, Kurt C. (1966), *Mechanical Engineering Technology*, Assistant Professor — B.S.M.E., Purdue University, 1960; M.S.E., University of Dayton, 1968; Reg. Prof. Eng.
- Romaguera, Enrique, (1969), *Languages*, Instructor—B.A., University of Dayton, 1965; M.A., Ohio University, 1966.
- Rooney, Victor M. (1966), *Electronic Engineering Technology*, Assistant Professor—A.E.E., University of Dayton, 1959; B.E.E., University of Dayton, 1965; M.S.E.E., Ohio State University, 1970.
- Rosa, Joseph J. (1964), *Psychology*, Associate Professor—A.B., Brown University, 1953; M.A., Columbia University, 1959.
- Rose, S.M., Albert H. (1945), *Political Science*, Professor—B.S., University of Dayton, 1927; M.A., Western Reserve University, 1942.
- Rose, S.M., Louis H. (1933), *Electrical Engineering*, Professor—B.S., University of Dayton, 1923; M.S., University of Fribourg, 1933; B.E.E., University of Dayton, 1935; Reg. Prof. Eng.
- Rougier, Harry J. (1939), *English*, Associate Professor — B.S., University of Minnesota, 1933; M.A., University of Minnesota, 1939.
- Royer, Edwin J. (1968), *Marketing*, Assistant Professor — B.S., Ohio State University, 1955; M.S., Ohio State University, 1957; Ph.D., Ohio State University, 1967.
- Rudolph, O.S.F., Sister Catherine (1966), *Library*, Assistant Professor—B.S. in E.D., Marian College, 1946; M.S. in E.D., Butler University, 1954.
- Ruff, Lawrence A. (1960), *English*, Associate Professor—B.S., University of Dayton, 1958; M.A., Catholic University of America, 1959; Ph.D., Ohio State University, 1968.
- Rupp, S.M., Rev. Urban (1966), *Foundations of Education*, Associate Professor — B.A., University of Dayton, 1943; M.A., Western Reserve University, 1956.
- Ruppel, S.M., George J. (1956), *History*, Professor—B.A., University of Dayton, 1934; M.A., Catholic University of America, 1947; Ph.D., University of Pittsburgh, 1955.
- Rus, S.M., Rev. Gabriel (1962), *Languages*, Assistant Professor — A.B., University of Dayton, 1931; M.A., Western Reserve, 1952.
- Ryan, John D. (1968), *Theological Studies*, Assistant Professor — B.A., Loyola University, 1957; Ph.L., West Baden College, 1959; M.A., Loyola University, 1960.
- Ryckman, Seymour J. (1959), *Civil Engineering*, Professor — B.S., Michigan State University, 1939; M.S., University of Missouri, 1942; Reg. Prof. Eng.
- Sanford, Robert G. (1970), *Accounting*, Assistant Professor—Ph.B., University of Notre Dame, 1940; M.B.A., DePaul University, 1968.
- Saquel, Mario M. (1966), *Languages*, Associate Professor—B.A., Universidad de Chile, Chile, 1940; Licenciado, Juridical and Social Sciences, Pontifical Catholic University, 1954; Doctor in Law, Palermo University, Italy, 1956.
- Schauer, John J. (1968), *Mechanical Engineering*, Assistant Professor—B.M.E., University of Dayton, 1958; M.S., Carnegie Institute of Technology, 1959; Ph.D., Stanford University, 1964.

- Scheidler, Charles H. (1953), *Psychology*, Professor — A.B., Washington University, 1949; Ph.D., Washington University, 1953.
- Schleppi, John R. (1963), *Health and Physical Education*, Assistant Professor (on leave)—B.S., Ohio State University, 1961; M.A., Ohio State University, 1963.
- Schmall, Robert A. (1968), *Mechanical Engineering*, Assistant Professor—(on leave)—B.M.E., University of Dayton, 1955; M.S., University of Cincinnati, 1961.
- Schmid, Merle D. (1960), *Industrial and Systems Engineering*, Professor—B.S., University of Washington, 1935; M.S., University of Arizona, 1936; Ph.D., Illinois Institute of Technology, 1959.
- Schmidt, Bernhard M. (1949), *Electrical Engineering*, Professor—B.E.E., University of Dayton, 1942; M.Sc., Ohio State University, 1957; Ph.D., Ohio State University, 1963; Reg. Prof. Eng.
- Schneider, S.M., Francis W. (1955), *Performing and Visual Arts-Music*, Assistant Professor—B.A., University of Dayton, 1926; M.A., Ohio State University, 1948.
- Schneider, James R. (1964), *Physics*, Associate Professor — A.B., Villa Madonna College, 1956; M.S., University of Cincinnati, 1959; Ph.D., University of Cincinnati, 1965.
- Schoen, James A. (1968), *Engineering Technology*, Instructor—B.S., University of Dayton, 1967; M.S., University of Dayton, 1969.
- Schoen, S.M., Thomas A. (1959), *Computer Science and Mathematics*, Associate Professor — B.S., University of Dayton, 1954; M.A., University of Cincinnati, 1959.
- Schraut, Kenneth C. (1940), *Mathematics*, Professor — A.B., University of Illinois, 1936; M.A., University of Cincinnati, 1938; Ph.D., University of Cincinnati, 1940.
- Schwelitz, Faye D. (1971), *Biology*, Assistant Professor—B.A., Alverno College, 1953; M.S., Purdue University, 1967; Ph.D., Purdue University, 1971.
- Scott, Alfred J., Jr. (1967), *Mechanical Engineering*, Instructor—B.M.E., University of Dayton, 1965.
- Seebold, S.M., Rev. Andrew L. (1953), *Sociology*, Professor — A.B., University of Dayton, 1924; M.A., Catholic University of America, 1943; Ph.D., Catholic University of America, 1947.
- Selka, Lawrence L. (1968), *Communication Arts*, Assistant Professor—B.S., Bowling Green State University, 1954; M.A., Bowling Green State University, 1963.
- Sens, Thelma J. (1971), *Sociology*, Instructor—B.A., University of Dayton, 1966; M.S.W., Ohio State University, 1968.
- Shaughnessy, Gerald J. (1967), *Mathematics*, Assistant Professor—B.S., University of Dayton, 1963; M.S., Florida State University, 1964.
- Shaw, Carol M. (1968), *Chemical Technology*, Assistant Professor—B.S., Ohio University, 1963; M.S. in Ed., University of Dayton, 1968.
- Shaw, George B. (1967), *Civil Engineering*, Assistant Professor — A.M.E.T., University of Dayton, 1963; B.C.E., University of Dayton, 1967; M.S.C.E., University of Dayton, 1971. Reg. Prof. Engr. and Surveyor.
- Shay, Gertrude D. (1949), *Biology*, Associate Professor — B.S., Mary Manse College, 1945; M.S., University of Detroit, 1948.
- Sherrer, Johannah J. (1970), *Library*, Instructor—B.A., University of Portland, 1969; M.L.S., University of Kentucky, 1970.
- Shine, Lester C. II (1965), *Psychology*, Assistant Professor — B.B.A., University of Texas, 1956; M.A., Southern Methodist University, 1963; Ph.D., Ohio State University, 1965.
- Siciliano, Carol J. (1964), *Physical and Health Education*, Assistant Professor — B.S.Ed., Bowling Green State University, 1959; M.A.Ed., Western Reserve University, 1962.

- Siegfried, David A. (1971), *Performing and Visual Arts*, Instructor—B.S., Ohio State University, 1965; M.A., Ohio State University, 1970.
- Smith, Howard E. (1957), *Mechanical Engineering*, Professor—B.M.E., University of Dayton, 1951; M.S., University of Cincinnati, 1961; Ph.D., University of Cincinnati, 1969; Reg. Prof. Eng.
- Snyder, Barth J. (1935), *Business Management*, Professor — A.B., University of Dayton, 1931; J.D., University of Dayton, 1934; M.A., Ohio State University, 1942.
- Soffer, Gad (1966), *History*, Associate Professor—B.S., Georgetown University, 1963; M.A., American University, 1964; Ph.D., American University, 1968.
- Sory, Walter (1956), *Languages*, Assistant Professor—B.A., Classical Gymnasium, Poland, 1926; B.S. in Ed., State Teachers Seminary, Poland, 1928; M.A., State Teachers Institute in Cracov, 1929; LL.M., Catholic University of Lublin, Poland, 1935.
- Springer, George H. (1946), *Geology*, Professor — A.B., Brown University, 1938; Sc.M., Brown University, 1940.
- Srinivasan, Seshadri (1968), *Chemical Engineering*, Assistant Professor—B.S., University of Madras, 1962; M.S., Syracuse University, 1966; Ph.D., Syracuse University, 1969.
- Staats, Loren C. (1966), *Communication Arts*, Professor—B.A., Ohio University, 1926; M.A., Ohio University, 1931; Ph.D., Ohio State University, 1946.
- Stander, S.M., Joseph W. (1960), *Mathematics*, Associate Professor—B.S., University of Dayton, 1949; M.S., Catholic University of America, 1957; Ph.D., Catholic University of America, 1959.
- Stanley, Philip L. (1966), *Physical and Health Education*, Assistant Professor (on leave)—B.S., Wittenberg University, 1959; M.S., Eastern Kentucky University, 1964.
- Stanley, S.M., Rev. Thomas A. (1952), *Theological Studies*, Professor — B.A., University of Dayton, 1943; S.T.B., University of Fribourg, 1949; S.T.L., University of Fribourg, 1951; S.T.D., University of Fribourg, 1952.
- Staub, Albert E. (1956), *Engineering Technology*, Assistant Professor—A.B., University of Missouri, 1951; M.A., Miami University, 1963.
- Staudter, Donald V. (1966), *Industrial Engineering Technology*, Assistant Professor—B.S.I.E., University of Dayton, 1959; M.B.A., Xavier University, 1964, Reg. Prof. Eng.
- Steinbicker, Paul G. (1968), *Political Science*, Professor—B.A., Xavier University, 1929; M.A., University of Cincinnati, 1930; Ph.D., University of Cincinnati, 1934.
- Steiner, Wilfred J. (1946), *History*, Professor — A.B., Loras College, 1936; M.A., Harvard University, 1938; Ph.D., Ohio State University, 1957.
- Steinlage, Ralph C. (1966), *Mathematics*, Associate Professor — B.S., University of Dayton, 1962; M.S., Ohio State University, 1963; Ph.D., Ohio State University, 1966.
- Stewart, Douglas B. (1970), *Economics*, Assistant Professor — B.S., University of Portland, 1963; M.S., University of Oregon, 1966.
- Stockum, Eleanor K. (1957), *English*, Assistant Professor—B.A., College of St. Teresa, 1950; M.A., Marquette University, 1953.
- Stough, Stanley J. (1969), *Business Management*, Assistant Professor — B.S. B.A., Findlay College, 1964; M.B.A., Ohio University, 1966.
- Strange, Jerry D. (1958), *Engineering Technology*, Associate Professor — A.E., University of Dayton, 1955; B.S., Otterbein College, 1958; M.S., Xavier University, 1964.
- Streifthau, Donna L. (1970), *Home Economics*, Assistant Professor — B.S., Miami University, 1963; M.Ed., Miami University, 1965; Ph.D., Ohio State University, 1970.

- Stricker, Gary D. (1971), *Geology*, Assistant Professor—B.A., Wayne State University, 1963; M.S., Wayne State University, 1965.
- Strnat, Karl J. (1968), *Electrical Engineering*, Tait Professor — Ing.f.Maschinenbau, Technolog. Gewerbemuseum, Vienna, 1948; Dipl. Ing., Techn. Hochschule Wien, Vienna, 1953; Dr. Techn., Techn. Hochschule, Wien, Vienna, 1956.
- Sturm, S.M., Norbert A. (1959), *English*, Associate Professor—B.S., University of Dayton, 1940; M.A., Ohio State University, 1951; M.A., Western Reserve University, 1955; Ph.D., Western Reserve University, 1961.
- Tagg, Lawrence E. (1953), *Performing and Visual Arts-Music*, Associate Professor — B.Mus., University of Nebraska, 1947; M.Mus., University of Nebraska, 1948.
- Taylor, Bruce M. (1967), *History*, Assistant Professor—B.A., Dartmouth College, 1957; M.A., Columbia University, 1962.
- Taylor, David L. (1971), *Biology*, Clinical Assistant Professor—B.A., Wittenberg University, 1963; M.S., West Virginia University, 1965; Ph.D., West Virginia University, 1968.
- Thomas, Mary Sue (1969), *Dean of Women*, Assistant Professor — B.A., Nazareth College, 1960; M.A., Michigan State University, 1964.
- Thompson, John G. (1967), *Philosophy*, Assistant Professor—B.A., Terrebonne College (Montreal), 1935; M.A., Montreal University, 1937.
- Thompson, Mercedes A. (1968), *Languages*, Instructor — B.A., Douglass College, 1960; M.A., University of Colorado, 1968.
- Thomson, Robert A. (1952), *Engineering Mechanics*, Professor — B.S. in Ed., University of Dayton, 1950; B.M.E., University of Dayton, 1954; Ph.D., Illinois Institute of Technology, 1958; Reg. Prof. Eng.
- Thorne, Joseph R. (1961), *Mechanical Engineering*, Associate Professor (on leave)—B.S., Ohio University, 1938; M.S., Purdue University, 1950.
- Tibbetts, Paul E., Jr. (1969), *Philosophy*, Assistant Professor—A.E., Worcester Junior College, 1959; B.A., Clark University, 1964; M.A., Boston University, 1965.
- Tiedge, James T. (1970), *Communication Arts*, Instructor—B.A., University of Notre Dame, 1966.
- Tortoriello, Thomas R. (1971), *Communication Arts*, Assistant Professor — B.A., Curry College, 1965; M.S., Emerson College, 1967; Ph.D., Ohio State University, 1970.
- Trent, Judith S. (1971), *Communication Arts*, Assistant Professor—B.A., Western Michigan University, 1962; M.A., University of Michigan, 1968; Ph.D., University of Michigan, 1970.
- Trey, Thomas J. (1971), *Chemical Engineering*, Assistant Professor—B.Ch.E., University of Dayton, 1966; M.S., University of Notre Dame, 1968; Ph.D., University of Notre Dame, 1970.
- Trigg, John R. (1966), *Biology*, Instructor—B.S., University of Dayton, 1965.
- Tsui, James B. Y. (1965), *Electrical Engineering*, Associate Professor — B.S.E.E., National Taiwan University, 1957; M.S.E.E., Marquette University, 1961; Ph.D.E.E., University of Illinois, 1965.
- Tsui, Susan L. (1965), *Library*, Assistant Professor—B.A., National Taiwan University, 1961; M.L.S., University of Illinois, 1964.
- Ulrich, Lawrence P. (1964), *Philosophy*, Assistant Professor — A.B., Catholic University of America, 1961; M.A., Catholic University of America, 1962; M.Ed., Xavier University, 1965.
- Uncapher, Karen J. (1970), *Elementary Education*, Assistant Professor — B.S. in Ed., Miami University, 1967; M.S. in Ed., University of Dayton, 1970.
- Updyke, Joseph F. (1947), *Accounting*, Associate Professor—B.S., University of Dayton, 1947.
- Vest, Donna B. (1970), *Sociology*, Instructor — B.A., Miami University,

- 1965; M.A., Bowling Green State University, 1968.
- Vigle, John B. (1959), *Assistant Director of University Libraries*, Associate Professor—A.B., University of Kentucky, 1949; M.S. in L.S., University of Kentucky, 1956.
- Vincze, Mary (1962), *Library*, Instructor—B.S., Hungarian Royal Academy, 1933.
- Vines, Alice G. (1969), *History*, Assistant Professor—B.A., B.S., in Ed., University of Cincinnati, 1960; M.A., University of Cincinnati, 1961.
- Vrasdonk, Rev. William G. (1967), *Theological Studies*, Assistant Professor—Drs. Th., Carolus Magnus University (Netherlands), 1961; M.A., Loyola University, 1966.
- Walden, Esther (1964), *Business Management*, Professor—B.S., Ohio State University, 1941; M.B.A., Ohio State University, 1959; Ph.D., Ohio State University, 1962.
- Walsh, Joseph H. (1962), *Chemistry*, Associate Professor—B.S., University of Dayton, 1956; Ph.D., Georgetown University, 1963.
- Wanke, Elmer R. (1969), *Physical and Health Education*, Instructor—B.S. in Ed., Ohio University, 1969; M.Ed., Ohio University, 1969.
- Waters, S.N.D., Sister Elizabeth M. (1963), *Education*, Assistant Professor—B.S. in Ed. Athenaeum of Ohio, 1946; M.A. in Ed., Xavier University, 1962.
- Weatherly, Michael (1968), *Communication Arts*, Instructor—B.A., Stephen F. Austin State College, 1958; M.A., Bowling Green State University, 1961.
- Weber, S.M., Rev. Edwin J. (1960), *Theological Studies*, Assistant Professor—B.A., University of Dayton, 1926; M.A., Ohio State University, 1945.
- Weber, Louis A. (1954), *Performing and Visual Arts-Art*, Assistant Professor—B.S., University of Dayton, 1941; M.A., Ohio State University, 1947.
- Weiler, John E. (1967), *Economics*, Assistant Professor—B.A., University of Cincinnati, 1960; M.A., University of Cincinnati, 1961.
- Weiss, Roger F. (1965), *Civil Engineering*, Assistant Professor—B.S.C.E., University of Dayton, 1965; M.S.E., University of Dayton, 1969.
- Wening, Gerald G. (1964), *Philosophy*, Assistant Professor—A.B., Athenaeum of Ohio, 1960; M.A., University of Dayton, 1964.
- Wesselkamper, Thomas C. (1968), *Computer Science*, Assistant Professor (on leave)—B.S., University of Dayton, 1957; M.S., University of Notre Dame, 1960.
- Westerheide, John R. (1965), *Research*, Assistant Professor—B.M.E., University of Dayton, 1947.
- Whalen, Jr., Charles W. (1952), *Economics*, Professor (on leave)—B.S., University of Dayton, 1942; M.B.A., Harvard University, 1946.
- White, Joan I. (1970), *Business Management*, Assistant—B.S. University of Tulsa, 1961; M.A., University of Oklahoma, 1967.
- White, Joseph E. (1956), *Education*, Assistant Professor—B.S., Ed., University of Dayton, 1950; M.Ed., Marquette University, 1956.
- Wilder, Jesse H. (1953), *Mechanical Engineering Technology*, Professor—B.S.M.E., Duke University, 1947; M.S., State University of Iowa, 1949; Reg. Prof. Eng.
- Willis, Gerald L. (1962), *Biology*, Assistant Professor—B.S., University of Dayton, 1959; M.S.T., Miami University, 1963.
- Windell, Idajean (1967), *Education*, Assistant Professor (on leave)—B.S., St. Joseph's College, 1964; M.S., Indiana University, 1967.
- Winger, Bernard J. (1966), *Economics*, Assistant Professor—B.S., Xavier University, 1959; M.A., University of Cincinnati, 1960; C.P.A., Ohio, 1965.
- Wise, Spence L. (1968), *Accounting*, Assistant Professor—B.B.A., Ohio University, 1963; M.B.A., Ohio Univer-

- sity, 1966; C.P.A., Accountancy Board of Ohio, 1968.
- Wolff, Florence I. (1969), *Communication Arts*, Assistant Professor—B.S., Temple University, 1941; M.Ed., Duquesne University, 1967; Ph.D., University of Pittsburgh, 1969.
- Wolff, Robert L. (1958), *Mechanical Engineering Technology*, Assistant Professor—A.E., University of Dayton, 1956; B.S., University of Dayton, 1959; M.B.A., Xavier University, 1967.
- Wottle, S.M., Vincent J. (1938), *Chemistry*, Associate Professor (on leave)—B.S., University of Dayton, 1936; M.S., Catholic University of America, 1938; Ph.D., Ohio State University, 1951.
- Wood, David M. (1970), *Mechanical Engineering*, Assistant Professor—B.S.M.E., University of Cincinnati, 1966; Ph.D., University of Cincinnati, 1970.
- Wurst, John C. (1971), *Mechanical Engineering*, Assistant Professor of Materials Engineering—B.M.E., University of Dayton, 1957; M.S.E., University of Dayton, 1968; Ph.D., University of Illinois, 1971.
- Yaney, Perry P. (1965), *Physics*, Associate Professor—B.S.E.E., University of Cincinnati, 1954; M.S., University of Cincinnati, 1957; Ph.D., University of Cincinnati, 1963.
- Yaple, Robert L. (1966), *History*, Assistant Professor—B.A., University of Kansas, 1959; M.A., University of Chicago, 1964.
- Zahner, Mary A. (1971), *Performing and Visual Arts*, Instructor—B.F.A., Ohio University, 1960; M.A., Ohio University, 1969.
- Zech, Veryl L. (1940), *Performing and Visual Arts - Music*, Associate Professor—B. of Mus., University of Dayton, 1948; M. of Mus., Cincinnati Conservatory of Music, 1951.
- Zeinz, S.M., Rev. Joseph H. (1964), *Languages*, Associate Professor—A.B., Holy Cross College, 1938; M.A., Catholic University of America, 1941; Ph.D., Ohio State University, 1965.

RESEARCH STAFF

- Alt, James H. (1965), *Associate Research Engineer*—B.E.E., University of Dayton, 1965.
- Andrews, Charles R. (1952), *Senior Research Engineer*—B.M.E., University of Dayton, 1951; M.B.A., Xavier University, 1963; Registered Professional Engineer.
- Askins, Donald R. (1964), *Associate Research Engineer*—B.Ch.E., University of Dayton, 1963.
- Ball, Cyril F. (1970), *Assistant Research Programmer*—B.S., University of Dayton, 1969.
- Balster, Ralph A. (1969), *Associate Data Acquisition and Instrumentation Engineer*—B.S.E.E., University of Dayton, 1969.
- Benner, Charles L. (1963), *Assistant Research Chemist*—B.S., Findlay College, 1963.
- Berens, Alan P. (1969), *Research Statistician*—B.S., University of Dayton, 1955; M.S., Purdue University, 1957; Ph.D., Purdue University, 1963.
- Berner, William E. (1966), *Associate Research Engineer*—B.M.E., University of Dayton, 1965.
- Bertke, Robert S. (1964), *Associate Research Engineer*—B.M.E., University of Dayton, 1963.
- Boehman, Louis I. (1966), *Research Engineer*—B.S.M.E., University of Dayton, 1960; M.S.M.E., Illinois Institute of Technology, 1963; Ph.D., Illinois Institute of Technology, 1967.
- Boehmer, Robert P. (1962), *Associate Research Mathematician*—B.S., University of Dayton, 1962.

- Bogner, Frederick (1969), *Research Engineer*—B.S.C.E., Case Institute of Technology, 1961; M.S.E.M., Case Institute of Technology, 1964; Ph.D., Case Institute of Technology, 1967.
- Bruns, Raymond J. (1966), *Associate Research Engineer*—B.E.E., University of Dayton, 1966.
- Busch, Gerald E. (1952), *Assistant to the Director, Research Institute*—B.S., University of Dayton, 1952; M.B.A., Xavier University, 1960.
- Cannon, Charles M. (1966), *Associate Research Engineer*—B.M.E., University of Dayton, 1966.
- Carr, Patricia G. (1971), *Assistant Research Information Specialist*—B.A., Ohio Wesleyan, 1968.
- Cashin, John (1961), *Associate Research Biologist*—B.S., University of Dayton, 1960.
- Centers, Phillip W. (1966), *Associate Research Chemist*—B.S., Wilmington College, 1966; M.S., University of Dayton, 1971.
- Cervay, Russell R. (1970), *Assistant Research Engineer*—B.M.E., University of Dayton, 1967.
- Cherry, John A. (1958), *Research Engineer*—B.M.E., University of Dayton, 1951.
- Collins, George T. (1966), *Associate Research Engineer*—B.S., University of Dayton, 1966.
- Conner, Robert L. (1960), *Research Engineer*—B.S.M.E., University of New Mexico, 1950.
- Coy, Richard G. (1954), *Research Engineer*—B.S.M.E., University of Dayton, 1954.
- Crouch, Jack G. (1969), *Principal Investigator*—B.S., West Point, 1945; M.S., University of Michigan, 1951; Ph.D., University of Michigan, 1968.
- Davison, Joseph E. (1966), *Research Metallurgist*—B.S., St. Louis University, 1960; M.S., Iowa State University, 1964; Ph.D., Iowa State University, 1966.
- Detrio, John A. (1966), *Research Physicist*—B.S., Spring Hill College, 1959; M.S., University of Alabama, 1961.
- Dillhoff, Kathryn J. (1971), *Assistant Research Programmer*—B.S., University of Dayton, 1970.
- Dodson, Ann T. (1970), *Assistant Research Information Scientist*—B.A., Muskingum College, 1952.
- Dominic, Robert J. (1960), *Research Engineer*—B.E.E., University of Dayton, 1955.
- Dueweke, Paul J. (1968), *Associate Research Physicist*—B.S., Wayne State University, 1966; M.S., University of Dayton, 1968.
- Duvall, Donovan S. (1964), *Research Chemist*—B.S., Ohio State University, 1951; M.S., University of Dayton, 1971.
- Edmonds, Paul (On Leave of Absence), (1963), *Associate Research Microbiologist*—B.S., Kentucky State, 1955; B.S., Miami University, 1963; M.S., University of Dayton, 1968.
- Engel, Olive G. (1970), *Research Chemist*—B.S., Florida State University, 1933; M.S., Florida State University, 1939; Ph.D., University of North Carolina, 1950.
- Engler, Nicholas A. (1952), *Senior Research Physicist*—B.S., University of Dayton, 1947; M.S., University of Cincinnati, 1949.
- Fielman, John W. (1962), *Associate Research Mathematician*—B.S., University of Cincinnati, 1959.
- Fiscus, Ira B. (1964), *Associate Research Engineer*—B.M.E., University of Dayton, 1963.
- Ford, Frederic E. (1969), *Assistant Research Chemist*—B.S., University of Vermont, 1941; M.S., University of Virginia, 1949.
- Gehrich, John L. (1971), *Research Engineer*—B.E.E., University of Dayton, 1963;

- M.S.E.E., University of Southern California, 1965; Ph.D., University of Southern California, 1971.
- Gerdeman, Dennis A. (1962), *Associate Research Engineer*—B.M.E., University of Dayton, 1962; M.S.E., University of Dayton, 1970; Registered Professional Engineer.
- Goldschmidt, Mark A. (1959), *Assistant Research Physicist*—B.S., University of Dayton, 1967.
- Graves, George A., Jr. (1965), *Associate Research Ceramist*—B.S.Cer.E., Alfred University, 1960.
- Harmer, Richard S. (1970), *Research Ceramist*—B.S., University of Illinois, 1963; M.S., University of Illinois, 1967; Ph.D., University of Illinois, 1971.
- Hearsey, Richard M. (1971), *Research Engineer*—Diploma of Imperial College, 1961.
- Hecht, Norman L. (1963), *Associate Research Ceramist*—B.S.Cer.E., Alfred University, 1960; M.S., Alfred University, 1968.
- Hemmert, William F. (1969), *Assistant to the Director, Research Institute*—B.S., Ohio State University, 1964.
- Henighan, Thomas L. (1968), *Assistant Research Engineer*—B.S., University of Dayton, 1965; M.B.A., University of Dayton, 1969.
- Heyda, James F. (1970), *Senior Research Mathematician*—B.S., University of Chicago, 1935; M.A., Michigan State University, 1937; Ph.D., University of Illinois, 1940.
- Hoppenjans, J. Richard (1969), *Associate Research Engineer*—B.S.C.E., University of Dayton, 1968; M.S.C.E., University of Dayton, 1970.
- House, Willard E. (1967), *Assistant Research Chemist*—B.S., Texas Southern University, 1966.
- Hovey, William J. (1953), *Research Engineer*—B.S., University of Dayton, 1952; M.S., Ohio State University, 1967; Registered Professional Engineer.
- Iden, David J. (1971), *Materials Engineer*—B.S., Air Force Institute of Technology, 1963; M.S., Air Force Institute of Technology, 1964.
- Jones, Raymond E. (1966), *Assistant Research Engineer*—B.M.E., University of Dayton, 1966.
- Jones, Rex L. (1971), *Associate Research Physicist*—B.S., University of Missouri, 1959; Ph.D., Purdue University, 1968.
- Kahle, Donald A. (1955), *Research Engineer*—B.E.E., University of Dayton, 1951; Registered Professional Engineer.
- Kahut, Peter M. (1966), *Associate Research Physicist*—B.S., Lemoyne College, 1956.
- Kovar, Robert F. (1967), *Associate Research Chemist*—B.S., Brooklyn Polytechnic Institute, 1963; Ph.D., University of Massachusetts, 1967.
- Krause, E. Horst (1969), *Research Engineer*—B.S., Berlin Institute of Technology, 1957; Ph.D., Brunswick Institute of Technology, 1962.
- Kreitman, Marshall (1966), *Senior Research Physicist*—A.B., University of Louisville, 1952; M.S., University of Louisville, 1956.
- Lee, Thomas W. (1970), *Research Physicist*—B.A., Brigham Young University, 1952; M.S., Brigham Young University, 1956.
- Leinberger, G. Karl (1962), *Associate Research Engineer*—B.S., University of Dayton, 1962; M.S., University of Dayton, 1966.
- Look, David C. (1969), *Research Physicist*—B.S., University of Minnesota, 1960; M.S., University of Minnesota, 1962; Ph.D., University of Pittsburgh, 1965.

- Luers, James K. (1964), *Research Mathematician*—B.S., Xavier University, 1962; M.S., Xavier University, 1963.
- Luthman, Robert R. (1952), *Associate Director, Research Institute*—B.S., University of Dayton, 1950; M.B.A., Xavier University, 1963.
- MacArthur, Charles (1969), *Associate Research Physicist*—B.S., Ohio State University, 1967; M.S., Ohio State University, 1969.
- March, Jacqueline F. (1968), *Associate Research Chemist*—B.S., Flora Stone Mather College, 1937; M.S., Western Reserve, 1939.
- McDaniel, Thomas J. (1967), *Research Engineer*—B.S., University of Illinois, 1962; M.S., University of Illinois, 1964; Ph.D., University of Illinois, 1968.
- Meese, Jon M. (1970), *Associate Research Physicist*—B.S., University of Cincinnati, 1961; M.S., Purdue University, 1964; Ph.D., Purdue University, 1970.
- Mildrum, Herbert F. (1952), *Associate Research Engineer*—B.E.E., University of Dayton, 1964.
- Militello, Joseph (1965), *Assistant to the Director, Research Institute*—B.S., University of Detroit, 1961; M.B.A., University of Dayton, 1970.
- Minardi, John E. (1958), *Principal Investigator*—B.M.E., University of Dayton, 1955; M.S.M.E., University of Southern California, 1957.
- Mohlman, Henry T. (1960), *Associate Research Mathematician*—B.S., University of Dayton, 1960.
- Nashif, Ahid B. (1963), *Research Engineer*—B.S.C.E., Tri-State, 1961; M.S.Eng.S., University of Dayton, 1965.
- Newman, Ronald K. (1957), *Research Engineer*—B.M.E., University of Dayton, 1957; M.S.E., University of Dayton, 1967.
- Nieport, Rita J. (1968), *Assistant Research Programmer*—B.S., University of Dayton, 1968.
- Peterson, Dart G. (1969), *Assistant to the Director, Research Institute*—B.A., Western Reserve University, 1948.
- Petrak, Gerald J. (1965), *Associate Research Engineer*—B.M.E., University of Dayton, 1964.
- Piekutowski, Andrew J. (1970), *Assistant Mechanical Engineer*—B.S.M.E., University of Dayton, 1970.
- Pinson, Jay D. (1971), *Research Engineer*—B.S., Ohio University, 1950; M.S., Oklahoma State University, 1963; Ph.D., Oklahoma State University, 1966.
- Preonas, Diamantis D. (1967), *Associate Research Engineer*—B.S., University of Dayton, 1967.
- Ray, Alden E. (1961), *Senior Research Metallurgist*—B.A., Southern Illinois, 1953; Ph.D., Iowa State, 1959.
- Reboulet, Ronald C. (1965), *Assistant Research Mathematician*—B.S., University of Dayton, 1965; B.S., University of Dayton, 1969.
- Reeves, Jerry B. (1967), *Associate Research Physicist*—B.S., North Texas State University, 1965; M.S., North Texas State University, 1967.
- Roth, George J. (1954), *Research Engineer*—B.M.E., University of Dayton, 1954.

- Rubey, Wayne A. (1968), *Assistant Chemical Technologist*—B.S., University of Dayton, 1968.
- Ryan, Patrick J. (1966), *Research Engineer*—B.S., Iowa State University, 1947; M.S., Notre Dame University, 1958.
- Scheffler, Frederic L. (1961), *Research Engineer*—B.S., Purdue University, 1957; M.S., University of Michigan, 1959.
- Schrader, Donna S. (1965), *Associate Research Programmer*—B.A., Miami University, 1965.
- Shirazi, Mehdi (1968), *Associate Research Mathematician*—B.S.M.E., University of Bombay, 1946; B.S.E.E., University of Bombay, 1947; M.A., University of Kansas, 1954.
- Sliemers, James C. (1966), *Assistant Research Engineer*—B.M.E., University of Dayton, 1966.
- Solomon, James (1969), *Assistant Research Chemist*—B.S., University of Dayton, 1964.
- Soloski, Edward J. (1959), *Associate Research Chemist*—B.S., John Carroll University, 1955.
- Standage, Arthur E. (1967), *Senior Research Chemist*—B.S., University of Sheffield, 1953; Ph.D., University of Sheffield, 1957.
- Stevenson, Gary E. (1963), *Associate Research Chemist*—B.S., University of Dayton, 1963.
- Swartzbaugh, Joseph T. (1965), *Associate Research Physicist*—B.S., University of Dayton, 1960; M.S., Worcester Polytechnical Institute, 1962.
- Swift, Hallock F. (1966), *Senior Research Physicist*—B.S., Cornell University, 1947.
- Trampus, Anthony (1970), *Research Mathematician*—B.S., Case Institute of Technology, 1951; M.S., George Washington University, 1953; Ph.D., Case Institute of Technology, 1957.
- Vernon, Erwin C. (1967), *Associate Research Programmer*—Ph.B., University of Wisconsin, 1947; M.S., University of Michigan, 1959.
- Weckesser, John U. (1970), *Assistant to the Director, Research Institute*—B.S., University of Dayton, 1966.
- West, Blaine S. (1966), *Research Engineer*—B.S.C.E., West Virginia University, 1960; M.S.T.A.M., West Virginia University, 1962.
- Westerheide, John R. (1952), *Director, Research Institute*—B.M.E., University of Dayton, 1947.
- Whitford, Dale H. (1952), *Senior Research Engineer*—Aeronautical Engineer, University of Cincinnati, 1951; Registered Professional Engineer.
- Wiff, Donald R. (1967), *Associate Research Physicist*—B.S., Capital University, 1958; M.S., Kent University, 1960; Ph.D., Texas A & M University, 1966.
- Wilt, Benjamin H. (1971), *Associate Research Engineer*—B.M.E., Villanova University, 1965.
- Wurst, John C. (1957), *Research Engineer*—B.M.E., University of Dayton, 1957; M.S.M.E., University of Dayton, 1968; Ph.D., University of Illinois, 1971; Registered Professional Engineer.
- Ziegenhagen, John (1967), *Assistant Research Chemist*—B.A., University of Wisconsin, 1963.

