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UNDERGRADUATE
ISSUE



The
University
of
Dayton
Bulletin



DAYTON, OHIO 45409

THE UNIVERSITY OF DAYTON BULLETIN

VOLUME LXXXV

MARCH 1974

NUMBER 3

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The University of Dayton Bulletin includes the undergraduate bulletin issue, the graduate bulletin issue, the evening session bulletins, and the summer session bulletin. 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 ISSUE MARCH 1974

DAYTON, OHIO 45469



1974-75 Academic Calendar

FIRST TERM

| | |
|-------------------|---|
| To be announced | Last days to complete registration |
| August 30, 31 | Freshman Orientation |
| September 1, 2, 3 | Freshman Orientation |
| September 2 | National Holiday—Labor Day |
| September 4 | Classes begin at 8:00 a.m. |
| September 11 | Last day for change in schedules |
| September 11 | Last day to change grading option |
| September 20 | Last day to withdraw without record |
| October 14 | National Holiday—Columbus Day—no day class meetings— evening classes will meet |
| October 19 | Homecoming—Saturday classes will meet |
| October 28 | Freshman mid-term progress grades due in the Registrar's Office |
| October 28 | National Holiday—Veteran's Day—all classes will meet |
| November 1 | All Saints Day—no class meetings |
| November 8 | Last day to withdraw with record of "W" |
| November 27 | Thanksgiving recess begins after the last evening class |
| December 2 | All classes resume |
| December 14 | Examinations—Saturday classes |
| December 16-20 | Examinations—Evening classes |
| December 17-20 | Examinations—8.00 a.m.—5:00 p.m. |
| December 20 | First Term ends after the last examination |
| December 21 | Diploma exercises |

SECOND TERM

| | |
|----------------|--|
| January 2, 3 | Last days to complete registration |
| January 7 | Classes begin at 8:00 a.m. |
| January 16 | Last day for change in schedules |
| January 16 | Last day to change grading option |
| January 24 | Last day to withdraw without record |
| February 13-14 | Faculty Workshop—evening classes will meet |
| February 17 | National Holiday—Lincoln-Washington Birthdays—no day class meetings—evening classes will meet |
| February 24 | Freshman mid-term progress grades due in the Registrar's Office |
| March 7 | Last day to withdraw with a "W" |
| March 26 | Easter recess begins after the last evening class |
| April 1 | All classes resume |
| April 19 | Examinations—Saturday classes |
| April 22-25 | Examinations—Evening classes |
| April 22-25 | Examinations—8:00 a.m.—5:00 p.m. |
| April 25 | Second Term ends after the last examination |
| April 27 | Commencement |

THIRD TERM—First Session

| | |
|------------|---|
| May 2 | Last day to complete registration |
| May 5 | Classes begin at 8:00 a.m. |
| May 8 | Ascension—no class meetings |
| May 12 | Last day for change in schedules |
| May 12 | Last day to change grading option |
| May 15 | Last day to withdraw without record |
| May 26 | National Holiday—Memorial Day—no class meetings |
| May 30 | Last day to withdraw with a “W” |
| June 11-17 | Examinations—Evening classes |
| June 14 | Examinations—Saturday classes |
| June 16-17 | Examinations—8:00 a.m.—5:00 p.m. |
| June 17 | First Session ends after the last examination |

THIRD TERM—Second Session

| | |
|------------------|---|
| June 20 | Last day to complete registration |
| June 23 | Classes begin at 8:00 a.m. |
| June 30 | Last day for change in schedules |
| June 30 | Last day to change grading option |
| July 2 | Last day to withdraw without record |
| July 4 | National Holiday—Independence Day—no class meetings |
| July 18 | Last day to withdraw with a “W” |
| July 28-31 | Examinations—Evening classes |
| July 31-August 1 | Examinations—8:00 a.m.—5:00 p.m. |
| August 2 | Examinations—Saturday classes |
| August 2 | Second Session ends after the last examination |
| August 3 | Diploma exercises |

1975-76 Proposed Academic Calendar

FIRST TERM

| | |
|----------------|--|
| September 1 | Labor Day |
| September 3 | Classes begin at 8:00 a.m. |
| October 13 | Columbus Day |
| October 20 | Mid-term grades due date |
| November 1 | All Saints Day |
| November 27 | Thanksgiving |
| December 1 | All classes resume |
| December 8 | Immaculate Conception |
| December 13-19 | Examinations |
| December 19 | First Term ends after the last examination |
| December 20 | Diploma exercises |

SECOND TERM

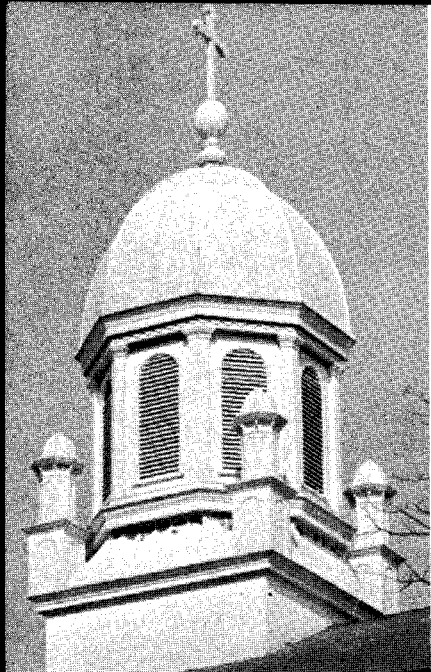
| | |
|----------------|---|
| January 6 | Classes begin at 8:00 a.m. |
| February 12-13 | Faculty Workshop |
| February 16 | Lincoln-Washington Birthdays |
| April 18 | Easter |
| April 17-23 | Examinations |
| April 23 | Second Term ends after the last examination |
| April 25 | Commencement |

THIRD TERM—First Session

| | |
|------------|---|
| May 5 | Classes begin at 8:00 a.m. |
| May 27 | Ascension Day |
| May 28 | No classes |
| May 31 | Memorial Day |
| June 17-19 | Examinations |
| June 19 | First Session ends after the last examination |

THIRD TERM—Second Session

| | |
|------------|--|
| June 21 | Classes begin at 8:00 a.m. |
| July 5 | Independence Day |
| July 29-31 | Examinations |
| July 31 | Second Session ends after the last examination |
| August 1 | Diploma exercises |



| | |
|---|-----|
| Academic Calendar | 3 |
| I General Information | 7 |
| II Student Life and Services | 25 |
| III Admissions | 33 |
| IV Financial Information | 39 |
| V Academic Regulations | 59 |
| VI College of Arts and Sciences | 69 |
| VII School of Business Administration | 113 |
| VIII School of Education | 127 |
| IX School of Engineering | 145 |
| Engineering Technology | 157 |

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 four schools and the college, offering a large selection of study ranging from art and philosophy to geology and computer science.

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

The campus itself is located on a seventy-six acre hilltop at the southern edge of the city of Dayton where older and newer buildings are blended into a pleasant setting. A West Campus, just fifteen minutes distant from the Main Campus, also comprises seventy-six acres; it is used primarily for housing of freshman men.

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-fourth 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, and the School of Law. In all, forty-two departments of instruction function on the campus, awarding thirty-three different degrees on the associate, baccalaureate, and graduate levels.

These degrees are:

| | |
|--|-----------------------------------|
| Bachelor of Arts | Juris Doctor |
| Bachelor of Science | Master of Arts |
| Bachelor of Fine Arts | Master of Business Administration |
| Bachelor of General Studies | Master of Public Administration |
| Bachelor of Music | Master of Clinical Chemistry |
| Bachelor of Science in Business Administration | Master of Computer Science |
| Associate in Business Administration | Master of Science |
| Bachelor of Science in Education | Master of Science in Education |
| Bachelor of Chemical Engineering | Master of Science in Teaching |
| Bachelor of Civil Engineering | Master of Science in Chemical |
| Bachelor of Electrical Engineering | Engineering |
| Bachelor of Industrial and Systems Engineering | Master of Science in Engineering |
| Bachelor of Mechanical Engineering | Master of Science in Engineering |
| Bachelor of Technology | Management |
| Associate in Technology | Master of Science in |

Civil Engineering
Master of Science in
Electrical Engineering
Master of Mechanical Engineering

Doctor of Philosophy in Engineering
Doctor of Engineering
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.

The Medical Technology Program is recognized by the Board of Schools of the American Society of Clinical Pathologists.

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, Data Processing, Economics, English, General Studies, Geology, History, Home Economics, Languages, Mathematics, Medical Technology, Military Science, Performing and Visual Arts (Fine Arts, Music, Theatre), Philosophy, Physical Science, 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. The Program leading to a B.S. in Medical Technology and certification by the national Registry of Medical Technologists is operated in cooperation with local and county-wide AMA Approved Hospitals. 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 and valuable musical practice and experience.

Programs leading to the degrees of Master of Arts or Master of Science are offered in American studies, biology, chemistry, communication arts, English, history, humanities, mathematics, philosophy, physics, political science, psychology, and theological studies. The Department of Computer Science offers the Master of Computer Science degree. 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, economics, and packaging management. 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, and Master of Science in Teaching. 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, and Mechanical Engineering; and also offers an upper level program in Industrial and Systems Engineering. The School offers graduate programs leading to the degrees of Master of Science in Engineering—Aerospace, Materials, Master of Science in Engineering, Engineering Management, Chemical Engineering, Civil Engineering, and Electrical Engineering, Master of Mechanical Engineering, Doctor of Engineering and Doctor of Philosophy in Engineering.

School of Law

The University of Dayton has reopened its School of Law and is accepting first-year students for the fall term of 1974. The purpose of the School of Law is to conform to and further the goals and purposes of the University of Dayton.

The plan and design of the law program is predicated on a careful consideration of what law as a profession demands of the student choosing that career. As a professional field, law requires a high level of competency in the knowledge, theory, and practice of law. The Law School, therefore, regards as its prime responsibility, both to the student and society, to provide a program of studies that is thorough and exact-

ing so that such a level of competence is achieved.

The program also recognizes that the lawyer must fulfill several roles: counselor, advocate, member of a profession, and public servant. As a counselor, he or she must be prepared to cope with the reality that legal matters are often interrelated with other factors, sometimes very personal ones, in the client's situation. As an effective advocate, the lawyer must be capable of making available to the client all the rights and privileges accorded him by the law. As a member of a profession, he or she has a responsibility to earn the respect and confidence of the public, so essential to a sound legal and judicial system. As a public servant, the lawyer must realize that the very nature of his training and profession imposes the duty of leadership and service.

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.

Office of the Assistant Provost

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 Women's 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 special needs of persons from minority groups.

There are no limits on the kinds of programs which might be developed so long as the following conditions are met:

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. programs must enhance and further the recognized goals and purposes of the University of Dayton.

Experimental 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 experimental studies involve disciplines that lie entirely within one of the Schools of the University or the College of Arts and Sciences, the programs may be handled by the respective School or College.) Faculty members accrue credit to their home department when they voluntarily teach a UDI course through the Center.

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 occasionally; the Assistant Provost encourages and furthers coordination of new programs and 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, Environmental and Women's Studies. Also housed in the Second Story is the Program for Self-Directed Learning, sponsored by the College of Arts and Sciences, which is part of UD's innovative thrust. Projects aimed at developing educational alternatives and needing space may apply for facilities in The Second Story.

Mini-Courses

MMMMM

Mini-courses are a type of short-term credited course developed by students or faculty to meet specific needs not covered in the regular curriculum.

Flexibility is inherent in the mini-course concept. One college credit is equivalent to fifteen class hours. In mini-courses, the fifteen hours can occur in different sequences—spread over several weeks, or concentrated into a few days or possibly a workshop. Some topics may require even less than fifteen hours of study, leading to the possibility of fractional credit.

Mini-courses, developed first by the Office of the Assistant Provost, are now offered in several departments and are available throughout the year. Listings are published by the Assistant Provost's Office.

Fund for Educational Development

On behalf of the Vice-President for Academic Affairs and Provost, a Council of faculty members, chaired by the Assistant Provost, administers a special Fund for Educational Development. Grants are made to individuals or teams of faculty members upon approval of proposals submitted to the Council. Established in 1973 the Fund is intended as incentive and reward to faculty who engage in educational experimentation aimed at increasing the alternatives at the University of Dayton and improving the teaching and learning process. Full information is available through the Office of the Assistant Provost.

Toward the same goals, the Assistant Provost is continually involved in the surveying and researching of new program developments in higher education throughout the country. When programs with clear promise of usefulness to the University of Dayton are discerned—whether they originate in or outside this University—they are studied in depth by specially appointed Task Forces made up of prominent faculty members. Task Force recommendations are then presented to the Academic Vice-President and Provost for final administrative approval and implementation.

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
Harvard Graduate School of Education

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 Center for Afro-American Affairs utilizes many community organizations, public schools, urban leaders, and federally funded projects as resources for its students and programs.

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 Afro-American perspective on such disciplines as History, Political Science, Sociology, English, Education and Economics. The courses of the Center are available to all students of the University. The Center works cooperatively with other departments of the University in developing programs.

Students may obtain a minor in Afro-American Studies by successfully completing between 15 and 24 hours of course work. While there are no standard course requirements for a minor, each student must construct his program with the help of a faculty advisor. A student may also apply Afro-American Studies in his major area with approval of his advisor and Dean.

Graduate Fellowship Program

The Center, with the assistance from the Black Graduate Student Affairs Committee, recruits students from a number of selected predominately Black colleges and universities to enter the University as graduate students.

Financial assistance is available to 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, counseling of students and other involvements in the urban community.

Cultural and Special Service Programs

The Cultural and Special Programs provide service and activities for UD 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 such projects and through courses offered by the Center. These internships place students in urban and educational agencies throughout the Dayton area.

Other programs and activities of the Center include a news-letter, high school seminar and an urban and Afro-American collections room. The Center pioneered a new program leading to the Associates degree in Urban Community Development offered since Fall, 1973 by the College of Arts and Sciences in cooperation with the Center.

WVUD-FM and UD-CCTV

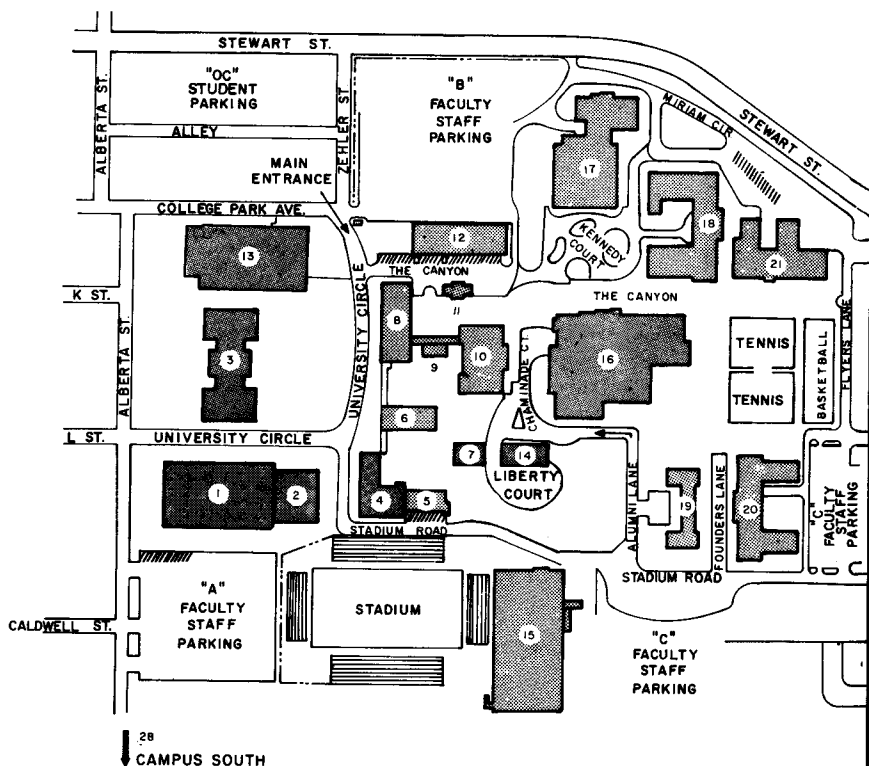
Modern communications media, available to all University departments and programs, include WVUD-FM, a radio station covering the Miami Valley area, and an on-campus, closed circuit television operation. Both facilities are housed in the John F. Kennedy Memorial Union.

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

Thirteen institutions of higher learning in the Miami Valley, including the Uni-



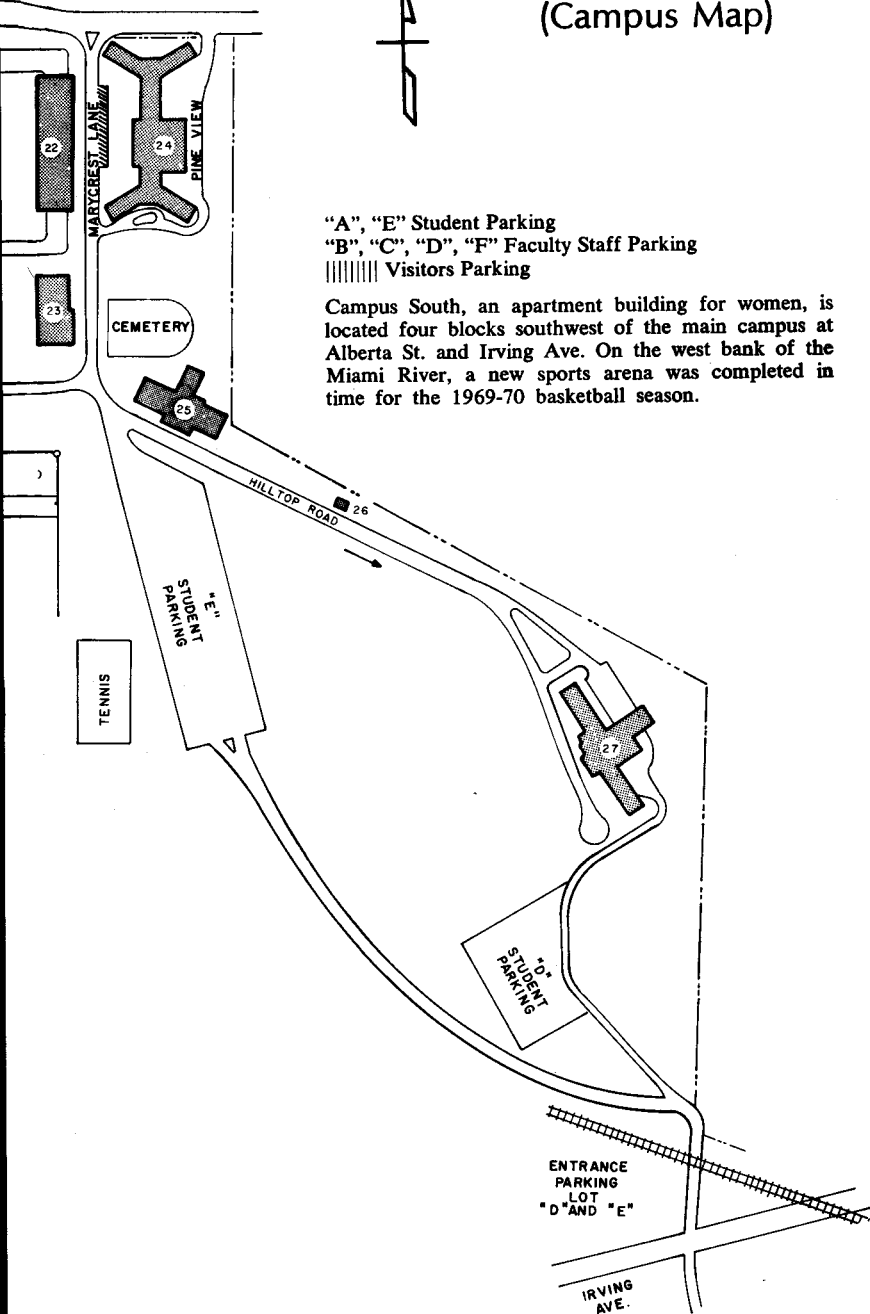
- | | |
|--|----------------------------------|
| 1. Fieldhouse | 16. J. F. Kennedy Memorial Union |
| 2. Flyer's Hangar | 17. Miriam Hall |
| 3. Albert Emanuel Center | 18. Sherman Hall |
| 4. St. Joseph's Hall | 19. Alumni Hall |
| 5. Zehler Hall | 20. Founders Hall |
| 6. Chapel of the Immaculate 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.



versity of Dayton, have organized the Dayton-Miami Valley Consortium (DMVC). The member institutions seek to increase inter-institutional cooperation, improve curricula, develop new courses and programs, minimize cost, and centralize selected functions, by using computers, modern educational technology, and communication media.

Among the benefits 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 is an active member of the Consortium for Higher Education Religion Studies (CHERS). This consortium makes possible cross registration, sharing of library resources, dialogue with students of other institutions, interchange of facilities and cooperative innovative planning. Area members include: Antioch College, Hama Divinity School, Payne Theological Seminary, St. Leonard Seminary, University of Dayton, Wilberforce University, Wilmington College, 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.

OFFICE OF INTERNATIONAL EDUCATION

The Office of International Education was established to serve three vital functions at the University: coordinate, guide and counsel in programs for studies abroad; advise and service international students at the University of Dayton; provide leadership in all other aspects of international education such as exchange programs, sister-school relationships and recruitment of students from other countries. To complement these functions a Resources Center is included in the office complex. This center houses a permanent browsing library of materials dealing with study abroad, work and exchange programs, travel, special international topics, foreign cultural reviews as well as American reviews of interest to international students on our campus. Various international displays are also to be found here throughout the year. The international office complex is located on the fourth floor of the university library.

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. (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," an annex to the Fieldhouse, is used for different purposes.

Baujan Field (1925)

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

St. Joseph Hall (1884)

One of the oldest buildings on the campus, St. Joseph Hall has seen many uses. It now houses classrooms, 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 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, Mechanical Engineering, Mechanical Engineering Technology, and the Director of Technical Studies and Services, and houses a broad spectrum of Research Institute activity.