SUPPORTING RESEARCH STAFF

Charles Acton, *Electro-Mechanical Technician*; Charles Allen, *Laboratory Technician*; Patrick J. Allen, *Mechanical Technician*; Robert J. Andrews, *Materials Technician*; Samuel M. Askins, *Senior Electronics Technician*; Frederick M. Azama, *Senior Ma-*

chinist; Michael S. Barger, *Field Representative*; Lester R. Bartimay, *Senior Electronics Technician*; Arthur K. Behme, *Elastomers Technician*; Charles E. Bell, *Senior Mechanical Technician*; Robert V. Bertke, *Physics Technician*; Adolph T. Biermann, *Senior Metallurgical Technician*; Sarah J. Bintz, *Junior Technical Illustrator*; Michael R. Bodiker, *Mechanical Technician*; Dan A. Bonsell, *Electronics Technician*; Sigmund W. Brzezicki, *Senior Materials Technician*; George Buchhalter, *Electro-Mechanical Technician*; John M. Buob, *Electronics Technician*; Jerald L. Burkett, *Senior Chemical Technician*; Byron Byrd, *Junior Fibers Technician*; William D. Cambron, *Mechanical Technician*; Lawrence R. Cash, *Elastomers Technician*; William E. Click, *Plastics Technician*; Gary A. Clinehens, *Senior Coatings Technician*; John R. Conner, *Junior Elastomers Technician*; Ronald Cornwell, *Fibers Technician*; Timothy J. Courtney, *Junior Coatings Technician*; Gene D. D'Aloiso, *Chemical Technician*; Henry A. DeMarey, *Supervisor, Graphic Arts*; David V. Dempsey, *Senior Research Technician*; Arnold Ditmer, *Mechanical Technician*; Roland W. Ditmer, *Senior Elastomers Technician*; Gary W. Doll, *Chemical Technician*; John N. Dues, *Plastics Technician*; Thomas A. Dusz, *Metallographic Technician*; Duane E. Earley, *Senior X-Ray Technician*; John H. Eblin, *Mechanical Technician*; Richard N. Ely, *Senior Electronics Technician*; Howard B. Evans, *Senior Electronics Technician*; Charles C. Fowler, *Senior Plastics Technician*; George W. Fultz, *Lubricants Technician*; Richard L. Fusek, *Senior Electro-Optical Technician*; Robert E. Gooding, *Senior Machinist*; Philip A. Graf, *Supervisor, Manual Data Processing*; James L. Graham, *Materials Technician*; Richard A. Grant, *Glassblowing Specialist*; Paul R. Greason, *Senior Laser Technician*; James E. Green, *Senior Electro-Mechanical Technician*; Terry L. Green, *Junior Chemical Technician*; David A. Hahn, *Senior Lubricants Technician*; Stephen J. Hanchak, *Senior Materials Technician*; Norman L. Harruff, *Senior Metallurgical Technician*; John T. Hartness, *Plastics Technician*; David J. Hemmelgarn, *Junior Chemical Technician*; Thomas R. Henderson, *Electro-Mechanical Technician*; Jacque D. Henes, *Physics Technician*; Dennis F. Holt-haus, *Machinist*; James C. Holverstott, *Chief Technician*; Charles Humston, *Junior Technical Illustrator*; Charles J. Hurley, *Chief Coatings Technician*; Jerome Ingram, *Senior Technical Illustrator*; Phillip Kern, *Junior Mechanical Technician*; Keith Kettler, *Senior Electronics Technician*; Andrew Kraus, *Metallographic Technician*; Ronald J. Kuhbander, *Chief Materials Technician*; Patrick Larger, *Junior Metallurgical Technician*; Robert E. Leasure, *Metallurgical Technician*; Robert Leese, *Metallurgical Technician*; Michael F. Lehman, *Mechanical Technician*; Charles Lovett, *Plastics Technician*; Samuel Macy, *Senior Electronics Technician*; John Mansperger, *Junior Field Technician*; Richard J. Marton, *Senior Electro-Mechanical Technician*; David C. Maxwell, *Senior Electro-Mechanical Technician*; Raymond J. Miller, *Senior Plastics Technician*; William C. Miller, *Fibers Technician*; Edward A. Moffett, *Field Representative*; John E. Moreau, *Senior Photographic Technician*; Ronald P. Mortimer, *Elastomers Technician*; David T. Mott, *Electronics Technician*; Louis A. Muhic, *Senior Electronics Technician*; Donald Mullen, *Materials Technician*; Peter Muth, *Senior Machinist*; Dale E. McCullum, *Senior Ceramics Technician*; Susan McKee, *Junior Draftsman*; James C. McKiernan, *Senior Polymers Technician*; Michael Nagy, *Junior Electro-Mechanical Technician*; James W. Naughton, *Senior Electro-Mechanical Technician*; Nicholas J. Olson, *Senior Plastics Technician*; Dale S. Opela, *Senior Electro-Mechanical Technician*; Michael L. Parin,

Mechanical Technician; Donnie Partin, *Electronics Technician*; Frederick J. Pestian, *Supervisor, Fabrication Shop*; Robert J. Pettit, *Field Representative*; Roger D. Petty, *Senior Electronics Technician*; L. Dee Pike, *Senior Materials Technician*; Howard W. Polley, *Elastomers Technician*; Gary E. Price, *Electronics Technician*; Paul L. Proshok, *Senior Coatings Technician*; Lacy W. Ranson, *Electronics Technician*; Paul Von Richter, *Junior Physics Technician*; Michael P. Riley, *Graphic Arts Technician*; Dorothy Sargent, *Research Assistant, Biology*; Bruce F. Schreiber, *Electro-Mechanical Technician*; Charles W. Schroll, *Materials Technician*; Lawrence W. Sears, *Materials Technician*; Larry Shields, *Junior Field Technician*; Clyde E. Smith, *Supervisor, Electronics Laboratory*; Eugene J. Soltis, *Senior Instrumentation Technician*; Edward A. Strader, *Instrumentation Technician*; Rolland J. Strong, *Photographic Technician*; Henry R. Taylor, *Senior Electro-Mechanical Technician*; Gary L. Teeters, *Metallographic Technician*; Francis W. Timko, *Mechanical Technician*; Charles A. Tobin, *Senior Chemical Technician*; Joseph F. Umina, *Senior Electronics Technician*; Roger L. Vissoc, *Coatings Technician*; David A. Walsh, *Senior Science Technician*; David Weldy, *Junior Materials Technician*; LeRoy Whittaker, *Plastics Technician*; Thomas H. Wical, *Senior Elastomers Technician*; Guy S. Williams, *Electronics Specialist*; Lawrence A. Wogoman, *Senior Electro-Mechanical Technician*; David Woleslagle, *Junior Field Technician*; Walter Zorning, *Junior Field Technician*

OFFICE FOR COMPUTING ACTIVITIES

Gee, Martell J. (1969), *Director*—Ph.D., Brigham Young University, 1967.
McAdams, Ronald L. (1959), *Assistant Director*—B.A., Manchester College, 1959

Administrative Systems Development

Roemer, Albert J. (1963), *Manager*—B.S., University of Dayton, 1962.
Dresher, Richard J. (1968), *Systems Analyst*—B.S., University of Dayton, 1969.
Sommers, Harry C. (1960), *Programming Supervisor*—A.B., University of Dayton, 1969.
Drerup, John (1971), *Systems Analyst*—A.B., University of Dayton, 1957.
Linck, Anita (1970), *Programmer/Analyst*—B.S., University of Dayton, 1970.
Brush, Anne (1968), *Programmer*
Dalhamer, George (1970), *Programmer/Analyst*—B.S., Miami University, 1970
Hunter, Don (1964), *Junior Programmer*
Cron, Steve (1969), *Programmer*

Operations

Honingford, William A. (1960), *Manager*—B.S., University of Dayton, 1969.
Michel, Daniel (1966), *Programmer*
Goodpastor, Patricia (1967), *Supervisor of Data Preparation*
Hitchcock, Karen (1969), *Programmer*
Turner, Gary (1971), *Programmer*
Cox, David A. (1968), *Senior Computer Operator*
Cain, Candice (1969), *Senior Computer Operator*
Speaks, Bobbie (1969), *Senior Computer Operator*
Furlong, Toni (1970), *Junior Computer Operator*
Galbraith, Terry (1970), *Junior Computer Operator*

Academic Services

- May, Alan M. (1969), *Manager*—Ph.D., University of Cincinnati, 1968.
 Moore, Robert E. (1969), *CAI Coordinator*—B.S., University of Cincinnati, 1960.
 McClimens, Michael (1970), *Systems Analyst*—B.S., University of Dayton, 1971.
 Zeh, Richard (1962), *Programmer*

Systems Programming & Support

- Pugh, John (1969), *Manager*—B.S., Ohio University, 1952.
 Koo, Ping (1969), *Systems Design Analyst*—M.S., Univ. of Missouri, 1963
 Grazulis, Paul (1970), *Systems Programmer*—B.S., Univ. of Dayton, 1970.

PSYCHOLOGICAL SERVICES CENTER STAFF

Rev. Andrew L. Seebold, S.M., *Administrative Director*; Lloyd A. Rensel, *Director Testing Services*; Charles H. Scheidler, *Chief Psychologist*; John E. Riley, *Director Veterans Guidance and Counselor*; Howard P. Stevens, *Counselor*; Eleanor Anderson, *Counselor*; Dennis Maloy, *Counselor*; Eileen A. Myers, *Supervisor, Psychometrist*; Mary Ellen Donohue, *Psychometrist*; Mary Krueger, *Supervisor Test Processing*; Elaine Carey, *Psychometrist*; Bette Rensel, *Psychometrist*; John Ubbink, *Psychometrist*; Cynthia Matsumara, *Psychometrist*.

ATHLETIC STAFF

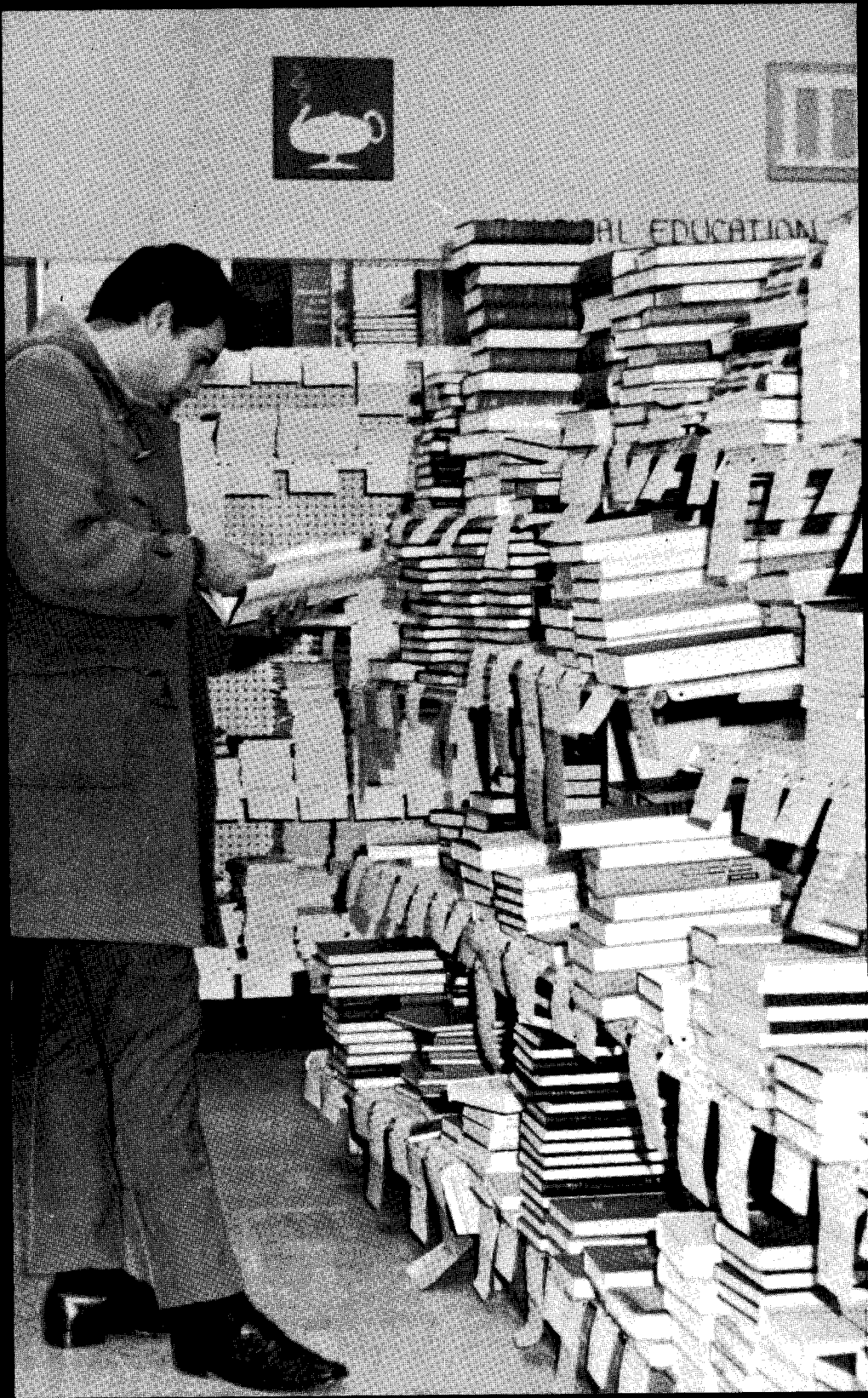
Thomas J. Frericks, *Director of Athletics*; Harry C. Baujan, *Assistant to the Chairman of the Board of Athletic Control*; Donald J. Donoher, *Head Basketball Coach*; William B. Cassidy, *Freshman Basketball Coach*; Jack Butler, *Assistant Basketball Coach*; John E. McVay, *Head Football Coach*; Joseph M. Eaglowski, *Assistant Football Coach*; Wallace Neel, *Assistant Football Coach*; Leonard J. Fontes, *Assistant Football Coach*; James Gruden, *Assistant Football Coach*; Elmer Wanke, *Freshman Football Coach*; Billy R. Mayo, *Director of Intramurals*; Edward C. Kwest, *Trainer*; Ken Keck, *Equipment Manager*; Dr. George Rau and Dr. Edw. Leschansky, *Team Physicians*; Golf Coach to be named; Shaw Emmons, *Tennis Coach*; Walt DeAnna, *Ice Hockey Coach*; John R. Schleppe, *Soccer Coach*; Stam Bulugaris, *Wrestling Coach*; Gene Schill, *Director of Promotion and Public Relations*; Gary McCans, *Ticket Manager*; Jack R. Brown, *Consultant to the Ticket Office*; Thomas G. Dowling, *Business Manager of Athletics*; Herbert J. Dintaman, *Director of Facilities*; James W. Hoover, *Administrative Assistant*.

HEALTH SERVICE STAFF

Administration Director: Rev. Charles Collins, S.M.
Medical Director: John H. Dirckx, M.D.
Religious Services: Fr. Francis Langhirt, S.M.
Supervisor: Catherine Kirk, R.N.

NURSES (Full-time): Ruth Barnes, Edith Brun, Lois Hanes, Mary Harmeson, Doris Krafka, Patricia Roth, Betty Zimmerman. **(Part-time)**: Betty Artkamp, Ellen Banke, Marilyn Cogan, Mary Hemmert, Virginia Herbeck, Patricia Hickey, Patricia Huelsman, Virginia Jauck, Mary Mulligan, Patricia Staudter, Mary Zeh.

SUPPORTING STAFF: Georgia Bowen, Rosemary Cordie, Helen Heindl, Ida Henderson, Jane Macklin, Callie Moore, Percy McDonald, Ruth Norris.



XI Courses of Instruction

ACCOUNTING (ACC)

Edward W. Rodgers, *Chairman*

Professor: Hoben

Associate Professors: Clark, Eley, Ellis, Fioriti, Rodgers

Assistant Professors: Paperman, Sanford, Wise

Instructor: Hoover

Part-time Instructors: Luthman, Murray, Trentman, Wagner

ACC 203. SURVEY OF ACCOUNTING—Replaced by MBA 500B

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 except Acc 301.

ACC 301. FINANCIAL REPORTING AND ADMINISTRATION THREE CREDIT HOURS

An introduction to accounting and financial procedures, concepts, and terminology. The course is intended to serve non-business students, especially social science majors, with a usable introduction to financial statements and other accounting reports, including institutional budgets and financial control procedures.

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 further 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 401. AUDITING PRINCIPLES **THREE 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**
A conceptual, rather than a procedural, 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 emphasis on solutions of specific problems. Useful 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. Permission of instructor required.

Administrative Sciences (Adm)

ADM 100. SEMINAR **ONE TO SIX CREDIT HOURS**

ADM 200. SEMINAR **ONE TO SIX CREDIT HOURS**

ADM 300. SEMINAR **ONE TO SIX CREDIT HOURS**

ADM 400. SEMINAR **ONE TO SIX CREDIT HOURS**

Opportunities for students to explore interdisciplinary relationships between administration, its environment, and other fields.

Center For Afro-American Affairs (AAS)

Mr. Roderick J. McDavis, *Director*

Dr. Melvin E. Williams, *Associate Director*

Assistant Professor: Herbert Martin

Instructor: Alvin Gay

Graduate Fellow: Clemmie Solomon

AAS 201. AFRO-AMERICAN LITERATURE I **THREE CREDIT HOURS**
A historical overview of black literature and how it is connected to the history of the Black man. Students prepare literary documents of their own which relate to a certain historical period. Emphasis will be on the contributions of black literary artists before 1900.

AAS 202. AFRO-AMERICAN LITERATURE II **THREE CREDIT HOURS**
A continuation of Aas 201 with major emphasis on black artists after 1900.

AAS 210. AFRO-AMERICANS AND THE POLITICAL PROCESS **THREE CREDIT HOURS**
This course will stress the relationship between the growth of politics and how it has

contributed to Afro-Americans' development. It emphasizes, also, the unwritten features of the political process

AAS 241. AFRO-AMERICAN HISTORY BEFORE 1900 THREE CREDIT HOURS
This course will explore the historical experiences of Afro-American development and current trends which are its products. Emphasis will be placed on history before 1900.

AAS 242. AFRO-AMERICAN HISTORY AFTER 1900 THREE CREDIT HOURS
A continuation of Aas 241 with major emphasis on history after 1900.

AAS 300. AFRO-AMERICAN POETRY I THREE CREDIT HOURS
Five major Black writers—Langston Hughes, Robert Hayden, Gwendolyn Brooks, M. B. Tolson, and LeRoi Jones—are read and discussed.

AAS 301. AFRO-AMERICAN POETRY II THREE CREDIT HOURS
A continuation of Aas 300. Contemporary Black writers will be studied and their works reviewed. Students will also write poetry.

AAS 312. INSTITUTIONAL RACISM THREE CREDIT HOURS
This course will investigate institutional and personal racism and how the individual perpetuates institutional racism. It will illuminate the process by which persons learn racism and explore racist systems which assign negative values and prerogatives to non-white people and positive values and prerogatives to white society.

AAS 314. LAW AND THE BLACK COMMUNITY THREE CREDIT HOURS
This course will explore the concepts of community control. Inequalities under the law and in protection of black citizens by law enforcement agencies will be viewed as a major factor contributing to the alienation between such agencies and community residents.

AAS 320. CONTEMPORARY ECONOMIC PROBLEMS OF THE BLACK COMMUNITY THREE CREDIT HOURS
An economic overview of the problems present in the American economy, with an expanded consideration of policy formation and its effect on the poor in America.

AAS 331. SOCIOLOGY OF THE BLACK COMMUNITY THREE CREDIT HOURS
This course, for upper classmen, attempts to foster an understanding of the black community which has been left unexplored by traditional curriculums of sociology and urban anthropology. Discussion will focus on the black family as well as such institutions as the church, community, groups, social gatherings, and black organizations.

AAS 332. SEMINAR: PROBLEMS IN THE URBAN COMMUNITY THREE CREDIT HOURS
This course identifies and explores major problems confronting major urban communities. Selected for emphasis will be housing, rat control, employment, culture, crime, drugs, health, education, and other pertinent issues.

AAS 360. EDUCATIONAL SYSTEMS AND THE URBAN GHETTO THREE CREDIT HOURS
This course is primarily for students who plan a teaching career. Discussion will focus upon the effects of "miseducation" and how different levels of schooling, and schools as institutions, define their role when serving black communities.

AAS 403. PRACTICUM IN COMMUNITY SERVICE II THREE CREDIT HOURS
Continuation of Practicum I.

AAS 404. SEMINAR IN COMMUNITY SERVICE II ONE CREDIT HOUR
Continuation of Seminar I.

AAS 491. PRACTICUM IN COMMUNITY SERVICE I THREE CREDIT HOURS
Students are involved directly in community experience. The participants gain knowledge

of the needs of community people and how well these needs are met. Practical experiences help the student explore his own interests, and are relevant to successful community involvement in future life.

AAS 492. SEMINAR IN COMMUNITY SERVICE I ONE CREDIT HOUR
 This seminar and the practicum in community service are integrated over one trimester. Problems encountered during the practicum and present day problems of community services are discussed in the seminar.

AAS 493. INDIVIDUAL STUDY AND RESEARCH THREE CREDIT HOURS
 Individual Study and Research provides a student the opportunity to work individually on selected topics under the direction of the staff of the Center for Afro-American Affairs. The student meets with the instructor at pre-arranged times and carries forward his investigation without formal class meetings. This course is open to Juniors or Seniors and may be taken only once. Permission of Director required.

American Studies (AmS)

Dr. Francis J. Henninger, *Chairman*
Assistant Professors: Alexander, 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.

GROUP A	GROUP B		GROUP C	
English	History		Economics	
305	358	456	341	430
332	390	472	342	480
352	396	474		
450	452	475	Political Science	
452	453	476	301	408
454	454	477	303	411
456	455		310	413
			311	450
Fine Arts	Philosophy		312	475
471	304	323	313	480
472	311	330	360	
490	314	422		
	320	452	Psychology	
	321	470	311	408
	322		315	409
			406	420

GROUP A	GROUP B	GROUP C	
Music	Theological Studies	Sociology-Anthropology	
304	326	206	332
305	363	206L	400
308	370	210	406
310	448	315	422
	478	318	433
		322	435W
		325	
		328	

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, 1972-1973*

AMS 301. INTERPRETATIONS OF AMERICAN CULTURE

A critical study of various interpretations of American culture through more than a hundred years. *Second Term, 1972-1973*

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. *Each Term, 1972-1973*

AMS 405. TOPICS IN AMERICAN CULTURE

A course designed to offer students in all disciplines an opportunity to study American topics of wide interest whose most effective approach is interdisciplinary. *Each Term, 1972-1973*

Biology (Bio)

Dr. George B. Noland, *Chairman*

Professors: Cooney, Jaffee, Joly, Noland

Associate Professors: Bajpai, Chantell, Faso, Geiger, Joly Lachapelle, McDougall, Ramsey, Shay

Assistant Professors: Hayat, Laufersweiler, McKinney, Schwelitz, Willis

Instructor: Trigg

Clinical Assistant Professor: Taylor

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. This course (and Bio 102 below) is designed for students not following the biology core curriculum.

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

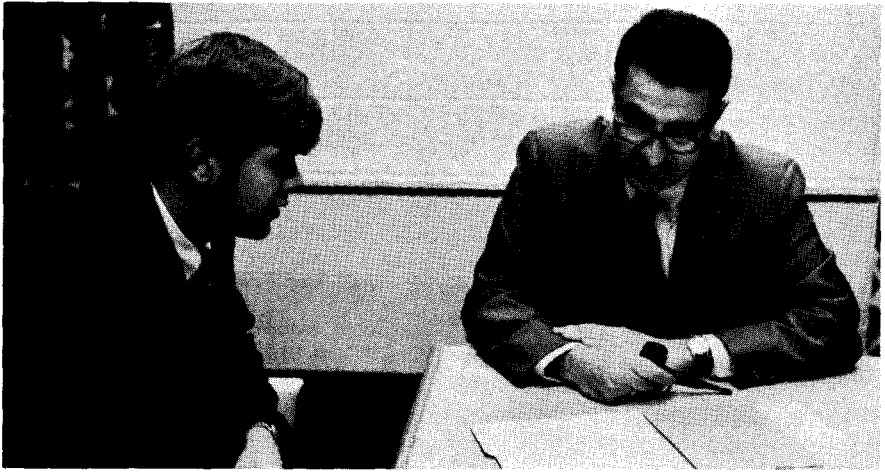
THREE CREDIT HOURS

A continuation of Bio 101. Stresses primarily the operational aspects of living matter. Prerequisite: Bio 101.

- 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 151. CONCEPTS OF BIOLOGY I** **THREE CREDIT HOURS**
 A study of the physico-chemical organization, the regulatory mechanisms and the energy relations of living things. Core biology course (for majors in Biology, Medical Technology, Premedicine, etc.).
- BIO 152. CONCEPTS OF BIOLOGY II** **THREE CREDIT HOURS**
 Continuation of Bio 151. Homeostatic mechanism. Reproduction in organisms and its relationship with genes, growth and development, population concepts, environment and evolution. Core biology course.
- BIO 152L. BIOLOGY LABORATORY INVESTIGATIONS I** **ONE CREDIT HOUR**
 An introduction to laboratory procedures and instrumentation through a series of modern rigorous experimental exercises. Data presentation and interpretation is stressed. Accompanies Bio 152 lecture. Core Biology course.
- BIO 201L. BIOLOGY LABORATORY INVESTIGATIONS II** **ONE CREDIT HOUR**
 Small group, specialized laboratory investigations. Areas examined will include plant sciences, field biology, animal studies and analytical biology. Core biology course.
- BIO 207L. HUMAN ANATOMY LABORATORY** **ONE CREDIT HOUR**
 A lecture-laboratory course in basic human anatomy. The gross morphology of the human body is examined through regional and systematic studies. Dissection work is done on embalmed cats. For Medical Technology majors only. One three hour lab per week. Prerequisites: One year of Introductory Biology.
- 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. Prerequisite: Bio 101-2, or 151-152.
- BIO 209L. COMPARATIVE ANATOMY LABORATORY** **TWO CREDIT HOURS**
 Course to accompany Bio 209 lecture. Two three-hour periods per week.
- BIO 303. PHYSIOLOGY** **THREE CREDIT HOURS**
 A physico-chemical examination of the physiological events occurring in a living system with emphasis on mammalian systems. Prerequisites: Bio 101-102, or Bio 151-152, Chm 123-124; Chm 313-314 recommended.
- BIO 303L. PHYSIOLOGY LABORATORY** **THREE CREDIT HOURS**
 A modern and systematic approach for the acquisition and interpretation of information about the physiology of living systems. Course to accompany Bio 303 lecture.
- BIO 310. MICROTECHNIQUE AND HISTOLOGY** **THREE CREDIT HOURS**
 Fundamentals of cell morphology, microscopic structure of tissues and organs, and discussion of techniques in their study. Prerequisite: Bio 101-102, or 151-152.

- 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.
- BIO 312. GENERAL GENETICS** THREE CREDIT HOURS
A study of the principles of variation and heredity covering both Mendelian and Molecular Genetics. Core biology course.
- BIO 325. PARASITOLOGY** TWO CREDIT HOURS
An introduction to the morphology, life history and significance of parasites and other symbionts. Prerequisite: Bio 101-102 or 151-152.
- BIO 325L. PARASITOLOGY LABORATORY** ONE CREDIT HOUR
Course to accompany Bio 325 lecture. One three-hour period per week. Stresses the recognition of common parasites. Both living and preserved forms are studied.
- BIO 340. CELL BIOLOGY** THREE CREDIT HOURS
Function, structure, composition, heredity, and growth of cells. Analysis of cell concept in biochemical terms. Prerequisites: Bio 101-102 or 151-2, Chm 313 (may be taken concurrently). Core biology course.
- BIO 342. DEVELOPMENTAL BIOLOGY** THREE CREDIT HOURS
Growth and differentiation analyzed from standpoint of nucleo-cytoplasmic relationships, and biochemical/physiological aspects. Topics include regeneration and metamorphosis. Core biology course.
- BIO 344L. CELL AND GENETIC LABORATORY** TWO CREDIT HOURS
Laboratory to supplement Bio 312 and 340. One three hour lab per week. Prerequisites: Bio 151-152, Bio 340 and Bio 312. The latter may be taken concurrently. Core biology course.
- BIO 345L. GROWTH AND ENVIRONMENT LABORATORY** TWO CREDIT HOURS
Laboratory to supplement Bio 342 and Bio 440. One three hour lab per week Prerequisites: Bio 151-152, Bio 340. The latter may be taken concurrently. Core biology course.
- BIO 361. INVERTEBRATE ZOOLOGY** TWO CREDIT HOURS
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, or 151-152.
- BIO 361L. INVERTEBRATE ZOOLOGY LABORATORY** TWO CREDIT HOURS
Course to accompany Bio 330 lecture. Two three-hour laboratory periods per week.
- BIO 399. THE BIO-ECOLOGY OF MAN** THREE CREDIT HOURS
A readings-discussion course dealing with Man's influence on the environment (population, pollution, resources). Open only to non-biological science majors. Offered Pass-Fail only. No prerequisites.
- BIO 407. EMBRYOLOGY** THREE CREDIT HOURS
Vertebrate development is analyzed with emphasis upon morphogenesis, especially organogenesis. Topics include congenital defects. Prerequisites: Bio 101-102 or 151-152; 209 recommended.
- BIO 407L. EMBRYOLOGY LABORATORY** TWO CREDIT HOURS
Course to accompany Bio 407 lecture. One four-hour period per week.

- BIO 411. GENERAL BACTERIOLOGY** **THREE CREDIT HOURS**
 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 or 151-152 and Chm 313-314 recommended.
- BIO 411L. GENERAL BACTERIOLOGY LABORATORY** **TWO CREDIT HOURS**
 Course to accompany Bio 441 lecture. Two two-hour periods per weeks.
- BIO 420. SEMINAR** **ONE CREDIT HOUR**
 Practice in development, presentation, and discussion of papers dealing with biological research problems. Prerequisite: Jr. or Sr. standing.
- BIO 421. BIOLOGICAL PROBLEMS** **ONE OR TWO CREDIT HOURS**
 Laboratory research problems. Topics arranged with faculty advisors.
- BIO 422. BIOLOGICAL PROBLEMS** **ONE OR TWO CREDIT HOURS**
 Library research problems. Topics arranged with faculty advisors.
- BIO 434. HIGHER PLANTS** **THREE CREDIT HOURS**
 A study of structure, function, reproduction and interrelations of tracheophyte plants. Emphasis is on ferns, conifers and flowering plants.
- BIO 434L. HIGHER PLANTS LABORATORY** **ONE CREDIT HOUR**
 Course to accompany Bio 434. One three-hour laboratory per week.
- BIO 436. LOWER PLANTS** **THREE CREDIT HOURS**
 A course to provide familiarity with basic processes, structures, distribution and reproduction of Algae, Fungi and Bryophyte plants.
- BIO 436L. LOWER PLANTS LABORATORY** **ONE CREDIT HOUR**
 Course to accompany Bio 436. One three-hour laboratory per week.
- BIO 440. ENVIRONMENTAL BIOLOGY** **THREE CREDIT HOURS**
 A course stressing the principles of evolutionary biology and ecology and the relationship between the two. Core biology course.
- BIO 462. ADVANCED GENETICS** **TWO CREDIT HOURS**
 An analysis of the nature of the gene and gene action. Particular attention will be given to genetic control of protein synthesis and to recent advances in biochemical and physiological genetics. Prerequisites: Bio 312, Chm 313.
- BIO 462L. ADVANCED GENETICS LABORATORY** **ONE CREDIT HOUR**
 A laboratory to accompany Bio 462 employing an experimental approach to genetic problems. Students work the entire term on a project of their choice.
- 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 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 466. 3 hours per week. Laboratory experiments to demonstrate immunological, serological, determinative and medical bacteriology.



Business Management (Bus)

Arthur L. Holt, *Chairman*

Professors: Darr, George, Snyder, Walden

Associate Professors: Buckenmyer, Holt

Assistant Professors: Berger, Casey, Ellerbrock, Fuszara, Kussman, Marrinan,
Miller, Stough, White

Instructor: Myers

Part-Time Instructors: Baughan, Davis, Gibson, Gordhammer, Hamilton, Holland,
Quinn, Steinlage, Stephenson, Yaross.

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 108. FUNDAMENTALS OF MATHEMATICS **THREE CREDIT HOURS**

Recommended for students with insufficient working knowledge of secondary mathematics. Three hours are added to graduation requirements of those taking this course.

BUS 110-111. QUANTITATIVE ANALYSIS **SIX CREDIT HOURS**

Includes systems of equations and inequalities, an introduction to linear programming and matrix algebra, logarithms, compound interest and annuities, and an introduction to calculus. Prerequisite: Bus 108 or sufficient college preparatory mathematics.

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 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 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 312. QUANTITATIVE BUSINESS ANALYSIS **THREE CREDIT HOURS**
 Development of the basic tools of Quantitative Analysis and introduction to the principal decision models that are used for management analysis in the context of managerial process. Prerequisite: Bus 110-111 and Bus 210-211 or equivalent.

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 215.

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 410-411. QUANTITATIVE BUSINESS ANALYSIS **SIX CREDIT HOURS**
 Introduction to logical analysis of decisions that arise under uncertainty in the practice of business administration. Provides emphasis on (1) correct formulation of a decision problem, with special attention to correct accounting for interaction between an individual problem and the context in which it is situated; (2) understanding of the meaning

of the objective and subjective inputs that are required for logical analysis of the problem; (3) understanding of the meaning of the outputs that can be obtained from such analysis; and (4) methods by which the person who is responsible for a decision can most effectively supply those inputs that can only be supplied by him or by experts to whom he delegates his responsibility. Case method and supporting computer programs are used extensively. Prerequisites: Bus 110-111 and Bus 210-211.

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 413-414. OPERATIONS RESEARCH I AND II SIX CREDIT HOURS
Significant ideas in management science which are both fundamental and long-lasting, with an analysis of their strengths and inherent limitations. Identification of areas needing further conceptual and methodological development within an overview of management science as an intellectual innovation, and demonstration of the cohesiveness of present-day management-science methodology. Prerequisites: Bus 110-111 and Bus 210-211.

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 417. INDUSTRIAL RELATIONS THREE CREDIT HOURS
Interrelationships and interaction of the employer and the employee in the public and private sectors in conflict and accommodation. The structure and nature of management-union relationships and agencies created by these relationships.

BUS 419. COLLECTIVE BARGAINING, MEDIATION AND ARBITRATION THREE CREDIT HOURS
Meaning, practices, principles and organization of collective bargaining; techniques of mediation and agencies for effecting mediation; major economic problems involved in the adjustment of labor disputes.

BUS 420. LABOR LEGISLATION THREE CREDIT HOURS
A study of the National Labor Relations Act as amended.

BUS 423. BUSINESS POLICIES AND MANAGEMENT THREE CREDIT HOURS
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) ONE TO SIX CREDIT HOURS
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 THREE CREDIT HOURS
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.

BUS 492. TRAINING PROGRAM, GRADUATE ASSISTANT INSTRUCTORS ONE CREDIT HOUR
Lectures, readings, discussions, and pre-classroom practice directed toward preparing the Graduate Assistant to assume the role of instructor in introductory business subjects.

Chemical Engineering (Cme)Dr. Michael A. Bobal, *Chairman**Professor:* Bobal*Associate Professor:* Olinger*Assistant Professors:* Olinger, Srinivasan, Trey

- CME 203. MATERIAL AND ENERGY BALANCES** THREE CREDIT HOURS
An introduction to chemical engineering with lectures and problems on material and energy balances as applied to industrial processes. Prerequisites: Chm 123, Mth 118.
First Term, Each Year
- CME 305. THERMODYNAMICS** THREE CREDIT HOURS
Development of the fundamental principles of thermodynamics, particularly with respect to chemical engineering processes. Prerequisite: Mth 218. *Second Term, Each Year*
- CME 306. KINETICS** THREE CREDIT HOURS
Reaction kinetics, catalysis and adsorption. Prerequisite: Cme 305.
First Term, Each Year
- CME 324. TRANSPORT PHENOMENA I** THREE CREDIT HOURS
Topics include viscosity, shell momentum balances, isothermal equations of change, thermal conductivity, shell energy balances, non-isothermal equations of change, diffusivity, concentration profiles. Prerequisite: Mth 219. Corequisite: Cme 381.
First Term, Each Year
- CME 325. TRANSPORT PHENOMENA II** THREE CREDIT HOURS
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** ONE CREDIT HOUR
Experiments cover viscosity, velocity profiles, temperature profiles, heat transfer coefficients, diffusivity, compressibility factors for gases. Prerequisite: Cme 324. Corequisite: Cme 325.
Second Term, Each Year
- CME 333-4. PHYSICAL CHEMISTRY** SIX CREDIT HOURS
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** TWO CREDIT HOURS
Laboratory course to accompany Cme 333-4. One three hour laboratory period per week.
- CME 381. APPLIED MATHEMATICS FOR CHEMICAL ENGINEERS** THREE CREDIT HOURS
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** THREE CREDIT HOURS
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** THREE CREDIT HOURS
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 TWO CREDIT HOURS
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 TWO CREDIT HOURS
Continuation of Cme 413L. Prerequisite: Cme 325. *Second Term, Each Year*
- CME 430. CHEMICAL ENGINEERING DESIGN THREE CREDIT HOURS
Study of the principles of process development, plant design and economics. Prerequisite: Cme 411. *Second Term, Each Year*
- CME 452. PROCESS CONTROL THREE CREDIT HOURS
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. *First Term, Each Year*
- CME 453L. PROCESS CONTROL LABORATORY ONE CREDIT HOUR
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. *Second Term, Each Year*

Chemical Engineering Electives

- CME 499. SPECIAL PROBLEMS IN CHEMICAL ENGINEERING (HONORS) TWO TO SIX CREDIT HOURS
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: Walsh, Fox

Assistant Professors: Fratini, Keil, Richards, Knachel

Adjunct Assistant Professors: Becker, DeSando, Nelson, Spencer

- CHM 110. GENERAL CHEMISTRY THREE CREDIT HOURS
Fundamental principles of chemistry including a brief treatment of organic chemistry. Three class periods each week.
- CHM 110L. GENERAL CHEMISTRY LABORATORY ONE CREDIT HOUR
Course to accompany Chm 110 lecture. One two-hour laboratory period per week.
- CHM 123-124. GENERAL CHEMISTRY SIX CREDIT HOURS
A comprehensive treatment of the fundamentals of general chemistry. Three class periods per week. Prerequisite: high school Chemistry.
- CHM 123L-124L. GENERAL CHEMISTRY LABORATORY TWO CREDIT HOURS
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 126L. QUANTITATIVE ANALYSIS LAB TWO CREDIT HOURS
A laboratory course primarily for chemistry majors. One four-hour laboratory period per week. Prerequisites: Chm 123, Mth 101 or their equivalents. *Second Term, Each Year*

CHM 201. QUANTITATIVE ANALYSIS TWO CREDIT HOURS
 A course intended for premedical, preidental, and medical technology students. Two class periods per week. Prerequisite: Chm 124.

CHM 201L. QUANTITATIVE ANALYSIS LABORATORY TWO CREDIT HOURS
 Course to accompany Chm 201 lecture. One four-hour laboratory period per week.

CHM 302. PHYSICAL CHEMISTRY THREE CREDIT HOURS
 A short course especially designed for premedical, preidental, or biology majors. Three lectures per week. Prerequisite: Chm 124. *First Term, Each Year*

CHM 303-304 PHYSICAL CHEMISTRY SIX CREDIT HOURS
 For chemistry majors and chemical engineers. Three lecture hours each week. Prerequisite: Chm 126L or equivalent; Corequisite: Mth 218.

CHM 303L-304L. PHYSICAL CHEMISTRY LABORATORY TWO CREDIT HOURS
 Course to accompany Chm 303 lecture. One three-hour laboratory period each week. Corequisite: Mth 218.

CHM 309. CHEMICAL LITERATURE ONE CREDIT HOUR
 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, preidental, 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 rigorous fundamental course sequence for students with demonstrated ability in chemistry; emphasis is placed on synthesis, mechanisms, and structure determination; for all qualified students, regardless of major field; three lectures per week. Prerequisite: Chm 124 and approval of departmental chairman.

CHM 315L-316L. ORGANIC CHEMISTRY LABORATORY THREE CREDIT HOURS
 Laboratory course required of all B.S. Chemistry majors; Chm 315L consists of two three-hour sessions per week (2 credit hours); Chm 316L consists of one three-hour laboratory per week (1 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, as well as the physical and spectral properties of organic compounds leading to their identification. One class period per week. Prerequisite: Chm 313-314 or Chm 315-216. *Firt 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 and practice of organic chemistry. May include structure-reactivity relationships, reaction mechanisms, and synthetic topics not normally treated in introductory courses. Prerequisite: Senior standing. *First Term, Each Year*

CHM 415. ANALYTICAL CHEMISTRY TWO CREDIT HOURS
 Methods of analysis based on modern instrumentation includes chemical, electrical and spectral methods. Prerequisites: Chm 303-304.

CHM 415L. ANALYTICAL CHEMISTRY LABORATORY TWO CREDIT HOURS
 This course accompanies Chm 415. Two three-hour laboratory sessions each week. Prerequisites: Chm 303L-304L. *Second Term, Each Year*

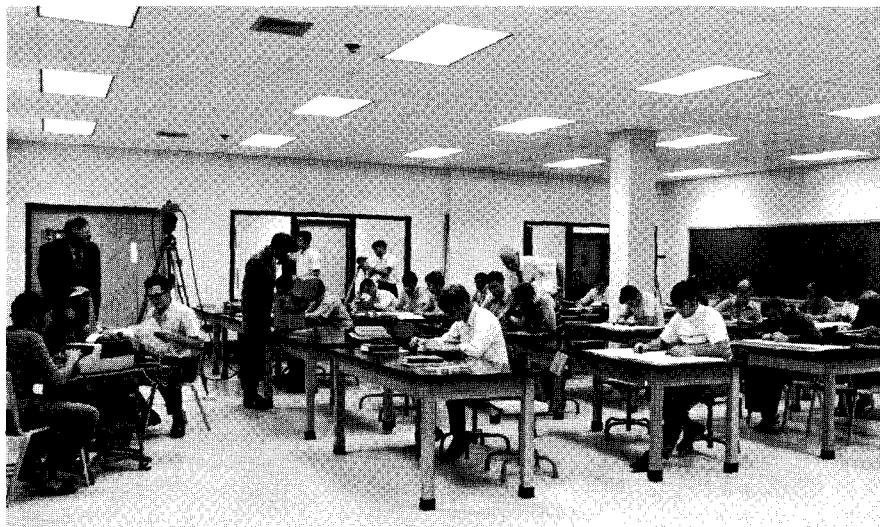
CHM 417. INORGANIC CHEMISTRY THREE CREDIT HOURS
 Electron distribution in atoms, nature of the chemical bond, periodicity, nucleus and its reactions, coordination compounds. Prerequisite: Chm 303-304. *First Term, Each Year*

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.