The administrative offices of the Dean of Engineering and 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 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 students. Fifty-four apartments accommodate over three hundred women.

Benisek Hall (1970)

Benisek Hall, at Trinity and Stonemill Rd., south of the Campus, is headquarters for Campus Security, the Grounds Department, the Maintenance Department, Physical Plant, Construction and Planning, and Custodial Service.

Stuart Hall (1963)

This 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.

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 and women for positions of responsibility as officers in the active Army and its Reserve components. If the draft is reinstated the program would also enable qualified college graduates to fulfill their obligations 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 and women who complete the eight semesters of study or equivalent, 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 for academic credit.

The basic course emphasizes practical leadership techniques as well as management concepts which apply equally in both military organizations and private industry. Studies in national securities and global concepts as well as military history are also discussed.

The advanced instruction includes practical exercises in tactical training, management, leadership techniques and the exercise of command. 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.

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 one-half the basic pay of a Second Lieutenant.



II Student Life and Services

RESIDENCE LIFE AND HOUSING

Professional and student staff coordinate with the Office of Residence Life and the Housing Office in administering the personnel and management functions in the University residence halls. The staffs seek to assist each resident in realizing a maximum educational experience while at the University. An elected Hall Council represents student opinion and initiates programs in each hall. A Judicial Board facilitates the due process system and provides for a hearing by one's peers in disciplinary matters. A member of the Campus Ministry is available in each hall for counseling and religious direction.

While junior and senior students may arrange their own housing either on or off campus, freshmen and sophomore students are required to live in University residence halls unless they are married, twenty-one years of age or over, or local residents living with their families.

All new students, upon their official acceptance to the University of Dayton, receive application/contracts and instructions for residence hall accommodations from the Office of Admissions.

Any questions concerning housing information should be directed to the Housing Office, University of Dayton.

DINING FACILITIES

The University's food service is operated in two principal facilities. The main cafeteria, El Granada, is located in the Kennedy Memorial Union and contains a dining area seating 340 students. Adjacent to this facility in the Union is a snack bar where light lunches may be obtained.

The Brass Rail is located in Marycrest Residence Hall and is a smartly decorated modern dining room.

The food service 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 three cafeterias.

STUDENT ORGANIZATIONS

One of the most attractive aspects of the University of Dayton Community is the variety of organizations and activities which exists. Through participation, students derive personal benefit while frequently serving the needs of others.

The Office of University Activities is responsible for consultation with, and coordinating, developing, and planning in the areas of organizations, programs, and activities. Organizations and events must be registered and movies must be booked through this office.

Among the organizations are coordinating units such as Student Government, Interfraternity and Pan Hellenic Councils, Central Service Organization, and the various Residence Hall Councils; social organizations including national and local fraternities and sororities; co-curricular and academic organizations among which are the Debate Team, language clubs, and honor societies; and musical, military, service, 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 newspaper, a literary magazine, a yearbook, and many special-interest publications.

Each of the campus clubs elects its own officers and many groups have faculty consultants.

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.

PSYCHOLOGICAL SERVICES

The University Psychological Services Center provides a complete testing program for the students of the University, and for industry and the community at large.

These testing services for University full-time students are used to help students

identify their talents and aptitudes and thus guide them into proper fields of opportunity to seek advice in personal, social, and academic problems which they 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 employment 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

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.

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

Infirmary or hospital costs are covered for the most part by the highly recommended student insurance program which is available to all full-time students. (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 campus. Upperclass students (sophomore and above) who reside on campus may apply for Parking Permits at the Traffic Office, on a first come, first serve basis. Freshmen students who reside on campus may be issued permits on a space available, first come, first serve basis. Unique situations will be given special consideration. Freshmen students who reside on campus and who wish a Parking Permit should first contact the Office of Residence Life before applying at the Traffic Office.

CULTURAL ACTIVITIES

Throughout the year, by means of various programs including the University Arts Series, 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, Pianist Van Cliburn, Poets Louis Untermeyer, John Ciardi, Allen Ginsberg, and W. H. Auden, the Roger Wagner Chorale, the Guarneri String Quartet, the Dayton Civic Ballet, Turnau Opera Players, Salzburg Marionette Theatre, the Oxford-Cambridge Shakespeare Company, vocalist Miriam Makeba, acclaimed guitar ensemble the Romeros, flamenco Master Carlos Montoya, Eleo Pomare Dance Company, and Marcel Marceau.

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

The University has a number of 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 and the Fieldhouse 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 play-fields are available on campus. 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 Intercollegiate Athletics is an integral part of the educational development that the University makes available to all students. There is a very broad program in both Intercollegiate Athletics and Intramural Athletics.

All students are encouraged to participate in some form of athletics according to their interest and ability.

The University feels that Intercollegiate and Intramural Athletics cultivate a sense of campus unity which is one of the factors contributing to student spirit.

Many people throughout the country have come to know the University of Dayton through the accomplishments of its intercollegiate athletic teams.

The University of Dayton presents a full range of activities in its intercollegiate program. The University sponsors Football, Soccer, Women's Field Hockey and Volleyball in the fall of the year. Winter activities include: Varsity and Junior Varsity Basketball, Hockey, Wrestling and Women's Varsity and Junior Varsity Basketball. The Rifle team is our only co-ed varsity team. Spring sports include: Baseball, Tennis and Golf.

The cheerleaders and yell leaders add to the famous Dayton Flyer Spirit at University of Dayton games.

There are some "club" sports on the University campus. Rugby and Bowling provide additional activities for students interested in these areas.

THE STUDENT HANDBOOK

Each student at the University of Dayton is responsible for knowing and observing policies, procedures, and regulations contained in the Official Student Handbook. This publication provides valuable information for students which can assist in their meaningful participation in the University Community.







III Admissions

GENERAL INFORMATION

Each application for admissions is considered individually. The Committee on Admissions reviews the academic achievement, aptitude and interest of every applicant with the goal of admitting students who possess the intellectual ability and motivation to profit best from their attendance at the University of Dayton.

HOW TO APPLY FOR ADMISSIONS

All applications for admissions must be submitted to the Director of Admissions on forms supplied by the University of Dayton. Applicants are encouraged to submit their application early in their senior year.

Applicants must also present an official transcript of their courses and grades in secondary school and the results of either the Scholastic Aptitude Test (SAT), of the College Entrance Examination Board (CEEB), or the American College Test (ACT).

Admission is based on the total information submitted by the applicant or in his behalf. It is the applicant's responsibility to see that complete information has been provided to the Director of Admissions.

When submitting the completed application to the high school counselor or principal for completion of the transcript, the applicant should attach a check or money order for \$15.00 payable to the University of Dayton. This application fee is non-refundable.

FACTORS DETERMINING ADMISSIONS

Applicants must have graduated from a high school accredited by a regional accrediting agency or by a State Department of Education and have a total record indicating likelihood of success at the University of Dayton.

The quality of the academic record is shown by the applicant's grades, standing in class and selection of courses. Although no set pattern of courses is required for admissions 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, Computer Science, or Engineering will find a strong mathematics background most helpful.

The results of the Scholastic Aptitude Test (SAT) or the American College Test (ACT) serve as an additional indicator of academic capacity.

The Committee on Admissions is very interested in the applicant's personal traits and record as a school citizen. The recommendation of the high school concerning ability, motivation and character influence decisions of the Committee on Admissions.

Applicants are encouraged to visit the campus for an interview with an admission

counselor. A visit will provide the applicant with an opportunity to see the campus, and ask questions of the students and faculty.

ADVANCED PLACEMENT BY EXAMINATION

Achievement Tests:

Applicants who are seeking advanced standing in English, Foreign Language, and/or Mathematics are encouraged to take the appropriate College Entrance Examination Board (CEEB) Achievement Tests prior to June 1.

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.

College Level Examination Program—CLEP

The University of Dayton cooperates with the College Level Examination Program of the College Entrance Examination Board (CEEB). If you take the CLEP General Examination it is not necessary to take the CEEB Achievement Test in English. Applicant would need the CEEB Achievement Test in Mathematics and Language if a program requiring courses in these areas were to be followed. CLEP does not provide for placement in these areas. Academic credit will be granted to students who achieve scores at or above the 50th percentile on any of the five areas of the General Examination. Academic credit may also be granted to students who achieve scores at or above the 50th percentile on certain subject matter examinations. The credit for the subject matter examinations will be determined by the appropriate academic departmental chairman.

TRANSFER STUDENTS

Students from accredited institutions may be considered for transfer to the University of Dayton providing they are in good standing academically (at least a "C" average—2.00) and socially.

Transfer students will be considered for admission after they have followed the regular admissions procedure outlined above. They must also submit official transcripts from all institutions previously attended, along with a statement from the last institution that they are eligible to continue their work there.

Transfer students are considered for a degree, provided the last 30 semester credit hours have been taken on the University of Dayton campus, and other requirements for graduation have been met. Students who transfer directly from two-year institutions will be required to earn at least 54 semester credit hours at the University of Dayton for any Baccalaureate degree.

In no case will transferred credit be accepted for a course in which the applicant received a grade lower than one corresponding to the "C" grade at the University of Dayton.

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 Lowe, Veteran's Office, Room 222, St. Mary Hall. All veterans attending the University must contact his office. Counseling by the Veterans Administration is available in the Guidance Center. Academic advisors to veterans are available in the College and in the Schools. In the college, Dr. Philip Harwood, Department of Communication Arts, advises veterans in the Humanities, and Dean Richard Peterson in the Sciences. In the Schools, Dr. George Matlin, Department of Economics, advises veterans in the School of Business Administration, Dean Joseph White in the School of Education, and Dean David Kraft in the School of Engineering and Engineering Technology.

FOREIGN STUDENTS

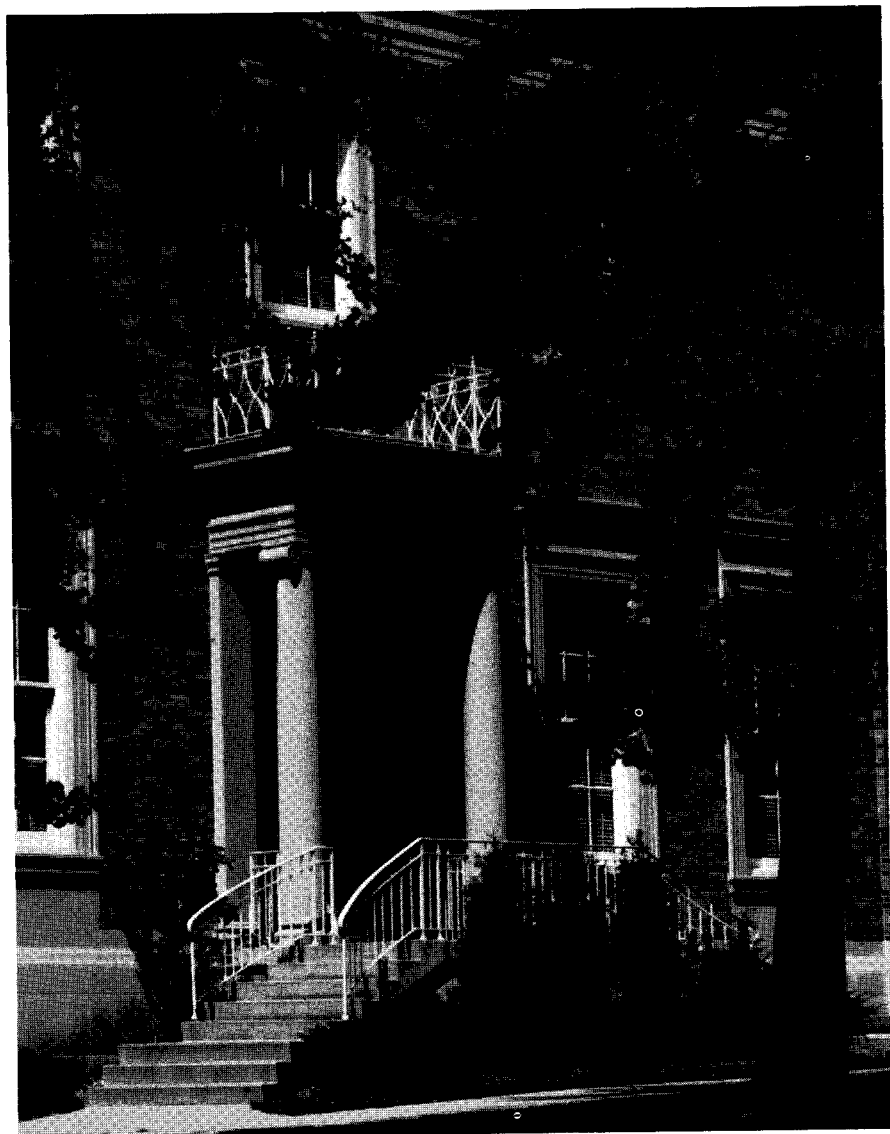
Undergraduate students whose native language is not English are expected to follow the normal admissions procedure outlined above. In addition, unless there is positive and conclusive evidence that the student has competence in both speaking and writing English, the applicant must demonstrate a score of 550 or above on the TOEFL.

A student unable to demonstrate a 550 TOEFL at the time of his application may wish to apply for admission conditionally. Such a student will normally be expected to attend one of the special intensive English programs offered in the United States and demonstrate an adequate TOEFL score upon completion. One such program is the Summer English Language Institute of the University of Dayton.

Foreign student applicants must present their academic credentials in an official English translation. The applicant must also submit a complete record of a medical

examination on the University Health Form and present certification of financial resources available to support their education at the University of Dayton.

Arrangements to see the Foreign Student Advisor should 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 can be obtained by writing the Director of Admissions.







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, 1974 through July, 1975**

| | |
|--|----------------|
| | <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 | 35.00 |
| Freshman Orientation Fee | 35.00 |
| Freshman Orientation Fee, commuter students..... | 25.00 |

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..... | \$865.00 |
| (Maximum tuition including laboratory and course fees: \$950.00 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..... | 649.00 |
| Full-time Student Teacher (13 or more credit hours), including the Supervising Teacher Fee..... | 865.00 |
| ¾-time Student Teacher (8-12 credit hours of student teaching), including the Supervising Teacher Fee..... | 649.00 |
| 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 hour (not to exceed \$85.00) | 20.00 |
| Studio Fee for certain courses in Fine Arts (see p. 305)..... | 5.00-25.00 |
| 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 |
| Only one fee payable if registration for both sessions is made at same time. | |
| Laboratory and Course Fees—Same as in 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 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, 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 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.

CHARGES FOR ROOM AND BOARD, PER TERM

August, 1974 Through April, 1975

RESIDENCE HALLS: *

| | <u>Single Occupancy</u> | <u>Double Occupancy</u> | <u>Triple Occupancy</u> |
|-----------------|-----------------------------|-----------------------------|-----------------------------|
| Marycrest Hall | \$325.00 | \$246.00 | \$220.00 |
| Stuart Hall | 325.00 | 229.00 | 202.00 |
| Founders Hall | 325.00 | 229.00 | 202.00 |
| University Hall | 325.00 | 229.00 | 202.00 |

Campus South Apartments: * \$330.00 per occupant

Off Campus Housing—
U.D. Owned* \$208.00 to \$248.00 per occupant

5 Day meal service (Monday-Friday—15 Meals) \$260.00

(5 day meal tickets are required for freshmen living on campus and optional for upper-class students. Freshmen may purchase 7 day ticket in lieu of 5 day ticket.)

7 day Meal service (Monday-Sunday—20 meals) \$315.00

Luncheon ticket (Monday-Friday) 88.00

NOTE—Facilities are available on weekends for obtaining meals.

*Room deposit to cover possible damage (refundable) \$30.00

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 1974-75 academic year (fall and winter terms) will total \$1830. Room and Board on campus for this period would be approximately \$1100. Books and supplies will cost approximately \$50 per term. In addition to this, the student will need funds to satisfy personal expenses and meals on the weekends.

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 45469. 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 45469. 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 \$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 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.

Keith Boyer Memorial Scholarship

The Alpha Kappa Psi Professional Business Fraternity established this scholarship in memory of Keith Boyer, a former student in the School of Business Administration.

To be considered as a candidate for this award the applicant must be enrolled in the School of Business Administration and have completed at least sixty-eight credit hours. Preference is given to members of the Alpha Kappa Psi Fraternity.

Reverend Martin Luther King Memorial Scholarship

The Reverend Martin Luther King Memorial Scholarship was established in the Spring of 1968 and the Chairman of the Scholarship Committee and the Director of Human Relations constructed guidelines for the administration of the scholarship fund in February, 1969.

Each year two Upperclass Negro students who have made a contribution to the University in the area of inter-group relationships and exemplify the principals of human rights for which Martin Luther King stood will be selected as recipients of the scholarship. The scholarships are intended to be one year awards and each recipient will receive a stipend of \$500.

Kohmescher Scholarship

The Theresa Enneking Kohmescher Scholarship was established in memory of Mrs. Kohmescher, the mother of Father Kohmescher. The program started in 1969 and each year one student is selected as the recipient of this \$500 award.

The selection of the recipient is based upon academic achievement, character, campus leadership, service to the University community, and financial need. Special preference is given to students majoring or minoring in theology.

Joseph/Pearl Thal Scholarship

The Joseph and Pearl Thal Trust Fund was initiated to provide tuition grants for qualified students wishing to enroll in courses in Judiac Studies.

Ann and Dave Hall Scholarship

Mr. and Mrs. Dave Hall have established the Ann and Dave Hall Scholarship to recognize a University of Dayton student who has met and overcome obstacles in the pursuit of his education and has widened the ability to assist himself in supporting his educational expenses. The recipient must have demonstrated leadership abilities and possess those abilities necessary to make a constructive contribution to society.

The recipient of this one year, \$500 scholarship is selected by the Chairman of the Scholarship Committee.

Armco Scholarship

Armco has provided \$15,000 to the University of Dayton to be used for student assistance. The \$15,000 is to be utilized over a five year period and in selecting recipients preference is to be given to applicants from Middletown and to prospective students interested in engineering.

Mother's Club Scholarship

Each year the University of Dayton Mother's Club awards two scholarships to University of Dayton upperclass students who started their higher education at the University of Dayton and have completed at least one academic year. Each of these one year scholarships has a stipend of \$500.

R. Kathleen Whetro

The Central Women's Organization at the University of Dayton annually awards scholarships to women students in recognition of academic excellence and service to the University.

George Igel Scholarship

Each year a graduating senior from Columbus, Ohio who plans to major in Engineering is selected as the recipient of this scholarship.

Dayton Society of Professional Engineers—Ladies Auxiliary

The Ladies Auxiliary of the Dayton Society of Professional Engineers has provided \$350 which is to be matched by the University so that a \$700 scholarship is avail-

able for a local high school female senior who has demonstrated interest in, and ability to do, engineering work.

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.

Dayton Philharmonic Women's Association Scholarship

This scholarship is established to support outstanding performance in orchestral instruments, for residents of Montgomery County, in Ohio, or any county adjacent to Montgomery County. The recipient will be an incoming freshman chosen by audition and the stipend is \$250.00.

Sigma Alpha Iota Dayton Alumnae Scholarship

Sigma Alpha Iota, national professional music fraternity for women, grants an annual award to a music major with at least two terms' membership in S.A.I., for outstanding scholarship and achievement.

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 Montgomery 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

Basic Educational Opportunity Grant

The Basic Educational Opportunity Grant Program (Basic Grants) makes funds available to eligible students attending approved post-high school institutions.

In academic year 1974-75, you may apply for a Basic Grant if you are entering an approved post-secondary educational institution on a full-time basis.

To apply for a Basic Grant, you must complete a form called "Application For Determination Of Expected Family Contribution."

You may get copies of the application from Postsecondary Educational Institutions, High Schools, Post Offices, State Employment Offices, County Agricultural Extension Agents, Colleges, Talent Search and Upward Bound Projects, or by writing to Box G, Iowa City, Iowa 52240.

Send the completed form to Box B, Iowa City, Iowa 52240. Within 4-weeks, you will receive a "Family Contribution Analysis Report."

Submit the report to the University of Dayton, which will calculate the amount of the Basic Grant you are eligible to receive. The amount of your award will be based on your expected family contribution, the cost of attendance at your school, and a payment schedule issued to all approved educational institutions by the U.S. Office of Education.

Supplemental 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-\$1500 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 \$1500 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 his deduction, the student's need exceeds \$1500 the University will provide a remission grant for that amount up to a maximum of \$800.

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 \$1300. 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 \$1300 of the financial need in "self-help" (loan/school year employment) and the University of Dayton will provide the remaining need, up to \$800, 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 \$1300 and the student's maintaining a cumulative grade average of at least 2.50.

Ohio Instructional Grants 1974-75

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 Student Aid Office at the University of Dayton. It is strongly recommended that students arrange an interview with the Student 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, 1974 and the last deadline is August 9, 1974. Applicants are urged to meet the February 1, 1974 deadline. All forms must be carefully completed. Incomplete applications and income statements will be returned or rejected.

**OHIO INSTRUCTIONAL GRANT TABLE 1973-74
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 | 1,320 | 1,320 | 1,320 | 1,320 | 1,320 |
| 4,001-4,999 | 1,200 | 1,320 | 1,320 | 1,320 | 1,320 |
| 5,000-5,999 | 1,050 | 1,200 | 1,320 | 1,320 | 1,320 |
| 6,000-6,999 | 900 | 1,050 | 1,200 | 1,320 | 1,320 |
| 7,000-7,999 | 750 | 900 | 1,050 | 1,200 | 1,320 |
| 8,000-8,999 | 600 | 750 | 900 | 1,050 | 1,200 |
| 9,000-9,999 | 450 | 600 | 750 | 900 | 1,050 |
| 10,000-10,999 | 300 | 450 | 600 | 750 | 900 |
| 11,000-13,999 | 150 | 300 | 450 | 600 | 750 |
| 14,000-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.