CHM 498-9. RESEARCH (HONORS) TWO TO SIX CREDIT HOURS
 An elective for Chemistry majors. Permission of Chairman of Department required. Prerequisite: Senior standing.



Civil Engineering and Engineering MechanicsSeymour J. Ryckman, *Chairman**Professors:* Driscoll, Ryckman, Thomson*Associate Professor:* Kraft*Assistant Professors:* McDaniel, Payne, Shaw, Weiss*Instructor:* Hoppenjans**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, earth-work 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 THREE CREDIT HOURS
 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** ONE CREDIT HOUR
 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** THREE CREDIT HOURS
 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** ONE CREDIT HOUR
 Laboratory experiments and problems associated with Cie 313. Corequisite: Cie 313.
- CIE 314. THEORY OF STRUCTURES** FOUR CREDIT HOURS
 The analytical and graphical methods of stress determination in statically determinate structures, together with a study of influence lines. Prerequisite: Egm 303.
- CIE 315. THEORY OF STRUCTURES** THREE CREDIT HOURS
 The analytical and graphical methods of force determination in statically determinate structures, together with a study of influence lines. Prerequisite: Egm 303.
- CIE 390. ENVIRONMENTAL POLLUTION CONTROL I** THREE CREDIT HOURS
 A study of environmental pollution problems relating to air, water and land resources. Includes pollution causes and effects as well as technology for solving the problems. Legal and political considerations. For junior and senior students other than Civil Engineering. Credit may not be applied for Civil Engineering degree. Prerequisite: some chemistry knowledge.
- CIE 402. STRUCTURAL DESIGN II** TWO CREDIT HOURS
 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** TWO CREDIT HOURS
 Assigned problems illustrating and affording practice in the design covered in Cie 402. Corequisite: Cie 402. *Second Term, Each Year*
- CIE 405. HIGHWAY ENGINEERING** THREE CREDIT HOURS
 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** THREE CREDIT HOURS
 The determination of stresses and deflections of statically indeterminate frames and trusses by the classic and modern methods, including Castigliano's theorem, least work, moment and shear distribution. Prerequisite: Cie 407. *Second Term, Each Year*
- CIE 407. REINFORCED CONCRETE** FOUR CREDIT HOURS
 The first course in the theory and design of reinforced concrete structures; the study of earth pressure; design of retaining walls and footings. Prerequisite: Cie 306, or Cie 314. *First Term, Each Year*
- CIE 408A. SEMINAR** ONE CREDIT HOUR
 Practice in the presentation and discussion of papers; lectures by staff and prominent engineers. Attendance required by Civil Engineering second term seniors only.
- CIE 408B. SEMINAR** ZERO CREDIT HOURS
 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.

CIE 415. STRUCTURAL DESIGN I THREE CREDIT HOURS
 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 417. REINFORCED CONCRETE THREE CREDIT HOURS
 The first course in the theory and design of reinforced concrete structures; the study of earth pressure; design of retaining walls and footings. Prerequisite: Cie 315.

CIE 418. STRUCTURAL DESIGN II THREE CREDIT HOURS
 Concentrated loads on slabs, beams; composite construction, rigid frames, flat slabs as rigid frames, plastic design of rectangular and tee beams. Prerequisites: Cie 415, Cie 417.

CIE 433. SANITARY ENGINEERING I THREE CREDIT HOURS
 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 THREE CREDIT HOURS
 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 THREE CREDIT HOURS
 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 TWO TO SIX CREDIT HOURS
 Particular assignments to be arranged and approved by Chairman of the Department. Credit hours to be determined.

Engineering Mechanics (Egm)

EGM 101. MECHANICS I THREE CREDIT HOURS
 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 THREE CREDIT HOURS
 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 THREE CREDIT HOURS
 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 **THREE CREDIT HOURS**
 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 **ONE CREDIT HOUR**
 Action of metals, timber and concrete under load, verification of theories of mechanics. Prerequisite: Egm 303.

EGM 304. ADVANCED STRENGTH OF MATERIALS **THREE CREDIT HOURS**
 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*

Professors: Biersack, Staats

Assistant Professors: Blatt, Harwood, Kiernan, Tortoriello, Trent, Wolff

Instructors: Caggiano, Devine, Minarik, Quirk, Schletter, Tiedge, Weatherly

Part-time Instructors: Vlahos, Reingold, Ryckman, Milliken

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, 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, 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 encourages co-curricular activities: the University Debaters, the Flyer News, and WVUD Radio.

Speech 101 is a Prerequisite for all courses listed as 200 or above.

Speech

SPE 101. FUNDAMENTALS OF EFFECTIVE SPEAKING **THREE CREDIT HOURS**
 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 THREE CREDIT HOURS
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 THREE CREDIT HOURS
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 THREE CREDIT HOURS
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 THREE CREDIT HOURS
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 THREE CREDIT HOURS
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 THREE CREDIT HOURS
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 THREE CREDIT HOURS
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 THREE CREDIT HOURS
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 THREE CREDIT HOURS
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 402. FORENSICS THREE CREDIT HOURS
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 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—See Performing and Visual Arts

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 24 semester hours in Jrn and Com 300-400 courses. 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
Limitations of freedom of the press. The right of the people to know and the news media to report, within the limits of decency, fair comment and privacy. Censorship. Off-the-record material. Libel laws, copyright restrictions. Postal regulations.

JRN 398-399. JOURNALISM WORKSHOP ONE CREDIT HOUR PER SEMESTER
A practical participation in Journalism activity with a recognized and approved journalistic organization. Available to students at the Sophomore level and above, to a maximum of six (6) credit hours, three (3) of which may be applied to a Communication Arts or Journalism Major.

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 THREE CREDIT HOURS
Study of the methods used in preparing and writing newspaper editorials—editorial conferences to discuss topics, research necessary.

JRN 404. NEWSPAPER MANAGEMENT PROBLEMS THREE CREDIT HOURS
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 THREE CREDIT HOURS
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 TWO CREDIT HOURS
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 TWO CREDIT HOURS
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 THREE CREDIT HOURS
Types of free-lance articles. Analysis of literary markets. Manuscript form and submission methods. Magazine and book publishing. Completion and submission of one salable article required for credit.

COM 304. ADVERTISING THREE CREDIT HOURS
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 THREE CREDIT HOURS
Use and abuse of propaganda. Editorial persuasion. Propaganda devices and techniques. An application of the principles of Aristotelian logic to the field of mass communication.

COM 306. 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. (See Bus 409.)

COM 307. TECHNICAL WRITING THREE CREDIT HOURS
Designed for administrators, engineers, scientists, and business men. Views writing and language as a communications problem. Development techniques for organizing technical information in written form.

COM 401. PUBLICITY AND PUBLIC RELATIONS THREE CREDIT HOURS
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.

COM 411. COMMUNICATION IN MODERN SOCIETY THREE CREDIT HOURS
A study of some communication problems in modern organizations, institutions, cultures, and in interpersonal relationships.

COM 455. PUBLIC RELATIONS WORKSHOP THREE CREDIT HOURS
 Application of policy objectives to public relations program development. Students plan and carry out a public relations program for an established organization, working out realistic and efficient solutions to communications and public relations problems. Case studies in public relations in business and industry, social institutions including school and community relations, and in governmental public relations policy. Prerequisite: Com 401 or permission of chairman.

COM 491. PUBLIC RELATIONS INTERNSHIP THREE CREDIT HOURS
 A practical participation in Public Relations activity with a recognized and approved public relations organization. Selected senior or graduate students appointed as interns in public relations department of a business, educational, philanthropic, or governmental agency work a minimum of eight hours per week in supervised activity by agency staff and school faculty. Analytical report evaluating the experience is required at end of internship. Prerequisite Com 455 or permission of chairman.

Computer Science (Cps)

Thomas A. Schoen, S.M., *Chairman*
Associate Professors: Gee, Jehn, Schoen
Assistant Professors: Kalmey (on leave), Kester, Lokai, Wesselkamper (on leave)
Instructor: Keim

Cps 107. COMPUTING—GENERAL SURVEY ONE TO THREE CREDIT HOURS
 A non-technical introduction to the history and organization of digital computers. Survey of the diverse applications of computers in government, business, education, and the arts. Discussion of the psychological and sociological impact of the computer age. Not open to Cps majors.

Cps 144. (SCIENTIFIC) PROGRAMMING *ONE TO THREE CREDIT HOURS
 Basic programming theory and practice using a language suitable to scientific or technical problems as FORTRAN, ALGOL, or PL/I.

Cps 145. (BUSINESS) PROGRAMMING *ONE TO THREE CREDIT HOURS
 Basic programming theory and practice using a language suitable to business oriented problems as COBOL.

Cps 146. (LIST PROCESSING) PROGRAMMING *ONE TO THREE CREDIT HOURS
 Basic programming theory and practice using a language suitable to list processing applications as LISP or SNOBOL.

Cps 245. ASSEMBLER PROGRAMMING *THREE TO FOUR CREDIT HOURS
 Machine and assembler language programming; macros; input/output techniques. Prerequisite: Cps 144 or 145.

Cps 341. DISCRETE STRUCTURES THREE CREDIT HOURS
 Set algebra including mappings and relations; algebraic structures including semigroups and groups; elements of theory of directed and undirected graphs; Boolean algebra and propositional logic.

Cps 342. DATA STRUCTURES *THREE CREDIT HOURS
 Basic concepts of data; linear lists, strings, arrays, and othogonal lists; representation of trees and graphs; multilinked structures; symbol tables and searching techniques; sorting techniques. Prerequisite: Cps 245.

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 245.

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 144 and Mth 218 or 228. Recommended corequisite: Mth 219 or 229.

Cps 387. LOGICAL DESIGN

THREE CREDIT HOURS

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 144, Mth 218 or 228.

Cps 405. SYSTEMS OPTIMIZATION TECHNIQUES

THREE CREDIT HOURS

Linear programming, network analysis including PERT, game theory, queuing theory, inventory theory, Markov chains, simulation and other topics. Prerequisite: Cps 144, Mth 362, Mth 367 or equivalent.

Cps 415. INTRODUCTION TO ANALOG COMPUTATION AND SIMULATION

*THREE CREDIT HOURS

Basic principles of analog computation, analog solution of linear and non-linear differential equations, simulation, function generation. Applications to science and engineering. Two lectures and one lab per week. Prerequisite: Mth 219 or 229.

Cps 416. PARALLEL HYBRID COMPUTATION

*THREE CREDIT HOURS

Basic principles of parallel hybrid computers, elementary logic components and their use, combinatorial logic, Boolean operations, sequential logic and synchronization, microprograms. Two lectures and one lab per week. Prerequisite: Cps 415.

Cps 441-442. ADVANCED PROGRAMMING

*SIX CREDIT HOURS

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 342, 346.

Cps 455-456. NUMERICAL ANALYSIS

SIX CREDIT HOURS

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

THREE CREDIT HOURS

Formalization of propositional calculus, first order theories including predicate calculi, formal number theory, recursive functions, Goedel's incompleteness theorem.

Cps 482. AUTOMATA THEORY

THREE CREDIT HOURS

Finite automata, sequential machines, Turing machines, computability, existence of self-reproducing machines.

Cps 498. PROBLEMS IN (NAMED AREA)

ONE TO THREE CREDIT HOURS

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.

By arrangement

CPS 499. (SPECIAL TOPICS)

ONE TO THREE CREDIT HOURS

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. *By arrangement*

artificial intelligence
 computer architecture
 informational retrieval
 linguistic analysis
 microprogramming
 multiprogramming techniques

numerical analysis
 programming languages
 sequential machines
 simulation languages
 time-sharing topics
 utility programs

*—fee; see page 44.

Criminal Justice (CRJ)James A. Adamitis, *Director*

Students in other degree programs at the University of Dayton may minor in criminal justice. A minor requires 17 semester hours which is to include CrJ 200, Principles of Criminal Justice and CrJ 213, Criminal Law.

CRJ 200. PRINCIPLES OF CRIMINAL JUSTICE TWO CREDIT HOURS

An introduction to the field of criminal justice. Stresses the theoretical foundations, origin, nature, methods and limitations of criminal justice as a college curriculum.

CRJ 213. CRIMINAL LAW THREE CREDIT HOURS

Principles of criminal liability; preparation of case materials; court procedures and case disposition.

CRJ 320. LAW OF EVIDENCE AND PROCEDURE TWO CREDIT HOURS

A comprehensive study of the rules of evidence; evaluation of evidence and proof; physical evidence; testimony. Prerequisite: a course in Criminal Law.

CRJ 322. CORRECTIONS THREE CREDIT HOURS

The administration of correctional institutions and other detention facilities with emphasis on probation and parole systems, and the rehabilitation and treatment of the psychiatrically incarcerated.

CRJ 325. COMMUNITY AND PUBLIC RELATIONS THREE CREDIT HOURS

Contemporary problems of police-community relations; training programs, image development and policy implementation of releasing information to the mass media.

CRJ 330. ORGANIZED CRIME THREE CREDIT HOURS

Considers the social-psychological factors characterizing criminal careers and surveys the regional, political, and financial factors influencing organized crimes.

CRJ 400. CIVIC DISORDER AND POLITICAL CHANGE THREE CREDIT HOURS

Concerned with the theoretical approaches toward understanding the process of violent change in political institutions. Examines the continuum between violence and non-violence as a consequence of competing interests in the process of revolution, revolt, campus dissent and political assassination. Emphasis will be placed on the roles of criminal justice and governmental agencies in meeting political dissent.

CRJ 415. DRUG ADDICTION THREE CREDIT HOURS

Considers the physical and behavioral variables contributing to drug addiction and narcotic abuse, and assesses several rehabilitation programs and medical treatment centers within the Criminal Justice legal structure.

CRJ 440. INDEPENDENT STUDY AND RESEARCH THREE CREDIT HOURS
Directed study and research on selected topics of significant academic publications in law enforcement and criminal justice. Prerequisite: permission of instructor.

CRJ 447. CONTEMPORARY ISSUES IN JUSTICE ADMINISTRATION THREE CREDIT HOURS
Seminar to identify and discuss the contemporary issues in justice administration. Prerequisite: permission of the instructor.

CRJ 495. INTERNSHIP IN CRIMINAL JUSTICE THREE CREDIT HOURS
Supervised experience in a criminal justice or law enforcement agency solely in a civilian capacity. Open to pre-service students only. Prerequisite: permission of the Director.*

*Students who specifically qualify for the Forensic Science internship in Criminal Justice will be with the Miami Valley Regional Crime Laboratory and Sinclair Community College in conjunction with the University of Dayton.

Economics (Eco)

Dean William J. Hoben, *Acting Chairman*

Professor: Matlin, Whalen (on leave)

Associate Professor: Louis

Assistant Professors: Weiler, Ou, Raney, Winger, Barrett, Oyen

Part-time Instructor: Gnauck

Eco 201-202 are prerequisites for all advanced courses in Economics. Minors are required to take Eco 340, 341, and two electives.

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 201H. PRINCIPLES OF ECONOMICS I (HONORS) THREE CREDIT HOURS
Intended as a substitute for Eco 201. May be elected by students with a cumulative average of 3.00 or above, or with permission of the instructor.

ECO 202. PRINCIPLES OF ECONOMICS II THREE CREDIT HOURS
Examines pricing under conditions of perfect and imperfect competition. Considers distribution of income, principles of international trade, problems of economic development, and alternative economic systems.

ECO 202H. PRINCIPLES OF ECONOMICS II (HONORS) THREE CREDIT HOURS
Intended as a substitute for Eco 202. May be elected by students with a cumulative average of 3.00 or above, or with permission of the instructor.

ECO 333. STATISTICS (ARTS & SCIENCES ONLY) THREE CREDIT HOURS
Analysis of central tendencies and dispersion, elementary probability and the normal curve, hypotheses tests, time-series analysis, index numbers, and regression and correlation measurements.

ECO 340. MICRO ECONOMIC ANALYSIS THREE CREDIT HOURS
Analyzes theory of consumer behavior; production theory; equilibrium of the firm; price determination in different market structures; distribution of income; allocation of resources; welfare economics.

- ECO 341. MACRO ECONOMIC ANALYSIS** **THREE CREDIT HOURS**
National income accounting and the determination of the level of income and employment; classical, Keynesian and post-Keynesian models; private, government and foreign sectors; theories of inflation and economic growth.
- ECO 430. HISTORY OF ECONOMIC THOUGHT** **THREE CREDIT HOURS**
Surveys early philosophers. Examines various schools and systems of economic thought (Mercantilists, Physiocrats, Classical, Historicals, Marginalists, Neo-classicals, Keynesians) and current economic theories with emphasis upon American developments.
- ECO 441. ECONOMETRICS** **THREE CREDIT HOURS**
Study of simple and multiple regression analysis; statistical inference; properties of the estimators; identification problems; model building; simultaneous estimating technique.
- ECO 442. 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 445. PUBLIC FINANCE** **THREE CREDIT HOURS**
Examines the economic aspects of government finance at the local, state and especially national level. Emphasizes the behavioral effects of various taxes, efficiency in spending, the changing role of the U.S. government, fiscal policy and intergovernmental revenue and expenditure programs. Particular attention is given to relating analytical tools to current developments.
- 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 461. INTERNATIONAL ECONOMICS** **THREE CREDIT HOURS**
Studies international trade and international monetary relations; examines theoretical and practical aspects of flows of commodities and production resources, protection, balance of payments adjustment mechanism and policy, and international economic organizations.
- ECO 471. LABOR ECONOMICS** **THREE CREDIT HOURS**
Considers wage theory, determinants of wage rates and employment. Examines union policy, economic stability and growth. Analyzes the economics of private governmental welfare and security programs.
- 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 490. SEMINAR IN (TOPIC TO BE SELECTED)** **THREE TO SIX CREDIT HOURS**
An in-depth analysis of a selected area of economics. The area chosen for examination may be ascertained from the current university composite. The course may be elected a second time for additional credit.

Eco 498H. HONOR STUDIES IN ECONOMICS **ONE TO SIX CREDIT HOURS**

Directed Readings and research in selected fields of Economics. The number of credit hours will depend on the amount of work chosen. The course will involve periodic discussions with other students and faculty in the program. May be taken more than once for additional credit. Prerequisite: 3.0 average in Economics with a minimum of nine credit hours in Economics.

Education

Foundations of Education (EdF)

- M. Audrey Bourgeois, Chairman*
- Professors: Panzer, Faerber*
- Associate Professors: Bourgeois, Britt, Anderson, Rupp, Petit*
- Assistant Professors: Emling, Gray*
- Instructor: Geiger*
- Part-time Instructors: Wening*

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.

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 high school.

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.

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. Prerequisite: EdF 205; EdF 206, or EdF 207.

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 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 205, 206, or 207; and EdF 208.

EDF 440. HONORS SEMINAR **TWO CREDIT HOURS**

Concerns itself with specific issues and problems of education. Permission of chairman of foundations of education necessary.

Elementary Education (EdE)*Dr. Simon Chavez, Chairman**Professors: Chavez, O'Donnell**Associate Professor: Klosterman**Assistant Professors: Anderson, Fuchs, Mathews, Miles, Waters, Daily, Lutz, Uncapher**Part-time Instructor: Bankston***EDE 109. PERSONAL-PROFESSIONAL DEVELOPMENT OF THE
ELEMENTARY SCHOOL TEACHER** TWO CREDIT HOURS

This is the first course in the professional education sequence. It is designed to help the student define his professional goals and to assess his strengths and weaknesses in light of competencies deemed essential for an elementary school teacher.

**EDE 110. PERSONAL-PROFESSIONAL DEVELOPMENT OF THE
ELEMENTARY SCHOOL TEACHER** TWO CREDIT HOURS

A continuation of 109. Practicum experiences on campus and in local area schools are provided to help the student explore his interests and to test whether or not he is willing to commit himself to the teaching profession. A block of time of 3 hrs. one day a week is required for this.

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 296. TEACHING IN THE ELEMENTARY SCHOOL THREE CREDIT HOURS

Studies the role of the school in society, the structuring and organization for learning, and provisions for teacher-pupil interaction.

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** SIX CREDIT HOURS

An integrated language arts course with reading as its core subject. Acquisition of a certificate in handwriting required. Practicum 2 hrs. 3 days each week.

EDE 324. LANGUAGE IN THE ELEMENTARY SCHOOL TWO CREDIT HOURS

Stresses the expressional 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. INTERDISCIPLINARY APPROACH TO SOCIAL STUDIES INSTRUCTION** 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.

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.

EdE 410. STUDENT TEACHING-KINDERGARTEN SIX CREDIT HOURS
To be taken in same term as EdE 413. Required for Kindergarten-Primary certification.

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. AUDIO-VISUAL INSTRUCTION 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 481. ART IN THE ELEMENTARY SCHOOL TWO CREDIT HOURS

EdE 483. MUSIC IN ELEMENTARY EDUCATION-PRIMARY TWO CREDIT HOURS

EdE 484. MUSIC IN ELEMENTARY EDUCATION-INTERMEDIATE TWO CREDIT HOURS

Education for the Educable Mentally Retarded

EdE 390. LEARNING AND BEHAVIOR DISORDERS THREE CREDIT HOURS
A survey course dealing with the nature and characteristics of handicapping conditions in children.

EdE 411. STUDENT TEACHING—EMR SIX CREDIT HOURS
Consists of teaching in an actual classroom situation under supervision. Includes a seminar. Prerequisites: EdE 390, EdE 480, EdE 489, EdE 490.

EdE 480. PSYCHOLOGY AND EDUCATION OF THE RETARDED THREE CREDIT HOURS
A survey course giving a broad overview of mental retardation. Prerequisite EdE 390.

- Ede 487. OCCUPATIONAL ORIENTATION AND JOB TRAINING FOR THE E.M.R.** TWO CREDIT HOURS
 Principles and practices in the guidance, training, and placement of adolescent and young adult retarded persons. Prerequisite Ede 480.
- Ede 488. MATERIALS OF INSTRUCTION FOR E.M.R.** TWO CREDIT HOURS
 Adaptation of materials to be used in the teaching of the mentally retarded. Prerequisite special permission.
- Ede 489. EDUCATIONAL PRACTICES FOR EDUCABLE MENTALLY RETARDED** THREE CREDIT HOURS
 Objectives, methods, and materials for teaching arithmetic, reading, language arts, and social studies to the E.M.R.; participation of ½ day per week required. Two semester sequence (3 credit hrs. per semester) Prerequisite Ede 390, Ede 480, and Ede 320.
- Ede 490. EDUCATIONAL PRACTICES FOR EDUCABLE MENTALLY RETARDED** THREE CREDIT HOURS
 Continuation of Ede 489.

Secondary Education (EdS)

Dr. Ellis Joseph, *Chairman*
 Professor: Joseph
 Associate Professors: Edgington, Morton, Kreigbaum, Metzger, Frye
 Assistant Professors: Gay, Taylor, Willis, McNally
 Instructor: Griesemer
 Part-time Instructors: Levin, Rosser

- EdS 109. PERSONAL AND PROFESSIONAL DEVELOPMENT OF SECONDARY TEACHERS I** TWO CREDIT HOURS
 This is the first experience in the professional education sequence. It is designed to help the student define his professional goals and to assess his personal strengths and weaknesses in the light of competencies that are deemed essential for secondary school teaching. Practicum experiences on campus and in local area schools are provided to enable the student to explore his interests and to test whether or not he is willing to commit himself to the teaching profession. This experience is required of all first year students in secondary education, and they should be prepared to devote one afternoon a week to practicum experiences. *First Term*
- EdS 110. PERSONAL AND PROFESSIONAL DEVELOPMENT OF SECONDARY TEACHERS II** TWO CREDIT HOURS
 A continuation of the emphases in EdS 109. Required of all first year students in secondary education. Students should be prepared to devote one afternoon a week to practicum experiences. *Second Term*
- EdS 327. BUSINESS EDUCATION IN THE SECONDARY SCHOOL** THREE 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, SELF, AND SOCIETY THREE CREDIT HOURS
An examination of the interrelationships between school, self, and society utilizing group procedures when possible. Prerequisite: EdF 208.
- EdS 404. LATIN IN THE SECONDARY SCHOOL THREE CREDIT HOURS
Considers the functions and values of the study of Latin; 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: EdF 208.
- EdS 405. ENGLISH IN THE SECONDARY SCHOOL THREE CREDIT HOURS
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: EdF 208. *First and Second Term, Each Year*
- EdS 406. SOCIAL STUDIES IN SECONDARY SCHOOL THREE CREDIT HOURS
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: EdF 208. *First and Second Term, Each Year*
- EdS 408. MODERN LANGUAGE IN THE SECONDARY SCHOOL THREE CREDIT HOURS
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: EdF 208.
- EdS 409. MATHEMATICS IN THE SECONDARY SCHOOL THREE CREDIT HOURS
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 EdF 208. *Second Term, Each Year*
- EdS 410. RELIGION IN THE SECONDARY SCHOOL TWO CREDIT HOURS
Presents the teacher of religion with modern methods of instruction with view to the practical needs of adolescents. Prerequisite: EdF 208.
- EdS 411. SCIENCE IN THE SECONDARY SCHOOL THREE CREDIT HOURS
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: EdF 208. *Second Term, Each Year*
- EdS 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 and EdS 351.
- EdS 414. STUDENT TEACHING (SECONDARY) 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 and EdS 351.

EdS 415. STUDENT TEACHING (SPECIAL) 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 455. PRACTICUM IN HIGH SCHOOL READING IMPROVEMENT THREE 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 THREE 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.

EdS 482. TEACHING ART IN SECONDARY SCHOOLS
 Basic principles of teaching art more creatively at the secondary school level. The elements of teaching techniques, art student learning processes, creative personality involvement, and creative art performance will be explored. The course is required of all prospective secondary art teachers and is open to interested art teachers in service. One two-hour course each week. (*See Art 482).

Physical and Health Education (EdP)

- James B. LaVanche, *Chairman*
- Dr. Philip Stanley, *Director of Men's Division*
- Associate Professor: LaVanche*
- Assistant Professors: Landis, Morefield, Schleppe, Stanley*
- Instructors: Donoher, Frericks, McVay, Wanke*
- Dr. Doris Drees, *Director of Women's Division*
- Associate Professor: Drees*
- Assistant Professors: Balata, Crissey, Dreidame, Robert, Siciliano*

General Program

Co-Educational — Open to all University students

EdP 101. CULTURAL AND PERSONAL ASPECTS OF PHYSICAL EDUCATION ONE CREDIT HOUR
 Development of an appreciation of the values of exercise as well as an understanding of the sociological factors associated with physical education.
First term, Each Year

EdP 102. PERSONAL AND COMMUNITY HEALTH TWO CREDIT HOURS
 Relevant health topics, selected by the students, are discussed with emphasis on the individual's development of positive health attitudes and behavior.

EdP 130. PHYSICAL EDUCATION ACTIVITIES ONE CREDIT HOUR EACH TERM
 Skills and understanding basic to an appreciation of selected activities.

Professional Program

EdP 109-110. PERSONAL AND PROFESSIONAL DEVELOPMENT OF THE TEACHER FOUR CREDIT HOURS
 This is the first course in the professional education sequence. It is designed to help the student define his professional goals and to assess his personal strengths and weak-

nesses in the light of competencies that are deemed essential for a physical education teacher. Practicum experiences on campus and in local area schools are provided to enable the student to explore his interests and to test whether or not he is willing to commit himself to the teaching position.

EdP 116. PERSONAL HEALTH TWO CREDIT HOURS
Evaluation of personal health attitudes, habits, and knowledge by surveying current health topics appropriate to college students. *First Term, Each Year*

EdP 118. COMMUNITY HEALTH TWO CREDIT HOURS
Incidence, prevention and control of health problems through family, school, and community interrelationships. Includes a survey of public and private health agencies and other resources available to the health educator. *Second Term, Each Year*

EdP 150-162. PHYSICAL EDUCATION ACTIVITIES
Fundamentals of physical activities for physical education majors. Development of skills and knowledge needed to teach team and individual sports. Proficiency must be shown in all activities. Six Credit Hours required. Prerequisite to EdP 300.

MEN: Archery, Badminton, Bowling, Conditioning, Fencing, Golf, Gymnastics (Apparatus), Handball, Soccer, Swimming, Tennis, Track & Field, Tumbling, Volleyball, Wrestling.

WOMEN: Archery, Badminton, Basketball, Bowling, Conditioning, Field Hockey, Flag Football, Golf, Gymnastics (Apparatus), Soccer, Softball, Speedway, Tennis, Track & Field, Tumbling, Volleyball

EdP 213. PRINCIPLES AND HISTORY OF PHYSICAL EDUCATION TWO CREDIT HOURS
A study of the historical development of physical education; as well as the aims and scope of the psychological, sociological and biological aspects of physical education in regards to its role in the general education process.

EdP 223. BASIC MOVEMENT EDUCATION THREE CREDIT HOURS
The study of the undergirding body of knowledge relevant to all the traditional content areas of games and sports, dance, and gymnastics. Prerequisite for EdP 324.

EdP 245W. MODERN DANCE (ELECTIVE) TWO CREDIT HOURS
Emphasis on basic and intermediate techniques involved in Modern Dance. The study of dance as an art form. *Second Term, Every Other Year*

EdP 251. THE SCHOOL HEALTH PROGRAM 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 300. METHODS OF TEACHING PHYSICAL EDUCATION THREE CREDIT HOURS
Methods to teach individual, dual and team activities in physical education classes. Practicum.

EdP 301. MOTOR LEARNING TWO CREDIT HOURS
This course is designed to investigate fundamental principles of human movement. Physical and psychological variables essential to motor learning are considered.

EdP 305-306. HUMAN ANATOMY AND PHYSIOLOGY SIX CREDIT HOURS
A study of the human body with emphasis on the interdependent relationships of structure and function. (Prerequisite: Bio 114) Prerequisite to EdP 408 and EdP 409.

EDP 309. SCHOOL HEALTH INSTRUCTION THREE CREDIT HOURS
 A study of the instructional phase of the school health program with emphasis on the methods of teaching health in the elementary and secondary schools.

First Term, Each Year

EDP 301M. COACHING BASKETBALL (ELECTIVE) TWO CREDIT HOURS
 The theory, skills, strategies and methods of coaching basketball. *First Term, Each Year*

EDP 312M. COACHING FOOTBALL (ELECTIVE) TWO CREDIT HOURS
 The theory, skills, strategies and methods of coaching football. *Second Term, Each Year*

EDP 313W. COACHING OF FIELD HOCKEY AND TRACK AND FIELD (ELECTIVE) TWO CREDIT HOURS
 The theory, strategies, and methods of coaching women's field hockey and track & field.
First Term, Every Other Year

EDP 314M. COACHING BASEBALL AND WRESTLING (ELECTIVE) TWO CREDIT HOURS
 The theory, skills, strategies and methods of coaching baseball and wrestling.
Second Term, Each Year

EDP 315W. COACHING OF BASKETBALL AND VOLLEYBALL (ELECTIVE) TWO CREDIT HOURS
 The theory, strategies, and methods of coaching women's basketball and volleyball.
Second Term, Every Other Year

EDP 316M. COACHING SOCCER AND TRACK AND FIELD (ELECTIVE) TWO CREDIT HOURS
 The theory, skills, strategies and methods of coaching soccer and track and field.
First Term, Each Year

EDP 318. COACHING GYMNASTICS (ELECTIVE) TWO CREDIT HOURS
 The theory, skills, strategies and methods of coaching gymnastics.
Second Term, Each Year

EDP 319M. THEORY AND TECHNIQUES OF OFFICIATING FOOTBALL AND WRESTLING (ELECTIVE) ONE CREDIT HOUR
 An application of the rules and techniques of officiating to game situations. Opportunity for taking O.H.S.A.A. Officials Examination.
First Term, Every Other Year

EDP 319W. THEORY AND TECHNIQUES OF OFFICIATING FIELD HOCKEY (ELECTIVE) ONE CREDIT HOUR
 An application of the rules and techniques of officiating to game situations.
First Term, Every Other Year

EDP 320M. THEORY AND TECHNIQUES OF OFFICIATING BASKETBALL AND BASEBALL (ELECTIVE) ONE CREDIT HOUR
 An application of the rules and techniques of officiating to game situations. Opportunity for taking O.H.S.A.A. Officials Examination.
Second Term, Every Other Year

EDP 320W. THEORY AND TECHNIQUES OF OFFICIATING BASKETBALL (ELECTIVE) ONE CREDIT HOUR
 An application of the rules and techniques of officiating to game situations. Students are required to officiate in intramurals.
Second Term, Every Other Year

EDP 321W. THEORY AND TECHNIQUES OF OFFICIATING VOLLEYBALL (ELECTIVE) ONE CREDIT HOUR
 An application of the rules and techniques of officiating to game situations. Students are required to officiate in intramurals.
First Term, Every Other Year

- EDP 324. ELEMENTARY PHYSICAL EDUCATION THREE CREDIT HOURS
 Designed to equip the physical education teacher with basic theory, techniques and methods for conducting a program for elementary students. Prerequisite: EdP 223.
- EDP 330. ATHLETIC INJURIES (ELECTIVE) TWO CREDIT HOURS
 Application of principles involved in prevention, care and treatment of athletic injuries.
First Term, Each Year
- EDP 336. SAFETY EDUCATION AND FIRST AID TWO OR 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 Certificate may be obtained.
- EDP 346W. ORGANIZATION AND ADMINISTRATION OF EXTRACURRICULAR ACTIVITIES
 (ELECTIVE) TWO CREDIT HOURS
 Theory and practice in the organization and administration of extra-curricular responsibilities.
First Term, Every Other Year
- EDP 348. ORGANIZATION AND ADMINISTRATION OF RECREATION (ELECTIVE) TWO CREDIT HOURS
 Study of the philosophy, leadership, standards, facilities and programs of recreation.
Second Term, Every Other Year
- EDP 360. ADDICTION (ELECTIVE) TWO CREDIT HOURS
 Viewing psychic dependence as repetition of a pleasant experience; attempts will be made to determine the causes, effects, and alternatives of addiction in our society.
Offered on Demand
- EDP 361. CONSUMER EDUCATION (ELECTIVE) TWO CREDIT HOURS
 Sorting fact from fiction in using products and services from the present market; includes fact diets, nutrition nonsense, quackery, advertising tricks, beauty gimmicks, a survey of medical hoaxes, and protection that is available to all consumers. *Offered on Demand*
- EDP 362. ECOLOGY (ELECTIVE) TWO CREDIT HOURS
 A detailed study of present environmental conditions; emphasis is on improvement through individual effort and community action. *Offered on Demand*
- EDP 363. EMOTIONAL HEALTH (ELECTIVE) TWO CREDIT HOURS
 The aim is toward increased self-understanding through in-depth study of emotions, behavior, personality, social relationships, and adjustments to change. *Offered on Demand*
- EDP 364. SEX EDUCATION (ELECTIVE) TWO CREDIT HOURS
 A detailed study of the continual cycle of maturation, reproduction, pregnancy, birth and physiological development in humans. Emphasis will be given to the psychological concept of sexuality in American society. *Offered on Demand*
- 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. CURRENT ISSUES IN HEALTH EDUCATION TWO CREDIT HOURS
 A seminar on current health topics with emphasis on prevention, solution and the related role of the health educator. *Second Term, Each Year*

EDP 408. **PHYSIOLOGY OF EXERCISE** TWO CREDIT HOURS
 Detailed study of the affects of exercise on human functions; thus providing a basis for the study of physical fitness, motor skills, and athletic training. Prerequisite: EdP 305-306.

EDP 409. **KINESIOLOGY** THREE CREDIT HOURS
 The investigation and analysis of human motion based on anatomical, physiological and mechanical principles. Prerequisites: EdP 305-306.

EDP 410. **ADAPTIVE PHYSICAL EDUCATION** TWO CREDIT HOURS
 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 FOR THE ELEMENTARY EDUCATOR** THREE CREDIT HOURS
 A study of the total school health program. The Standard First Aid course is given. Elementary Education majors only.

EDP 414. **PHYSICAL EDUCATION FOR THE ELEMENTARY EDUCATOR** THREE CREDIT HOURS
 Designed to equip the elementary education major with basic theory, techniques and methods for conducting a physical education program for the elementary students. Elementary Education majors only.

EDP 417. **STUDENT TEACHING (SPECIAL TEACHING FIELD)** NINE-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)** NINE-TWELVE CREDIT HOURS
 Consists of teaching under close supervision in the specialized subject area in the 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 419. **STUDENT TEACHING — HEALTH** NINE-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.

E4P 420. **AQUATICS (ELECTIVE)** TWO CREDIT HOURS
 The American Red Cross Senior Life Saving and the Water Safety Instructor's Course. Prerequisite: Advanced Swimming. *Second Term, Each Year*

EDP 430. **PRINCIPLES OF HEALTH EDUCATION** TWO CREDIT HOURS
 Establishment of the need for health education, historical development, survey of various philosophies and discussion of specific professional standards all aimed toward conceptualization of a personal philosophy by the health educator. *Offered on Demand*

EDP 440. **INTRODUCTION TO DRIVER AND TRAFFIC SAFETY EDUCATION (ELECTIVE)** THREE CREDIT HOURS
 Specifics of classroom instruction in the various subject-matter fields. Selection of presentation and evaluation techniques based on recognized course objectives. *First Term, Each Year*

EDP 441. **ORGANIZATION AND ADMINISTRATION OF DRIVER AND TRAFFIC SAFETY EDUCATION (ELECTIVE)** THREE CREDIT HOURS
 Organizational and administrative aspects of driver and traffic education as they relate to the total school and other specialized programs. Prerequisite: EdP 440. *Second Term, Each Year*

**EDP 450. SELECTED STUDIES IN PHYSICAL EDUCATION
OR HEALTH EDUCATION (ELECTIVE)**

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

NO CREDIT

Corrective therapy clinical training program is offered students who major in health and physical education. Involves 400 clock hours of directed clinical training at the Veterans Administration Center, Dayton and Veteran Administration Center, Brocksville, Ohio.

Counselor Education (EdC)

Dr. Eugene K. Moulin, *Chairman*

Professor: Campanelle

Associate Professors: Anderson, Diethorn, Moulin

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 Instructor: Overly

Courses are listed in the Graduate Catalog Issue of the Bulletin.

Electrical Engineering (ELE)

Dr. Bernhard M. Schmidt, *Chairman*

Professors: Morgan, Rose, Schmidt, Strnat

Associate Professors: Evers, Kubach, Lewis, Tsui

Assistant Professors: Fitz, Moon

ELE 231. CIRCUIT THEORY I

THREE CREDIT HOURS

Principles of linear circuit theory. Analysis of resistive circuits having constant or time varying sources. Analysis of transient and steady state behavior of simple circuits containing R, L, and C. Introduction to ECAP. Prerequisite: Mth 119.

ELE 232. CIRCUIT THEORY II

THREE CREDIT HOURS

Sinusoidal analysis: sinusoidal forcing function, phasor concept, steady-state response, resonance, average power and rms values, magnetically coupled circuits, polyphase circuits. Prerequisite: Ele 231.

ELE 233. FIELD THEORY I

THREE CREDIT HOURS

Vector calculus, static electric fields, conductors, dielectric materials, boundary conditions, field mapping, steady electric currents and their magnetic fields, motion of charged particles. Prerequisite: Mth 218.

ELE 312. ENGINEERING ELECTRONICS I

THREE CREDIT HOURS

A first course on the terminal behavior of electron devices. Topics include qualitative physical description, volt ampere curves, graphical solutions. Formulation of incremental and piecewise linear models. Analysis of simple amplifier circuits. Prerequisite: Ele 232.

- ELE 313. ENGINEERING ELECTRONICS II** THREE CREDIT HOURS
Cascaded amplifiers, feedback amplifiers, linear integrated circuits; including steady state and transient response. Oscillators. Digital and switching circuits. Prerequisite: Ele 312. Corequisite: Ele 331.
- ELE 321. BASIC ELECTRIC THEORY** THREE CREDIT HOURS
For Chemical, Civil, Mechanical and Industrial Systems Engineering students. Fundamental methods of analysis in DC and AC circuits. Prerequisites: Phy 207, Mth 218.
- ELE 322. FUNDAMENTAL ENGINEERING ELECTRONICS** TWO CREDIT HOURS
An introduction to electron devices and electronic circuits leading to applications that emphasize instrumentation and control. For students not majoring in electrical engineering. Prerequisite: Ele 321 or equivalent background in DC and AC circuit theory.
- ELE 322L. FUNDAMENTAL ENGINEERING ELECTRONICS LABORATORY** ONE CREDIT HOUR
Experiments dealing with electronics, instrumentation, transducers, and automatic control. Corequisite: Ele 322.
- ELE 331. CIRCUIT THEORY III** THREE CREDIT HOURS
Analysis of electrical circuits excited with non-sinusoidal sources. Fourier series. Ramp, step and impulse functions. Impulse response and convolution integral. Fourier integral and transforms. Prerequisites: Ele 232, Mth 219.
- ELE 332. CIRCUIT THEORY IV** THREE CREDIT HOURS
Application of Laplace-transform techniques to the specification and design of frequency-selective networks; two-terminal networks; filters; impedance matching. Prerequisite: Ele 331.
- 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 isotropic and anisotropic media. Prerequisite: Ele 333.
- ELE 335L. ELECTRICAL ENGINEERING LABORATORY I** ONE CREDIT HOUR
Experimental situations stressing familiarization with electrical engineering concepts, hardware, devices, instrumentation, and techniques. Corequisite: Ele 232.
- ELE 336L. ELECTRICAL ENGINEERING LABORATORY II** ONE CREDIT HOUR
Quantitative experiments dealing with resonance, coupled circuits, magnetic circuits, instrumentation, and measurements. Prerequisite: Ele 335L.
- ELE 338L. ELECTRICAL ENGINEERING LABORATORY III** ONE CREDIT HOUR
Electron devices, amplifiers, feedback circuits, switching circuits, power electronics. Prerequisite: Ele 312.
- ELE 410A. SEMINAR** ONE CREDIT HOUR
Presentation of papers on contemporary electrical engineering by the students and lectures by engineers in active practice. A required course for second term seniors.
- ELE 410B. SEMINAR** ZERO CREDIT HOURS
Presentation of papers on contemporary electrical engineering by the students and lectures by engineers in active practice. A required course for juniors and first term seniors.

ELE 413. COMMUNICATION ENGINEERING **THREE CREDIT HOURS**
 Amplitude, angle and pulse modulation systems. Generation, deletion, and analysis of modulated signals. Power and bandwidth considerations. Introduction to information theory. Prerequisite: Ele 331.

ELE 431. ENERGY CONVERSION **THREE CREDIT HOURS**
 Properties and theory of magnetic circuits as applied to electro-mechanical energy conversion. Non-linear magnetic devices. Introduction to rotating machine analysis. Field and circuit concepts of rotating machines. Rotating fields. Direct current, synchronous, and induction machines. Prerequisites: Ele 331, Ele 333.

ELE 432. AUTOMATIC CONTROL SYSTEMS **THREE CREDIT HOURS**
 Open and closed-loop systems, mathematical models for control systems, representation of feedback control systems, servomechanism characteristics, stability analysis. Prerequisite: Ele 332. Corequisite: Ele 431.

ELE 435L. ELECTRICAL ENGINEERING LABORATORY IV **ONE CREDIT HOUR**
 Digital logic, passive and active filters, networks transmission lines. Prerequisites: Ele 313, Ele 338L.

ELE 436L. ELECTRICAL ENGINEERING LABORATORY V **ONE CREDIT HOUR**
 Modulation, detection, communication electronics, communication subsystems. Prerequisite: Ele 435L.

ELE 437L. ELECTRICAL ENGINEERING LABORATORY VI **ONE CREDIT HOUR**
 Experiments dealing with operating and performance characteristics of electromechanical energy converters, application of electronic control to power machinery, and operating and performance characteristics of automatic control systems. Corequisite: Ele 431.

Electrical Engineering Electives

ELE 415. MICROWAVE ENGINEERING **THREE CREDIT HOURS**
 Microwave transmission lines, cavity resonators; microwave circuits and devices; microwave generators; applications of microwaves. Prerequisite: Ele 334.

ELE 417. THESIS **THREE CREDIT HOURS**
 Independent project in a field selected by the student and approved by the faculty. Open to seniors in the second semester.

ELE 440. PHYSICAL ELECTRONICS **THREE CREDIT HOURS**
 Introduction to wave mechanics; electron ballistics; theory of metals and semiconductors; electron emission, space charge flow; modern electron devices. Prerequisite: Mth 219.

ELE 441. PULSE AND DIGITAL CIRCUITS **THREE CREDIT HOURS**
 Transmission networks, differentiating circuits, clippers, comparators, clamping, the transistor as a switch, logic circuits, multivibrators, time base generators and pulse amplification. Emphasis on application of modern semiconductor devices. Prerequisite: Ele 313.

ELE 499. SPECIAL PROBLEMS IN ELECTRICAL ENGINEERING **TWO TO SIX CREDIT HOURS**
 Particular assignments to be arranged and approved by Chairman of the Department.

English (ENG)

Dr. B. J. Bedard, *Chairman*

Dr. Michael H. Means, *Assistant Chairman*

Professors: Bedard, Lees, O'Donnell

Associate Professors: Arons, August, Cochran, Deboo-Marre, Macklin, McCarthy, Means, Patrouch, Rougier, Ruff, Strum

Assistant Professors: Cameron Farrelly, Geibel, Henninger, Horst, Kimbrough, Labadie, LaBriola, Marre, Martin, McNally, Mundell, Murphy, Palumbo, Pici, Stockum

Instructors: Bozdech, Columbus, Kleine-Kreutzmann

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, ORPHEUS, 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 203. MAJOR BRITISH WRITERS THREE CREDIT HOURS
A study of four or five writers representative of the principal periods in English literature. Prerequisite: Eng 106 or its equivalent.

ENG 204. MAJOR AMERICAN WRITERS THREE CREDIT HOURS
A study of four or five writers representative of the principal periods in American literature. Prerequisite: Eng 106 or its equivalent.

- ENG 205. MAJOR WORLD WRITERS THREE CREDIT HOURS
 This course treats in translation significant writings of the Western world, exclusive of English and American literature. These are among the works which have exerted great influence on both these literatures. Prerequisite: Eng 106 or its equivalent.
- ENG 208. TOPICS IN LITERATURE THREE CREDIT HOURS
 Exploration of varying approaches to the study of literature. Prerequisite: Eng 106 or its equivalent.
- ENG 210. POETRY THREE CREDIT HOURS
 A study of representative examples of a major literary genre. Prerequisite: Eng 106 or its equivalent.
- ENG 212. DRAMA THREE CREDIT HOURS
 A study of representative examples of a major literary genre. Prerequisite: Eng 106 or its equivalent.
- ENG 214. FICTION THREE CREDIT HOURS
 A study of fiction as a major literary genre. Prerequisite: Eng 106 or its equivalent.
- ENG 240H-241H. SOPHOMORE HONORS THREE CREDIT HOURS
 A seminar in which selected works from the literature of western civilization would be studied. Prerequisite: Sophomore standing in Arts. By invitation only.
- ENG 301. SURVEY OF EARLY ENGLISH LITERATURE THREE CREDIT HOURS
 A survey of English literature from the medieval period to the end of the eighteenth century. Prerequisite: Nine hours of English.
- ENG 302. SURVEY OF LATER ENGLISH LITERATURE THREE CREDIT HOURS
 A survey of English literature from the beginning of the Romantic period to the present day. Eng 301 is *not* the prerequisite. Prerequisite: Nine hours of English.
- ENG 305. SURVEY OF AMERICAN LITERATURE THREE CREDIT HOURS
 A survey of American literature from the Colonial period to the present day. Prerequisite: Nine hours of English.
- ENG 307. INTRODUCTION TO LINGUISTICS THREE CREDIT HOURS
 An introduction to the basic concepts and procedures of general linguistics, including language description, history, variation, theory, and acquisition. Prerequisite: completion of intermediate level in a language or junior standing.
- ENG 316. ADVANCED COMPOSITION THREE CREDIT HOURS
 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. Prerequisite: Twelve hours of English.
- ENG 318. CREATIVE WRITING THREE CREDIT HOURS
 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 THREE CREDIT HOURS
 A consideration of selected literary masterpieces of Western civilization in the Middle Ages. Prerequisite: Twelve hours of English.
- ENG 322. WORLD LITERATURE THREE CREDIT HOURS
 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 THREE CREDIT HOURS
 A comprehensive study of the three Canticles of the *Divine Comedy*; Inferno, Purgatorio, and Paradiso. Prerequisite: Twelve hours of English.
- ENG 329. SHORT STORY THREE CREDIT HOURS
 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 214. Prerequisite: Twelve hours of English.
- ENG 330. DEVELOPMENT OF DRAMA THREE CREDIT HOURS
 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 212.
- ENG 332. MODERN DRAMA THREE CREDIT HOURS
 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 348. MODERN IRISH LITERATURE THREE CREDIT HOURS
 A consideration principally of the Irish literary revival of the late nineteenth and early twentieth century with appropriate background material. Prerequisite: Twelve hours of English.
- ENG 352. TOPICS IN MODERN LITERATURE THREE CREDIT HOURS
 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. Prerequisite: Twelve hours of English.
- ENG 362. SHAKESPEARE THREE CREDIT HOURS
 A study of selected plays of Shakespeare. Some of these are discussed intensively in class; others are assigned for outside reading. Prerequisite: Twelve hours of English.
- ENG 375. STUDIES IN LITERATURE ONE TO SIX CREDIT HOURS
 A study of special topics or themes in literature. Could be repeated under special circumstances. Prerequisite: Twelve hours of English.
- ENG 382. DIRECTED READINGS TWO CREDIT HOURS
 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 THREE CREDIT HOURS
 Independent directed study on special topics for selected students. May be repeated when topic or instructor changes. Permission required.
- ENG 405. CHAUCER THREE CREDIT HOURS
 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 Elizabethan, Jacobean, and Caroline periods, exclusive of Shakespeare. Prerequisite: Twelve hours in 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.
- 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 470. HISTORY OF ENGLISH THREE CREDIT HOURS
Stages in the development of the English language and influences shaping its development are studied to show what happened to the English language from the beginning to the present time. Prerequisite: Eng 307.

ENG 472. THE STRUCTURE OF ENGLISH THREE CREDIT HOURS
Studies in grammatical structure of modern English in the light of historical development. Traditional and modern linguistic points of view considered. Prerequisite: Eng 307.

ENG 474. DESCRIPTIVE LINGUISTICS THREE CREDIT HOURS
The scientific description of language. Intended primarily for students interested in linguistics as an academic discipline, attention is directed to articulatory and acoustic phonetics, phonemics, morphology, and field methods. Prerequisite: Eng 307.

ENG 476. DIALECTOLOGY THREE CREDIT HOURS
A survey of the methods and results of linguistic geography and modern sociological dialectology with particular emphasis on American English and non-standard dialect problems in society and the classroom. Prerequisite: Eng 307.

ENG 480. INDEPENDENT STUDY ONE TO SIX CREDIT HOURS
Individual investigations of special topics under faculty direction. With permission. May be repeated under special circumstances. Prerequisite: At least eighteen 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.

Engineering (EGR)

EGR 101-2. INTRODUCTION TO ENGINEERING TWO CREDIT HOURS
An introduction to the School of Engineering, the profession of engineering, and related topics.

Fine Arts—See Performing and Visual Arts

Geology (GEO)

George H. Springer, *Chairman**Professor:* Springer*Associate Professor:* Horvath*Assistant Professors:* Gray, Murtaugh, Ritter, Stricker*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 ONE CREDIT HOUR
 Course to accompany Geo 109. Two hours per week.

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 ONE CREDIT HOUR
 Course to accompany Geo. 115. Two hours per week.

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 ONE CREDIT HOUR
 Course to accompany Geo 116. Two hours per week.

GEO. 201. MINERALOGY THREE CREDIT HOURS
 An introduction to the study of minerals, their chemical and physical properties, their associations and occurrences. *First Term, Each Year*

GEO 201L. MINERALOGY LABORATORY ONE CREDIT HOUR
 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. *Second Term, Each Year*

GEO 204L. OPTICAL MINERALOGY LABORATORY TWO CREDIT HOURS
 Course to accompany Geo 204. Four hours per week. *Second Term, Each Year*

GEO 208. ENVIRONMENTAL GEOLOGY THREE CREDIT HOURS
 A study of the relationship of geologic factors to the problems of water supply, pollution, erosion, land use, and earth resources. *Second Term, 1972-1973*

- GEO 208L. ENVIRONMENTAL GEOLOGY LABORATORY ONE CREDIT HOUR
Course to accompany Geo 305. Two hours per week. *Second Term, 1972-1973*
- 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. *Second Term, 1973-1974*
- GEO 301L. STRUCTURAL GEOLOGY LABORATORY ONE CREDIT HOUR
Course to accompany Geo 301. Two hours per week. *Second Term, 1973-1974*
- 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. *First Term, 1973-1974*
- GEO 302L. GLACIAL GEOLOGY LABORATORY ONE CREDIT HOUR
Course to accompany Geo 302. Two hours per week. *First Term, 1973-1974*
- GEO 303. FIELD GEOLOGY SIX CREDIT HOURS
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 THREE CREDIT HOURS
A detailed study of landforms and the erosional processes that develop them. Prerequisites: Geo 115, 116, and 301. *Second Term, 1972-1973*
- GEO 307L. GEOMORPHOLOGY LABORATORY ONE CREDIT HOUR
Course to accompany Geo 307. Two hours per week. *Second Term, 1972-1973*
- GEO 309. PETROGRAPHY THREE CREDIT HOURS
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, Each Year*
- GEO 309L. PETROGRAPHY LABORATORY ONE CREDIT HOUR
Course to accompany Geo 309. Four hours per week. *First Term, Each Year*
- GEO 310. STRATIGRAPHY THREE CREDIT HOURS
The interpretation of specific lithotypes and the synthesis of the stratigraphic record. Prerequisites: Geo 116, 301. *Second Term, 1972-1973*
- GEO 310L. STRATIGRAPHY LABORATORY ONE CREDIT HOUR
Course to accompany Geo 310. Two hours per week. *Second Term, 1972-1973*
- GEO 401. PALEONTOLOGY THREE CREDIT HOURS
A study of animal life of the geologic past as shown by the fossil record. *First Term, 1972-1973*
- GEO 401L. PALEONTOLOGY LABORATORY ONE CREDIT HOUR
Course to accompany Geo 401. Two hours per week. *First Term, 1972-1973*

- GEO 403. SEDIMENTATION** THREE CREDIT HOURS
Detailed study of sediments; their sources, environments of deposition, and methods of consolidation. Sedimentary rock classifications and analyses. Prerequisites: Geo 201, 204, 301. *First Term, 1972-1973*
- GEO 403L. SEDIMENTATION LABORATORY** ONE CREDIT HOUR
Course to accompany Geo 403. Two hours per week. *First Term, 1972-1973*
- GEO 404. PROBLEMS IN GEOLOGY** THREE CREDIT HOURS
A consideration of special problems involving advanced work in the laboratory and library; arranged to meet the needs of individual students.
- GEO 411. IGNEOUS PETROLOGY** THREE CREDIT HOURS
A study of the formation of igneous rocks. Prerequisites: Geo 201, 204, 309. *Second Term, Each Year*
- GEO 411L. IGNEOUS PETROLOGY LABORATORY** ONE CREDIT HOUR
Course to accompany Geo 411. Two hours per week. *Second Term, Each Year*
- GEO 412. INTRODUCTORY GEOCHEMISTRY** THREE CREDIT HOURS
An investigation of the chemical nature and development of the earth, its interior, crust, and surface materials. Quantitative chemical and physical chemical studies of formation of rock types, ore deposition, and geochronology. *Second Term, 1972-73*
- GEO 412L. INTRODUCTORY GEOCHEMISTRY LABORATORY** ONE CREDIT HOUR
Course to accompany Geo 412. Three hours per week. *Second Term, 1972-73*

History (HST)

Dr. Leroy V. Eid, *Chairman*

Professors: Beauregard, Donatelli, Maras, Ruppel, Steiner

Associate Professors: King, Mathias, Rhee, Soffer

Assistant Professors: Bannan, Eid, Taylor, Vines, Yaple

Instructors: Alexander, Palermo, Ridgway

Part-time Instructors: Gannon, Perkins

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 402-450 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 Tutorial courses (Hst 497 and 498) 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 402-450 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 upon 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 HISTORY** **THREE CREDIT HOURS**
 A study of developing nations in search of cultural identity, social justice and political stability.
- HST 306. INTELLECTUAL AND CULTURAL HISTORY OF MODERN EUROPE** **THREE CREDIT HOURS**
 Close analysis of men, ideas, and principal cultural developments in the period beginning with the Renaissance and extending into the 20th century.

- HST 318. FRENCH REVOLUTION AND NAPOLEONIC ERA** THREE CREDIT HOURS
 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.
- HST 319. FRANCE SINCE 1815** THREE CREDIT HOURS
 A study of French history from the Bourbon Restoration to the establishment of the 20th century Fifth Republic, with special emphasis on the intellectual, social economic, political, and diplomatic trends.
- HST 321. HISTORY OF ENGLAND SINCE 1688** THREE CREDIT HOURS
 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.
- HST 323. BRITISH EMPIRE AND COMMONWEALTH** THREE CREDIT HOURS
 An over-all view from Empire to Commonwealth, 1783 to the present. Option of in-depth area studies gives scope for cultural and sociological as well as political problems.
- HST 328. HISTORY OF EASTERN EUROPE** THREE CREDIT HOURS
 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.
- HST 329. MODERN GERMANY** THREE CREDIT HOURS
 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.
- HST 332. SOCIAL AND CULTURAL HISTORY OF THE MIDDLE EAST** THREE CREDIT HOURS
 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.
- HST 357. LATIN AMERICA IN 20TH CENTURY** THREE CREDIT HOURS
 An intensive examination of revolution and reaction in today's Latin America and the implications for those who formulate United States foreign policy.
- HST 358. INTELLECTUAL AND CULTURAL HISTORY OF THE U.S.** THREE CREDIT HOURS
 The course explores themes that contemporary historians of the American intellectual experience consider to be particularly important. Emphasis is placed on the relevant historiographical techniques and assumptions.
- HST 359. U.S. CONSTITUTIONAL HISTORY** THREE CREDIT HOURS
 A historical analysis of the origin and evolution of the American Constitution, constitutional theory and constitutional practice.
- HST 364. HISTORY OF OHIO** THREE CREDIT HOURS
 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.
- HST 390. THE WESTWARD MOVEMENT** THREE CREDIT HOURS
 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.

- HST 396. HISTORY OF THE NEGRO IN THE NEW WORLD** THREE CREDIT HOURS
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.
- HST 401. PRO-SEMINAR IN HISTORY** TWO CREDIT HOURS
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.
- HST 402. MAIN CURRENTS IN ANCIENT HISTORY** THREE CREDIT HOURS
Aspects of the civilizations of the Ancient Near East, Greece, and Rome selected because of their integration into Western Civilization. Emphasized topics: the Hebrew world view and value system, Greek democracy, Roman political and social institutions.
- HST 404. EARLY EUROPE** THREE CREDIT HOURS
From the Diocletian reform of the Roman Empire to the Mid-eleventh century, the course examines the decline of Rome and the construction of European Civilization. Emphasized topics: Byzantine and Islamic contributions, barbarian migrations, development of Christianity and the institutional Church, Carolingian Empire and the revival of learning, and the emergence of European monarchies.
- HST 406. THE RISE OF EUROPEAN STATES** THREE CREDIT HOURS
Political and social aspects from the mid-eleventh to the mid-fourteenth century. Topics include: evolution of towns and commerce, crusading movement, rise of universities, medieval art and culture, and political construction and interaction of European monarchies.
- HST 407. RENAISSANCE AND REFORMATION** THREE CREDIT HOURS
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.
- HST 408. EARLY MODERN SPAIN AND PORTUGAL** THREE CREDIT HOURS
A history of Spain and Portugal from the 15th century to the 18th century; Catholic Kings, Charles V, and Phillip II, Henry the Navigator; and the later Hapsburgs will be dealt with in detail; Spain and Portugal in Europe and the wider world.
- HST 411. ERA OF ABSOLUTISM, ENLIGHTENMENT** THREE CREDIT HOURS
Designed to bridge the gap between the later Reformation and the era of the French Revolution. Intellectual and cultural development will be covered, with emphasis on political, economic and social trends of the Old Regime.
- HST 413. THE REVOLUTIONARY ERA, 1789-1918** THREE CREDIT HOURS
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.
- HST 414. TWENTIETH CENTURY EUROPE** THREE CREDIT HOURS
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.
- HST 415. SOVIET UNION SINCE 1917** THREE CREDIT HOURS
A detailed survey and analysis of the historical development of the USSR from the Revolution of 1917 to the present time.

HST 416. MILITARY HISTORY SINCE 1789 **THREE CREDIT HOURS**

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.

HST 424. THE PARLIAMENTARY CONCEPT IN ENGLISH HISTORY **THREE CREDIT HOURS**

A study of the origins and development of common law and parliamentary government in England, stressing the medieval period.

HST 426. TUDOR-STUART ENGLAND **THREE CREDIT HOURS**

A study of England—1485 to 1714. For the Tudor period, chief emphasis will be given to the development of the national state, royal absolutism, and the Reformation. The evolution of the constitutional question will be the main theme in the treatment of the Stuart era and Cromwellian Interregnum. The social, economic and cultural aspects of the period, as well as its diplomacy, will be fully covered.

HST 427. ENGLAND IN THE 18TH CENTURY **THREE CREDIT HOURS**

A survey of the changes in British political, social and economic institutions. The neo-classical and Romantic movements, Wesleyism, and the beginnings of Evangelicalism will be studied.

HST 432. NORTH AFRICA IN MODERN TIMES **THREE CREDIT HOURS**

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.

HST 436. SOUTH AFRICA IN MODERN TIMES **THREE CREDIT HOURS**

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.

HST 437. WEST AFRICA IN MODERN TIMES **THREE CREDIT HOURS**

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.

HST 438. THE MIDDLE EAST, 19TH AND 20TH CENTURIES **THREE CREDIT HOURS**

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.

HST 443. MODERN CHINA **THREE CREDIT HOURS**

A survey of the political, cultural and international developments in China from the eighteenth century to the present.

HST 446. SOUTHEAST ASIA **THREE CREDIT HOURS**

A survey of the cultural and political history of Southeast Asian countries, emphasizing recent developments.

HST 447. DIPLOMATIC HISTORY OF THE FAR EAST SINCE 1840 **THREE CREDIT HOURS**

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.

HST 448. JAPAN SINCE PERRY **THREE CREDIT HOURS**

A historical study of the economic, social, and political developments of modern Japan from the end of the "Seclusion" to the present time.

HST 452. REVOLUTION AND CONFEDERATION THREE CREDIT HOURS
 The course will treat the following topics: the problems of empire-relationships since 1754; the causes, conduct, and consequences of the American Revolution; the postwar problems leading to the adoption of the Federal Constitution.

HST 453. AMERICAN COLONIAL HISTORY THREE CREDIT HOURS
 A study of the foundations of American Nationality: European background of America, development of the colonial system, transplanting of ideas and institutions from the Old World, growth of democratic tendencies.

HST 454. THE AGE OF JEFFERSON AND JACKSON THREE CREDIT HOURS
 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.

HST 455. THE OLD SOUTH THREE CREDIT HOURS
 A study of political, social, economic, and cultural history, emphasizing presiding themes of pre-Civil War Southern life — ruralism, cotton culture, extractive economics, slavery, developing political minority status in the nation. A general knowledge of American History is a prerequisite.

HST 456. CIVIL WAR AND RECONSTRUCTION THREE CREDIT HOURS
 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.

HST 472. APPALACHIA AND THE NEW SOUTH THREE CREDIT HOURS
 A study and appraisal of the internal and external forces that have shaped the Southern states since the Civil War. All aspects of Southern life will be considered.

HST 474. THE GILDED AGE, 1877-1900 THREE CREDIT HOURS
 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.

HST 475. THE PROGRESSIVE PERIOD, 1900-1920. THREE CREDIT HOURS
 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.

HST 476. BETWEEN THE WARS THREE CREDIT HOURS
 Intensive study of chief facets of United States history from 1919 to 1941. Topics emphasized include: Normalcy, the Depression, the evolving New Deal, and the approach to World War II.

HST 477. CONTEMPORARY AMERICAN HISTORY THREE CREDIT HOURS
 A study of the immediate background of contemporary political, social and economic problems. Topics discussed: Impact of World War II on the United States, Cold War, New Frontier, and Johnson Administration.

HST 478. INTERPRETATIONS IN AMERICAN HISTORY THREE CREDIT HOURS
 Specific topics will be chosen for investigation and interpretation as determined by the instructor. The objective of the course is to study new interpretations of historical events. A general knowledge of American History is a prerequisite.

HST 482. THE HISTORY OF MEXICO THREE CREDIT HOURS
 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.

HST 483. HISTORY OF BRAZIL THREE CREDIT HOURS
 A history of Brazil since 1808 emphasizing the Empire, slavery, the early Republic, Getulio Vargas, and the contemporary scene. Economic and social history will be stressed.

HST 484. CARIBBEAN SINCE 1801 THREE CREDIT HOURS
 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.

HST 497. HONORS TUTORIAL I ONE TO THREE CREDIT HOURS
 A course devoted to the study of a special topic to be selected by the instructor. Applicants will be admitted on the basis of academic record.

HST 498. HONORS TUTORIAL II ONE TO THREE CREDIT HOURS
 A course devoted to the study of a special topic to be selected by the instructor. Applicants will be admitted on the basis of academic record.

Home Economics (HEC)

Elizabeth L. Schroeder, *Chairman*
Associate Professors: Metzger, Payne
Assistant Professor: Streifthau
Instructors: Lefler, Maul
Part-time: Freeman

HEC 101. CLOTHING I TWO CREDIT HOURS
 A study of clothing selection and construction of simple garments using commercial patterns with emphasis on fitting, dressmaking, details and finishing procedures. Two lecture periods per week.

HEC 101L. CLOTHING I LABORATORY ONE CREDIT HOUR
 A course to accompany Hec 101 lecture. One three-hour period per week.

HEC 105. INTRODUCTION TO RELATED ART THREE CREDIT HOURS
 A study of the fundamentals of design and color and their application in selection and arrangement. Three lecture periods per week. *Both Terms, Each Year*

HEC 200. INTRODUCTORY FOODS TWO CREDIT HOURS
 Application of scientific principles to food preparation and evaluation. Two lecture periods per week.

HEC 200L. INTRODUCTORY FOODS LABORATORY TWO CREDIT HOURS
 A course to accompany Hec 200 lecture. Two two-hour periods per week.

HEC 211. CLOTHING II TWO CREDIT HOURS
 Detailed emphasis on principles of fitting and creating construction of underlined & lined garments. Two lecture periods per week. Prerequisite: Hec 101 or equivalent.

HEC 211L. CLOTHING II LABORATORY ONE CREDIT HOUR
 Course to accompany Hec 211 lecture. One three-hour laboratory per week.

HEC 214. TEXTILES THREE CREDIT HOURS
 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. CONSUMER EDUCATION AND HOME MANAGEMENT** THREE CREDIT HOURS
 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 from the consumer standpoint. Three lecture periods per week.
First Term, Each Year
- HEC 225. CHILD DEVELOPMENT I** THREE CREDIT HOURS
 Developmental study of prenatal, infancy and early childhood. Observation and work in nursery school arranged. Two lecture periods per week.
First Term, Each Year
- HEC 300. CULTURAL ASPECTS OF FOOD** TWO CREDIT HOURS
 A study of the effect of culture and food resources on food patterns and food preparation. Historical evolution of food, especially U.S. Regional food habits, is also included. Two lecture periods per week.
- HEC 300L. CULTURAL ASPECTS OF FOOD LABORATORY** ONE CREDIT HOUR
 A course to accompany Hec 300 lecture. One three-hour period per week.
- HEC 303. NUTRITION AND HEALTH** THREE CREDIT HOURS
 Fundamental principles of human nutrition, including requirements of the body for the nutritive essentials, the composition of foods and the planning of adequate diets for health. Three class periods per week.
- HEC 304. QUANTITY FOOD PRODUCTION** THREE CREDIT HOURS
 Basic steps of Quantity Food Production methods. An Independent Study Program to initiate the student into the process of self-learning. Includes faculty conferences, student-led seminars, library research and laboratory investigations. Hours arranged.
- *HEC 308. INSTITUTIONAL BUYING** THREE CREDIT HOURS
 Application of principles for determining needs, procuring and storing foods in quantity. Institutional equipment selection, maintenance, and layout.
- 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 200 or equivalent.
First Term, Each Year
- HEC 318. FAMILY LIVING** THREE CREDIT HOURS
 Developmental tasks, socio-economic and cultural influences on family interaction at each stage of the life cycle.
- HEC 323. DEMONSTRATION TECHNIQUES** TWO CREDIT HOURS
 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 200.
- 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 or equivalent. *Both Terms, 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 420. *Second Term, Each Year*

HEC 402. DIET THERAPY THREE CREDIT HOURS
A study of the value of good nutrition in the prevention and effective treatment of disease.

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.

HEC 406. HOME MANAGEMENT II THREE CREDIT HOURS
Application of managerial concepts to problems relating to the home from the consumer and community points of view.

HEC 407. INSTITUTIONAL ORGANIZATION AND MANAGEMENT THREE CREDIT HOURS
Principles related to feeding persons in institutions. Includes personnel management, organization, administration and cost control.

HEC 415. TAILORING ONE CREDIT HOUR
Tailoring construction as applied in the making of coats and suits. One lecture period per week. Prerequisites: Hec 101, 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 THREE CREDIT HOURS
Integration of historic and contemporary furnishings into today's house. Problems deal with in depth investigation of the elements of interior design from an economic, functional, and aesthetic point of view. Prerequisite: Hec 105, 328.

HEC 436. INDEPENDENT STUDY THREE TO SIX CREDIT HOURS
This independent study is to allow students to concentrate on a special interest to them. Original investigation, independent conferences and reports are required. Approval of Department Chairman and instructor.

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. Two lecture periods per week. Prerequisite: Hec 200. *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 and Systems Engineering (ISE)

Dr. Merle D. Schmid, *Chairman*

Professors: Gephart, Schmid

Associate Professors: Kovacs, Mitchell

Assistant Professors: Balachandran, Fuchs

***ISE 202. ENGINEERING ECONOMY** **THREE CREDIT HOURS**
Emphasizes rational, scientific methods of economic analysis for engineering and management decision-making. Prerequisite: Mth 118.

ISE 222. MANAGEMENT INFORMATION AND CONTROL SYSTEMS **TWO CREDIT HOURS**
Fundamental concepts of information through the illustrative use of the accounting process coupled with experience in information processing and control resulting from programmed instruction practice.

ISE 251. WORK DESIGN AND SIMPLIFICATION **TWO CREDIT HOURS**
Introduction into design, analysis, simplification, standardization, and measurement of work systems. Application of principles of plant layout, line balancing, material handling and work station design to the development of optimum work systems. Prerequisite: Cps 144, Mth 119.

ISE 251L. WORK DESIGN AND SIMPLIFICATION LABORATORY **ONE CREDIT HOUR**
Laboratory to accompany Ise 251 consists of one two hour laboratory period each week during which observations are made from visual and analog simulations of work systems. Corequisite: Ise 251.

ISE 290. INTRODUCTION TO INDUSTRIAL AND SYSTEMS ENGINEERING **ONE CREDIT HOUR**
A study of the early development of Industrial and Systems Engineering, its evolution, and its present status in the engineering environment. Includes traditional techniques used in Industrial Engineering, and introduces the student to current aspects of the field. Prerequisite: Cps 144.

***ISE 313. ENGINEERING LAW** **TWO CREDIT HOURS**
Legal principles applied to engineering.

ISE 323. DESIGN STRATEGY FOR MANAGEMENT SYSTEMS **TWO CREDIT HOURS**
Design strategy using the Ideals Concept as one example of a specific strategy which has been developed as an approach to designing systems to effectuate human purposes.

ISE 324. BEHAVIORAL DIMENSIONS IN MANAGEMENT **TWO CREDIT HOURS**
Introduction to the contributions of management theorists and practitioners from management schools and the various behavioral sciences.

ISE 334. MACHINE COMPUTING ELEMENTS IN ENGINEERING SYSTEMS **TWO CREDIT HOURS**
The basic principles underlying the operation of digital analog computing machines are presented with emphasis on the functions computers play in the overall design of engineering systems. Prerequisites: Ise 251, Mth 219, Mth 368.

ISE 334L. MACHINE COMPUTING ELEMENTS IN ENGINEERING SYSTEMS LABORATORY **ONE CREDIT HOUR**
Laboratory to accompany Ise 334. Consists of one two hour laboratory period each week with hands-on operation of analog, digit and hybrid computer. Corequisite: Ise 334.

*These courses were previously designated as Ine.

ISE 351. WORK STANDARDS **TWO CREDIT HOURS**
 Study of work systems. Development and analysis of techniques to standardize and measure work. Development of production standards through the use of Time Study, Motion Time Measurement, Work Measurement Sampling and other techniques. Prerequisites: Ise 202, Ise 251, Mth 367.

ISE 351L. WORK STANDARDS LABORATORY **ONE CREDIT HOUR**
 Laboratory to accompany Ise 351 consists of one two hour laboratory period each week. Realistic visual simulations are used to present current real-world conditions in a number of typical industrial, commercial and service industries. Corequisite: Ise 351.

***ISE 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: Ise 222.

***ISE 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. Prerequisite: Ise 222.

***ISE 421. RELIABILITY AND MAINTAINABILITY** **THREE CREDIT HOURS**
 Applications of statistical theory to engineering reliability design. Testing methods for determining reliability. Design of components and assemblies for reliability. Prerequisites: Cps 144, Mth 368.

***ISE 422. ADVANCED TOPICS IN RELIABILITY AND MAINTAINABILITY** **THREE CREDIT HOURS**
 The application of reliability theories to the design of complex, integrated systems. Prerequisite: Ise 421.

ISE 423. QUALITY ASSURANCE **TWO CREDIT HOURS**
 Principles of statistical quality control. Application of p-charts x and R charts and attribute and variable acceptance sampling plans. Design of quality control systems and procedures. Prerequisites: Cps 144, Mth 368.

ISE 423L. QUALITY ASSURANCE LABORATORY **ONE CREDIT HOUR**
 Laboratory to accompany Ise 423 consists of one two hour laboratory period each week. Mechanical, electronic and computer simulations of quality control processes. Corequisite: Ise 423.

ISE 428. DESIGN AND ANALYSIS OF ENGINEERING EXPERIMENTS **TWO CREDIT HOURS**
 Emphasis will be on establishment of test conditions for a complex engineering experiment designed to answer predetermined specific objectives and to analyze the random response through statistical methods. Prerequisites: Cps 144, Mth 368.

ISE 428L. DESIGN AND ANALYSIS OF ENGINEERING EXPERIMENTS LABORATORY **ONE CREDIT HOUR**
 Laboratory to accompany Ise 428. Consists of one two hour laboratory period per week. Real-world and simulated experiments used as source of data for experimental designs. Corequisite: Ise 428.

*These courses were previously designated as Ine.

ISE 451. PRODUCTION AND INVENTORY PLANNING AND CONTROL TWO CREDIT HOURS
 Analysis and design of systems of men and machine for production process: forecaster and feedback adjustments of product demand and labor staffing, scheduling and control of production and inventory levels. Prerequisites: Cps 144, Mth 368.

ISE 451L. PRODUCTION AND INVENTORY PLANNING AND CONTROL LABORATORY ONE CREDIT HOUR
 Laboratory to accompany Ise 451. Consists of one two hour laboratory period per week. Simulated real-world data are presented to the class, or to each student independently, through interactive digital, analog, or hybrid computer read-outs or through a multi-station visual simulator. Corequisite: Ise 451.

ISE 452-453. OPERATIONS RESEARCH I & II SIX CREDIT HOURS
 A two term sequence presenting the fundamental ideas of operations research. Its purpose is to provide the student with the understanding and competence to appreciate the strength as well as the inherent limitations of the operations research approach. No advanced training in business administration or industrial engineering is assumed, however, a mathematical sophistication that is acquired in college level introductory calculus and infinite mathematics is assumed. Prerequisites: Cps 144, Mth 368.

ISE 454. CYBERNETICS AND CONTROL THEORY THREE CREDIT HOURS
 Emphasizes total systems concept for solving design problems. An introduction to the theory of control with emphasis upon general principles as contrasted with a detailed study of specific control systems. Illustrates commonplace and well understood concepts of control such as feed-back, stability, regulation, ultra-stability, information coding, noise. Prerequisites: Cps 144, Mth 368.

ISE 455. PRINCIPLES OF SYSTEMS THREE CREDIT HOURS
 Basic concepts of structure in dynamic systems course serves as a starting point for invoking a systems approach to dynamic systems in multi-disciplinary courses on urban, ecological, corporate or other social systems. Prerequisites: Cps 144, Mth 368.