Dayton Area Grant

Graduates of local high schools who are not eligible for other forms of non-repayable grants may be eligible for the Dayton Area Grant. The funds for this program have been made available by local benefactors and the grant stipend is \$500 per academic year.

Mother's Club Grants

The University of Dayton Mother's Club provides grants to students who face unexpected extreme financial problems.

Music Grants/Scholarships

The Music Division of the Performing and Visual Arts Department administers Music Grants/Scholarships. Additional information may be obtained from Mr. Patrick Gilvary, Chairman, Performing and Visual Arts, University of Dayton.

Law Enforcement Grants

Currently employed law enforcement officers may receive a grant not to exceed \$300 per semester for part-time study of degree-creditable courses related and useful in enforcement.

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.

LOANS

National Direct Student Loan

The National Direct 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 loan for undergraduates is \$2500 for the first two years of undergraduate work and \$5000 total.

The recipient enters the repayment cycle nine months after he ceases to carry at least one-half the normal full-time academic load. When the recipient enters the repayment cycle a three percent simple interest charge is included.

Recipients of the loan who teach economically, emotionally, mentally, or physically handicapped children may receive cancellations of the loan. Other cancellation privileges are available.

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.

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.

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.

Law Enforcement Loans

Loans are available to full-time students studying toward a degree in law enforcement. The amount of the loans may vary according to the availability of funds but may not exceed \$900 per semester or \$1800 per school year.

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.

Monthly Pre-Payment

The family may elect to make monthly payments sufficiently in advance of registration to cover costs of the forthcoming term. Correspondence related to this plan should be directed to the assistant to the Bursar.

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 ob-

tained 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.

Dependent of Employee Reductions

Unmarried dependent children and the husband or wife of full time employees are eligible for tuition reductions for both undergraduate and graduate level courses.

Guest Over 60

Students over 60 year of age are eligible for free tuition on the undergraduate level. Applications for this reduction may be made in the Student Aid Office.

EMPLOYMENT

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

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 two alternative grading options. The course grading options are as follows:

No. 1—A, B, C, D, F

No. 2—S, NC

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

- A — Excellent; for each semester credit hour, four quality points are allowed.
- B — Good; for each semester credit hour, three quality points are allowed.
- C — Fair; for each semester credit hour, two quality points are allowed.
- D — Poor but passing; for each semester credit hour, one quality point is allowed.
- F — Failed. This mark indicates poor scholastic work, or failure to report withdrawal from a course. In such cases, required courses must be repeated, 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 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 2, "C" or above. The "S" credit shall be counted as hours only and shall not be considered in determining a student's cumulative point average.
- NC—No Credit. This mark indicates no credit given for a course taken under grading option 2, below "C". 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 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" or "NC" (option 2) on the student's permanent record card. No quality point is allowed.
- W — Withdrew. 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." 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 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.

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 under option 1.

The CUMULATIVE grade point average is computed from the grades submitted by the instructors except those for option 2 and 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 CGPA, but a course for which an "F" or an "I" is received is included in the usual manner.

ACADEMIC STANDING

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

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

2. Any student who has a semester point average of less than 1.0, regardless of his cumulative point average, will be dismissed from the University. The Registrar's Office will post the statement, "Subject to Dismissal—per Academic Policy" on the student's permanent record.

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

1. To be eligible for consideration for honors graduation, students must have completed seventy-five per cent (75%) of the credit hours taken at U.D. under the standard grading option (A, B, C, D, F).

2. To be graduated with honors, a student must have a cumulative point average at the end of his seventh term at the University of 3.5 or higher, based on 4.0.

3. Transfer students who have fulfilled the University's minimum residence requirements are eligible for honors, provided that honors status is determined solely on the basis of grades received at U.D.

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

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

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

Summa Cum Laude—if the cumulative point average is between 3.9 and 4.0.

5. If a student qualifies for honors or moves into a higher category of honors on the basis of his graduating cumulative point average, notation shall be made on his transcript and permanent record, and an appropriate honors key will be awarded belatedly.

6. Any exceptions to this procedure will be handled by the Provost.

NOTE: The University Honors program is in the process of being reviewed by the Academic Senate.

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

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

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

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

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

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

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.

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—do-

nated 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 L. Duke Golden award of excellence to the outstanding senior in the Bachelor of Technology Program—donated by the Gamma Beta Chapter of Tau Alpha Pi Honor Society, 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. Kiefaber '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 Senior in Mechanical Engineering Technology.
- 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.

Secondary Education—The Dr. Harry Hand Memorial Award for Excellence in English Education—donated by the faculties of the School of Education and the Department of English.

Secondary Education—The Daniel L. Leary Award for the outstanding research and development activity by a student seeking a secondary teaching certificate in the School of Education—donated by Dr. Ellis A. Joseph.

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, Humanities*
MISS ANN FRANKLIN, *Assistant Dean*
MR. RICHARD PETERSON, *Assistant Dean*
SR. ELLEN MURPHY, O.P. *Assistant to Associate Dean*

The College of Arts and Sciences strives to help students develop 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 or minor in a related discipline or disciplines. The departmental bloc of courses usually does not exceed 42 hours. Only six specialized programs in the College presently require more than 39 hours in a single discipline.

Supporting courses or minor, usually ranging from 12-18 hours, must include twelve credit hours of upper-level (300-400 level) coursework in approved sequence.

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

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

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

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

Other programs leading to the Bachelor's degree:

| | |
|----------------------------|------------------------------------|
| Commercial Design (B.F.A.) | General Studies (B.G.S.) |
| Music Therapy (B. Mus.) | Fine Arts (B.F.A.) Music (B. Mus.) |

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 2.0 in the major field, in the minor field, and in the total program. In the B.F.A. and B. Music programs, a 2.0 cumulative average is required in the non-professional courses, as well as in the professional courses.

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 74.

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.

4. *Program for Self-Directed Learning (PSDL)*

The Program for Self-Directed Learning provides an opportunity for students to design programs around their own needs and interests in consultation with members of the faculty. In line with the University's goals of individualizing and diversifying programs and making them more flexible, PSDL offers students a wide range of options in both content and methods of learning. Students may spend from 8 to 17 hours per semester in the program. They may participate for more than one semester, although the normal limit is four semesters. Students may thus complement the usual college experience of following a selected set of courses with an alternate approach to learning in which they place the responsibility for learning on their own shoulders and test their ability to direct themselves by designing and carrying out lines of study of their own choosing.

Regarding content: students may do work in areas not covered by regular course offerings, for example, dance therapy, radical feminism, alternate life styles, and interdisciplinary studies. They may take a problem-centered rather than a discipline-centered approach; for example: a feasibility study for a campus day care center.

Regarding method: PSDL encourages students to use experiential and experimental approaches, to develop skills in learning how to learn, to strengthen intrinsic motivation and self-confidence, and to take initiative and responsibility for furthering their own learning. Students may utilize a variety of learning resources in addition to the classroom and library, namely, field experiences, field trips, independent study, internships, individual and group projects, conferences, and work with community agencies and with community resource persons.

Each student works with a faculty advisor and a three-person evaluation committee which has the task of helping the students develop and evaluate their program and interpret the resultant learnings to the academic community.

**GENERAL REQUIREMENTS FOR ALL
BACHELOR OF ARTS PROGRAMS**

(For specific requirements consult program schedules A1 through A19 in following pages or the Departmental or Program Chairman).

Major field of disciplinary concentration (minimum 30 hrs.—maximum 42 hrs.)

At least 24 hours must be upper-level

Breadth Requirement (See distribution Table) 45-69 hrs.

Program and Free Electives (See Senior Synthesis below) 9-45 hrs.

These courses must be external to the major discipline. They should be selected for further breadth, for the acquisition of additional skills, or for complementing the major field.

120 hrs. Total

Distribution Table for Breadth Requirement

Courses taken to fulfill the Breadth Requirement should ordinarily be external to the major discipline.

Type of Requirement *All Programs*

NATURAL SCIENCE, APPLIED SCIENCE, OR
QUANTITATIVE STUDIES 6-12 hrs.

Biology, Chemistry, Geology, Physics, Mathematics, Computer Science, and as approved by the student's Departmental Chairman, appropriate courses in Engineering, Technology, Accounting. At least three hours must be in natural science (Biology, Chemistry, Geology, Physics).

SOCIAL AND BEHAVIORAL SCIENCE 9-12 hrs.

Anthropology, Economics, Political Science, Psychology, Sociology and with the approval of Departmental Chairman appropriate courses in Afro-American Studies, Business Management, Criminal Justice, Education, Marketing or Social Work. At least 1 unit of 6 hours required with at least 3 hours from the 300-400 level.¹

HUMANITIES 18 hrs.

American Studies, Communication Arts, English, History, Humanities Studies, Languages, Performing & Visual Arts, Philosophy, Theology and with approval of Departmental Chairman appropriate courses in Afro-American Studies. At least two units each of six hours in humanities area with at least 3 hours in each unit from 300-400 level courses (except Languages in which a unit may be satisfied with six hours at the 200 level).¹ (The basic Philosophy, Theology, and Communication Courses do not fulfill this requirement.)

PHILOSOPHY AND/OR THEOLOGY12-18 hrs.

COMMUNICATION SKILLS 0-9 hrs.
(English 101, 106—SPE 101)

The B.A. degree requires that every student must demonstrate competence in written and oral communication before completing the freshman year. Each of these competencies may be demonstrated by the student in one of the following ways.

- a) Competence indicated by high school or standardized test data submitted for admission showing academic achievement or extra-curricular success in these areas. Included among the acceptable kinds of extra-curricular data are prominent membership in school or recognized community debate, forensics, or theatre groups. Included among acceptable academic data are the College Entrance Examination Board Advanced Placement Program in English, the English component of the American College Testing Program's Student Profile Report (ACT), the College Entrance Examination Board's English Achievement Test, and the Scholastic Aptitude Test's Verbal Aptitude Test (SAT).
- b) Competence indicated by an examination administered by faculty of the English or Communication Arts Departments or by the College Level Examination Program General Examination's English composition component administered by the University of Dayton's Guidance Center.

¹Students electing 300-400 level courses in any department should be aware that some introductory background knowledge may be expected of them even though no specific prerequisite course is listed. Doubts may be resolved by consultation with faculty members of the pertinent department.

- c) Successful completion of Speech 101 for oral communication proficiency, English 101 and/or 106 for writing skills.

Other Requirements

1. At least 48 hours of upper-level (300-400 numbered courses) work must be presented for the B.A. degree.
2. Senior Synthesis—The B.A. requires that every student engage during his last three terms in 6-9 hours of coursework which offers an opportunity to integrate the elements of undergraduate education. This requirement may be satisfied by coursework which also fulfills other requirements of the B.A. degree, and may include any courses designated as senior synthesis in the composite course listing and recommended by the student's major department.