ISE 456. DISCRETE TIME SERIES TWO CREDIT HOURS
 Emphasis is placed on Industrial application of open loop statistical forecasts. Techniques of describing a time series by very general classes of functions are studied. These include but are not limited to trigonometric functions that make it possible to describe any cyclical process accurately and easily. Prerequisites: Cps 144, Mth 368.

ISE 456L. DISCRETE TIME SERIES LABORATORY ONE CREDIT HOUR
 Laboratory to accompany Ise 456 consists of one two hour laboratory period per week. Simulated real-world discrete time series data are presented for solution to the class, or each student independently, through interactive digital, analog, or hybrid computer read-outs. Corequisite: Ise 456.

ISE 490-491. SENIOR SEMINAR TWO CREDIT HOURS
 Required of all senior Ise students. Topics of interest to senior students in Industrial and Systems Engineering are explored in the senior seminars. A major objective of these courses is to aid the student to make the transition from undergraduate college activities to the activities in graduate schools or in his first work position. Topics discussed will be determined largely by the needs of the students themselves. Prerequisite: Senior standing.

ISE 499. SPECIAL PROBLEMS IN INDUSTRIAL AND SYSTEMS ENGINEERING TWO TO SIX CREDIT HOURS
 Particular assignments to be arranged and approved by Chairman of the Department.

Interdisciplinary Studies (UDI)-(GED)-(ASI)

UDI 022. PERSONAL COMMITMENTS TO THE FUTURE ONE CREDIT HOUR
 A mini-course designed as a series of discussions to explore the crises confronting our futures with persons who share a commitment to shaping these futures—what does “the future” mean to us?

UDI 033. FUTURIST SURVIVAL SKILLS ONE CREDIT HOUR
 This mini-course is designed to study the tools developed to understand societal trends, impacts of change on social systems, and methodologies for planning alternative futures—what do we need to know to deal with the future?

UDI 080. DEVELOPMENTAL READING NO CREDIT
 Individualized instruction for those wishing to improve both speed and comprehension in reading.

UDI 099. SELF-DIRECTED FUTURE STUDY UP TO ONE CREDIT HOUR
 Independent study of topics on the future.

UDI 141. AMERICAN ROOTS OF NON-VIOLENCE ONE-HALF CREDIT HOUR
 This mini-course offers a study of the initial attempts at formulating a non-violent stance towards society in America by some of the great thinkers in our tradition with specific consideration made to the Concord school of thought and to two of its greatest proponents, Henry David Thoreau and Ralph Waldo Emerson. The appreciation of these traditions is meant to enliven and serve as a basis for critical thinking of the present resurgence of non-violence as a method for social change.

UDI 142. WORLD ENERGY SUPPLY AND USAGE ONE CREDIT HOUR
 Through a study of the fundamental laws of thermodynamics and the resultant parameters on energy which these laws entail, basic questions concerning the supply and usage of this energy and its proper and just distribution among developed and underdeveloped nations are addressed.

UDI 144. CHURCH AS MODEL III ONE CREDIT HOUR
 A study of a dynamic model of the Church as a social change agent working for peace. The model is based on Richard McBrien's book *The Church: Continuing Quest*.

UDI 150. VIETNAM: ITS PEOPLE AND THEIR CULTURE ONE CREDIT HOUR
 An analysis of the history and culture of the Vietnamese people, and an introduction to a series of mini-courses on the topic.

UDI 155. DRAFT AND ITS ALTERNATIVES ONE CREDIT HOUR
 A detailed study of past conscription policies; a look at the draft today with special emphasis on recent legal revisions and the various alternatives to military service.

UDI 160. INTRODUCTION TO ENVIRONMENTAL STUDIES THREE CREDIT HOURS
 An introduction to environmental problems in an interdisciplinary context by means of lectures, seminars, laboratory demonstrations, and field trips presented by experts from the campus and community.

UDI 344. PARAMETERS OF PEACE THREE CREDIT HOURS
 This general overview course is intended to serve society by developing competencies in the area of “peacemaking.” It will concentrate specifically on the parameters of peace studies.

UDI 353. ENVIRONMENTAL LEGISLATION ONE CREDIT HOUR
 A critical analysis of environmental legislation that pertains to non-degradation policy. Consideration will be given to the National Environmental Policy Act and the Clean Air amendments of 1970, and the similar legislation on the Ohio state and local levels.

UDI 451. COMPUTER-AIDED INSTRUCTION ONE CREDIT HOUR
 A study of computer aided instruction to include how much it is being used now in schools, where it is being used and the results obtained from its use. The student will be exposed to material now being used with CAI; he will become familiar with the hardware, the formation of educational objectives for CAI, and the skills necessary to write a mini-packet for CAI.

UDI 499. ACTION CONTEXT UP TO SIX CREDIT HOURS
 Action-learning experiences with business, industry, community, and governmental agencies. Seminars will aid students in reflecting on that experience and developing problem-solving skills related to it.

UDI 301-2. THE FUTURE: AN INTERDISCIPLINARY APPROACH SIX CREDIT HOURS
 Futurism, a way of thinking and acting. An introduction to a new breed of men that have emerged in our time: the futurists, who explore and make the future. Management and systems in relation to the future. Revolutionary transformation and change. Economic development of the world. Evolution of technology. Ethics and values, the theology of the future, the phenomenology of religion. Growth, environment and peace—projects of the future.
Offered 1970-1

UDI 310. PLANNING FOR THE SEVENTIES: CREATING THE FUTURE OF THE UNIVERSITY TWO CREDIT HOURS
 Offered in conjunction with the University-wide effort of institutional planning for the 1970's. It is designed to educate the university community about a methodology of planned educational change which realistically considers the forces in society that are shaping the future for education. It involves lectures-discussions, seminars with the educational community of the Dayton-Miami Valley region, and the actual experience of innovative planning for the future of the University of Dayton. Enrollment is open to students, faculty and administrators.
Offered 1970-1

UDI 320. THE CITY AS COMMUNITY THREE CREDIT HOURS
 Problem-focused, multi-contextual, and interdisciplinary in approach. The purpose of this course is to focus the resources of the University on the present and future crisis of our cities. Particular stress is placed on the human need of the urban community and the skills necessary to be an effective agent for change and human development.
Offered 1970-1

UDI 321. CITY AS COMMUNITY PRACTICUM TWO CREDIT HOURS
 Lab/work experience offered in conjunction with Udi 320.
Offered 1970-1

UDI 351. ENVIRONMENTAL QUALITY THREE CREDIT HOURS
 Studies the relationship between public health and air pollution. Surveys of the community involve data collection, correlation of information and report writing, under the direction of outside consultants.
Offered 1970-1

UDI 352. ENVIRONMENTAL STUDIES THREE CREDIT HOURS
 This course introduces a wide range of environmental thought and problems as presented by a highly diverse group of lecturers. In addition, students will participate in surveys of environmental problems, improvements, and plans at three different levels in the city of Dayton: business, government, and private institutions and individuals.
Offered 1970-1

GED 200H. INTERDISCIPLINARY COURSE TWO CREDIT HOURS
 A study of various relevant topics in contemporary American life through the special disciplines of Psychology, Education, Philosophy, Mathematics, Sociology, Information Science, Physical Sciences, Engineering, Economics, Political Science, History, and Theology. *Offered 1968-69*

GED 201. INTERDISCIPLINARY COURSE TWO CREDIT HOURS
 A study of contemporary man; a view of man in his totality by examining his various components to see how their integration is achieved. Topics include: inter-personal relationships, race relations, labor and management, art today, universities, current trends in literature, man and the computer age, law and order, new religion, advertising, Marxism and Buddhism Philosophies. *Offered 1968-69*

GED 202. INTERDISCIPLINARY COURSE TWO CREDIT HOURS
 A study of alienation and communication in four aspects of man's personality—esthetic, scientific, abstracting, and social. Topics include: computers, drugs, mass media, anatomy of communication, stratification of society, history—esthetic, self-discovery through alienation, inter-personal relationships. *Offered 1969-70*

GED 203. INTERDISCIPLINARY COURSE TWO CREDIT HOURS
 A study of the modes of communication currently used by man. Topics include: Inter-personal communications—non-verbal (sense, E.S.P., drugs), and verbal (myth and symbol, language, group dynamics); media of art, poetry, prose and music; mass media—McLuhan, television, radio, film, newspapers and magazines, advertising; roles of communication—politics and education. *Offered 1969-70*

GED 301. INTERDISCIPLINARY COURSE TWO CREDIT HOURS
 A study of the history of the Appalachian region involving the academic disciplines History, Political Science, Psychology, Sociology and Theology. Topics include: past and present federal and state programs and their effectiveness, effects of poverty and the psychology of social change, qualities of a successful economy and the possibility of economic change in Appalachia, religions of Appalachia and their effect on the people. *Offered 1969-70*

GED 400H. INTERDISCIPLINARY COURSE TWO CREDIT HOURS
 A study of several American communities: their perception of each other and their interaction with each other. Topics include: community as a living organism, community in action, community structure, community as influenced by technology, community problems, economics of the poor, ghetto mentality, community organizing, community development, crisis in the universities, politics of confrontation, and sexual mores. *Offered 1967-68*

GED 401. INTERDISCIPLINARY COURSE TWO CREDIT HOURS
 A study of contemporary living to obtain a relevant and multi-dimensional expression of community. Topics include: community as a living organism, community in action, community structure, community as influenced by technology, effect of economic hardship in the community, mentality of the ghetto community, crisis in the university community, community change on the administrative level, problems in community overcrowding, cybernetics and world development, community in process, and community development—big business. *Offered 1968-69*

GED 402. INTERDISCIPLINARY COURSE TWO CREDIT HOURS
 Introduction to the Futurist. A study of the three trends among the futurists today—
 1. physical and social sciences are working together more on an interdisciplinary basis;
 2. modern education is tending to have students think in terms of total picture; 3. new

behavioral science called "eiconics." In interpreting the problems of our society the futurists fall into four schools: the Optimists, the Pessimists, the Activists and the Neutralists. Topics include: trends among college students, scientific-literary dichotomy, Optimist #1 Teilhard de Chardin, Pessimist # 1 Jacques Maritain, Activist #1 Peter Drucker, Optimist #2 Herman Kahn, Pessimist #2 Michael Harrington, Activist #2 Kenneth Boulding, Optimist #3 Marshall McLuhan, Pessimist #3 Arnold Toynbee, Corporation Management.
Offered 1969-70

GED 404. INTERDISCIPLINARY COURSE TWO CREDIT HOURS
Medical Ethics—A study of the relation between the scientific aspects of Biology, Medical Technology, Medical Practice and Psychology in general and the ethical aspects involved in medical practice and research. Topics include: general ethics, life and death in perspective, birth control, abortion, Euthanasia, artificial insemination/adoption, genetic work and research, war research, alcoholism and drug addiction.
Offered 1969-70

GED 405. INTERDISCIPLINARY COURSE NINE CREDIT HOURS
The Living Learning Center: a course composed of a seminar, independent study, and the living experience. The seminar concerns itself with the Humanization and Dehumanization of man; independent study is upon the basic theme; the living experience pursues topics of interest of each individual as well as problems encountered. *Offered 1969-70*

GED 405. INTERDISCIPLINARY COURSE FOUR CREDIT HOURS
A course to integrate the working understanding of community organization with the theory and technicalities of this social science in order to expand instinctual skill into a fully developed and more professional application of social work. Topics include: structure of federal and local programs, small group dynamics, social and family disorganization, sociological patterns of the Appalachian migrant, statistical techniques of social planning, land use in urban development, dynamics of citizen participation, extremism in white poverty areas, compensatory education, basic welfare regulations, welfare rights organizations.
Offered 1969-70

GED 406. INTERDISCIPLINARY COURSE TWO CREDIT HOURS
Simulated Society (Sim-Soc) and learning games. A study of the meaning, value and method of learning games and specifically Simulated Society learning games. The class participates in Sim-Soc. Selected readings with discussions provide the student with the opportunity to synthesize the political, philosophical, sociological, psychological and economic theories of John Locke, Thomas Hobbes, Robert A. Dahl, John S. Mill, and Alexis de Tocqueville.
Offered 1969-70

Interdisciplinary Studies — Currently Offered

ASI 102. FRESHMAN HONORS INTERDISCIPLINARY THREE CREDIT HOURS
An honors seminar whose main theme is "Developing Values in Education." It is the core of the Freshman Honors Program, and is designed to assist the students in discovering options for goals and alternate means of pursuing their education. Enrollment is by invitation.
Offered 1970-71 and 1971-72

ASI 103. LANGUAGE AND CULTURE TWO CREDIT HOURS
A course designed to investigate the origin and evolution of language, to relate language to the individual's perception of reality, to determine how a language reflects a culture's mode of thought, to evaluate body language as a reinforcement or substitute for verbal communication, to provide responsible students with an opportunity to direct their education in the manner which they find most beneficial and desirable.
Offered 1970-71

ASI 104. FRESHMAN INTERDISCIPLINARY STUDIES **NINE CREDIT HOURS**
 A continuation of Asi 101 completed First Term 1970-1. An innovative experimental course which explores three ideas as key themes in the development of Western Civilization and includes some study of non-Western cultures and civilizations. This course substitutes for English 106, History 102, and Philosophy 101.

ASI 204. COMMUNITY AND COMMUNAL LIVING **FOUR CREDIT HOURS**
 A study of all facets of community through readings and group seminars in the communal living situation. The topic "Community" is studied on two levels: the basic principles or foundations and the many facets such as community in a Capitalistic Society, the roll of the individual in the community, and theological dimensions of community, human facilitation.
Offered 1970-71

ASI 205. THE ULTIMATE CONCERN **SIX CREDIT HOURS**
 A study of the manifold facets of the religious, spiritual, physical, occidental, mental, psychological, and philosophical apprehensions of man.

ASI 302. APPALACHIAN STUDIES **THREE CREDIT HOURS**
 A study of Appalachian culture in a manner involving the disciplines of history, political science, economics, psychology, sociology, and religion. Topics to be studied are: Appalachia History and its influence on the present, the problems and solutions of recent events in Appalachia, the influence of local government and federal programs on the people of Appalachia, the economic problems of underprivileged peoples and the future of industrial development in the region, the literature, art and music of the area, psychology of social change and community development, laws of social justice as they apply to underdeveloped regions, science of planned change, and the traditional Baptist religion.
Offered 1970-71, 1971-72

ASI 407. DEVELOPING VALUES IN EDUCATION **FOUR CREDIT HOURS**
 A coordination of and participation in Asi 102 the core of the Freshman Honors Program. The goal of Asi 102 is to establish a sense of self-motivation in the students so that they can create a personal value system of education. Registrants serve to encourage and stimulate the freshman students participating for the pursuit of academic excellence, they will participate in the seminar and coordinate it, they will conduct workshops and offer guidance throughout the term.
Offered 1970-71 and 1971-72

ASI 409. MEDICAL ETHICS **THREE CREDIT HOURS**
 A course to anticipate and confront ethical problems inherent in the health professions. To be able to arrive at ethically sound solutions to these problems when they arise, it is first necessary to give serious effort and thought to the construction of a system of values. This course is an opportunity not only to critically review these personal values, but also to gain new insights into them.
Offered 1970-71

ASI 411. THE WORLD OF VICTORIAN ENGLAND **SIX CREDIT HOURS**
 The interdisciplinary study of the history and the literature of the Victorian Age, with some attention to Victorian paintings, music, and architecture.

Topics include the effects of the Industrial Revolution, the three major Reform Bills, the peaceful "revolution" that changed the balance of political power, the roles of Victoria and Albert, the political maneuverings of the leading prime ministers, the growth of Victorian cities and the consequent rise of urban problems, the feminist movement, and the problems of the British Empire.

Against this historical panorama is set the poetry, prose, and fiction of the great Victorian writers—Tennyson, Dickens, Browning, Carlyle, Mill, Newman, Ruskin, and others. The literature is studied both as works of art and as historical documents that reveal the temper of the times. Corresponding works of architecture, music and painting are used to illustrate the quality of Victorian thought and sensibility.

ASI-SDL PROGRAM FOR SELF-DIRECTED LEARNING FIFTEEN CREDIT HOURS EACH TERM
 A pilot program for the 1971-72 academic year which provides the opportunity for students to utilize a great number of learning resources, to create and develop new options for pursuing education, to determine their own educational goals, and to develop their own curriculum in consultation with faculty.

In consultation with faculty each student develops his own program and establishes a detailed plan of study which constitutes a framework from which he directs his learning and which outlines the subject areas and types of learning experiences he intends to pursue. He may choose the classroom situation, independent study, small group discussions, library research, experimental research, or experimental fieldwork.

The faculty advisors assist the students in design and development of their programs, help to elicit and clarify individual and group purposes, promote a climate in which positive interaction and participation can occur freely, make learning resources available, help students to discover and create their own learning resources, and participate in small group discussions and mini-seminars.

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 ONE CREDIT HOUR
 Seminar dealing with the biblical view of history. *First Term*
- JUD 330. JUDAIC LITERATURE TWO CREDIT HOURS
 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 ONE CREDIT HOUR
 Seminar discussing selected texts of Judaic literature. *Third Term*
- JUD 340. ARCHAEOLOGY AND THE BIBLE TWO CREDIT HOURS
 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
 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

TWO CREDIT HOURS

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.

To be announced

JUD 361. SEMINAR: THE BIBLE AND THE KORAN

ONE CREDIT HOUR

To be announced

JUD 370. THE WORLD OF THE PSALMIST

THREE CREDIT HOURS

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.

First Term

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. Gordon A Neufang, Jr., *Chairman*

*Professor: Ferrigno**

Associate Professors: Conard, McKenzie, Saquel, Zeinz

Assistant Professors: Castelló-Lamas, Galeano, Neufang, Rus, Sory

Instructors: Chiodo, Frederick, Greely, Hasham, Romaguera, Thompson

Part-time Instructors: Perz, Fogel

A language major may arrange his courses, with the approval of the department chairman, in one of these two forms of 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 languages (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.

Majors and prospective language teachers are urged to spend at least a summer traveling and studying in a country in which the citizens speak the language of concentration.

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.

*On sabbatical leave 2nd term 1971-72.

French (FRN)

FRN 101, 102. ELEMENTARY FRENCH I, II **THREE* CREDIT HOURS, EACH TERM**
 Basic elements of the French language with emphasis on audio-oral skills. Language Laboratory required.

FRN 201, 202. INTERMEDIATE FRENCH I, II **THREE CREDIT HOURS EACH TERM**
 Intensive review of French grammar, selected readings in French literature or culture, practice in spoken and written language skills. Language Laboratory required.

NOTE: Frn 301 and Frn 302 are prerequisites for all other upper level courses in French.

FRN 301. FRENCH CONVERSATION **THREE CREDIT HOURS**
 Intensive drill for development of audio-oral skills. Gradual expansion by vocabulary development, pattern drills and use of idioms into discussions centered around typical French life and cultural situations. Required of all French majors and prospective teachers. Language Laboratory required. *First Term, Each Year*

FRN 302. ADVANCED FRENCH COMPOSITION **THREE CREDIT HOURS**
 Practice in composition based on topics dealing with various aspects of French life and culture. Systematic vocabulary enrichment. Basic grasp of stylistics through literary texts. Required of French majors and prospective teachers. *Second Term, Each Year*

FRN 303. FRENCH PHONETICS AND DICTION **TWO CREDIT HOURS**
 Formation of the sounds of French, rules of pronunciation, use of phonemic transcription, practical exercises in reading and interpreting French texts. Required of all French majors and prospective teachers. Language Laboratory required. *First Term, Each Year*

FRN 304. FRENCH CIVILIZATION **TWO CREDIT HOURS**
 Introduction to the study of French Civilization with emphasis on the interrelation of cultural trends in the arts and thought of France. Required of all French majors and prospective teachers. *Second Term, Each Year*

FRN 305. EXPLICATION DE TEXTES **THREE CREDIT HOURS**
 Introduction to method of analyzing literary texts by observing and doing analyses of French prose and poetry. Elements of French versification. Required of all French majors and prospective teachers. *First Term, Each Year*

FRN 313, 314. SURVEY OF FRENCH LITERATURE **THREE CREDIT HOURS EACH TERM**
 Major texts, trends and authors from the Middle Ages to the present, showing the influences and continuity between the various periods. Lectures, discussions, oral and written reports. Required of all French majors and prospective teachers.

FRN 409. FRENCH LITERATURE OF THE MIDDLE AGES **TWO CREDIT HOURS**
 Studies in French literature from the Serment de Strasbourg through the poetry of Villon. Lectures, discussions, oral and written reports. *First Term, 1972-1973*

FRN 410. FRENCH LITERATURE OF THE RENAISSANCE **TWO CREDIT HOURS**
 The world of the Sixteenth Century as revealed in the writings of Rabelais, the Pleiade, Montaigne, etc. Lectures, discussions, oral and written reports. *Second Term, 1972-1973*

FRN 411. FRENCH CLASSICISM **TWO CREDIT HOURS**
 The development of the Classical Ideal in French theater, poetry and prose. Lectures, discussions, oral and written reports.

FRN 412. THE ENLIGHTENMENT **THREE CREDIT HOURS**
 The spirit of rationalism from the fall of Louis XIV to the French Revolution. En-

*Four credit hour proposal presently under study.

lightenment concepts of man, religion and society in the works of the French *philosophes* and their contemporaries. Lectures, discussions, oral and written reports.

FRN 413. NINETEENTH CENTURY FRENCH PROSE WRITERS THREE CREDIT HOURS
Major trends in Nineteenth Century French prose as reflected in the works of Chateaubriand, Hugo, George Sand, Emile Zola, Balzac, Flaubert, Stendhal, etc. Lectures, discussions, oral and written reports. *Offered as needed*

FRN 414. POETRY AND DRAMA OF THE NINETEENTH CENTURY THREE CREDIT HOURS
The major trends of Nineteenth Century French poetry from romanticism through symbolism, including a survey of the Romantic Theater. Lectures, discussions, oral and written reports. *Offered as needed*

FRN 415. TWENTIETH CENTURY FRENCH PROSE WRITERS THREE CREDIT HOURS
The development of the French novel from Proust to the *nouveau roman*. Style and thought in prose works in history, philosophy, criticism, etc. Lectures, discussions, oral and written reports. *Offered as needed*

FRN 416. TWENTIETH CENTURY FRENCH POETRY TWO CREDIT HOURS
The direction taken by French poetry from the inheritors of the Symbolist tradition to the present time. Lectures, discussions, oral and written reports. *Offered as needed*

FRN 417. TWENTIETH CENTURY FRENCH DRAMA TWO CREDIT HOURS
Trends in the French theater from turn-of-the-century drama to the present day. Lectures, discussions, oral and written reports. *Second Term, 1972-1973*

FRN 418H. HONORS SEMINAR TWO CREDIT HOURS
Special seminar for French majors only. Concentration on a certain aspect of French language or literature, the subject to be determined by the teacher. *1972-1973*

German (GER)

GER 101, 102. ELEMENTARY GERMAN I, II THREE* CREDIT HOURS, EACH TERM
Basic elements of German language with emphasis upon pronunciation, speaking, reading, and grammar. Language Laboratory required. No prerequisite.

GER 201. INTERMEDIATE GERMAN THREE CREDIT HOURS
Systematic grammar review. Increased use of the language in written exercises and classroom discussions based upon selected readings from modern authors. 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, 202S. GERMAN FOR SCIENCE MAJORS I, II THREE CREDIT HOURS, EACH TERM
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.

*Four credit hour proposal presently under study.

GER 304, 305. ADVANCED COMPOSITION AND CONVERSATION

THREE CREDIT HOURS, EACH TERM

Further stress on mastery of syntax and morphology, enlarging vocabulary. Discussion of readings on German culture and civilization. May be taken in either sequence. One semester required for German majors and minors.

GER 313. SURVEY OF GERMAN LITERATURE I

THREE CREDIT HOURS

German literature and its development from 750 A.D. to end of 17th Century. A study of exemplary works and literary movements of the period. Required for German majors.

GER 314. SURVEY OF GERMAN LITERATURE II

THREE CREDIT HOURS

German literature from the 18th Century to the present. A study of exemplary literary works and movements of the period. Required for German majors.

GER 409. GERMAN LITERATURE OF THE NINETEENTH CENTURY

THREE CREDIT HOURS

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, 1971-1972

GER 410. GERMAN LITERATURE OF THE NINETEENTH CENTURY

THREE CREDIT HOURS

A continuation of German Literature of the Nineteenth Century, Ger 409.

Second Term, 1971-1972

GER 411. TWENTIETH CENTURY GERMAN LITERATURE

THREE CREDIT HOURS

A survey of the outstanding authors and works in the first half of the present century up to World War II. Lectures, discussions and reports on assigned readings.

First Term, 1972-1973

GER 412. TWENTIETH CENTURY GERMAN LITERATURE

THREE CREDIT HOURS

Continuation of German 411; German literature since 1945. Lectures, discussions and reports on assigned readings.

Second Term, 1972-1973

GER 413. THE CLASSICAL PERIOD

THREE CREDIT HOURS

A study of the principal authors of this period, with emphasis on Schiller.

First Term, 1972-1973

GER 414. THE CLASSICAL PERIOD

THREE CREDIT HOURS

Continuation of German 413, with emphasis on Goethe.

Second Term, 1972-1973

GER 415. MODERN GERMAN DRAMA

THREE CREDIT HOURS

A study of the Modern German Theater with emphasis on Brecht.

Offered as needed

GER 416. MODERN GERMAN DRAMA

THREE CREDIT HOURS

The German Theater since Brecht.

Offered as needed

GER 417. KAFKA

THREE CREDIT HOURS

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

THREE CREDIT HOURS

German literary reaction to the two wars; influences of Kafka, Hemingway, Dos Passos, Faulkner, Joyce, and Camus on Doblin, Kasack, Koeppen, Andresch, Boll, and Lind; the *nouveau roman* illustrated by Johnson and one work by Grass.

Offered as needed

- GER 419. MINNESANG THREE CREDIT HOURS
 German courtly love poetry of the 12-13th centuries: its origins, music, themes, inevitable problems and irreverent parodies as expressed by Wolfram, Walther, Reinmar, Morungen, Hartmann, Neithart and others.
- GER 495. SEMINAR TWO CREDIT HOURS
- GER 496. SEMINAR TWO CREDIT HOURS

Greek (GRK)

- GRK 101, 102. ELEMENTARY GREEK I, II THREE* CREDIT HOURS, EACH TERM
 A study of the essentials of classical Greek grammar with exercises and readings.
- GRK 201. INTERMEDIATE GREEK THREE CREDIT HOURS
 Continuation of the study of grammar, Readings from Herodotus, Xenophon, and Plato.
 Prerequisite: Grk 102. *First Term, Each Year*
- GRK 303. PLATO THREE CREDIT HOURS
 The *Apologia* is read and selections from the rest of Plato's works. Plato's contribution to the history of ideas as emphasized and illustrated through extensive supplementary reading in Jowett.
- GRK 304. HOMER THREE CREDIT HOURS
 Readings from the *Iliad* and the *Odyssey*. *Second Term, Each Term*
- GRK 305. THE SEPTUAGINT THREE CREDIT HOURS
 Extensive readings. Comparison with the Vulgate. Excursions into the field of Biblical science. *To be announced*
- GRK 306. THE NEW TESTAMENT THREE CREDIT HOURS
 Similar to Grk 305. Comparison of the Greek and Latin texts with modern renditions.
- GRK 403. GREEK DRAMA THREE CREDIT HOURS
 Readings of Sophocles' *Oedipus Rex* and *Antigone* with a study of the origin and development of Greek drama.

Italian (ITA)

- ITA 101, 102. ELEMENTARY ITALIAN I, II THREE* CREDIT HOURS, EACH TERM
 Elements of Italian, including pronunciation, reading, translation, grammar, dictation and conversation.
- ITA 201, 202. INTERMEDIATE ITALIAN I, II THREE CREDIT HOURS, EACH TERM
 Grammar review, selected readings from modern authors, exercises in composition and conversation. Prerequisite: Ita 102.
- ITA 301, 302. MASTERPIECES OF ITALIAN LITERATURE THREE CREDIT HOURS, EACH TERM
 Major works from Dante to D'Annunzio, presented in literary-historical perspective. Prerequisite: Ita 202 or permission of the Department. *1971-1972*

*Four credit hour proposal presently under study.

ITA 307. ADVANCED ITALIAN COMPOSITION AND CONVERSATION THREE CREDIT HOURS
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. 1972-1973

ITA 308. ADVANCED ITALIAN COMPOSITION AND CONVERSATION II THREE CREDIT HOURS
Continuation of Ita 307. 1972-1973

Latin (LAT)

LAT 101, 102. ELEMENTARY LATIN I, II THREE* CREDIT HOURS, EACH TERM
A college course in Latin fundamentals.

LAT 201, 202. INTERMEDIATE LATIN I, II THREE CREDIT HOURS, EACH TERM
Second year course in Latin. Readings from classical authors of the pre-Christian periods. Prerequisite: Lat 102.

LAT 301. LATIN COMPOSITION AND CONVERSATION THREE CREDIT HOURS
This course aims to give an intensive review of inflections and syntax with emphasis on original style and fluency of expression. *Second Term, Each Year*

LAT 302. INTENSIVE LATIN EIGHT CREDIT HOURS
An intensive course in Latin Composition and Conversation with special emphasis on philosophical and ecclesiastical Latin. Prerequisite: Latin 301. *Summer*

LAT 304. VERGIL THREE CREDIT HOURS
A survey of the work of Vergil, with special attention to the literary art of the *Aeneid* and the nature and development of the Roman epic. *Second Term, Each Year*

LAT 305. MEDIEVAL LATIN THREE CREDIT HOURS
An outline of the main course of Latin literature from 400 A.D. to 1500 A.D., with special attention being given to the classical heritage of the Middle Ages.

LAT 306. HORACE THREE CREDIT HOURS
Readings of selected Odes and Epodes, and the *Ars Poetica* of Horace; a study of his lyric quality, workmanship, and meters. *First Term, Each Year*

LAT 307. READINGS IN LATIN LITERATURE THREE CREDIT HOURS
This course embraces the reading of excerpts from a wide range of Latin authors. *First Term, Each Year*

LAT 309. CICERO THREE CREDIT HOURS
A study of *De Amicitia* and *De Senectute* or other works of Cicero. *Second Term, Each Year*

LAT 310. SELECTED LETTERS OF PLINY THREE CREDIT HOURS
A study of the Latin letter as a literary form. The men and the world of the times of Pliny are revealed by his letters.

LAT 313. OVID THREE CREDIT HOURS
Intensive readings in the *Metamorphoses* with emphasis on the influence of the mythological epic on some of the modern literatures.

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

*Four credit hour proposal presently under study.

- LAT 335. ROMAN SATIRE** THREE CREDIT HOURS
 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.
- LAT 401. ADVANCED LATIN COMPOSITION** THREE CREDIT HOURS
 An intensive course in Latin composition, with special attention to the classical type of Cicero.
- LAT 403. SENECA** THREE CREDIT HOURS
 A study of Seneca's philosophical style and the ethical teaching of Stoicism as revealed in his *Moral Epistles* and *Essays*.
- LAT 405-406-407. PHILOSOPHICAL LATIN** NINE CREDIT HOURS
 Translation of Latin philosophical works. Lat. 405: *Logica et Ontologia*; Lat 406: *Cosmologia et Psychologia*; Lat 407: *Theodicaea et Ethica*.
Summer
- LAT 412. ECCLESIASTICAL LATIN** THREE CREDIT HOURS
 The object of this course is to acquaint students for the priesthood with the Latin of theologians.
Summer
- LAT 413. THE CONFESSIONS OF ST. AUGUSTINE** THREE CREDIT HOURS
 Excerpts are taken from the first Nine Books.
- LAT 414. PATRISTIC LATIN** THREE CREDIT HOURS
 Selections from St. Augustine, Tertullian, St. Cyprian, Lactantius, St. Ambrose, St. Jerome, and other Fathers.

Classics (CLA)

- CLA 201. CLASSICAL GREEK CIVILIZATION** TWO CREDIT HOURS
 An introduction to ancient Greek civilization, concentrating upon important facets of literature, history, art, and archaeology.
- CLA 202. CLASSICAL ROMAN CIVILIZATION** TWO CREDIT HOURS
 An introduction to the civilization of ancient Rome, concentrating upon important facets of literature, history, art, and archaeology.
- CLA 203. CLASSICAL MYTHOLOGY** TWO CREDIT HOURS
 An introduction to the principal cycles of Greek and Roman mythology, with special emphasis on the influence of classical mythology upon the literature and art of the Western World.
- CLA 301. GREEK LITERATURE IN TRANSLATION** THREE CREDIT HOURS
 Development of Greek ideas and ideals in the principal works of Greek literature. Study of various literary genres which have influenced world literature.
- CLA 302. LATIN LITERATURE IN TRANSLATION** THREE CREDIT HOURS
 The Roman contribution to world literature as seen in the principal literary works in the Latin language. Study of the principal literary genres and authors.

Russian (RUS)

- RUS 101, 102. ELEMENTARY RUSSIAN I, II** THREE* CREDIT HOURS, EACH TERM
 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.

*Four credit hour proposal presently under study.

RUS 201, 202. INTERMEDIATE RUSSIAN I, II THREE CREDIT HOURS, EACH TERM
 Review of the essentials of grammar, intensive conversational and comprehension exercises, reading of graded modern and contemporary prose and poetry. Prerequisite: Rus 101-102, or equivalent.

RUS 301, 302. RUSSIAN READING AND CONVERSATION I, II THREE CREDIT HOURS, EACH TERM
 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 303. ADVANCED RUSSIAN GRAMMAR AND COMPOSITION THREE CREDIT HOURS
 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 THREE CREDIT HOURS
 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. Prerequisite: Rus 202 or equivalent. Third term (I), each year.

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)

SPN 101, 102. ELEMENTARY SPANISH I, II THREE* CREDIT HOURS, EACH TERM
 Development of a foundation for understanding, speaking, reading and writing Spanish. Language laboratory required. No prerequisite.

*Four credit hour proposal presently under study.

- SPN 201, 202. INTERMEDIATE SPANISH I, II THREE CREDIT HOURS EACH TERM
Review of the basic principles of the language through composition and conversation, stressing fluency in the use of Spanish. Language laboratory required. Prerequisite: Spn 102 or placement.
- SPN 301, 302. SPANISH LITERATURE I, II THREE CREDIT HOURS EACH TERM
A survey of Spanish literature, with special emphasis on the Golden Age and the modern period. Lectures, discussions and reports on assigned readings.
- SPN 305. SPOKEN SPANISH THREE CREDIT HOURS
Development of fluency in the vocabulary and idioms of the spoken language through discussion of topics related to contemporary living in the Hispanic world. Required of majors and prospective teachers.
- SPN. COMPOSITION AND SYNTAX THREE CREDIT HOURS
Intensive study of the structure of Spanish. Emphasis on correct written Spanish. Required of majors and prospective teachers.
- SPN 309. SPANISH PHONETICS AND DICTION TWO CREDIT HOURS
Description of the sounds of Spanish, rules of pronunciation. Exercises in reading and speaking, phonetic and phonemic transcriptions. Required of all Spanish majors and prospective teachers.
- SPN 313. EXPLICACION DE TEXTOS THREE CREDIT HOURS
Introduction to the methods of analyzing literary texts by observing and doing analyses of Spanish prose and poetry. Elements of Spanish versification. Required of Spanish majors and prospective teachers. Conducted in Spanish.
- SPN 315. SPANISH CIVILIZATION AND CULTURE THREE CREDIT HOURS
Readings and discussions on the historical, social, political and cultural phenomena of Spain. Conducted in Spanish.
- SPN 316. IBERO-AMERICAN CIVILIZATION AND CULTURE THREE CREDIT HOURS
Readings and discussions on the historical, social, political and cultural phenomena of Ibero-America. Conducted in Spanish.
- SPN 317. SPANISH-AMERICAN COLONIAL LITERATURE THREE CREDIT HOURS
A study of the principal authors and works of the colonial period, with emphasis on the prose. Lectures, discussions and reports on assigned readings.
- SPN 318. SPANISH-AMERICAN PROSE THREE CREDIT HOURS
A study of the principal authors and their works of this area. Lectures, discussions and reports on assigned readings.
- SPN 319. SPANISH-AMERICAN POETRY THREE CREDIT HOURS
A survey of the principal poets and their works. Lectures, discussions, analysis and reports on assigned poems.
- SPN 403. MODERN SPANISH DRAMATISTS THREE CREDIT HOURS
A study of the important dramatists from 1830 to the present time. Lectures, discussions and reports on assigned readings.
- SPN 404. DRAMA OF THE GOLDEN AGE THREE CREDIT HOURS
A study of the significance and principal works of the great dramatists of the sixteenth and seventeenth centuries. Lectures, discussions and reports on assigned readings.
- SPN 406. SPANISH NOVELISTS OF THE NINETEENTH CENTURY THREE CREDIT HOURS
A study of the more important works of the principal novelists of this period. Lectures, discussions and reports on assigned readings.

SPN 407, 408. SPANISH LITERATURE OF THE 20TH CENTURY I, II

THREE CREDIT HOURS EACH TERM

A study of the principal Spanish and Spanish-American authors and works of the present century. Lectures, discussions, and reports on assigned readings. Conducted in Spanish.

SPN 418H. INDEPENDENT STUDIES HONORS

ONE TO THREE CREDIT HOURS

An independent research project under the guidance of an instructor. Admission to project and number of credits require approval of chairman.

SPN 450. SPANISH MEDIEVAL LITERATURE

THREE CREDIT HOURS

A survey of Spanish medieval literature from its origin through *La Celestina*. Conducted in Spanish.

SPN 495. SEMINAR SPANISH-AMERICAN LITERATURE

ONE TO THREE CREDIT HOURS

SPN 496. SEMINAR SPANISH LITERATURE

ONE TO THREE CREDIT HOURS

The course content will be chosen at the discretion of the instructor. A selected area of Spanish and Spanish-American literature will be intensively studied. The number of credits to be granted requires approval of the chairman.





Marketing (MKT)

Harry C. Murphy, *Chairman*

Professor: Murphy

Associate Professors: Comer, Densmore, Jain

Assistant Professors: Kline, Royer

Instructor: Metzger

MKT 205. PRINCIPLES OF MARKETING

THREE CREDIT HOURS

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

MKT 310. SALESMANSHIP

THREE CREDIT HOURS

A study of the basic principles underlying all selling and their practical application to specific cases.

MKT 315. RETAIL MERCHANDISING

THREE CREDIT HOURS

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

MKT 318. RETAIL ADVERTISING AND SALES PROMOTION

THREE CREDIT HOURS

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

THREE CREDIT HOURS

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 205.

- MKT 340. INDUSTRIAL MARKETING** **THREE CREDIT HOURS**
 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 205.
- MKT 405. CONSUMER BEHAVIOR** **THREE CREDIT HOURS**
 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** **THREE CREDIT HOURS**
 The structure of the sales organization, determination of sales policies, the selection, training, and motivation of salesmen, the establishing of sales territories and quotas. Prerequisite: Mkt 205.
- MKT 417. RETAIL BUYING AND MERCHANDISING** **THREE CREDIT HOURS**
 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** **THREE CREDIT HOURS**
 Problems of marketing considered as problems of effective communication in such functional areas as advertising, personal selling, packaging, research, display and pricing. Prerequisite: Mkt 205.
- MKT 421. ADVERTISING** **THREE CREDIT HOURS**
 Nature and functions of advertising; the preparation of layouts; the writing of copy; selection and evaluation of media. The coordination of advertising with other marketing efforts. Social implications of advertising are discussed.
- MKT 430. MARKETING RESEARCH** **THREE CREDIT HOURS**
 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 205.
- 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 205. Enrollment limited.
- 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, Gantner, McCloskey, Mushenheim, Peterson, Rice, Stander, Steinlage

Assistant Professors: Friel, Gorton, Kauflin, Neuendorf, Potoczny, Shaughnessy

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 129 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 FOUR 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 FOUR 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 | 7. Game theory |
| 2. Applied mathematics | 8. General topology |
| 3. Complex variables | 9. Normed linear spaces |
| 4. Differential forms | 10. Probability theory |
| 5. Functional analysis | 11. Real variables |
| 6. Galois theory | 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 107. FUNDAMENTALS OF MATHEMATICS THREE CREDIT HOURS
Sets, functions and graphs, exponents and logarithms, polynomials and algebraic equations, systems of equations. Prerequisite: High school algebra and geometry.

MTH 111. MATHEMATICS AND ITS CULTURAL ASPECTS THREE CREDIT HOURS
Historical development of mathematics, the axiomatic approach, various mathematical systems, applications. Prerequisite: High school algebra and geometry.

MTH 112-113. INTRODUCTORY CALCULUS I & II 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 207. STATISTICAL METHODS FOR THE BEHAVIORAL SCIENCES **THREE CREDIT HOURS**
 Measures of central tendency and variability, frequency distributions, probability, the binomial distribution, normal distribution, inferences from sample means, curve fitting, correlation, analysis of variance. Prerequisite: two years of high school algebra.

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**
 Linear differential equations with constant or variable coefficients, numerical methods. Existence theorems. First order equations. Applications. Corequisite: Mth 218 or Mth 228.

- 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** **THREE CREDIT HOURS**
Fundamental concepts of vector spaces, systems of linear equations, determinants, linear transformations and matrices. Corequisite: Mth 218 or Mth 228.
- MTH 367. STATISTICAL METHODS I** **THREE CREDIT HOURS**
Probability distributions including the binomial, hyper-geometric, Poisson, and normal. Monte Carlo methods, computer simulation, estimation of population mean and standard deviation. Confidence intervals and tests of hypotheses using t-, Chi-square, and F-statistics. Prerequisite: Mth 218 or Mth 228.
- MTH 368. STATISTICAL METHODS II** **THREE CREDIT HOURS**
Distribution free methods including rank tests, sign tests and Kolmogorov-Smirnov test. The method of least squares, correlation, linear regression, analysis of variance. Design of experiments. Reliability and life testing. Prerequisite: Mth 367.
- MTH 370. INTRODUCTION TO HIGHER GEOMETRY** **THREE CREDIT HOURS**
Euclidean, projective, affine, and metric geometries using synthetic and analytic methods. Prerequisite: Mth 218 or Mth 228.
- MTH 390. INTRODUCTION TO THE FOUNDATIONS OF MATHEMATICS** **THREE CREDIT HOURS**
Introduction to mathematical logic and set theory, the history and development of the various schools of mathematical thought. Prerequisite: Mth 218 or 228 and Mth 361.
- MTH 403. APPLIED ANALYSIS I** **THREE CREDIT HOURS**
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** **THREE CREDIT HOURS**
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** **THREE CREDIT HOURS**
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** **THREE CREDIT HOURS**
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** **THREE CREDIT HOURS**
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** **THREE CREDIT HOURS**
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 THREE CREDIT HOURS
 The definite integral, improper integrals, line integrals, multiple integrals, and uniform convergence. Prerequisite: Mth 421. *Second Term, Each Year*
- MTH 455-456. NUMERICAL ANALYSIS SIX CREDIT HOURS
 See Cps 455-456.
- MTH 461. INTRODUCTION TO THE THEORY OF FUNCTIONS OF A COMPLEX VARIABLE THREE CREDIT HOURS
 Fundamental concepts, Cauchy integral theorem, analytic functions, analytic continuation, conformal transformations, the calculus of residues, applications to physics and engineering. Prerequisite: Mth 218 or 228.
- MTH 471. TOPOLOGY THREE CREDIT HOURS
 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.
- MTH 481. MATHEMATICAL LOGIC THREE CREDIT HOURS
 See Cps. 481.
- MTH 482. AUTOMATA THEORY THREE CREDIT HOURS
 See Cps 482. Prerequisite: Mth 481.
- MTH 490. READINGS IN (NAMED AREA) ONE TO THREE CREDIT HOURS
 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.
- MTH 499. JUNIOR-SENIOR SEMINAR ONE TO THREE CREDIT HOURS
 Special lectures and individual readings for majors in their junior and senior years.

Mechanical Engineering (MEE)

Dr. Howard E. Smith, *Chairman*

Professors: Ray, Smith

Associate Professors: Boehman, Chuang, Crouch, Luming, Minardi, Pinson, Thorne
Assistant Professors: Bauer, Bogner, Browne, Davison, Harmer, Schauer, Schmall,
 Wood, Wurst

Instructor: Scott

- MEE 106L. ENGINEERING GRAPHICS I TWO CREDIT HOURS
 Fundamentals of engineering graphics and the part that graphical communication plays in engineering.
- MEE 211. MATERIALS AND PROCESSES TWO CREDIT HOURS
 Crystalline nature of solids, work hardening, mechanical properties of metals, common industrial processes, metal cutting, economics of machining and processing. Prerequisites: Chm 123, Mee 106L, Phy 196; Corequisite: Mee 211L.
- MEE 211L. MATERIALS AND PROCESSES LABORATORY ONE CREDIT HOUR
 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** **TWO CREDIT HOURS**
Kinematic and dynamic analysis of mechanisms and machines; study of machine elements such as linkages, cams, gears, differentials; analog computing mechanisms; balancing; flywheels. Prerequisites: Cps 144, Egm 301; Corequisites: Mee 221L, Mee 301.
- MEE 221L. THEORY OF MACHINES LABORATORY** **TWO CREDIT HOURS**
Laboratory exercises based on the principles covered in Mee 221. Prerequisites: Cps 144, Egm 301; Corequisites: Mee 221, Mee 301.
- MEE 227L. ENGINEERING GRAPHICS II** **ONE CREDIT HOUR**
Training in the analysis and graphical solution of fundamental problems involving three dimensions and the applications of these solutions to the engineering problems. Prerequisite: Mee 106L.
- MEE 301. THERMODYNAMICS I** **THREE CREDIT HOURS**
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** **THREE CREDIT HOURS**
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** **TWO CREDIT HOURS**
Electronic structure, bonding, crystal structure, imperfections in crystals, strengthening mechanisms, phase transformations, equilibrium diagrams, heat treatment, mechanical behavior and corrosion. Prerequisites: Mee 211, or permission of instructor.
- MEE 303L. METALLURGY LABORATORY** **ONE CREDIT HOUR**
Heat treatment, hardness testing, preparation of specimens for metallurgical examinations, use of metallograph, examination of metallic structures, thermal analysis. Co-requisite: Mee 303.
- MEE 304. THEORY OF ENGINEERING EXPERIMENTATION** **ONE CREDIT HOUR**
Design of experimentation; instrumentation theory; statistical analysis of data. Prerequisite: Mth 218.
- MEE 305L. MECHANICAL ENGINEERING LABORATORY I** **ONE CREDIT HOUR**
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** **THREE CREDIT HOURS**
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 312L. MECHANICAL ENGINEERING LABORATORY II** **ONE CREDIT HOUR**
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: Mee 305L.
- MEE 316. MECHANICAL ENGINEERING ANALYSIS** **THREE CREDIT HOURS**
Mathematical modeling and simulation of engineering systems. Solutions and evaluation by digital and analog methods. Prerequisite: Mth 219.
- MEE 319. MECHANICAL VIBRATIONS** **THREE CREDIT HOURS**
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, Mee 316.

MEE 320. THERMAL ENGINEERING I TWO CREDIT HOURS
 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.

MEE 321. THEORY OF MACHINES TWO CREDIT HOURS
 Kinematic and dynamic analysis of mechanisms and machines; study of machine elements such as linkages, cams, gears, differentials; analog computing mechanisms; balancing; flywheels. Prerequisites: Cps 144, Egm 301; Corequisites: Mee 301, Mee 321L.

MEE 321L. THEORY OF MACHINES LABORATORY ONE CREDIT HOUR
 Laboratory exercises based on the principles covered in Mee 321. Prerequisites: Cps 144, Egm 301; Corequisites: Mee 301, Mee 321.

MEE 330. ENGINEERING ECONOMICS ONE CREDIT HOUR
 Basic techniques of cost analysis applied to the economic selection of engineering systems. Prerequisite: Mth 218.

MEE 341L. INSTRUMENTATION LABORATORY ONE CREDIT HOUR
 Measurements of basic engineering properties: pressure, speed, frequency, flow rate, torque, power, stress and strain. Prerequisites: Egm 303, Mee 302, Mee 304.

MEE 402. ENERGY CONVERSION SYSTEMS THREE CREDIT HOURS
 Introduction to direct energy conversion systems; advanced steam power plants; fossil and nuclear fuels; power reactors; aviation and industrial gas turbines; total energy concept; thermoelectric cooling. Prerequisite: Mee 302; Corequisite: Mee 410.

MEE 407. MACHINE DESIGN I TWO CREDIT HOURS
 Development of mathematical equations for analysis and design of static and dynamic machine members. Prerequisites: Egm 304, Mee 221 or Mee 321; Corequisite: Mee 407L.

MEE 407L. MACHINE DESIGN LABORATORY I ONE CREDIT HOUR
 Problems involving the application of principles covered in Mee 407. Solution of complex problems involving statics, dynamics and strength of materials to develop engineering judgment. Corequisite: Mee 407.

MEE 408. MECHANICAL DESIGN II TWO CREDIT HOURS
 Advanced topics in stress analysis and deflection analysis, introduction to optimization of mechanical designs. Prerequisite: Mee 407 or Mee 427; Corequisite: Mee 408L.

MEE 408L. MECHANICAL DESIGN LABORATORY II ONE CREDIT HOUR
 Design projects related to the principles covered in Mee 407 or Mee 427 and Mee 408, encompassing all aspects of a typical design project, from the development of a proposal to the evaluation of the design. Corequisite: Mee 408.

MEE 410. HEAT TRANSFER THREE CREDIT HOURS
 Laws of conduction, radiation and convection; heat transfer to boiling liquids and condensing vapors; steady state and variable flow heat transfer. Prerequisites: Mee 308, Mee 316.

MEE 414A. SEMINAR ONE CREDIT HOUR
 Presentation of papers by students and lectures by engineers in active practice. Registration required by all students in their last term prior to graduation.

MEE 414B. SEMINAR ZERO CREDIT HOURS
 Presentation of papers by the students and lectures by engineers in active practice. Registration required by all junior and senior students not registered in Mee 414A.

- 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. Prerequisite: Mee 301, or permission of instructor.
- 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 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.
- 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, fuel cells, solar cells, thermoelectric and thermionic power generators. Prerequisites: Mee 305L or Mee 341L; Corequisite: Mee 410.
- 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, or Mee 341L, Mee 410, Mee 418.
- MEE 427. MECHANICAL DESIGN I** **THREE CREDIT HOURS**
 Stress and deflection analysis of machine components, analysis and design of mechanical elements such as gears, bearings, springs, fasteners, and friction devices. Prerequisite: Mee 321; Corequisites: Mee 303, Mee 427L.
- MEE 427L. MECHANICAL DESIGN LABORATORY I** **ONE CREDIT HOUR**
 Design projects involving the application of principles covered in Mee 427. Solution of complex problems with emphasis on synthesis and creative design of mechanical systems. Corequisite: Mee 427.
- MEE 428. MECHANICAL DESIGN II** **THREE CREDIT HOURS**
 Advanced topics in stress analysis and deflection analysis, introduction to optimization of mechanical designs. Prerequisite: Mee 427; Corequisite: Mee 428L.
- MEE 428L. MECHANICAL DESIGN LABORATORY II** **ONE CREDIT HOUR**
 Design projects related to the principles covered in Mee 427 and Mee 428, encompassing all aspects of a typical design project, from the development of a proposal to the evaluation of the design. Corequisite: Mee 428.
- 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.
- MEE 435. FEEDBACK CONTROL SYSTEMS** **THREE CREDIT HOURS**
 Introduction to analysis and design of automatic control systems. Component analysis. Time domain analysis and frequency domain analysis. Stability of complex feedback control systems. Prerequisite: Mee 316.
- MEE 436. VEHICLE PERFORMANCE ANALYSIS** **THREE CREDIT HOURS**
 Ground, air, water, space vehicles. Development of force, moment, kinematic, weight equations. Advanced applications including stability, control, performance evaluations for selected vehicles. Analytical modeling techniques. Prerequisite: Mth 218.

MEE 450L. MECHANICAL ENGINEERING LABORATORY PROJECT ONE CREDIT HOUR
 Laboratory projects in thermal sciences. Individual or group projects to be arranged by instructor. Prerequisite: Mee 424L.

MEE 499. SPECIAL PROBLEMS IN MECHANICAL ENGINEERING ONE TO SIX CREDIT HOURS
 Particular assignments to be arranged and approved by Chairman of the Department.

Medical Technology (MET)

- Dr. R. C. Lachapelle, *University Advisor*
- Dr. W. Abramson, *Director (St. Elizabeth Hospital)*
- Dr. R. Van der Hoeven, *Director (Good Samaritan Hospital)*
- Dr. J. W. Funkhouser, *Director (Miami Valley Hospital)*
- Dr. R. H. Seasley, *Director (Kettering Memorial Hospital)*

The courses taken at the University of Dayton are listed under Program S-8. See individual departments for descriptions. The senior year in Medical Technology is done at St. Elizabeth Hospital, Good Samaritan Hospital, Miami Valley Hospital or Kettering Memorial Hospital. The courses are conducted by the respective hospital faculties.

MET 380. MEDICAL TECHNOLOGY SEMINAR ONE CREDIT HOUR
 Discussion to relate academic courses and clinical laboratory sciences. Prerequisite: Junior standing.

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

NO CREDIT

The student familiarizes himself with the ordering of supplies, office procedures, and with basal metabolism techniques.

MET 490. NORMAL PATHOLOGIC PHYSIOLOGY

NO CREDIT

A series of lectures stressing the correlation of theory and practical laboratory testing as it relates to disease states.

Military Science (MIL)LTC Edward H. Effertz, *Chairman**Professor: Effertz**Assistant Professors: Brown, Fawcett, MacLellan, Devlin, August, Hall, Michitsch*

Students desiring to obtain a commission as an officer in the United States Army are required to successfully complete four years of Military Science and be awarded a Bachelor's Degree from the University.

MIL 101-102. FUNDAMENTALS OF LEADERSHIP AND MANAGEMENT TWO CREDIT HOURS

Study of the fundamentals and the development of leadership using practical exercises and evaluations. Fundamentals of land navigation. An evaluation of the military as a profession, and its role in the national picture.

MIL 201-202. APPLIED LEADERSHIP AND MANAGEMENT TWO CREDIT HOURS

Case studies in leadership and management. Delegation of authority and responsibility, span of control, decision making. Analysis of the leader's role in directing, and coordinating the efforts of individuals and small units. Military geography and the use of maps and aerial photographs. Military History—a study of military history viewed toward an analysis of military leaders and their use of the principles of war.

MIL 301-302. ADVANCED LEADERSHIP AND MANAGEMENT FOUR CREDIT HOURS

Development of the student's ability to express himself clearly and accurately with emphasis on analysis of military problems, the evaluation of situations, and preparation and delivery of logical solutions. Analysis of the leader's role in directing and coordinating the efforts of individuals and small units in the execution of offensive and defensive tactical missions, to include military geography, weapons systems, communication systems, intelligence gathering capabilities, and role of the various branches of the Army. Development of basic methods of instruction.

MIL 401-402. THEORY AND DYNAMICS OF THE MILITARY TEAM FOUR CREDIT HOURS

Study of combat operations and the various military teams to include military geography; the coordination and planning necessary between the elements of the team.

SEMINAR IN LEADERSHIP AND MANAGEMENT

Analysis of selected leadership and management problems involved in unit administration, military justice, and the Army Readiness Program. The position of the United States in the contemporary world scene discussed in the light of its impact on leadership and management problems of the military services. Application of leadership principles, stressing responsibilities of the leader and affording experience through practical exercises. Obligations and responsibilities of an officer on active duty; chain of command; officer-enlisted relationships.

Performing and Visual Arts (PVA)

Patrick S. Gilvary, *Chairman*

Part-time Instructors: Knox T. Guthrie

PHO 101. BASIC PHOTOGRAPHY **THREE CREDIT HOURS**

An introduction to the art and technique of photography. Photographic design, shooting, processing and printing. Limited cameras available. Suggest personal cameras. Three hours, plus arranged lab time. Studio fee \$20.00

PHO 201. INTERMEDIATE PHOTOGRAPHY **THREE CREDIT HOURS**

Continuation of Pho 101. Includes lighting, filters, portraiture, spotting. Prerequisite: 101 and/or permission. Three hours, plus arranged lab time. Studio fee \$20.00.

PHO 301. ADVANCED BLACK AND WHITE PHOTOGRAPHY **THREE CREDIT HOURS**

Photographic work in advanced areas of black and white photography. Individual practices in basic optics, sensitometry, densitometry, and specialized processes. Prerequisite: Photography 202. Studio fee \$20.00.

PHO 401. COMMERCIAL AND ILLUSTRATIVE PHOTOGRAPHY **THREE CREDIT HOURS**

Photographic work in commercial, industrial, architectural, and illustrative both in the studio and on location. Individual practices in solving problems associated with professional photography. Prerequisite: Photography 301. Studio fee \$20.00.

PHO 402. COLOR PHOTOGRAPHY **THREE CREDIT HOURS**

In introduction to the theory and techniques of color transparency, color negative, and color printing. Individual practices in the areas of lighting, color emulsions, filtration, and corrections. Prerequisite: Photography 301. Studio fee \$20.00.

Fine Arts (ART)

Dr. Bernard E. Plogman, *Division Head*

Associate Professor: Plogman

Assistant Professors: Barrish, Weber

Instructors: Fiehler, Richardson, Zahner

Part-time Instructors: Black, Driesbach, Hitt, Lamden, Montgomery, Petrovich, Smith

The Fine Arts³ Division offers three deegreed 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 103-104 Introductory Drawing, and Art 111-112 Principles of Design before taking intermediate and advanced courses.

Students entering deegreed programs are required to present an art portfolio of at least five pieces of work. Transfer students entering a BFA program must 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. FUNDAMENTALS AND MATERIALS OF ART **FOUR CREDIT HOURS**
 This course is designed to acquaint beginners with the principles and concepts of art and with the various kinds of materials and techniques used in artistic expression.

ART 103-104. INTRODUCTORY DRAWING **FOUR CREDIT HOURS**
 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 **FOUR CREDIT HOURS**
 A study of the underlying elements and principles of design as they are applied to surface pattern. Color theories and their use in creative design are a part of the course. One two-hour course each week. Prerequisite for Art 112 is Art 111 or permission.

ART 181. ENJOYMENT OF ART **THREE CREDIT HOURS**
 The course is designed to develop in the student a greater capacity to enjoy as well as understand contemporary art expression. Major emphasis will be given to understanding the creative process, and investigating the artist's point of view as well as his relationship to his audience. The course is open to students from all disciplines. One three-hour course each week.

ART 191-192. LETTERING AND CALLIGRAPHY **FOUR CREDIT HOURS**
 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. Prerequisite for Art 192 is Art 191 or permission.

ART 208-209. INTERMEDIATE DRAWING **FOUR CREDIT HOURS**
 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. Prerequisite for Art 209 is Art 208 or permission.

ART 217-218. THREE DIMENSIONAL DESIGN **FOUR CREDIT HOURS**
 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 103-104 Introductory Drawing and Art 111-112 Principles of Design are prerequisites for this course.

ART 226-227. INTRODUCTORY PAINTING **FOUR CREDIT HOURS**
 Painting in oil and water color from still life, landscape and floral subjects. Emphasis is placed on composition and application of art theories. Use of imaginative subject matter will also be encouraged. One two-hour course each week. Prerequisite for Art 227 is Art 226 or permission.

ART 228-229. WATERCOLOR. **FOUR CREDIT HOURS**
 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 103-104 Drawing, Art 111-112 Design, and Art 226-227 Introductory Painting. *One two-hour course each week*

ART 231-232. SCULPTURE ***FOUR CREDIT HOURS**
 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. Prerequisite for Art 232 is Art 231 or permission.

ART 251. GRAPHICS ARTS *TWO CREDIT HOURS
Basic principles of relief printing as applied to the lino cut and the woodcut are treated. Registration, the use of color and the aesthetics of the relief print are explored. Discussion on printing papers, inks, proper matting procedures and new relief techniques are encouraged. One two-hour course each week.

ART 252. GRAPHICS ARTS *TWO CREDIT HOURS
The intaglio printing process as it is applied to acid etching is studied. Exercises in the use of hard and soft ground etching, the art of the aquatint are presented. Emphasis is placed on working procedures, the use of the intaglio press, choice of paper and inks and proper presentation of the completed print. One two-hour course each.

ART 261. INTRODUCTORY COPPER ENAMELING *TWO CREDIT HOURS
Basic principles and techniques of enameling on copper are studied. The student works out original enamel pieces. The course requirements are Introductory Drawing 103 and 104, also Principles of Design 111 and 112.

ART 281. PRACTICAL ARTS—PRIMARY GRADES *TWO CREDIT HOURS
An exploration of materials, media and techniques. Major emphasis being placed on experimentation and development of the students own creative potential and its relationship to teaching art at the primary level. Required for all primary school teachers. Prerequisite: Art 101-102.

ART 282. PRACTICAL ARTS—INTERMEDIATE GRADES *TWO CREDIT HOURS
Same as Art 281, with emphasis on the students creative development as related to teaching art in the intermediate grades. Required of all intermediate elementary school teachers. Prerequisite: Art 101-102.

ART 301. CHRISTIAN ART TWO CREDIT HOURS
A study of the best examples of sacred art as representative expositions of Christian theology and religious tradition; correlations with Church history, theology, music, literature. Open to all University students.

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. Prerequisite for Art 304 is Art 303.

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 *FOUR 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 363. JEWELRY CASTING *TWO CREDIT HOURS
Student explores such new processes as cloisonne, champleve, basse-taille, and plique-à-jour in depth. Prerequisite: Art 103-104-111-112, 261.

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. Open to all University students.

ART 372. RENAISSANCE ART THREE CREDIT HOURS
A continuation of Art 371 beginning with the Renaissance and continuing through the Baroque and Rococo periods. Open to all University students.

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 463. ADVANCED SILVER CASTING *TWO CREDIT HOURS
Small sculptures are modeled in wax and cast. Jewelry pieces can likewise be made; however in either area special emphasis is placed on the sculpture content of the pieces.
Second Term

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. Open to all University students.

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. Open to all University students.

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. Prerequisite: Art 101-102.

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, art 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. *Summer*

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. *Summer*

ART 490. INDIVIDUAL STUDIES **TWO TO SIX CREDIT HOURS**
 A course reserved for art students devoted to advanced individual work in the following designated art fields: 490D-Drawing, 490E-Enameling, 490G-Graphics, 490H-Art History, 490J-Jewelry, 490L-Lettering and Calligraphy, 490N-Design, 490P-Painting, 490S-Sculpture, 490Z-General Fine Art. Approval based upon academic standing and instructor-Division Head permission. Repeatable up to 15 hours.

*Studio fee \$15.00

Music (MUS)

Lawrence E. Tagg, *Division Head*

Professors: Berk, Reichard

Associate Professors: Tagg, Zech

Assistant Professors: Faust, Ritter

Instructors: Baxter, Carlson, Minton

Part-time Instructors: Schneider, Wiggenhorn

Special Applied Music Instructors: Cavally, J., Cavally, R, Drew, Durst, Hinkle, Mangan, Pepitone, Reger

Students intending to major in music must have an audition preliminary to program placement. Inquire at the Music Division concerning details.

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. Open to all university students.

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. Open to all university students.

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 only. 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 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 FOUR CREDIT HOURS
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. Open to all university students with permission of the instructor.

MUS 251. SECOND YEAR THEORY FOUR CREDIT HOURS
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.
First Term, Each Year

MUS 262. MUSICAL FORM TWO CREDIT HOURS
A study of the structural designs used in musical composition; a study of all polyphonic, homophonic, and the larger forms. Prerequisite: Mus 251.
Second Term, Each Year

MUS 272. KEYBOARD HARMONY TWO CREDIT HOURS
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.
Second Term, Each Year

MUS 296. APPLIED MUSIC—CLASS PIANO I ONE CREDIT HOUR
Beginners in piano are assigned to Class Piano. Open to all university students.

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 THREE CREDIT HOURS
The development of Western music to 1750. The relationship of music to the other arts and to broad movements in society and civilization. Open to any university student with junior or senior standing.
First Term, Each Year

MUS 302. HISTORY OF MUSIC II THREE CREDIT HOURS
The development of Western music from 1750 to the early twentieth century. The relationship of music to social and cultural movements. Open to any university student with junior or senior standing.
Second Term, Each Year

MUS 304. HISTORY OF AMERICAN MUSIC THREE CREDIT HOURS
Development of music in America dating from its early psalmody of the 17th century to its present day forms and styles. Open to all university students.

MUS 305. CONTEMPORARY TRENDS IN AMERICAN MUSIC THREE CREDIT HOURS
Survey of the contemporary American composers and their styles. The relationship of American music to the other arts. Open to all university students.

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. For music majors only.

- MUS 310. INTRODUCTION TO CONTEMPORARY MUSIC** TWO CREDIT HOURS
A survey of twentieth century music. Its relation to the other arts and to society. Mixed media performances, improvisation, electronic music and rock music will be included. For non-music majors only.
- 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 321. INSTRUMENTAL CONDUCTING** TWO CREDIT HOURS
Techniques of conducting instrumental music in orchestra, band and other ensembles. Practical experience with campus instrumental groups. Prerequisite: Junior standing in music and permission of the instructor. *First Term, Each Year*
- 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 324. GUITAR FOR THE CLASSROOM TEACHER** ONE CREDIT HOUR
Practical application of the guitar as a tool for music teaching in elementary and junior high school classes. Supplements or replaces use of piano in classroom teaching. Prerequisite: Music 101 or equivalent.
- MUS 325. STRINGED INSTRUMENTS I** TWO CREDIT HOURS
Class instruction in violin, viola, cello, bass. Teaching stringed instruments in the schools. Open to any qualified university students. Prerequisite: Ability to read music and permission of the instructor. *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. Open to any qualified university student. Prerequisite: Ability to read music and permission of the instructor. *Second Term, Each Year*
- MUS 327. BRASS INSTRUMENTS** ONE CREDIT HOUR
Class instruction in brass instruments. Teaching of brass instruments in the schools. Open to any qualified university student. Prerequisite: Ability to read music and permission of the instructor. *First Term, Each Year*
- MUS 328. PERCUSSION INSTRUMENTS** ONE CREDIT HOUR
Class instruction in percussion instruments. Teaching of percussion instruments in the school. Open to any qualified university student. Prerequisite: Ability to read music and permission of the instructor. *Second Term, Each Year*
- MUS 329. STRINGED INSTRUMENTS II** TWO CREDIT HOURS
Continuation of Stringed Instruments I to further skills in teaching and performance. Concentration on one instrument. Prerequisite: Music 325 or equivalent. Permission of the instructor.
- MUS 331. VOCAL MUSIC IN THE HIGH SCHOOL** TWO CREDIT HOURS
Methods and materials for large and small 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 351. CHORAL CONDUCTING TWO CREDIT HOURS
Development of conducting skills, with concentration on choral techniques. Practical experience with campus choral ensembles. Prerequisite: Junior standing in music and permission of the instructor.
- 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.
- MUS 371. PIANO LITERATURE I TWO CREDIT HOURS
A comprehensive survey of literature for the piano from the early keyboard music to the Romantic period. Required of piano majors. Prerequisite: Permission of the instructor.
- MUS 372. PIANO LITERATURE II TWO CREDIT HOURS
Continuation of a comprehensive survey of literature of keyboard music from the Romantic period to the present day. Required of piano majors. Prerequisite: Permission of the instructor.
- MUS 399. APPLIED MUSIC TWO CREDIT HOURS
Private instruction in piano, voice, organ, violin, viola, cello, bass, flute, oboe, clarinet, bassoon, saxophone, trumpet-cornet, french horn, trombone, baritone, tuba, percussion, guitar.
- MUS 411-412. MUSICAL COMPOSITION FOUR CREDIT HOURS
Prerequisites: Mus 152 or equivalent; 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 417-18. SIXTEENTH CENTURY COUNTERPOINT FOUR CREDIT HOURS
A study of the medieval modes and the vocal polyphony of the motet and the Mass, up to and including five-part writing; 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 ensembles; 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 Music Division. Prerequisite: Senior standing in Music or in Music Education. Approval of instructor.

MUS 429. MARCHING BAND TECHNIQUES **TWO CREDIT HOURS**
 Materials and methods of organization and instruction for the Marching Band.
 Prerequisite: Participation in the Marching Band. *First Term, Each Year*

MUS 431-432. PROBLEMS IN VOCAL MUSIC **FOUR CREDIT HOURS**
 Practical experience in a vocal or choral project approved by the Music Division.
 Prerequisite: Senior standing in Music or in Music Education; approval of the instructor.

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 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

In order to register for credit toward a major in Applied Music, students must have studied preparatory material which is the equivalent of that contained in Ohio Music Education Association contest lists.

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; Pischna; 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.

APPLIED MUSIC FEES:

- Mus 296 to 299 Class PianoTerm Fee \$10.00
- Mus 399 Piano, Organ, Voice, Strings, Reed, Woodwind or Brass InstrumentsTerm Fee \$40.00
- Mus. 499 Four-credit hour courses for Applied Music MajorsTerm Fee \$80.00

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.

ENSEMBLES

- Orchestra* (Dayton Philharmonic Youth Orchestra)
- Band* (Marching Band, Concert Band)
- Choir* (Mixed Chorus)
- Small Ensembles* (String, Woodwind, Brass, Vocal)

Ensembles are open to all students by audition. One-half credit per term may be granted if the student completes a music course on his degree program, and if he satisfies ensemble attendance requirements. Students do not register for ensemble and no grades are given. Candidates for music degrees must participate in at least one ensemble each term. The total requirement is determined by the degree and/or Ohio requirements for teacher-certification.

Theater (THR)

- Lawrence Selka, *Division Head*
- Associate Professor:* Gilvary
- Assistant Professor:* Selka
- Instructors:* Pedretti, Siegfried
- Part-time Instructor:* Schwarz

THR 100. THEATRE LABORATORY **THREE CREDIT HOURS**
 Credit allowance for role playing and/or play production in major productions. Fifty hours of work minimum for one credit. Repeatable up to three credits in the Freshman-Sophomore year. All registration retroactive. No advance registration. Required of all majors.

THR 105. INTRODUCTION TO THE THEATRE **THREE CREDIT HOURS**
 Analyzes the nature of theatre, its origin and development, from the standpoint of the play, the physical theatre, and its place in our culture. Open to all University students. Requisite of all majors.

THR 202. STAGE MAKEUP **TWO CREDIT HOURS**
 To acquaint the student with the basic principles of the art and technique of makeup so that he may use them creatively in design and execution thereby assisting him to develop and project the character. Open to all university students. *First Semester, Each Year*

THR 205. THEATRE STAGECRAFT **THREE CREDIT HOURS**
 Study and application of scene construction, rigging, backstage organization, production analysis and technician-designer relationship. Required of all theatre majors. Open to all university students. Studio fee \$15.00. *First Term, Each Year*

THR 207. LIGHTING FOR THE STAGE **THREE CREDIT HOURS**
 Study and application of the basics of designing the lighting for the stage. Covers instruments, control, sources, elements of electricity and lighting design. Studio fee \$15.00.

THR 210. ACTING I **THREE CREDIT HOURS**
 Affords study and practice in the fundamentals of acting, with stress upon the physical, mental, and emotional background of characterization. Prerequisite: 105 or permission. Open to all University students. Required of all Theatre majors. Corequisite: Thr 211.

THR 211. THEATRICAL MOVEMENT I **TWO CREDIT HOURS**
 A laboratory corequisite with Acting I concentrating on the development of physical strength, balance, flexibility, and coordination to awaken the student's sensitivity to body language and widen his vocabulary of movement. Required of all Theatre majors.

- THR 220. SELECTED READINGS IN THEATRE** ONE-THREE CREDIT HOURS
An introduction to the vast bibliography in the theatre by means of pre-selected topics for in-depth investigation. A different topic each term. One credit, repeatable up to three credits. Prerequisite: Thr 105 or permission.
- THR 300. THEATRE LABORATORY** ONE-THREE CREDIT HOURS
The third and fourth year level of credit allowance for role playing and/or play production. Requirements and registration same at Theatre 100.
- THR 304. THEATRE PRODUCTION WORKSHOP** 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 with full stage and shop facilities.
- THR 323. ACTING II** THREE CREDIT HOURS
A further development and practice of fundamental principles set down in the elementary course in acting, Thr 210. Emphasis is placed on more specialized character portrayal. Prerequisite: Thr 105, Thr 210-211 or with permission.
- THR 324. THEATRICAL MOVEMENT II** TWO CREDIT HOURS
A laboratory corequisite with Acting II concentrating on the development of physical strength, balance, flexibility, and coordination to awaken the student's sensitivity to body language and widen his vocabulary of movement. Required of all Theatre majors.
- THR 325. THEORY AND CRITICISM ON THE STAGE I** THREE CREDIT HOURS
Survey of representative plays as a basis for theatrical production and dramatic criticism for the classical to neo-classical periods. Required of theatre majors. Prerequisite: Thr 105.
First Term, Each Year
- THR 326. THEORY AND CRITICISM ON THE STAGE II** THREE CREDIT HOURS
Continuation of Thr 325 from Romantic to modern periods. Required of theatre majors. Prerequisite: Thr 105.
Second Term, Each Year
- THR 330. CONCEPTS IN STAGE DESIGN** THREE CREDIT HOURS
Studies in the principles of design; selection of elements, scale and proportion. Use of the design imagination through assignments in various styles and periods. Required for all theatre majors. Prerequisite: Thr 205.
Second Term, Each Year
- THR 340. THE DIRECTOR IN THE THEATRE** THREE CREDIT HOURS
A study of the evolution of director in theatrical history and a study of the modern director's scope. Some lab directing included. Required for all majors. Prerequisite: Thr 105, 205, 210-211.
First Term, Each Year
- THR 350. THEATRE STYLES** THREE CREDIT HOURS
An examination of the relationships between playwright, audience, actor, designer, and director in the development of major theatre styles of expression.
First Term, Each Year and Summer Term, Every Other Year
- THR 414. DESIGNING FOR THE STAGE** THREE CREDIT HOURS
Individual development through advanced research and study in stage design. Design and implementation of a major production in scale or full dimension. Prerequisite: Thr 205, 207, 330 or permission.
Second Term, Every Other Year
- THR 415. HISTORY OF THE THEATRE I** THREE CREDIT HOURS
A history of Theatre from Pre-Grecian through Elizabethan, with emphasis on the physical theatre as a reflection of and an influence on man utilizing pictorial and literary evidence. Required of all Theatre majors. Open to all University students.

THR 424. PLAY DIRECTING **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. Prerequisite: Thr 340.

THR 425. HISTORY OF THEATRE II **THREE CREDIT HOURS**
A continuance of Thr 415 from French Renaissance to present day. Required of all Theatre majors. Open to all University students.

THR 440. PROBLEMS IN THEATRE PRODUCTION AND DESIGN **THREE CREDIT HOURS**
Individual research and project work of the student's selection under the direct supervision of faculty. Innovation and creativeness will be emphasized. Prerequisite: Thr 205, 207, 330, 414 or permission. *Second Term, Every Other Year*

THR 485. THEATRE SEMINAR **THREE CREDIT HOURS**
Concentration on one theatrical figure, genre, or period for research and analysis. Alternative requirement with Thr 490 for all theatre majors. Second semester every other year. Repeatable up to six credits.

THR 490. SPECIAL PROBLEMS IN THEATRE **THREE-FIVE CREDIT HOURS**
Individual research and report on a topic of the student's choice in the field of theatre under direct supervision of faculty/staff. Alternative requirement with Thr 485 for all majors. Repeatable up to 15 credit hours.

Participation in each major production is required of all theatre majors for the Bachelor's Degree. Credit for participation is received in Thr 100 and Thr 300.

Philosophy (PHL)

Dr. Richard R. Baker, *Chairman*

Professors: Baker, Dieska

Associate Professors: Cartagena, Monasterio, Nersoyan, Rhodes

Assistant Professors: Boemer, Chrisman, Dombro, Edelenyi, Greene, Herbenick, Kunkel, Opalek, Quinn, Richards, Rinderly, Thompson, Tibbetts, Ulrich, Wening

Courses required for a major: Phl 101, 201 plus 24 semester hours of upper division courses. A minimum of 15 semester hours must be on the 400 level.

Courses required for a minor: Phl 101, 201 plus 12 semester hours of upper division courses. A minimum of 6 semester hours must be on the 400 level.

Students should consult the chairman concerning electives.

PHL 101. BASIC PROBLEMS IN PHILOSOPHY I **THREE CREDIT HOURS**
An introduction to the problem of the nature of philosophic inquiry, the problem of man, the problem of morality, and to such problems in politics, aesthetics, education, etc., as chosen by the instructor.

PHL 201. BASIC PROBLEMS IN PHILOSOPHY II **THREE CREDIT HOURS**
An introduction to the problem of knowledge, the problem of being, and the problem of God.