TYPICAL PROGRAM FOR BACHELOR OF ARTS STUDENTS

| <i>Freshman Year</i> | |
|--|-------|
| Arts & Sciences or Departmental Seminar | 0 |
| Communication Skills (By Proficiency) | |
| English 101-106 | |
| Speech 101 | 0-9 |
| Humanities Electives | 6 |
| Philosophy and/or Theology | |
| Philosophy 103 | |
| Theology—Any 100-200 Elective | 6 |
| Science or Quantitative Studies | 6-9 |
| One introductory course in Biology, Chemistry, Geology or Physics required | |
| Social Science electives | 3-6 |
| Electives to Total | 30-33 |

Sophomore Year

Consult Departmental Advisor

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> | 2 credit hours |
| 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> | 2 credit hours |
| EDF 208 <i>The Learning Process</i> | 3 credit hours |

Term C

| | |
|--|----------------|
| EDS 351 <i>The Secondary School, Self, and Society</i> | 3 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> | 12 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.
2. Candidacy for the B.G.S. may be declared in the first year but not later than the end of the junior year. 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.
6. The usual policy regarding prerequisites remains in effect in this program.

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

Major Field:

| | |
|---|----------------------|
| 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, pp. 202-203 of the Undergraduate Bulletin 1973-74. | |
| 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, pp. 202-203. | |
| Third Area Electives | 6 semester hours |
| These courses are chosen from the remaining Group A, B, or C, as listed under American Studies, pp. 202-203. | |
| Breadth Requirements (See Distribution Table pp. 72-73 of the 1974-75 Bulletin for specific requirements) | 45-69 semester hours |
| Free Electives: | |
| To a total of at least | 120 semester hours |

PROGRAM—A2: BACHELOR OF ARTS WITH A MAJOR IN ANTHROPOLOGY

| | |
|---|-------------------|
| Anthropology: ANT 150, 151, 310, and 351 or 352 | 12 semester hours |
| Sociology: SOC 401 and SOC 415 | 6 semester hours |
| Anthropology/Sociology/Social Work Electives..... | 18 semester hours |
| Philosophy and/or Theology | 12 semester hours |
| ⁴ English 101, 106..... | 6 semester hours |
| ⁴ Speech 101 | 3 semester hours |

| | |
|---|---------------------|
| Natural Science, Applied Science, Quantitative Studies..... | 6-12 semester hours |
| (at least 3 hours in Natural Sciences) | |
| Social and Behavioral Science | 9-12 semester hours |
| (at least 1 unit of 6 hours—with at least 3 hours on 300-400 level) | |
| Humanities | 18 semester hours |
| (at least 2 units of 6 hours each—with 3 hours in each unit on 300-400 level) | |
| General Electives to Total at least..... | 120 semester hours |

NOTES:

¹At least 48 hours of upper-level (300-400 numbered courses) work must be presented for the B.A. degree.

²Senior Synthesis: 6-9 hours required in last three terms. Basic requirement: SOC 415. Suggested: PHL 495.

³For Major: at least 24 hours must be upper-level (300-400).

⁴Cf. Basic document on B.A. degree for options.

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

(See General Requirements for the B.A. Degree, pages 72-73)

| Dept. | No. | Course | 1st Term ¹ | 2nd Term | 3rd Term |
|-----------------------|-------|-------------------------------|-----------------------|----------|----------|
| <i>Freshman Year</i> | | | | | |
| ENG ² | 101-6 | Freshman English | 3-0-3 | 3-0-3 | |
| CHM ³ | 123-4 | General Chemistry | 3-3-4 | 3-3-4 | |
| MTH ⁴ | 112-3 | Intro. Math. Anal. | 3-0-3 | 3-0-3 | |
| — ⁷ | — | Humanities/Soc. Sc. Elective | | 3-0-3 | |
| — | — | Theology/Philosophy Elective | 3-0-3 | | |
| SPE ² | 101 | Spe 101 | | 3-0-3 | |
| CHM | 100 | Arts and Sciences Orientation | 1-0-0 | | |
| — | — | Elective | 3-0-3 | | |
| | | | 16 | 16 | |
| <i>Sophomore Year</i> | | | | | |
| CHM ³ | 201 | Quantitative Analysis | 2-4-4 | | |
| MTH ⁴ | 215 | Basic Statistics | | 3-0-3 | |
| PHYS ³ | 201-2 | General Physics | 3-3-4 | 3-3-4 | |
| — | — | Theology/Philosophy Elective | 3-0-3 | | |
| — ⁷ | — | Humanities/Soc. Sc. Elective | 3-0-3 | 3-0-3 | |
| — | — | Elective | | 6-0-6 | |
| | | | 14 | 16 | |
| <i>Junior Year</i> | | | | | |
| CHM ⁵ | 313-4 | Organic Chemistry | 3-3-4 | 3-3-4 | |
| — | — | Elective | 3-0-3 | | |
| — ⁶ | — | Science Electives | 3-0-3 | 3-0-3 | |
| — ⁷ | — | Humanities/Soc. Sc. Electives | 6-0-6 | 6-0-6 | |
| — | — | Theology/Philosophy Elective | | 3-0-3 | |
| | | | 16 | 16 | |

Senior Year

| | | | | |
|------------------|-----|-------------------------------|-------|-------|
| CHM ⁸ | 302 | Physical Chemistry | 3-0-3 | |
| CHM | 309 | Chemical Literature | | 1-0-1 |
| — | — | Theology/Philosophy Elective | | 3-0-3 |
| — ⁹ | — | Science Electives | 3-0-3 | 3-0-3 |
| — ⁷ | — | Humanities/Soc. Sc. Electives | 6-0-6 | 6-0-6 |
| — | — | Elective | 3-0-3 | 3-0-3 |
| | | | 15 | 16 |

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

²The B.A. degree requires that every student must demonstrate competence in written and oral communication before completing the freshman year. Each of these competencies may be demonstrated in one of three ways prescribed by the College of Arts and Sciences. (See General B.A. Requirements, page 73.)

³May substitute more advanced course depending on background, placement test, or permission of department head.

⁴May substitute Mth 128-9 for Mth 112, 113 and 215.

⁵May substitute Chm 315-6.

⁶Must include two of the following courses: Chm 405, 412, 415, 420, 417, 404, 498, 499.

⁷Humanities Electives must total at least 18 hours as listed on page 73. Social Science courses must total at least 9 hours as shown on page 73.

⁸May substitute Chm 303-4.

⁹Must include either two or more of the above in footnote 6, or two of the following: Bio 313, 310, 312, 325, 340, 407, 411, certain computer science, geology, etc.

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

Major Program 30 semester hours

Mathematics and/or Sciences Unit 6 to 9 semester hours

Two units of 12 hours each selected from the Departments of Psychology, Sociology and Anthropology, Economics, Journalism, 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 and/or Theology.....(12)

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

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

Flexibility is particularly important to the student of Economics. There are many areas of study which can augment the course work in the major field. Examples would include:

- a. An interest in the quantitative aspect of Economics can be supported by courses in Mathematics and Computer Science.
- b. An interest in international Economic problems could be combined with proficiency in one or more foreign languages.
- c. An interest in socio-economic problems would naturally lead to coursework in other social sciences.

The department recognizes the importance of close cooperation between the student and his economic advisor in selecting courses which will provide a sound program.

The requirements for the degree are as follows:

| | |
|---|---------------------|
| Economics | 30 semester hours |
| Eco 203, 204, 346, 347, and 18 hrs. of upper division electives. | |
| Natural Science, Applied Science, or Quantitative Studies | 6-12 semester hours |
| 3 hrs. natural science; Mathematics 207; additional courses in mathematics, computer science, statistics, or natural science are recommended. | |
| Social Science | 9-12 semester hours |
| 12 hrs. from at least two of the following areas: Political Science, Sociology, Anthropology, or Psychology. | |
| Humanities | 18 semester hours |
| American Studies, Communication Arts, English, History, Humanities Studies, Languages, Performing and Visual Arts, Philosophy, Theology and Afro-American Studies. At least two units each of six hrs. in humanities area with at least 3 hours in each unit (except languages) from 300-400 level courses. | |
| Philosophy and/or Theology | 12 semester hours |
| 6 hrs. Philosophy and 6 hrs. Theology recommended. | |
| Communication Skills | 0-9 semester hours |
| English 101, 106; Speech 101. Other demonstrations of competence may be presented in lieu of these requirements, as set forth in the general description of B.A. degree. | |
| Senior Synthesis | 6 semester hours |
| To be arranged by the department and the student. | |

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

| | |
|---|--------------------|
| ¹ English | 36 semester hours |
| Science | 6-9 semester hours |
| Social and Behavioral Science..... | 9 semester hours |
| Humanities | 18 semester hours |
| Philosophy and/or Theology | 12 semester hours |
| Communication Skills (English and Speech)..... | 0-9 semester hours |
| Senior Synthesis | 6 semester hours |
| General Academic Electives to total at least..... | 120 semester hours |

¹Students majoring in English must complete at least 36 hours of English courses, at least

24 of which must be at the 300-400 level. Specific track suggestions can be obtained from the Department office.

PROGRAM—A7: BACHELOR OF ARTS WITH A MAJOR IN FINE ARTS

| | |
|--|----------------------|
| Major Program ¹ —Required courses: Art 103-4, 111-2, 191, 217, 226-7, 251, 371, 372, 471, 472 | 30 semester hours |
| Art Electives | 12 semester hours |
| Total | 42 semester hours |
| Breadth requirements (See distribution table page 73 and consult with Department Chairman for specifics) | |
| | 45-69 semester hours |
| Program and Free Electives | 15-39 semester hours |
| Total | 120 semester hours |

¹Portfolio required before program placement for regular as well as transfer students. Portfolio is also a requirement for graduation.

PROGRAM—A8: BACHELOR OF FINE ARTS

| | |
|--------------------------------------|-------------------|
| University Requirements | |
| Speech 101 (3) | |
| English 101-106 (6) | |
| Philosophy and/or Theology (12)..... | 21 semester hours |

| | |
|--|----------------------|
| Breadth Requirement | |
| Two units of 609 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 609 hours each selected from the Departments of Language, English, History, Performing and Visual Arts (other than major field), Communication Arts, Philosophy, Theological Studies. (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 |

| | |
|---|--------------------|
| Major Program ¹ (per programs listed below Fine Arts Major) | 88 semester hours |
| General Academic Electives to total at least | 136 semester hours |
| Major Program—Required courses: Art 103-4, 111-2, 191, 208-9, C-100, 217, 226-7, 231-2, 261, 263, 371, 372, 411, 471, 472 | 44 semester hours |
| Art Electives | 44 semester hours |
| Total | 88 semester hours |

Teacher Certification (E 11 Supplement)

| | |
|--|---------------------|
| Art requirements | 44.5 semester hours |
| Art Electives | 32.5 semester hours |
| Art Education | 4 semester hours |
| Professional Education | 24 semester hours |
| General (required for certification) | 13 semester hours |

Note: National Teachers Examination is requirement for all students. It should be taken during the second last term of attendance. Applications are available in the Education Office.