- PHL 301. LOGIC THREE CREDIT HOURS
 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.
- PHL 303. PHILOSOPHY OF NATURE THREE CREDIT HOURS
 An examination of the mythical, philosophical, and scientific claims about the structure and origin of the universe, with an orientation towards defining an ecological view and ecological policies.
- PHL 304. PHILOSOPHY OF MAN THREE CREDIT HOURS
 An examination of the nature of life in general; the relationship of man to the world; human interactions; the dignity and destiny of man.
- PHL 306. PHILOSOPHY OF KNOWLEDGE THREE CREDIT HOURS
 A critical examination of the validity of sensory and intellectual knowledge; the problem of the sources of knowledge as approached by skepticism, idealism, realism, empiricism, and relativism; the possibility of attaining truth.
- PHL 308. PHILOSOPHY OF BEING THREE CREDIT HOURS
 A study of the historical positions on the problem of reality and appearance; the nature of ultimate reality; the possibility of metaphysical judgments.
- PHL 311. PHILOSOPHY OF RELIGION THREE CREDIT HOURS
 An analysis of the main issues involved in religious belief and practice, such as the relationship between reason and revelation. A critical presentation of the views of the main writers in the field.
- PHL 312. ETHICS THREE CREDIT HOURS
 A systematic examination of the various types of moral and ethical theory in the Western tradition and of the major problems involved; the extent of human responsibility; the conditions for making ethical judgments.
- PHL 313. BUSINESS ETHICS THREE CREDIT HOURS
 A case study analysis of the ethical relationships between the firm and its employees, consumers, competitors, and the local community.
- PHL 314. PHILOSOPHY OF LAW THREE CREDIT HOURS
 Nature of law; natural and positive law; implications and juridical origin and effect of law; justice; genetic origin of law.
- PHL 315. MEDICAL ETHICS THREE CREDIT HOURS
 An introduction to morality in general and an inquiry into the major moral problems of medical practice. Discussion centers around human life and the preservation of its integrity.
- PHL 317. HISTORY OF POLITICAL THEORY 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. Same as Pol 418.
- PHL 320. PHILOSOPHY OF ART THREE CREDIT HOURS
 An examination of the principles and applications of art expressed by philosophers, artists, and critics. It is intended to develop in the student the skills of appreciation and evaluation of art and to give him an opportunity to work in different art media.

- PHL 321. COMPARATIVE THEORIES OF CREATIVITY** **THREE CREDIT HOURS**
An exploration of the historical development of aesthetics. Such topics as the origin of art, the creative artist, the role of the viewer, and the cultural context of artistic productivity will be discussed.
- PHL 323. PHILOSOPHY OF LITERATURE** **THREE CREDIT HOURS**
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 330. PHILOSOPHY OF SCIENCE** **THREE CREDIT HOURS**
A logical examination of the aims and methods of the physical and behavioral sciences. Topics include: concepts, theories, models, laws, observations, discoveries, experiments, measurements, statistics, and inferences.
- PHL 340. SPECIAL PROBLEMS IN PHILOSOPHY** **THREE CREDIT HOURS**
The objective of this seminar is to gain insight into the perennial and contemporary problems of philosophy. May be repeated when topic varies.
- PHL 350. HISTORY OF GREEK PHILOSOPHY** **THREE CREDIT HOURS**
A survey of the beginnings and later development of philosophical speculation by the Greek philosophers from Thales to Plotinus.
- PHL 351. HISTORY OF MEDIEVAL PHILOSOPHY** **THREE CREDIT HOURS**
A survey of the course of philosophical thought from the Patristic Period to the end of the Scholastic era in the 14th century.
- PHL 352. HISTORY OF MODERN PHILOSOPHY** **THREE CREDIT HOURS**
A consideration of the rise and development of modern philosophic thought from the Renaissance to the 20th century.
- PHL 355. INTRODUCTION TO EASTERN PHILOSOPHY** **THREE CREDIT HOURS**
An introduction to the ways of Asian wisdom, considering the Oriental view of philosophy as a specialized learning directed to the attainment of a higher state of being.
- PHL 391. SPECIAL SEMINAR** **THREE CREDIT HOURS**
This course is applicable to student-initiated group-learning experiences in an area of philosophy which is not covered by specific course offerings. It allows for educational innovation with a philosophical orientation which would be structured by a group of interested students and carried out with a departmental member. Prerequisite: Permission of the Chairman.
- PHL 416. BRITISH EMPIRICISM** **THREE CREDIT HOURS**
A careful analysis of the major writings of Locke, Berkeley, and Hume, with emphasis on their theories of knowledge, ethics, religion, science, and language.
- PHL 420. NINETEENTH CENTURY GERMAN THOUGHT** **THREE CREDIT HOURS**
A critical examination of the major areas of philosophic interest in nineteenth century Germany: the split of Hegelianism into right-wing and left-wing; renewed interest and controversy over the soul; the role of consciousness in nature and history; the problem of value experience.
- PHL 425. MARXISM** **THREE CREDIT HOURS**
An introduction to the thought of Karl Marx through a study of the historical setting of the man and his writings, accompanied by a careful analysis of selected primary sources representative of his thought.

PHL 431. PHILOSOPHY OF PLATO AND ARISTOTLE THREE CREDIT HOURS
 Readings and classroom discussion of selections from Plato's dialogues and the basic works of Aristotle, comparing their doctrines on such fundamental problems as Being, Man, Knowledge, Morality, etc.

PHL 434. ST. THOMAS AQUINAS THREE CREDIT HOURS
 A careful reading of basic texts in the *Summa Theologica* and the *Summa Contra Gentiles* devoted to the existence and nature of God, the nature and end of Man, Law, Habit, and Virtue.

PHL 435. RECENT CHRISTIAN PHILOSOPHIES THREE CREDIT HOURS
 A study of the major issues of Christian philosophy from the end of the 19th century to the present, its sources, development, effects, main authors, and its place in the Christian tradition.

PHL 451. SEMINAR IN INDIVIDUAL PHILOSOPHERS THREE CREDIT HOURS
 The objective of this seminar is to study in depth the thought of an individual philosopher, e.g., Descartes, Kant, Hegel, Heidegger, etc., who is of sufficient importance to warrant special study. May be repeated when the topic varies.

PHL 452. CONTEMPORARY PROCESS PHILOSOPHY THREE CREDIT HOURS
 A study of the metaphysical positions which resulted from the impact of evolutionary thought upon Western philosophy. Special emphasis will be given to Bergson and Whitehead, and constant attention will be paid to the question of compatibility between evolutionary and classical thought.

PHL 455. INTRODUCTION TO PHENOMENOLOGY THREE CREDIT HOURS
 An examination of the historical origin of phenomenology, its nature, goals, and scope. The influence exerted by phenomenology on the social sciences, psychology, and psychiatry. The major emphasis is on the thought of Husserl.

PHL 459. PHILOSOPHY OF LANGUAGE THREE CREDIT HOURS
 An introduction to recent trends in the philosophy of language, with concentration on the problems of meaning and truth, in order to demonstrate the analysis of such action concepts as intention, freedom, and responsibility.

PHL 470. CLASSICAL AMERICAN PHILOSOPHY THREE CREDIT HOURS
 An introduction to some of the influential writings of the American pragmatists Peirce, James, and Dewey. The richness and variety within the pragmatic movement will be stressed. A comparison with the philosophical views of Royce, Santayana, and Whitehead will be included.

PHL 476. CONTEMPORARY PROBLEMS IN THE PHILOSOPHY OF GOD THREE CREDIT HOURS
 A seminar dedicated to reading, analysis, and discussion of the works in contemporary philosophies of God: Existentialism, Neo-Thomism, Philosophy of Process, Naturalism, Personalism, Linguistic Analysis.

PHL 490. DIRECTED READINGS ONE TO FOUR CREDIT HOURS
 Primarily for philosophy majors but open to anyone who has completed twelve hours in philosophy. Normally, three semester hours credit will be granted. In certain cases the chairman may approve one, two, or four credit hours. This course may be repeated when the topic varies.

Physics (PHY)

Dr. Joseph J. Kepes, *Chairman*

Professors: Bueche, Kepes, L. Mann

Associate Professors: Cothorn, R. Mann, O'Hare, Schneider, Yaney

Assistant Professors: Crivello, Deye, Graham, Johnston

A major in Physics should have completed at least 24 upper level hours of Physics courses with a minimum grade point average of 2.0. At least 15 hours from Group I courses and 9 hours from Group II courses (listed below) must be included in the program. In special circumstances, courses from other disciplines can be substituted for the Group II courses. The student who is planning for graduate work in Physics or closely allied areas should take the courses listed in Groups I, II and III; the courses listed in Group IV are additional electives of value for such students.

<i>Group I</i>	<i>Group II</i>	<i>Group III</i>	<i>Group IV</i>
Phy 301	Phy 420	Phy 304	Mth 362
Phy 303	Phy 421	Phy 404	Mth 367
Phy 390	Phy 430	Phy 409	Mth 368
Phy 408	Phy 431	Mth 403	Mth 461
Phy 420	Phy 432	Mth 404	Cps 353
Phy 421	Phy 433	Mth 551	Cps 354
	Phy 460	Mth 552	
		Phy 441	

For majors in Physics a formal minor is not necessary, if one is chosen, the minor can be in any academic area of the University with the provision that the student have the permission of the Physics Chairman and the Chairman in the minor field. Students planning graduate work in Medicine, Modern Engineering, Applied Mathematics, Computer Science, Business, etc., should use the minor and open elective to gain competence in the discipline of interest.

Students in other disciplines who wish a minor in Physics can do so by taking any twelve upper level Physics credit hours from the above list. It is recommended that courses in Group I be chosen to provide the widest possible spectrum of courses.

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 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.

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****ONE CREDIT HOUR**

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.

First Term, Each Year

PHY 152. GENERAL PHYSICS **THREE CREDIT HOURS**
 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. *Second Term, Each Year*

PHY 152L. GENERAL PHYSICS LABORATORY **ONE CREDIT HOUR**
 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. *Second Term, Each Year*

PHY 196. GENERAL PHYSICS I MECHANICS **THREE CREDIT HOURS**
 An introductory course in Mechanics using the calculus. Three lectures, one and $\frac{1}{4}$ hours recitation per week. May replace Phy 201. Corequisite: Mth 118 or Mth 128.

PHY 196H. GENERAL PHYSICS I MECHANICS (HONORS) **THREE CREDIT HOURS**
 An introductory course in Mechanics for students with a strong background in Physics. Three lectures, one and $\frac{1}{4}$ hours recitation per week. By invitation only.

PHY 196L. GENERAL PHYSICS LABORATORY I **ONE CREDIT HOUR**
 Introduction to laboratory methods, handling of data, analysis, experiments in classical mechanics for students in Science. Two hours laboratory, one hour recitation per week. Corequisite: Phy 196.

PHY 201. GENERAL PHYSICS **THREE CREDIT HOURS**
 A discussion of mechanics and heat without the formalism of the calculus. Three class periods per week.

PHY 201L. GENERAL PHYSICS LABORATORY **ONE CREDIT HOUR**
 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 **THREE CREDIT HOURS**
 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 **ONE CREDIT HOUR**
 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 **THREE CREDIT HOURS**
 The basic principles of electricity and magnetism are studied. Three lectures, one and $\frac{1}{4}$ hours recitation per week. Prerequisite: Phy 196, Mth 128.

PHY 207H. GENERAL PHYSICS II ELECTRICITY AND MAGNETISM (HONORS) **THREE CREDIT HOURS**
 Basic principles of electricity and magnetism. Three lectures, one and $\frac{1}{4}$ hours recitation. per week. By invitation only.

PHY 207L. GENERAL PHYSICS LABORATORY II **ONE CREDIT HOUR**
 Open-ended experiments in mechanics and electricity and magnetism, tailored to the background of students. Two hours laboratory, one hour recitation per week. Corequisite: Phy 207.

PHY 208. GENERAL PHYSICS III MECHANICS OF WAVES **THREE CREDIT HOURS**
 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**ONE CREDIT HOUR**

The students perform a number of experiments emphasizing Modern Physics. Two hours laboratory, one hour recitation per week. Prerequisite: Phy 207L; Corequisite: Phy 208.

PHY 299. SPECIAL PROBLEMS**ONE TO FOUR CREDIT HOURS**

Special topical courses, laboratory, tutorial or library work in areas of current interest. Except for the special courses, students must have permission of the Department Chairman.

PHY 301. STATISTICAL THERMODYNAMICS**THREE CREDIT HOURS**

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 flow, 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 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**

Electromagnetic induction. Magnetic properties, A.C. Circuit methods. Maxwell's equations. Electromagnetic waves, reflection and refraction, simple wave-guides, resonators. Prerequisite: Phy 408.

Second Term, Each Year

PHY 411. THEORETICAL PHYSICS I THREE CREDIT HOURS
 Topics can include 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
 Topics can include Orthogonal functions, Dirac delta function, Laplace's equation, Poisson's equation, D'Alembert's equation, transformation theorems, Green's function, Group theory. 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 208 or consent of instructor. *First Term, Each Year*

PHY 430. ADVANCED LABORATORY I TWO CREDIT HOURS
 A 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 course in which the student studies 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 **THREE CREDIT HOURS**
 Basic postulates of Quantum Mechanics, Special Relativity with practical application to Atomic, Nuclear and Solid State Physics. Prerequisite: Phy 208 or equivalent.

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.

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.

PHY 460. SEMINAR **ONE CREDIT HOUR**
 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.

PHY 499. SPECIAL PROBLEMS IN (NAMED AREA) HONORS **ONE TO SIX CREDIT HOURS**
 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.

Political Science (POL)

Dr. Antonio E. Lapitan, *Chairman*

Professors: Rose, Steinbicker

Associate Professors: Abbott, Brockman, Lapitan, Liebler, Patyk

Assistant Professors: Fogel, Howard, Kerns

A major in Political Science includes Pol 201, 202, 418, and 421 or 431, plus six advanced courses. The six advanced courses must be chosen by the student in consultation with his advisor and in accordance with his academic or career objective. Students concentrating in Pre-Law or Urban Affairs are encouraged to take Pol 495, Internship.

A minor in Political Science includes Pol 201 and any four advanced courses.

- POL 201. THE AMERICAN POLITICAL SYSTEM** **THREE CREDIT HOURS**
 A study of the American political system, its constitutional base, historical and cultural setting, structures, processes and some of its major policy outputs.
- POL 201H. THE AMERICAN POLITICAL SYSTEM (HONORS)** **THREE CREDIT HOURS**
 By permission only. Limited enrollment.
- POL 202. INTRODUCTION TO COMPARATIVE POLITICS** **THREE CREDIT HOURS**
 Analysis of major concepts and approaches in the study of comparative government and politics.
- POL 301. THE AMERICAN JUDICIAL PROCESS** **THREE CREDIT HOURS**
 A study of the American judicial system, with emphasis on the courts and the bar. The criminal and civil legal processes are taken in detail.
- POL 302. OHIO GOVERNMENT AND POLITICS** **THREE CREDIT HOURS**
 A descriptive and analytical study of the institutions and processes of the Ohio government and its local political subdivisions.
- POL 303. STATE AND LOCAL GOVERNMENTS** **THREE CREDIT HOURS**
 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 305. INTRODUCTION TO 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.
- POL 310. PARTIES AND INTEREST GROUPS** **THREE CREDIT HOURS**
 A descriptive analysis of the nature and interaction of parties and interest groups, and their role in the American political system.
- POL 311. PUBLIC OPINION AND POLITICAL BEHAVIOR** **THREE CREDIT HOURS**
 A systematic examination of the formation, maintenance, change and impact of public opinion in the American political system. Emphasis is on the role of theory and analysis of data in understanding public opinion and political behavior.
- POL 312. THE LEGISLATIVE PROCESS** **THREE CREDIT HOURS**
 A study of the United States Congress, its organization and procedures, as well as its powers and influence in the political system.
- POL 313. THE AMERICAN PRESIDENCY** **THREE CREDIT HOURS**
 A study of the American presidency, the development of presidential powers, and its leadership role in the political system.
- POL 314. PRINCIPLES OF INTERNATIONAL RELATIONS** **THREE CREDIT HOURS**
 An analysis of the dynamic forces influencing nations in their conduct of world affairs.
- POL 320-326 COMPARATIVE POLITICS** **THREE CREDIT HOURS**
 Analysis of governmental institutions and processes of selected countries in each of the following areas.
- | | |
|-----------------------------------|-------------------------|
| Pol 320—Western Europe | Pol 324—Southern Asia |
| Pol 321—Russia and Eastern Europe | Pol 325—The Middle East |
| Pol 322—The Far East | Pol 326—Africa |
| Pol 323—Latin America | |

- POL 360. URBAN POLITICS** **THREE CREDIT HOURS**
 A study of the nature of urban political systems in the United States with emphasis on explanation of differences in their policy responses.
- POL 400. INTERNATIONAL LAW** **THREE CREDIT HOURS**
 An analysis of the development of international law, its theory and application to the various phases of international relations.
- POL 404. INTERNATIONAL ORGANIZATIONS** **THREE CREDIT HOURS**
 A study of the origins and evolution of organized international collaboration with an emphasis on the United Nations.
- POL 407. POLITICAL GEOGRAPHY** **THREE CREDIT HOURS**
 A study of the influence of geographical factors in the relations among nations.
- POL 408. AMERICAN FOREIGN POLICY** **THREE CREDIT HOURS**
 A critical study of the American foreign policy process and an evaluation of the substance of American foreign policy.
- POL 411. CONSTITUTIONAL LAW** **THREE CREDIT HOURS**
 An examination of the basic law of the United States. Analysis is made of the general principles inherent in the Constitution and some of the more significant provisions in the document—the commerce clause, the taxing and spending power, due process and the dimensions of presidential authority.
- POL 413. THE AMERICAN BUREAUCRACY**
 An examination of the nature and meaning of bureaucracy in contemporary American society and the devices for its evaluation and control.
- POL 418. HISTORY OF POLITICAL THEORY** **THREE CREDIT HOURS**
 An analysis of the significant political ideas of the leading Western philosophers from Plato to Marx. Examined are views as to the nature of man and reasons for government. Special emphasis is placed upon such concepts as freedom, justice, legitimacy, property and power.
- POL 419. TWENTIETH CENTURY POLITICAL THOUGHT** **THREE CREDIT HOURS**
 This course will concern the principal contributors to political thinking and orientation in the 1900's. These men would include Lenin, the theorists of Fascism, Durkheim, Dewey, Fromm, Neibuhr, and Skinner and it will emphasize these men's conceptions of the political problems of authority, community and citizenship.
- POL 420. AMERICAN JURISPRUDENCE** **THREE CREDIT HOURS**
 This course will examine the main currents in American legal theory with emphasis on American jurists and their respective legal thoughts, the criminal law and punishment area, as well as the moral evaluation and criticism of law.
- POL 421. SEMINAR IN POLITICAL SCIENCE** **THREE CREDIT HOURS**
 Seminar on current problems and issues in Political Science. May be taken once when the content changes. Prerequisite: Permission of professor.
- POL 431. INDEPENDENT STUDY AND RESEARCH** **THREE CREDIT HOURS**
 Individual reading and research on selected topics under the direction of a faculty member. Recommended for seniors only. Prerequisite: Permission of professor.
- POL 450. CIVIL LIBERTIES** **THREE CREDIT HOURS**
 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.

POL 451. CIVIC DISORDER AND POLITICAL CHANGE THREE CREDIT HOURS
 This course considers the theoretical approaches toward understanding the process of violent change in political institutions. It examines the continuum between violence and non-violence as a consequence of competing interests in the process of revolution, revolt, campus dissent and political assassination.

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 is on the impact of puritanism, the American Revolution, Hamiltonianism, Jeffersonianism, racism, nativism, social Darwinism, the New Deal and contemporary liberalism and conservatism.

POL 481. MODERN POLITICAL ANALYSIS THREE CREDIT HOURS
 This course will examine the scope and methods of political science ranging from the descriptive to the more quantitative approaches. Emphasis is placed on the more scientific methods of political analysis. Recommended for majors planning to pursue graduate work in the discipline.

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, *Chairman*

Professors: Noland, Rancurello

Associate Professors: Bower, Rosa

Assistant Professors: Barna, Brown, Butter, DaPolito, Detterman, Goldhaber, Kuntz, McConochie, Perlmutter, Shine

Part-time Instructors: Gallico, Moore, Nixon, Riley, Scheidler

Psychology majors must complete required courses as follows: Psy 201, 302, and 310. Psy 302 and 310 should be taken in early sequence. 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 two programs. The first leads to a B.S. degree, the second 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. See Graduate catalog for listing of courses.

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.

- PSY 302. ELEMENTARY STATISTICS** **THREE CREDIT HOURS**
Measures of central tendency, dispersion and correlation. Basic concepts involved in estimating parameters and testing hypotheses. Presumes high school training in mathematics. Required of all Psychology majors. Prerequisite: Psy 201 or equivalent. For minors or majors only. Math 107 or equivalent recommended.
- PSY 303. EXPERIMENTAL DESIGN AND INFERENCE** **THREE CREDIT HOURS**
Develops rationale for the design and interpretation of experiments, including analysis of variance, correlational analyses, and data transformations. Prerequisite: Psy 302 or equivalent.
- PSY 304. ADOLESCENT PSYCHOLOGY** **THREE CREDIT HOURS**
Treats interrelated physical, social, and emotional development of adolescents. Child Psychology is recommended as prerequisite though not required. Prerequisite: Psy 201 or equivalent.
- PSY 306. CHILD PSYCHOLOGY** **THREE CREDIT HOURS**
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.
- PSY 310. EXPERIMENTAL PSYCHOLOGY** **FOUR CREDIT HOURS**
Introduces the student to the basic concepts of scientific methods as applied to psychological problems. Experiments are conducted to familiarize student with the application of scientific methodology to the study of psychological processes of man. Required of all Psychology majors. Prerequisite: Psy 302.
- PSY 311. DYNAMICS OF ADJUSTMENT** **THREE CREDIT HOURS**
Explains the continuous adjustment process through an examination of psychological, social, biological, philosophical and other interrelated conceptions. Emphasizes personal-dynamic and effective behavior. Prerequisite: Psy 201.
- PSY 313. BEHAVIOR DISORDERS** **THREE CREDIT HOURS**
Examines patterns of disordered behavior. Discusses cultural, social, psychological and biological relationships and approaches to behavior changes. Prerequisite: Psy 201.
- PSY 314. COGNITIVE PROCESSES** **THREE CREDIT HOURS**
The information processing approach to attention, perception, memory imagery, and thought. Theoretical structures including neuron modeling of higher cognitive and experiential process. Prerequisite: Psy 201.
- PSY 315. PERSONALITY** **THREE CREDIT HOURS**
Introduction to the scientific study of personality as reflected in both clinical and experimental findings. Prerequisite: Psy 201.
- 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 403. COGNITIVE DEVELOPMENT IN CHILDREN** **THREE CREDIT HOURS**
An investigation of those factors which are assumed to influence cognitive development in children. Topics will include early experience, the structure of the intellect, intervention programs, concept formation, probability learning, mediation theory and parental

influences. In addition, Piaget's theory will receive close examination. Prerequisite: Permission of instructor.

PSY 404. RESEARCH IN EXPERIMENTAL CHILD PSYCHOLOGY THREE CREDIT HOURS
Each student will design, run, and evaluate a research problem in the area of child development. Although the major emphasis will be on the laboratory experimental approach, other methods will also be considered. Prerequisite: Permission of instructor.

PSY 406. COMMUNITY PROBLEMS AND PSYCHOLOGY I 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 welfare. Prerequisite: Psy 408 and permission of instructor.

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 410. COMMUNITY PROBLEMS AND PSYCHOLOGY II THREE CREDIT HOURS
Extension of Psy 406 to permit currently enrolled students to continue development of project throughout an additional semester. It has been found that in a given semester the community problem or issue being investigated and worked on requires more time to culminate in a useful and positive experience for both student and/or community agency being worked with. Prerequisite: Psy 406.

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 TWO CREDIT HOURS
Experimental and experiential analysis of the dynamics of small group behavior. Interpersonal behavior at various levels and in differing settings will be investigated, e.g., school, work, family; formal and informal organization. Introduction to sensitivity training and group therapy. Permission of instructor required.

PSY 415L. LABORATORY IN SMALL GROUP DYNAMICS ONE CREDIT HOUR
Designed to provide demonstrations and observation of group process and structure, interpersonal communication, group dynamics, and organizational relationships. Limited to 10 students. One two-hour period per week. Permission of instructor.

PSY 418. HUMAN FACTORS **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 302.

PSY 418L. HUMAN FACTORS LABORATORY **ONE CREDIT HOUR**

Selected experiments on display 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. Prerequisite: Psy 302.

PSY 420. INDUSTRIAL PSYCHOLOGY **THREE CREDIT HOURS**

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 432. BEHAVIOR MODIFICATION **THREE CREDIT HOURS**

Integrative account of behavioral modification—its procedures, terminology and goals—to serve as a focal point for the traditionally separated courses of learning, abnormal behavior and psychotherapy. Prerequisite: Permission of instructor.

PSY 434. INTRODUCTION TO MENTAL RETARDATION **THREE CREDIT HOURS**

Will include following topics with reference to mental retardation: history, definitions, incidence, etiology, classification, psychological theories, and special research problems. There will be no consideration of these areas as they apply to treatment of the retarded. The central interest will be how theories of mental retardation enlarge our understanding of behavior in general. Prerequisite: Psy 306 or Psy 403, or permission of instructor.

PSY 436. PSYCHOLINGUISTICS **THREE CREDIT HOURS**

An examination of recent theoretical issues and selected empirical findings pertaining to the acquisition and use of structured language. Prerequisites: Psy 201, Psy 302.

PSY 451. DIFFERENTIAL PSYCHOLOGY **THREE CREDIT HOURS**

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 groups. Prerequisite: Psy 302.

PSY 454. PHYSIOLOGICAL PSYCHOLOGY **THREE CREDIT HOURS**

Study of neurological structure and function emphasizing role of nervous and glandular systems in the study of behavior. Prerequisite: Psy 201.

PSY 493. RESEARCH AND FIELD STUDY **ONE TO SIX CREDIT HOURS**

Problems of special interest to the student are investigated under direction of psychology staff members. Permission of instructor is required. May be taken more than one time, but not to exceed six credit hours.

PSY 494. READINGS IN PSYCHOLOGY **ONE TO SIX CREDIT HOURS**

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. May be repeated but not to exceed six credit hours. Permission of instructor is required.

Executive Secretarial Studies (SEC)

Velma M. Miller, *Chairman*

Associate Professors: M. Civile, V. Miller

Instructor: J. Huff

Shorthand and Typewriting Placement Tests

During registration week, the department of Executive Secretarial Studies offers placement tests in both shorthand and typewriting. These tests are required of all students who have had prior training in either of these skills.

SEC 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.

SEC 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.

SEC 102. INTERMEDIATE SHORTHAND THREE CREDIT HOURS

Gregg theory is reviewed. Reading practice continues but transcription is emphasized. Five class periods a week.

SEC 103. ELEMENTARY TYPEWRITING THREE CREDIT HOURS

The keyboard is mastered. Additional emphasis is placed on the function and care of various makes of typewriters. Manuscript writing, tabulation, and letter writing are introduced. Five class periods a week.

SEC 103A. FUNDAMENTAL TYPEWRITING (REFRESHER) THREE CREDIT HOURS

Typewriting Review. A thorough review of the keyboard and the operative parts of the typewriter 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.

SEC 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.

SEC 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.

SEC 110. SECRETARIAL MATHEMATICS THREE CREDIT HOURS

Review and practice of essential mathematical computations common to business offices; development of proficiency in these functions.

SEC 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.

SEC 202. ADVANCED DICTATION AND TRANSCRIPTION THREE CREDIT HOURS

This course is intended to develop greater competency in dictation and transcription. It trains the student for high-level secretarial positions. 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 competency in high-level office employment. Five class periods a week.

SEC 205. ADMINISTRATIVE SECRETARIAL PRACTICUM **THREE CREDIT HOURS**
 Extensive training in duplicating processes as well as development of competency in the use of various makes of dictating-transcribing machines. Supervised secretarial work experience. Four class periods a week. Prerequisites: Sec 102 and Sec 104 (Intermediate Shorthand and Intermediate Typwriting).

SEC 206. ADVANCED ADMINISTRATIVE SECRETARIAL PRACTICUM **THREE CREDIT HOURS**
 A study of business filing techniques and records control. Training in the principles and techniques of composing business communications. Executive secretarial development in modern office techniques, routines, and procedures. Four class periods a week. Prerequisite: Sec 205 (Administrative Secretarial Practicum).

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 110 (Secretarial Mathematics) or equivalent.

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.

SEC 210. INTRODUCTION TO BUSINESS DATA PROCESSING **THREE CREDIT HOURS**
 An overview of punch card equipment and the computer. The student will gain an understanding of business procedures and the various interrelationships that exist. The student will be required to analyze, code and key punch business transactions which will then be run on the computer. Two class periods per week. Prerequisite: Sec 208 & 209 or equivalent.

Sociology, Anthropology, and Social Work

Rev. John G. Dickson, S.M., *Chairman*
 Professor Jack McDonald, *Assistant Chairman* (for Social Work)
Full-time Faculty:
 Professor: S. Hetzler
 Associate Professor: J. Dickson, H. Fakhouri, M. Huth
 Assistant Professor: J. Bregenzer, J. McDonald
 Instructor: F. Pavelka, T. Sens, D. Vest

STATEMENT OF PURPOSES: The curriculum of the Department of Sociology, Anthropology, and Social Work is organized to cluster around the five basic social institu-

tions: the family, religion, economics, politics and education. To this end, courses will be in all the necessary major fields such as 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, 415, 420 or 422; Soc 204 and any 300 or 400 level sociology or anthropology courses may be chosen to complete the remaining 18 hours. Minors must complete 12 hours of upper level courses in the department, and Sociology 205. Majors in other departments may obtain a certificate in Urban Life in lieu of a Sociology minor. Students may consult with the Department Chairman.

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 Anthropology 210, 321, 322, and 408.1, 2, or 3; Soc 415 or Soc/Ant 439, and Soc 401. Minors must complete 9 hours of upper level courses in the department, and Anthropology 210 and 321.

Major or Minor 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. A minimum of 46 hours of course work must be completed in the department, including Soc 205 and 401; Ant 210; and SWK 206 and 206L, SWK 304, 337, 376, 418, 421, 431. Those wishing to receive a minor in Social Work must have SWK 206 and 206L, 376, 418, and Soc 205 and Ant 210.

Each Freshman Major and Minor is urged to make out a tentative plan covering all four years at the University. This plan can be changed or updated as needed in the course of the following semesters. It is possible for a Major in Sociology to Minor in Anthropology or Social Work; Anthropology Majors may Minor in Sociology or Social Work.

SOCIOLOGY COURSES

- SOC 110. PERSPECTIVES ON URBAN MAN** **THREE CREDIT HOURS**
 An interdisciplinary approach to the problems of men in the urban and metropolitan environment utilizing faculty from the following departments: History, Biology; Civil Engineering; Sociology; Anthropology and Social Work; Economics; Political Science; Psychology; and Philosophy. Required Introductory Course for Urban Life Majors.
- SOC 204. MODERN SOCIAL PROBLEMS** **THREE CREDIT HOURS**
 The study of the extent, causes, prevention and treatment of abnormal conditions affecting contemporary society. Offered each semester each year.
- SOC 205. PRINCIPLES OF SOCIOLOGY** **THREE CREDIT HOURS**
 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 and Minors for whom the course is required. Offered each semester each year.
- SOC 301. MARRIAGE AND THE FAMILY** **THREE CREDIT HOURS**
 A fundamental course concerned with mate selection, husband-wife relationships, parenthood, family disorganization and rehabilitation. Offered each semester each year.
- SOC 303. POPULATION** **THREE CREDIT HOURS**
 The study of population growth, composition, distribution, problems and theory, with special reference to the United States. Offered the first semester each year.
- SOC 307. CRIMINOLOGY AND PENOLOGY** **THREE CREDIT HOURS**
 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. Offered the first semester each year.
- SOC 309. SOCIOLOGY OF EDUCATION** **THREE CREDIT HOURS**
 Structural and social psychological analyses of institutionalized educational patterns within the context of professional community. Studies in the social aspects of education, including education as a socialization process, the social structure of education, and the role of the school in social change. Offered the second semester each year.
- SOC 310. SOCIAL GERONTOLOGY** **THREE CREDIT HOURS**
 An examination of recent theoretical issues and selected empirical findings pertaining to the study of aged in their relationship to society. An introduction to the inclusive field embracing the entire study of the aged. Offered the second semester each year.
- SOC 311. SOCIOLOGY OF RELIGION** **THREE CREDIT HOURS**
 Objective analysis of the interrelations between religious phenomena and social institutions, social structure and behavior. Offered the first semester each year.
- SOC 313. JUVENILE DELINQUENCY** **THREE CREDIT HOURS**
 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. Offered the second semester each year.
- SOC 315. INDUSTRIAL SOCIOLOGY** **THREE CREDIT HOURS**
 An analysis of the characteristics of industrial society; occupational roles and relationships; technological progress and its repercussions; industrial relations problems. Offered the first semester each year.

- Soc 318. SOCIAL CLASS IN AMERICA** THREE CREDIT HOURS
 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. Offered the first semester each year.
- Soc 323. SOCIOLOGY OF LAW AND POLITICS** THREE CREDIT HOURS
 Analysis of law and the legal structure in its social context, with emphasis on the Anglo-American legal system; the factors which influence political structure, such as social class, religion, and military power will be dealt with. Offered the first semester each year.
- Soc 328. COLLECTIVE BEHAVIOR** THREE CREDIT HOURS
 The nature of crowds, mobs, manias, panics, fashions, fads, social movements, reforms, and revolutions; consideration of public opinion and propaganda in relation to these phenomena. Offered the second semester each year.
- Soc 330. SOCIOLOGY OF MASS COMMUNICATION** THREE CREDIT HOURS
 Seminar on social aspects of mass communication; the impact of cultural values on the mass media; the effects of the mass media on a variety of social groups and institutions. Offered the second semester each year.
- Soc 332. URBAN SOCIOLOGY** THREE CREDIT HOURS
 Physical and social characteristics of urban areas; urban ecology; major problems of urban life; urban planning and renewal. Offered the second semester each year.
- Soc 340. THE CULTURES AND SOCIAL INSTITUTIONS OF SOUTHERN EUROPE** THREE CREDIT HOURS
 A comparative study of the evolution of the social institutions of Southern Europe and the impact of their development on South European and surrounding cultures. Offered as needed.
- Soc 401. SOCIAL RESEARCH METHODS** THREE CREDIT HOURS
 Principal methodological approaches and basic statistical techniques in social research. Required of Sociology, Anthropology, and Social Work Majors. Offered each semester each year.
- Soc 402. STATISTICS** THREE CREDIT HOURS
 Optional for Majors. A further and more detailed study of statistical techniques in social research. Offered as often as needed.
- Soc 415. SENIOR SEMINAR IN SOCIOLOGY** THREE CREDIT HOURS
 Individual and group projects developed around such topics as: Marriage and Family Problems, Urban Renewal, and Deviant Behavior. Required of Sociology Majors. Offered the first semester 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. Either Soc 420 or Soc 422 is required of Sociology Majors. Offered the first semester 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. Either Soc 420 or Soc 422 is required of Sociology Majors. Offered the second semester 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 rela-

tions. 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.

SOC 436. URBAN LIFE PRACTICUM SIX CREDIT HOURS
Field experience, involving 12 hours of service each week for one term as a community organizer, research assistant, or administrative intern with a local public or private agency, under the combined supervision of the University of Dayton Coordinator and an agency staff member. The Coordinator will conduct seminars regularly during the internship period, at the termination of which each student will be required to submit a report summarizing and evaluating his learning experiences. Required course for Urban Life Majors.

SOC 440. INDEPENDENT STUDY THREE CREDIT HOURS
Research problems or special readings that are of interest to the student are investigated under the guidance of a sociology staff member. Permission of the chairman is necessary. Not to be taken for more than three credit hours. Offered each semester each year.

SOC 450. THE SOCIOLOGY OF UNDERDEVELOPED AREAS THREE CREDIT HOURS
Study of the special social problems characterizing technologically underdeveloped areas and an analysis of the relationships between the problems of these areas and those of the technologically advanced nations. Offered as needed.

ANTHROPOLOGY COURSES

ANT 210. 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. Offered each semester each year.

ANT 212. URBAN ANTHROPOLOGY THREE CREDIT HOURS
Examines the contemporary American city and significant historical and cross-cultural differences in urban life. Required course for Urban Life Majors.

ANT 321. EVOLUTION OF MAN AND CULTURE 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. Offered the first semester 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. Offered the first semester 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. Offered the second semester each year.

ANT 403. PRIMITIVE RELIGION THREE CREDIT HOURS
Comparative study of the religious beliefs and practices of non-literate peoples of the world. Offered the second semester each year.

ANT 408.1, .2, .3. CULTURE AREA STUDIES THREE CREDIT HOURS
One major cultural area of the world—Mexico (1), Africa (2), the Middle East (3)—

is studied each time the course is offered. May be taken more than once, but only one term required of Anthropology Majors.

ANT 433. ANTHROPOLOGICAL FIELD WORK SIX CREDIT HOURS
 Formulation and carrying out of a research design in archaeology, physical anthropology. Prerequisite: consent of instructor. Third Term each year.

SOCIOLOGY OR ANTHROPOLOGY COURSES

Soc/ANT 325. AMERICAN ETHNIC AND RACIAL MINORITIES THREE CREDIT HOURS
 The studies of the cultures of the major immigrant and racial groups in the United States and of their assimilation into the dominant culture. Offered the first semester each year.

Soc/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. Offered the second semester each year.

Soc/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. Offered the second semester each year.

SOCIAL WORK COURSES

SWK 206. 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 all courses in Social Work. Offered each semester each year.

SWK 206L. INTRODUCTION TO SOCIAL WORK LAB ONE CREDIT HOUR
 An observational survey of social welfare institutions and agencies and their function within the community. Students will be required to spend two hours per week either in agency visitation or seminar meetings. Must be taken with the lecture course, Swk 206. A prerequisite for all courses in Social Work.

SWK 304. SOCIAL WORK METHODS THREE CREDIT HOURS
 An introduction to the basic principles and processes involved in helping people solve their problems; the relationship between social workers and their clients, and the community; a critical evaluation of referral and treatment plans. Required of all Social Work Majors. Offered each semester each year.

SWK 337. PUBLIC WELFARE THREE CREDIT HOURS
 A historical survey of public welfare; the nature of social and economic dependency; analysis of current public welfare policies and programs. Required of all Social Work Majors. Prerequisite: Pol 201 and 303. Offered the first semester each year.

SWK 376. APPROACHES TO SOCIAL PROBLEMS THREE CREDIT HOURS
 Exploration of social workers' collaborative role with other professionals in planned institutional change. Study of selected problems in Social Welfare; mobilization of resources, designing and evaluating approaches to the alleviation of social problems. Required of all Social Work Majors. Offered the first semester each year.

SWK 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 all Social Work Majors. Offered the first semester each year.

SWK 421. SENIOR SEMINAR IN SOCIAL WORK**THREE CREDIT HOURS**

A seminar to permit in-depth study of special problems within the field of Social Work. Required of all Social Work Majors. Offered the second semester each year.

SWK 423. SOCIAL WORK SEMINAR IN POLITICAL SYSTEMS AND STRUCTURES**THREE CREDIT HOURS**

Analysis of federal, state, and local political systems and structures as they affect the delivery of social services; social planning and policy-making; analysis of the advocacy role of social work.

SWK 431. SOCIAL WORK FIELD EXPERIENCE**SIX CREDIT HOURS**

Students majoring in Social Work are required to complete an internship involving 10 hours of service each week for one term in a local community welfare agency or institution under the combined supervision of the University of Dayton's full-time Field Experience Director and an 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. A second term may be elected with the approval of the Field Experience Director. Prerequisites: Swk 206 and 206L, Swk 304, Swk 418.

SWK 432. SOCIAL WORK FIELD EXPERIENCE**SIX CREDIT HOURS**

Students with a major in Social Work have an option to participate in an additional term of field experience if they so desire. The student is expected to meet the same requirements as outlined for Swk 431. The purpose for this course is to give students an added and more intensive exposure to social welfare and to provide opportunity for expanded client-worker involvement. Experience gained through a second term field placement will broaden and enrich the student's previous internship and will more fully acquaint him with the social work profession. Note that this course is not required. Prerequisites: Swk 206 and 206L, Swk 304, Swk 418, Swk 431.

Theological Studies (THL)

Rev. Matthew F. Kohmescher, S.M., *Chairman*

Professors: Cole, Kohmescher

Associate Professors: Boulet, Burns, Middendorf

Assistant Professors: Anderson, Barnes, Brady, DiSanto, Fox, Friedland, Griffin, Kelber, L'Heureux, Lumpp, Martin, Mellert, Murray, Richards, Ryan, Vrasdonk

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.

Six credits in Theology are required of all Catholic students. For their first three credits in Theology students may take any 100 or 200 level course.

In addition to the special Honors Seminars and Reading courses qualified students may arrange to take almost any course offered by the department on a Directed Study basis. Majors (33 credits including Thl 210, 490) and minors (18 credits) should consult the chairman.

THL 112. FOUNDATIONS IN THEOLOGY THREE CREDIT HOURS
An introduction to the basic elements involved in theological reflection (i.e., the biblical, historical, philosophical, ethical, cultural, and psychological elements) and the way they are related in contemporary reflection about religious issues.

THL 195H. THEOLOGY HONORS I THREE CREDIT HOURS
A seminar covering the same content as Thl 112. By permission only.

THL 295H. THEOLOGY HONORS II THREE CREDIT HOURS
A seminar in which selected topics in Theology are studied. By permission only.

THL 395H. THEOLOGY HONORS III THREE CREDIT HOURS
A seminar in which selected topics in Theology are studied. By permission only.

THL 399. READINGS IN THEOLOGY ONE TO THREE CREDIT HOURS
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 490. SEMINAR THREE CREDIT HOURS
A seminar devoted to the future theological needs of the students enrolled, such as areas of research, bibliography, and teaching. Required of all theology majors; suggested for theology minors; open to others. Non-majors need permission of instructor.

THL 492. INTERDISCIPLINARY SEMINAR THREE CREDIT HOURS
A seminar in which the perspectives of various academic disciplines are brought to bear on specific issues. By permission only.

THL 495H. THEOLOGY HONORS IV THREE CREDIT HOURS
Directed study for students with high academic achievement and particular areas of interest. Prerequisite: 9 hours in Theology. By permission only.

THL 498. EUROPEAN DIALOGUE THREE OR SIX CREDIT HOURS
An opportunity to meet and dialogue with selected students and professors at several European universities. Offered only in May-June. Prerequisites: 9 hours in Theology, 9 hours in Philosophy. By permission only.

HISTORY OF RELIGIONS

THL 200. ASIAN RELIGIONS THREE CREDIT HOURS
An introduction to the study of the major religions of the Far East, such as Hinduism, Buddhism, Confucianism, Taoism, Shinto.

THL 305. ANCIENT NEAR EASTERN RELIGIONS **THREE CREDIT HOURS**
 An examination of the religions of the ancient Near East, with special attention to their relation to the Old Testament.

THL 307. JUDAISM **THREE CREDIT HOURS**
 A basic introduction to Judaism: its history, its faith, its worship.

THL 308. EASTERN ORTHODOXY **THREE CREDIT HOURS**
 A basic introduction to Eastern Orthodoxy: its history, its faith, its worship.

THL 406. JEWISH THOUGHT **THREE CREDIT HOURS**
 An historical development of Jewish thought from the close of the Old Testament canon down to modern times, with emphasis on selected movements and/or thinkers.

THL 408. ISSUES IN THE HISTORY OF RELIGIONS **THREE CREDIT HOURS**
 An examination of current issues in the study of the History of Religions. May be repeated when a different issue is discussed.

BIBLICAL STUDIES

THL 210. THE BIBLE IN MODERN SCHOLARSHIP **THREE CREDIT HOURS**
 An introduction into the content of the Bible and the literary, historical and theological scholarship which has arisen around it. Both will be studied in order to evaluate the significance of biblical traditions for the 20th century man.

THL 219. HISTORY OF EARLY CHRISTIANITY **THREE CREDIT HOURS**
 An examination of the formative years of the Early Christian Church (AD 30-130) in the context of the political, social, and economic developments of the time.

THL 310. ORIGINS OF THE BIBLICAL TRADITIONS **THREE CREDIT HOURS**
 A variety of oral and written traditions were brought together to form what we now call the Pentateuch, the first five books of the Old Testament. A discussion of this process of formation can be informative to contemporary man's understanding of his relationship to the past.

THL 313. BIBLICAL VIEW OF HISTORY **THREE CREDIT HOURS**
 An examination into the origins, the understandings, and the development of Israel's understanding of history. This will present an opportunity to gain some insight into the ancient's view of history and how 20th century man can understand his place in history.

THL 314. HISTORY OF ISRAEL **THREE CREDIT HOURS**
 An examination of the history of Israel as it can be reconstructed from Israelite as well as non-Israelite sources. Special attention will be given to problems of methodology.

THL 316. SYNOPTIC GOSPELS: EARLY LIVES OF JESUS **THREE CREDIT HOURS**
 Each of the Synoptic Gospels offers a distinct view of the life and ministry of Jesus. An attempt will be made to both compare and differentiate the Markan, Matthean, and Lukan interpretations of the person of Jesus, his function in the community, and his message to the people.

THL 317. STUDIES IN ST. JOHN: REALIZATION OF HOPE **THREE CREDIT HOURS**
 The Gospel of John proclaims the total fulfillment of God's promises and man's expectations in Jesus Christ. The theological argumentations of the fourth gospel will be analyzed, as well as the significance of the Johannine position in view of the current theology of hope.

THL 318. STUDIES IN ST. PAUL: MODELS OF SALVATION THREE CREDIT HOURS
 St. Paul's theology is the product of a man who was exposed to a diversity of religions, cultures and ideologies. A discussion of a variety of topics, motifs, symbols and structures exhibited in Pauline theology will disclose numerous possibilities for a Christian approach to life and death.

THL 411. THE PROPHETS: RADICAL TRADITIONALISTS THREE CREDIT HOURS
 The prophetic traditions of the Old Testament represent an attempt to say that tradition can function in times of crisis. The course will attempt to understand the prophets and then to question their validity for the contemporary situation.

THL 412. WISDOM LITERATURE: CHAOS AND COSMOS THREE CREDIT HOURS
 The wisdom books—Job, Ecclesiastes, Wisdom of Solomon, etc.— raise such issues as the relationship between Hebrew and Greek thought, religion and arts, the function of personification, and the relationship between nature and history.

THL 413. SONG, RITUAL AND WORSHIP IN ISRAEL THREE CREDIT HOURS
 An examination of Israel's sacred and profane poetic traditions. This will include questions about primitive worship, Hebrew poetry, and basic modes of speech.

THL 418. BIBLICAL ISSUES THREE CREDIT HOURS
 An examination of specific biblical themes, motifs, problems and traditions. May be repeated when a different issue is discussed.

HISTORICAL THEOLOGY

THL 221. THE DEVELOPMENT OF THEOLOGY THREE CREDIT HOURS
 An attempt to show the way in which Christian theology develops as a response to specific cultural-historical situations. Certain prominent issues will be discussed and analyzed as being illustrative of this process, e.g., the christological problem in the early church, the problem of authority in the age of the Reformation, or the rise of scepticism in the age of secularism in the modern period.

THL 321. THE CHURCH BEGINS THREE CREDIT HOURS
 An examination of the origins of the primitive Christian community and her evolution into the first centuries of this era. Attention will be given to various theories on how doctrine develops, the early cultus, the first "dogmas," and their expression.

THL 326. PROTESTANT CHRISTIANITY THREE CREDIT HOURS
 A survey of the development of Protestant thought from the Reformation.

THL 428. ISSUES IN HISTORICAL THEOLOGY THREE CREDIT HOURS
 An examination of a specific issue in the development of Christian thought, such as Fathers of the Church, Reformation Theology, Modernism, Vatican II, etc. May be repeated when a different issue is discussed.

SYSTEMATIC THEOLOGY

THL 243. MODERN THEOLOGY THREE CREDIT HOURS
 An attempt to help the student become more aware of theological thought in modern times through the study of selected topics and/or movements.

THL 245. SEARCH FOR IMMORTALITY THREE CREDIT HOURS
 An examination of how other disciplines regard the question of immortality and a theological evaluation of their insights.

THL 330. MODERN RELIGIOUS THINKERS **THREE CREDIT HOURS**
Reading and discussion of one or several modern religious thinkers.

THL 331. NATURE OF MAN **THREE CREDIT HOURS**
An exploration of the nature of man seen in theological perspective. Will include such issues as: a comparison of the Judaeo-Christian view of man with naturalistic, romantic and idealist views; the impact of the modern sciences on the image of man; the interrelations between one's view of the divine, the world, and man.

THL 341. SIGNIFICANCE OF JESUS **THREE CREDIT HOURS**
An historical discussion of what has been thought about the person and significance of Jesus in the past with emphasis upon modern assessments of Jesus.

THL 346. SACRAMENT AND SECULARITY **THREE CREDIT HOURS**
A consideration of the biblical and historical development of Christian sacramentality and its secularity with a view to its relevance and renewal for contemporary man.

THL 347. THE CHURCH TODAY **THREE CREDIT HOURS**
Contemporary theology of the mystery of the church: its nature, its constitution, its mission. Special treatment of current issues: authority, collegiality, membership, etc.

THL 348. THE LITURGY **THREE CREDIT HOURS**
An historical and theological study of the worship life of the church with special consideration of current problems.

THL 438. CONTEMPORARY THEOLOGIES **THREE CREDIT HOURS**
An examination of one or more of the major current schools of thought, such as Process Theology, Theology of Hope, Neo-Thomism, Christian Existentialism. May be repeated when a different issue is discussed.

THL 441. THEOLOGY OF MARY **THREE CREDIT HOURS**
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 442. PROBLEM OF GOD **THREE CREDIT HOURS**
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 448. ISSUES IN THEOLOGY **THREE CREDIT HOURS**
An examination of a selected issue or major theme of the Christian faith in the light of modern knowledge and sensibilities, such as faith and doubt, science and religion, theology of death, etc. May be repeated when a different issue is discussed.

CHRISTIAN ETHICS—RELIGION AND CULTURE

THL 265. CHRISTIAN ETHICS **THREE CREDIT HOURS**
An introduction to the reflection upon Christian morality. Includes a discussion of various approaches in Christian Ethics, the elements involved in ethical judgments, and some specific ethical issues.

THL 270. RELIGION AND CULTURE **THREE CREDIT HOURS**
An examination of some of the many ways in which religion and culture mutually influence each other.

THL 363. CURRENT SOCIAL ISSUES THREE CREDIT HOURS
 An examination of one or more social issues on the current scene, such as the Theology of Revolution, World Peace, Race Relations, etc. May be repeated when a different issue is discussed.

THL 364. CURRENT ETHICAL ISSUES THREE CREDIT HOURS
 An examination of one or more issues in contemporary reflection on the Christian moral life, such as the New Morality, City Without God, Faith and Moral Problems, etc. May be repeated when a different issue is discussed.

THL 370. RELEVANCE OF THEOLOGY THREE CREDIT HOURS
 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 465. THEOLOGY OF MARRIAGE THREE CREDIT HOURS
 Analysis of the sanctifying dignity of Christian marriage as a sacrament and commitment to share in the divine creative plan.

THL 473. THEOLOGY AND MODERN LITERATURE 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.

THL 478. THEOLOGY AND CULTURE THREE CREDIT HOURS
 An examination of a specific issue in Western culture, especially American culture, in light of the Judaeo-Christian tradition, such as theology and art, theology and the film, theology and mass-media. May be repeated when a different issue is discussed.

ENGINEERING TECHNOLOGY

Associate Dean: James L. McGraw

Chemical Technology (CTI)

G. William Lawless, *Chairman*
Assistant Professors: Lawless, Shaw

CTI 122. GENERAL 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.

CTI 122L. GENERAL CHEMISTRY LABORATORY ONE CREDIT HOUR
 To accompany CTI 122. Three hours of laboratory a week.

CTI 125. 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: Cti 122.

CTI 125L. INORGANIC CHEMISTRY LABORATORY ONE CREDIT HOUR
 To accompany Cti 125. 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 accompany these operations such as weighings and separations. Prerequisite: Cti 125.

CTI 202L. QUANTITATIVE ANALYSIS LABORATORY TWO CREDIT HOURS
To accompany Cti 202. Six hours of laboratory a week.

CTI 208-209. ORGANIC CHEMISTRY SIX CREDIT HOURS
A study of aliphatic, aromatic, and heterocyclic compounds, including reactions, properties, and applications of organic substances. Prerequisite: Cti 125.

CTI 208L-209L. ORGANIC CHEMISTRY LABORATORY TWO CREDIT HOURS
Laboratory course to accompany Cti 208-209. Three hours of laboratory per week.

CTI 305. MATERIALS SCIENCE THREE CREDIT HOURS
An introduction to engineering materials and their properties and behavior. Covers such areas as metallurgy, corrosion, ferrous, non-ferrous, and organic materials and composites.

CTI 308. CHEMICAL ENGINEERING TECHNOLOGY TWO CREDIT HOURS
An introduction to the unit operations, unit processes, and materials of chemical engineering.

CTI 308L. CHEMICAL ENGINEERING TECHNOLOGY LABORATORY ONE CREDIT HOUR
Designed to acquaint the student with Unit Operations equipment and its utilization. To accompany Cti 308.

CTI 309. CHEMICAL ENGINEERING TECHNOLOGY CALCULATIONS THREE CREDIT HOURS
A calculations course designed to acquaint the student with the fundamentals of process variables, material and energy balances, and equilibrium conditions in chemistry and chemical engineering.

CTI 313. TOPICS IN PHYSICAL CHEMISTRY THREE CREDIT HOURS
Course will consider several topics pertinent to the area of physical chemistry: thermodynamics, states of matter, solutions, electrochemistry, nuclear chemistry, absorption. Prerequisite Cti 122 or equivalent.

CTI 313L. TOPICS IN PHYSICAL CHEMISTRY LABORATORY ONE CREDIT HOUR
Designed to accompany Cti 313, three hours of laboratory per week.

CTI 316. ANALYTICAL INSTRUMENTATION THREE CREDIT HOURS
Course will present the student with a full picture of the analytical instruments available to the research laboratory and to the manufacturing process. Insofar as possible the students will operate the instruments, or see them in operation, and interpret the resulting spectra and data. A tour of a neighboring laboratory is usually arranged with possible demonstrations of analytical equipment that is not currently available on campus.

CTI 400. SELECTED CHEMICAL TOPICS ONE TO FOUR CREDIT HOURS
Investigation and discussion of current technical topics in chemical technology. May be taken more than once. Prerequisite: Permission of the department chairman.

CTI 451. POLLUTION THREE CREDIT HOURS
Course will cover the range of environmental pollution problems: air and water, waste disposal, the automobile and alternatives to it, our energy crisis, noise, pesticides, other topics as relevant. Lectures will attempt to develop an understanding, and thus an appreciation, of nature. Methods of control and the economics will also be considered.

Electronic Engineering Technology (ETI)Richard R. Hazen, *Chairman**Professor: Hazen**Associate Professor: Hanneman**Assistant Professors: Farren, Fischer, Rooney*

- ETI 110. ELECTRICAL CIRCUITS I THREE CREDIT HOURS
 Practical concepts of D.C. Circuits; resistance, resistivity, power and magnetism. Circuit calculations using basic formulas. Prerequisite: Sti 107.
- ETI 111. ELECTRICAL CIRCUITS II THREE CREDIT HOURS
 Practical concepts of A.C. Circuits; inductance, capacitance, reactance, impedance, phase, power and power factor. Circuit calculations utilizing vectors and complex quantities. Prerequisite: Eti 110, Sti 108.
- ETI 111L. ELECTRICAL CIRCUITS LABORATORY ONE CREDIT HOUR
 To accompany Eti 111. Three hours of laboratory a week.
- ETI 201. FUNDAMENTALS OF ELECTRONIC TECHNOLOGY THREE CREDIT HOURS
 Selected topics D.C.-A.C. circuits, measurements and electron devices for non-Electronic Technology students. Prerequisite: Sti 108, Sti 215.
- ETI 204. ELECTRICAL MEASUREMENTS TWO CREDIT HOURS
 Fundamentals of direct and alternating current measuring instruments and methods of measurement, with particular emphasis on industrial applications. Corequisite: Eti 111, Sti 207.
- ETI 204L. ELECTRICAL MEASUREMENTS LABORATORY ONE CREDIT HOUR
 To accompany Eti 204. Three hours of laboratory a week.
- ETI 205. ELECTRONIC MEASUREMENTS THREE CREDIT HOURS
 Study of modern electronic measuring instruments and systems including oscilloscopes, counters, and telemetry. Prerequisite: Eti 204. Corequisite: Eti 206.
- ETI 205L. ELECTRONIC MEASUREMENTS LABORATORY ONE CREDIT HOUR
 To accompany Eti 205. Three hours of laboratory a week.
- ETI 206. ELECTRON DEVICES I THREE CREDIT HOURS
 Fundamentals of vacuum tubes, gas tubes, semi-conductor diodes and their associated circuits. Prerequisite: Eti 111, Sti 207.
- ETI 206L. ELECTRON DEVICES I LABORATORY ONE CREDIT HOUR
 To accompany Eti 206. Three hours of laboratory a week.
- ETI 210. ELECTRICAL MACHINERY THREE CREDIT HOURS
 Fundamentals of the construction and application of direct current and alternating current machines and apparatus to industrial uses. Prerequisite: Eti 111. Evening classes only.
- ETI 210L. ELECTRICAL MACHINERY LABORATORY ONE CREDIT HOUR
 To accompany Eti 210. Three hours of laboratory a week. Evening classes only.
- ETI 211. MOTOR CONTROL THREE CREDIT HOURS
 Industrial uses of standard controllers for electric motors. Prerequisite: Eti 210. Evening classes only.
- ETI 211L. MOTOR CONTROL LABORATORY ONE CREDIT HOUR
 To accompany Eti 211. Three hours of laboratory a week. Evening classes only.

ETI 222L. ELECTRONIC CIRCUIT DIAGRAMS ONE CREDIT HOUR
Standards and symbols used on electronic circuit diagrams. Three hours of laboratory a week.

ETI 226. INTRODUCTION TO ANALOG COMPUTERS AND SERVOMECHANISMS THREE CREDIT HOURS
Fundamentals and design of synchros 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 111.

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 111.

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.

ETI 450. MICROELECTRONICS THREE CREDIT HOURS
 A study of the principles, design techniques, and fabrication processes utilized in the construction of thick film, thin film and integrated circuits.

ETI 451. ADVANCED INSTRUMENTATION TWO-THREE CREDIT HOURS
 A study of modern laboratory instrumentation utilizing the flexibility of an unstructured laboratory where independent projects including modern CRT systems, integrating DVM, acoustical equipment, advanced standards and other projects can be carried out.

ETI 452. FEEDBACK CONTROLS THREE CREDIT HOURS
 Includes the study of signal flow, circuit stability, Nyquist criteria, Bode plots, oscillators, amplifiers and electromechanical devices.

ETI 453. ANTENNAS THREE CREDIT HOURS
 The study of basic antenna types and their application to arrays and other systems.

ETI 454. ENVIRONMENTAL NOISE CONTROL THREE CREDIT HOURS
 Includes the study of noise, noise measurement, physiological effects of noise, Federal regulations and design criteria for noise reduction.

Industrial Engineering Technology (ITI)

Raymond B. Puckett, *Chairman*

Associate Professor: Puckett

Assistant Professor: Staudter

Instructor: Iselin

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 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 108.

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 108.

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 107.

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 315. ORGANIZATION AND MANAGEMENT** **THREE CREDIT HOURS**
 A study of the structure of industrial organizations and the responsibilities and duties of a supervisor in developing an effective production team.
- ITI 318. STATISTICAL QUALITY CONTROL** **THREE CREDIT HOURS**
 An introduction to the techniques of industrial process control using statistical methods. Prerequisite: Sti 107.
- ITI 331. MOTION AND TIME STUDY II** **TWO CREDIT HOURS**
 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. Prerequisite: Iti 230.
- ITI 331L. MOTION AND TIME STUDY LABORATORY II** **ONE CREDIT HOUR**
 To accompany Iti 331. Three hours of laboratory a week.
- ITI 332. PLANT LAYOUT** **TWO CREDIT HOURS**
 A study of the economical arrangement of stocks, machines and layout of aisles for efficient material handling and production. Prerequisites: Iti 108 and Mti 103L.
- ITI 332L. PLANT LAYOUT LABORATORY** **ONE CREDIT HOUR**
 To accompany Iti 332. Three hours of laboratory a week.
- ITI 400. SELECTED INDUSTRIAL TOPICS** **ONE TO FOUR CREDIT HOURS**
 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
 Assistant Professors: Kretzler, Mott, Rolle, Wolff

- MTI 103L. TECHNICAL DRAWING** **TWO CREDIT HOURS**
 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** **TWO CREDIT HOURS**
 Descriptive geometry drawing problems involving points, lines, planes and geometric shapes presented and solved in orthographic projection form. Six hours of laboratory per week. Prerequisite: Mti 103L.
- MTI 106L. TESTING AND MEASUREMENTS** **ONE CREDIT HOUR**
 Theory and practice of precision dimensional metrology, and standard mechanical testing equipment. Three hours of laboratory a week. Corequisite: Iti 104.
- MTI 108L. MANUFACTURING PROCESSES I, LABORATORY** **ONE CREDIT HOUR**
 Basic concepts of cutting and non-cutting metal removal processes, metal cutting theory, forming, joining, and production and general-purpose machines.

- MTI 213. INDUSTRIAL MECHANISMS** THREE CREDIT HOURS
Applications and mechanical advantages of gears, cams, pulleys, linkages and levers as used in industrial work simplification devices. For industrial engineering technology. Prerequisite: StI 115.
- MTI 215. STATICS** THREE 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. Three hours of class per week. Prerequisite: StI 115.
- MTI 220. MECHANICS: STATICS AND DYNAMICS** THREE CREDIT HOURS
Principles of applied engineering mechanics. Three hours of class per week. Prerequisites: StI 108 and StI 115.
- 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 215, StI 207.
- MTI 217. DYNAMICS** THREE CREDIT HOURS
Principles of applied engineering dynamics. Includes kinematics, kinetics, conservation of energy, conservation of momentum, and introduction to mechanical vibrations. Three hours of class per week. Corequisite: Mti 215.
- MTI 226L. MECHANISMS** 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 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 207.
- MTI 232. THERMODYNAMICS** THREE 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 216, StI 207.
- MTI 324L. DESIGN FOR MANUFACTURING** TWO CREDIT HOURS
The basic principles of the design of tools for the material removal, pressworking, casting, and joining processes. Includes material selection and torque, thrust, horsepower, and pressures required. One hour class and three hours 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, StI 207.
- MTI 329. FLUID POWER** THREE CREDIT HOURS
Study of hydraulic and pneumatic fluid power systems and components as used in industrial, mobile, and aero-space applications. Includes analytical design and laboratory evaluation of components, circuits, and basic control devices. Two hours class and three hours laboratory a week. Prerequisites: Mti 231.
- MTI 400. SELECTED MECHANICAL TOPICS** ONE TO FOUR CREDIT HOURS
Investigations and discussion of current technical topics in mechanical engineering technology. May be taken more than once. Prerequisite: Permission of the department chairman.

- MTI 423. DESIGN FOR MECHANICAL SYSTEMS** THREE CREDIT HOURS
 Synthesis of mechanical devices and systems. Emphasis on the integration on various machine elements into a single unit. Original individual design projects will be required. Prerequisite: Mti 323.
- MTI 430. DESIGN OF FLUID POWER SYSTEMS** THREE CREDIT HOURS
 Design of fluid power systems and their controls by graphical and analytical techniques. Includes binary arithmetic, switching theory (Boolean algebra), open and closed loop systems, fluidic, moving-part, electrical and, servo controls. Prerequisite: Mti 329.
- MTI 432. HEAT POWER** THREE CREDIT HOURS
 Applications of the fundamentals of thermodynamics, emphasizing energy transfer systems such as internal combustion engines, gas turbines, steam power plants, and reversed cycle devices. An introduction to nuclear energy and direct conversion techniques is also included. Prerequisite: Mti 232.

Engineering Technology Service Courses

Associate Professor: Strange
Assistant Professors: Fehlmann, Patrick, Staub
Instructors: Barsalou, Schoen

- 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 107. ENGINEERING TECHNOLOGY MATHEMATICS I** FOUR 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 108. ENGINEERING TECHNOLOGY MATHEMATICS II** FOUR 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 107.
- STI 115. 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 108.
- STI 115L. PHYSICS: MECHANICS LABORATORY** ONE CREDIT HOUR
 To accompany Sti 115. Two 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 151. INTRODUCTION TO ENGINEERING TECHNOLOGY THREE CREDIT HOURS
The environment of engineering technology, an introduction to problem solving techniques and to the design process.
- STI 207. ENGINEERING TECHNOLOGY MATHEMATICS III FOUR CREDIT HOURS
Applications of selected topics in differential and integral calculus to Engineering Technology. Prerequisite: StI 108.
- STI 215. PHYSICS: ELECTRICITY TWO CREDIT HOURS
The basic principles of electricity and their application in industry. Prerequisite: StI 115.
- STI 215L. PHYSICS: ELECTRICITY LABORATORY ONE CREDIT HOUR
To accompany StI 215. Two hours of laboratory a week.
- STI 216. PHYSICS: HEAT, LIGHT AND SOUND TWO CREDIT HOURS
The elementary principles of heat, light and sound with particular emphasis on industrial application. Prerequisite: StI 115.
- STI 216L. PHYSICS: HEAT, LIGHT AND SOUND LABORATORY ONE CREDIT HOUR
To accompany StI 216. Two hours of laboratory a week.
- STI 251. ECONOMICS OF INDUSTRY THREE CREDIT HOURS
Basic economic principles as applied to major industrial problems.
- STI 252. AMERICAN POLITICAL IDEAS AND PRACTICES THREE CREDIT HOURS
Fundamentals of democratic processes in government and the practices in which they function.
- STI 306. ENGINEERING TECHNOLOGY MATHEMATICS IV THREE CREDIT HOURS
Selected topics from ordinary differential equations with an emphasis on operational methods of solution. Stresses problems encountered in engineering technology. Prerequisite: StI 207.
- STI 334. TECHNICAL WRITING TWO CREDIT HOURS
A comprehensive treatment of the fundamentals of writing effective technical documentations for industry, which also encompass the selection and use of technical illustrations and tables.
- STI 400. SPECIAL TOPICS IN ENGINEERING TECHNOLOGY ONE-FOUR CREDIT HOURS
Investigation and discussion of current topics in engineering technology. May be taken more than once. Prerequisite: Permission of instructor.
- STI 499. SEMINAR ONE CREDIT HOUR
Selected technical and occupational topics. Required of all Bachelor of Technology students in the second term of their senior year.



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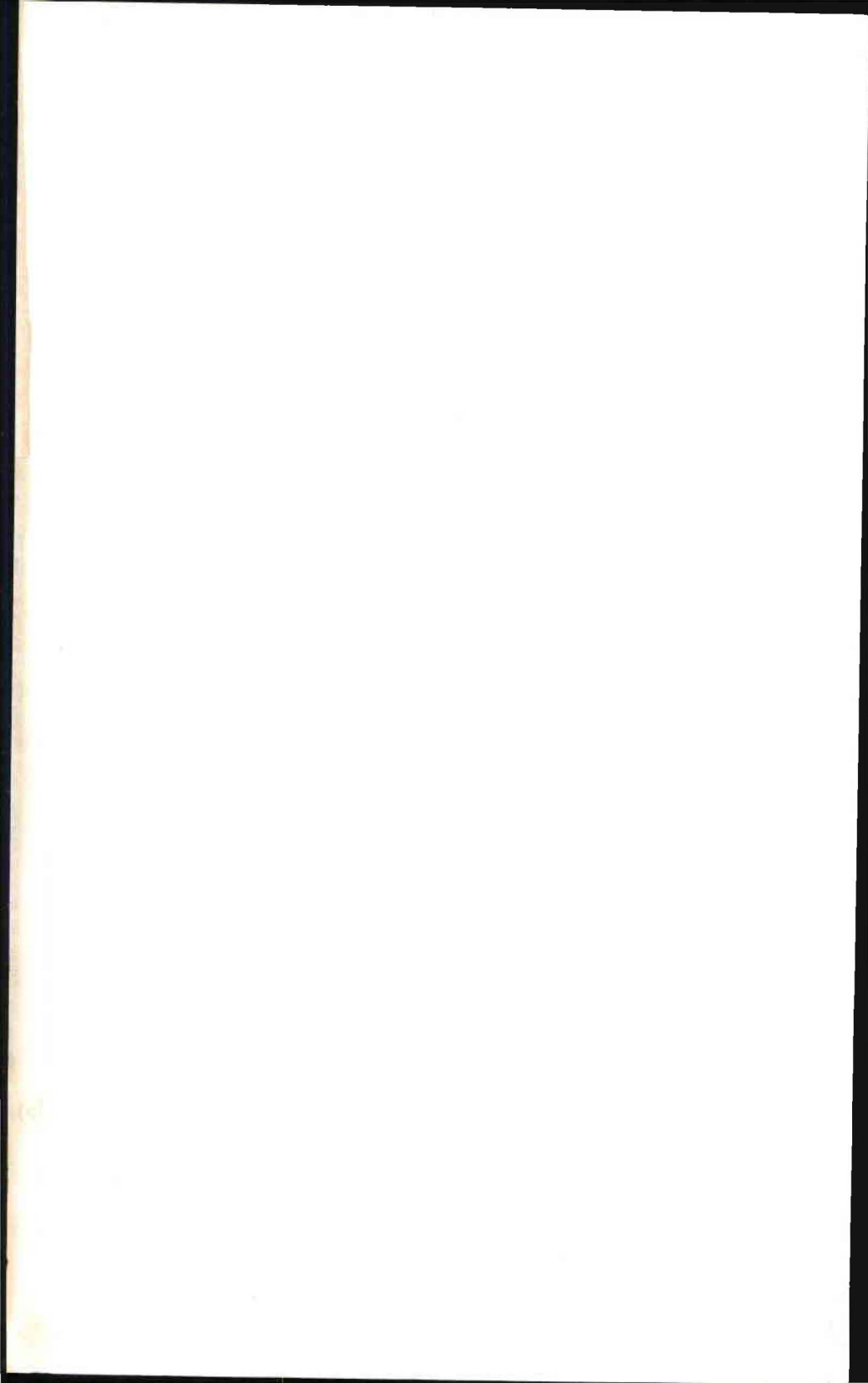
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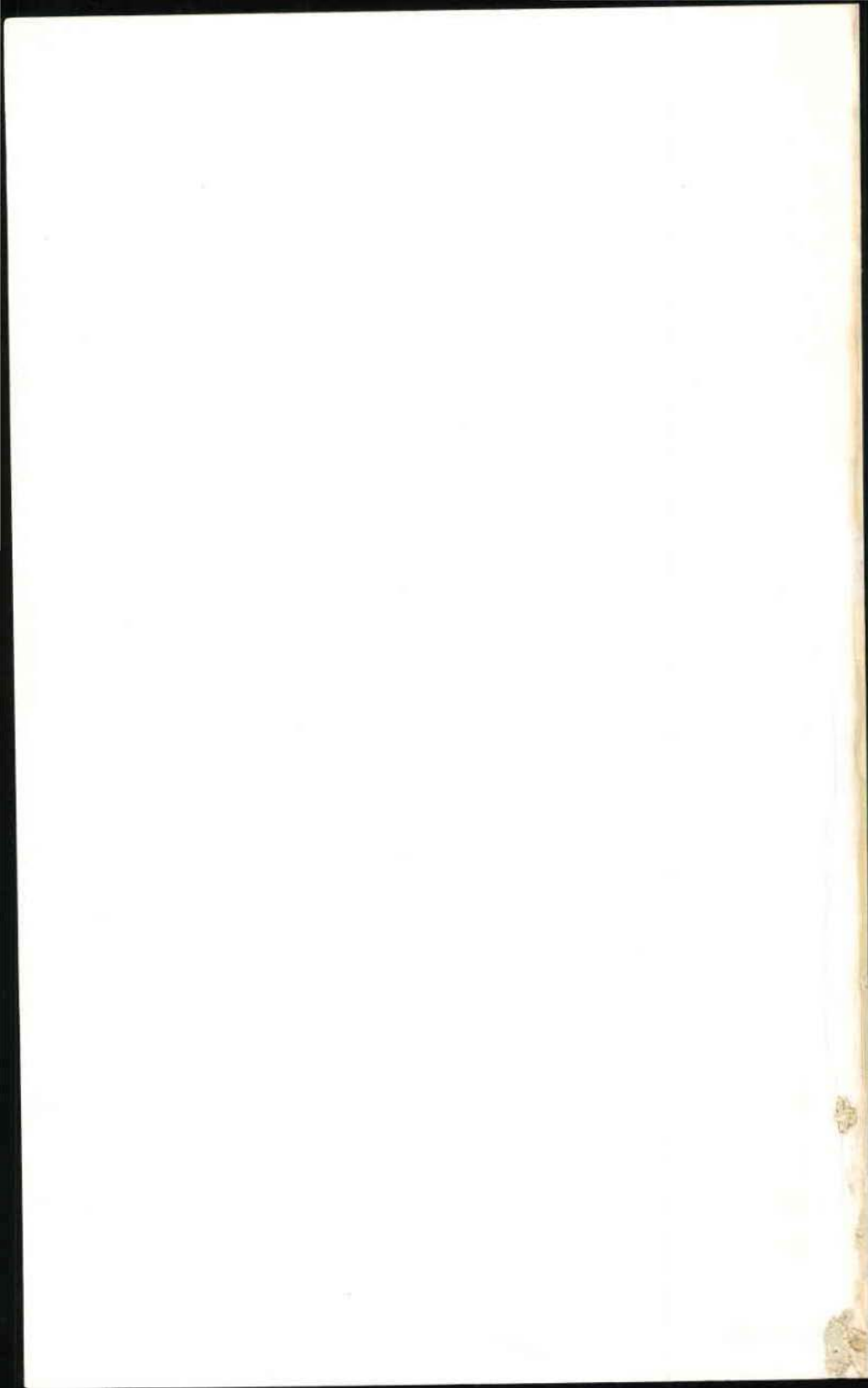
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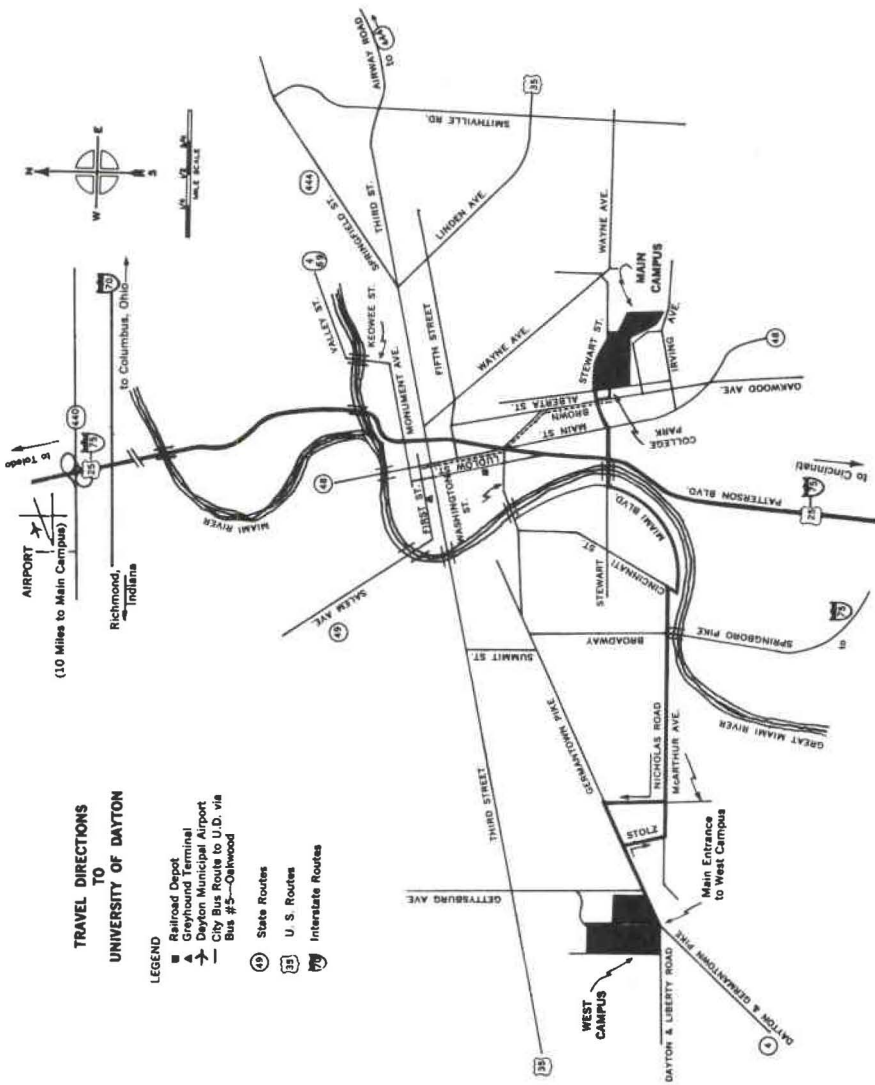
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**TRAVEL DIRECTIONS
TO
UNIVERSITY OF DAYTON**

- LEGEND**
- Railroad Depot
 - ▲ Greyhound Terminal
 - ✈ Dayton Municipal Airport
 - City Bus Route to U.D. via Bus #5—Oakwood
 - ④ State Routes
 - ③① U. S. Routes
 - ⑦⑦ Interstate Routes



AIRPORT
(10 Miles to Main Campus)

Richmond, Indiana
to Columbus, Ohio