PROGRAM—8A—Continued

Major in Commercial Design

| | |
|--|-------------------|
| Major Program: Art 103-4, 111-2, 191-2, 226-7, 206-7, 217-8, 251-2, 299, 303-4, 345, 355, 372, 385, 399, 413-4, 472, 499..... | 54 semester hours |
| Mkt 205, 315, 318, 420, 421 | 15 semester hours |
| Pho 101, 225, 325 | 9 semester hours |
| MII 103L | 2 semester hours |
| Art Electives | 8 semester hours |
| Total | 88 semester hours |

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

| | |
|--|----------------------|
| History | 38 semester hours |
| Breadth Requirements (See Distribution Table page 73 and consult with Department Chairman for specifics)..... | 45-69 semester hours |
| General academic electives to total at least | 120 semester hours |

See the department counsellor for suggested programs with a major in history that lead to careers in foreign service, law and education.

The department considers consistent and candid counselling to be the key to academic success. Freshmen are counselled by B. A. Perkins; other history majors are usually counselled by other members of the department.

History students are strongly encouraged to participate in the Summer Study Abroad Program conducted by the College of Arts and Sciences.

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

(See Distribution Table page 73 and consult chairman for specifics)

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 20 hours in each of two languages (any level).¹

| | |
|--|-------------------|
| Minor in a single language (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 | 6 semester hours |
| Humanities Electives ² | 18 semester hours |
| Philosophy and/or Theology | 12-18 semester hours |
| Science and Quantitative Studies..... | 6-9 semester hours |
| Speech 101 | 3 semester hours |
| Social Science Electives | 9 semester hours |
| General Academic Electives to total at least | 120 semester hours |

¹Students with a composite major arrangement may begin their second language in the

PROGRAM—A10—Continued

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.

²It 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. A good student with a background in two languages may be permitted to take as little as one term of a new language for reasons approved by the department chairman. In general, however, any additional language should be taken for at least two terms.

PROGRAM—A11: 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 course work. Students with strong mathematical ability may be invited to satisfy these requirements in the honors program offered by the department.

B. BREADTH REQUIREMENT

- (a) Six hours of course work in any area of natural science, computer science, engineering, or accounting; three hours of which must be in natural science. Majors are strongly advised to learn computer programming.
- (b) Nine hours of course work in social and behavioral science (see departments listed in the description of the general BA program). Six hours must be from one area, at least three of which must be upper level.
- (c) Eighteen hours in the humanities (see listing of departments above), which must include units of six hours from two areas; at least three hours in each unit must be upper level. (The basic philosophy, theology, and communication courses do not fulfill this requirement.)
- (d) Twelve hours in theology and/or philosophy.
- (e) Demonstration of proficiency or successful completion of Speech 101, English 101 and/or 106.

C. Other requirements as listed in the description of the general BA program.

PROGRAM—A12: BACHELOR OF ARTS WITH A MAJOR IN MUSIC
 Music Requirements for the degree Bachelor of Arts with a Major in Music

| | |
|--|----------------------|
| Theory | 8-12 semester hours |
| Mus 151-2 First Year Theory req. | |
| Literature and Conducting | 7-10 semester hours |
| Mus 108 Intro. to Music Lit. (2) | |
| Mus 301 or 302 Hst. of Mus. (3-6) | |
| Mus 308 Mus. in the 20th C. (2) | |
| Mus 321 Instrumental Conduct. (2) | |
| Mus 351 Choral Conducting (2) | |
| Applied Music | 10-16 semester hours |
| Students with insufficient keyboard ability will be required to take Mus 296-9 Class Piano (1 cr. each term) up to a specified level of proficiency. | |

PROGRAM—A12—Continued

| | |
|---|----------------------|
| Ensemble | 2-4 semester hours |
| Music electives to a total of 42 | semester hours |
| Total | 42 semester hours |
| Breadth Requirements See Distribution Table page 73 and consult | |
| with Department Chairman for specifics | 45-69 semester hours |
| Program and free electives | 15-39 semester hours |
| Total | 120 semester hours |

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

PROGRAM—A13: BACHELOR OF MUSIC

University Requirements

| | | |
|--------------------------------------|-----|-------------------|
| Speech | (3) | |
| English 101-106 | (6) | |
| Philosophy and/or Theology (12)..... | | 21 semester hours |

Breadth Requirements

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 | |
| Major Program ¹ (Per programs listed below) | 76-88 semester hours |
| General Electives to total | 136 semester hours |

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 to 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.

PROGRAM—A13—Continued

¹Prospective candidates will be auditioned by the Music faculty for placement in 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.

Music Therapy Major

| | |
|--|-------------------|
| Music 151, 152, 235, 251, 262, 272, 280, 281, 285, 286, 296-9, 301, 302, 318, 321, 322, 324, 325, 326, 327, 328, 351, 385, 386, 399, 485, 486, 489 and Ensemble, Recreational Music and electives to total | 79 semester hours |
| Psychology 201, 306, 313 | 9 semester hours |
| Total | 88 semester hours |

Note: Music 489 is an internship of six months required before the student receives his baccalaureate in the Music Therapy Program.

**Teacher Certification
(E 11—Supplement)**

| | |
|--|-------------------|
| Theory | 20 |
| Hst. and Literature | 8 |
| Conducting | 2 |
| Applied Music | 12 |
| Ensemble | 4 |
| Music Education | 12 |
| Music Electives | 18 |
| Total | 76 semester hours |
| Professional Education | 24 semester hours |
| General Certification Requirements | 13 semester hours |

Bachelor of Music students desiring teacher certification consult the Music Division Head or the P.V.A. Department Chairman for program counselling.

The choice of electives will depend on the student's needs, to be determined by periodic audition/counselling with the faculty.

The student choosing a *vocal emphasis* will demonstrate proficiency in voice and a keyboard instrument, and will normally have voice or a keyboard instrument as his principal applied study. The student choosing an *instrumental emphasis* will have an orchestral instrument as his principal applied study, and will also demonstrate keyboard proficiency.

In all cases, the student must demonstrate his proficiency in areas pertinent to the requirements of teacher certification in his chosen field, prior to student teaching.

**PROGRAM—A14: BACHELOR OF ARTS WITH A MAJOR IN
PHILOSOPHY**

Philosophy as a major can be pursued:

- a) to aid competence in the history of philosophical ideas and in contemporary philosophy;
- b) as a preparation for graduate studies in philosophy and related areas leading to teaching, research, and academic counselling at universities, colleges, junior colleges, and conceivably at the high school level;
- c) as a preparation for professional studies in law, education, public service, commerce, etc.;
- d) in conjunction with such majors as English, psychology, and others.

| | |
|--|--------------------|
| Philosophy | 30 semester hours |
| Natural Science, Applied Science, or Quantitative Studies..... | 6 semester hours |
| Social and Behavioral Science | 9 semester hours |
| Humanities | 18 semester hours |
| Theology and/or Philosophy (Theology recommended)..... | 9 semester hours |
| *Communication Skills | 0-9 semester hours |
| *Senior Synthesis..... | 6 semester hours |
| Program and Free Electives to total at least..... | 120 semester hours |

*See Distribution Table page 73 for details.

PROGRAM—A15: BACHELOR OF ARTS WITH A MAJOR IN POLITICAL SCIENCE

A student must successfully complete a minimum of 120 hours for the degree with at least 48 hours of upper level courses (300-400 numbered courses).

1. *Natural Science or Applied Science*..... 6 semester hours
 Courses chosen from Biology, Chemistry, Geology, Physics and with the approval of department chairman, appropriate courses in Engineering or Technology. At least three hours must be in natural science.
2. *Quantitative Studies* 6 semester hours
 - a. One unit of six hours from the following courses in Accounting (207, 208, 301, 302, 340 and 407)
 - b. One unit of six hours in Computer Science (302 and one programming course)
 - c. One unit of six hours in Mathematics and Statistics (101 or 107 and 207)
3. *Social and Behavioral Sciences*..... 12 semester hours
 Courses chosen from Anthropology, Economics, Psychology, Sociology and with the approval of department chairman, appropriate applied social science courses in Afro-American Studies, Business Management, Criminal Justice, Education, Marketing or Social Work. At least one unit of six hours required with at least three hours from the upper level courses.
4. *Humanities* 18 semester hours
 Courses chosen from American Studies, Communication Arts, English, History, Humanities Studies, Languages, Performing and Visual Arts, Philosophy, Theology and with the approval of department chairman certain humanities-related courses in Afro-American Studies. At least two units each of six hours in humanities with three hours in each unit from upper-level courses. If English, Communication Arts, Philosophy, or Theology is chosen, the unit of six hours excludes courses already required in philosophy-theology and communication skills.
5. *Philosophy and/or Theology* 12 semester hours
6. *Communication Skills*0-9 semester hours
 The B.A. degree requires that every student must demonstrate competence in written and oral communication before completing the freshman year. Each of these competencies may be demonstrated by the student in one of three methods prescribed by the College of Arts and Sciences. (See General B.A. Requirements page 72).
7. *Political Science* 30 semester hours
 Courses must include Pol 201, 202, 415 or 416 and 421. The other

PROGRAM—A15—Continued

eighteen 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. Pol 421 will fulfill the Senior Seminar requirement of the B.A. curriculum.

8. Area Concentration

Students may elect an area concentration in Education under the E-11 Program or any one of four multi-disciplinary area concentration in urban affairs, pre-legal training, international affairs, or public administration, developed by the Political Science Department.

I. Urban Affairs

Students are required to take Pol 360 Urban Politics, Soc 332 Urban Sociology, and any three of the following courses:

- Bio 399 The Bio-Ecology of Man *or* Geo. 208 Environmental Geology
- Hst 396 History of the Negro in the New World *or* AAS 242 Afro-American History After 1900
- Psy 342 Community Problems and Psychology
- Soc 325 American Ethnic and Racial Minorities
- Ant 110 Perspectives on Urban Man *or* Ant. 335 Urban Anthropology
- CrJ 400 Civic Disorder and Political Change
- AAS 360 Educational Systems and the Urban Ghetto
- Ec 445 Public Finance *or* Ec 490 Seminar on Urban and Regional Economics

Students electing this area concentration are encouraged to take Pol 495 Government Internship to acquire practical introduction to urban processes.

II. Pre-Law

Students are required to take Pol 301 American Judicial Process and any *four* of the following courses:

- Eco 204 Principles of Macroeconomics
- Phl 301 Logic
- Spe 302 Fundamentals of Debate
- Bus 301 Corporate Finance
- Hst 359 U.S. Constitutional History
- Soc 307 Criminology and Penology
- Psy 341 Social Psychology
- Soc 363 Sociology of Law
- Phl 314 Philosophy of Law
- Eng 205 Major World Writers
- Eco 442 Money, Banking and Monetary Policy

Students electing this concentration are encouraged to take Pol 495 Internship in Law to acquire practical experience in the legal profession or judicial process.

III. International Affairs

Students are required to take Pol 314 Principles of International Relations in addition to the required courses in political science and should select upper-level courses in the areas of American political processes, comparative politics, international law, and international organization.

In order to broaden the students' background in cross-cultural disciplines, communication skills, and language competencies they are encouraged to select their

PROGRAM—A15—Continued

humanities and social sciences requirements from the following areas: English grammar and comparative literature, comparative religion, comparative philosophy, cultural anthropology and area studies, comparative and international economics, and social psychology.

Students electing this area concentration are strongly encouraged to participate in the Summer Study Abroad Program conducted by the College of Arts and Sciences.

IV. Public Administration

Students are required to take Pol 305 Introduction to Public Administration, Pol 495 Internship in Government, and at least *four* of the following courses:

| | |
|---------|---|
| Acc 301 | Financial Reporting and Administration |
| Bus 314 | Personnel Management |
| Bus 318 | Human Relations for Management |
| Com 401 | Publicity and Public Relations |
| CPS 107 | Computing: General Survey <i>or</i> CPS 302 Computers and Society |
| CPS 144 | Programming |
| CRJ 447 | Contemporary Issues in Justice Administration |
| Eco 445 | Public Finance (Ec 203 a prerequisite) |
| Mth 207 | Statistical Methods for Behavioral Sciences |
| SOC 360 | Political Sociology |
| SWK 418 | Community Organization |

| <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 ¹ | 101-6 | Freshman English | 3-0-3 | 3-0-3 |
| — ² | — | Humanities Electives | 3-0-3 | 3-0-3 |
| — | — | Philosophy and/or Theology Rqmt. | 3-0-3 | 3-0-3 |
| — ³ | — | Natural Science Requirement | 3-0-3 | 3-0-3 |
| — ⁴ | — | Social Science Requirement | 3-0-3 | 3-0-3 |
| | | | 15 | 15 |
| <i>Sophomore Year</i> | | | | |
| POL | 201-2 | The American Political System and Introduction to Comparative Politics | 3-0-3 | 3-0-3 |
| — ² | — | Humanities Electives | 3-0-3 | 3-0-3 |
| — | — | Philosophy and/or Theology Rqmt. | 3-0-3 | 3-0-3 |
| — ⁴ | — | Social Science Requirement | 3-0-3 | 3-0-3 |
| — ⁵ | — | Quantitative Studies | 3-0-3 | 3-0-3 |
| SPE ¹ | 101 | Fundamentals of Effective Speaking | | 3-0-3 |
| | | | 15 | 18 |
| <i>Junior and Senior Years</i> | | | | |
| See Political Science Program A-15 | | | | |

¹See political Science Program (A-15) No. 6 and College of Arts and Sciences procedures for waiver of these requirements. Students whose communication skills were waived are encouraged to take humanities and political science courses.

²See Political Science Program (A-15) No. 4.

³See Political Science Program (A-15) No. 1.

⁴See Political Science Program (A-15) No. 3.

⁵See Political Science Program (A-15) No. 2.

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

| | |
|--|--------------------|
| Psychology 101, 216, 217 ¹ , electives | 31 semester hours |
| (May substitute Math 207 or Math 215 for Psy 216) | |
| ² Natural Science, Applied Sciences, or Quantitative | 10 |
| ³ Social and Behavioral Sciences | 9 |
| ⁴ Humanities | 18 |
| Philosophy and/or Theology | 12 |
| ⁵ Communication Skills (Speech 101, Eng 101 and 106) | 0-9 |
| ⁶ Senior Synthesis | 6 |
| General Academic Electives to total at least | 120 semester hours |
| ¹ Physics 151 or Phl 330 or equivalent is a prerequisite for Psy 217 (consult your advisor). | |
| ² Math 107, and 7 hours Science required: 7 hrs. must include 3 hours Natural Science (Bio, Chem, Geo, Physics) and 1 hr. lab. | |
| Other hours may include Mathematics, Computer Science, and as approved by the Student's Departmental Chairman, appropriate courses in Engineering, Technology, Accounting. | |
| ³ Exclude Psychology for Psychology majors. Anthropology, Economics, Political Science, Sociology, and with approval of Departmental Chairman, appropriate courses in Afro-American Studies, Business Management, Criminal Justice, Education, Marketing, or Social Work. At least one unit of 6 hours required with at least 3 hrs. from 300-400 level. | |
| ⁴ Exclude Philosophy and Theology. American Studies, Comm. Arts, English, History, Humanities Studies, Languages, Performing & Visual Arts, and with the approval of Departmental Chairman, appropriate courses in Afro-American Studies. At least 2 units each of 6 hours with at least 3 hours in each unit from 300-400 level (except languages in which a unit may be satisfied with 6 hrs at the 200 level). | |
| ⁵ Proficiency may be demonstrated by compliance with alternatives on p. 73 of the Undergraduate catalog. | |
| ⁶ To be taken in last 3 terms; may include any of the transdisciplinary courses and/or Psy 495. | |

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

| | |
|---|---------------------|
| Sociology: SOC 101, 401, 415, and 420 or 422 | 12 semester hours |
| Sociology/Anthropology/Social Work Electives | 24 semester hours |
| Philosophy and/or Theology | 12 semester hours |
| ⁴ English 101, 106 | 6 semester hours |
| ⁴ Speech 101 | 3 semester hours |
| Natural Science, Applied Science, Quantitative Studies | 6-12 semester hours |
| (at least 3 hours in Natural Sciences) | |
| Social and Behavioral Science | 9-12 semester hours |
| (at least 1 unit of 6 hours—with at least 3 hours on 300-400 level) | |
| Humanities | 18 semester hours |
| (at least 2 units of 6 hours each—with 3 hours in each unit on 300-400 level) | |
| General Electives to Total at least | 120 semester hours |

PROGRAM—A17—Continued

NOTES:

¹At least 48 hours of upper-level (300-400 numbered courses) work must be presented for the B.A. degree.

²Senior Synthesis: 6-9 hours required in last three terms.
Basic requirement: SOC 415. Suggested: PHL 495.

³For Major: At least 24 hours must be upper-level (300-400).

⁴Cf. Basic document on B.A. Degree for options.

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

| | |
|--|----------------------|
| Major Program—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 |
| Breadth Requirements (See Distribution Table page 73 and consult with Department Chairman for specifics) | 45-69 semester hours |
| Program and Free Electives | 15-39 semester hours |
| Total | 120 semester hours |

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 STUDIES¹

| | |
|---|----------------------|
| Theological Studies | 33 semester hours |
| a. One course in each of these four areas: | |
| Biblical Studies (10-19) | |
| Historical Theology (20-29) | |
| Systematic Theology (30-49) | |
| Christian Ethics/Religion and Culture (60-79) | |
| b. Electives | |
| Breadth Requirement | 42-51 semester hours |
| Natural Science, Applied Science, Quantitative Studies..... | 6 semester hours |
| Social and Behavioral Sciences | 9 semester hours |
| Humanities | 18 semester hours |
| Philosophy | 9 semester hours |
| Communication Skills | 0-9 semester hours |
| Program and Free Electives | 36-45 semester hours |
| Total | 120 semester hours |

¹See p. 72 for detailed information about Bachelor of Arts Programs.

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 Philosophy and two Theology courses) | 43 |
| Social Science electives (see below)..... | 12 |
| | 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, 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.

While the exact number of credits in any of the above categories may vary, students are encouraged to complete a foreign language through the 200 level and to select a unit of at least 12 credit hours in any area of humanities and social science.

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, laboratory or field research problem.

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 | 336 ⁴ | Ecology and Evolution | 3-0-3 | | |
| BIO | 340 | Cell Biology | | 3-0-3 | |
| CHM | 313-4 | Organic Chemistry | 3-3-4 | 3-3-4 | |
| PHY ⁵ | — | Physics | 3-2-4 | 3-2-4 | |
| ENG | — | English elective | | 3-0-3 | |
| — | — | Humanities/Soc. Sci. electives | 5-0-5 | 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 | |
| — ⁶ | — | Science elective | 3-0-3 | | |
| — | — | Humanities/Soc. Sci. elective | 9-0-9 | 12-0-12 | |
| | | | 17 | 17 | |
| <i>Senior Year</i> ⁷ | | | | | |
| BIO | 420 | Seminar | 1-0-1 | | |
| — ⁵ | — | Science elective | 6-3-7 | 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 College requirements: Spe 101, Phl 6 cr., Thl (if Catholic), 6 cr.

⁴Week-end or vacation period field trips are usually available. If elected, credit is granted under Bio 421. Biology Problems.

⁵Depending on math background and interests, two physics sequences are available, Phy 201-2, Phy 196 and 207-8 (see Physics Department Courses of Instruction).

⁶See information under Biology Curriculum Description.

⁷While a minimum of 125 credit hours is recommended for the B.S. in Biology, a student taking 17 credit hours per term may choose to accumulate 136 credit hours in four years. These extra credits may be taken in any area of the student's interest.

*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 | 3-3-4 | 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 | |
| <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 103, PHL elective | 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, 420, 498, 499, 551, 552.

**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 140, and Cps 245, and 24 credits in upper-level courses, normally including Cps 341, 342, 346 and 353.
 - 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 AND SOCIAL SCIENCES—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; Phy 196, 207 recommended.
 - 5. COMPOSITION AND SPEECH SKILLS—a certain level of proficiency is required in these skills. 0-9 credits as prescribed by the College.
 - C. ELECTIVES (about 25 credits)
 - 6. Additional courses to attain the required 120.
- More detailed information may be obtained from the department.

**PROGRAM—S3A: BACHELOR OF SCIENCE WITH A MAJOR IN
DATA PROCESSING**

Minimum graduation requirements are distributed as follows:

- A. COMPUTER SCIENCE—Basic programming, normally Cps 140 and Cps 245, and 24 credits in upper-level courses, normally including Cps 341, 342, and 346.
 - B. MATHEMATICS—Basic calculus and statistics—for example, Mth 112, 113, 367, 368.
 - C. HUMANITIES AND SOCIAL SCIENCES—30 credits, including 6 credits in Philosophy, and 6 credits in Theological Studies for Catholic students.
 - D. SCIENCES—a minimum of 3 credits in a physical science.
 - E. COMPOSITION AND SPEECH SKILLS—a certain level of proficiency is required in these skills. 0-9 credits as prescribed by the College.
 - F. ELECTIVES—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 Programming

A student must successfully complete a minimum of 123 semester hours for the degree.

1. Humanities: 34 semester hours chosen from the courses offered by the Departments of Communication Arts, English, History, Language, Performing and Visual Arts, Philosophy and Theological Studies. These must include Eng 111, College Composition I; Eng 112, College Composition II; Phl 103, Introduction to Philosophy, and a philosophy elective; Spe 101, Fundamentals of Effective Speaking, 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, Sociology, and Social Work. These must include Eco 203, Principles of Microeconomics; Pol 201, The American Political System; Pol 301, The American Judicial Process; Pol 305, Introduction to Public Administration; Pol 360, Urban Politics; Pol 450, Civil Liberties; Pol 475, American Political Thought; Psy 201, Introduction to Psychology; Psy 308, Social Psychology; Soc 307, Criminology and Penology and Soc 332, Urban Sociology.
3. Criminal Justice: a minimal of 30 semester hours, which must include CrJ 200, Principles of Criminal Justice; CrJ 213, Criminal Law, and CrJ 320, Law of Evidence and Procedure. "Proficiency examinations" are only available for in-service personnel, e.g., law enforcement officers, probation and parole representatives, and etc. No more than six semester hours (i.e., two courses) of "proficiency examination" credit will be permitted under Option A., the "Total Programming" section. Those Criminal Justice majors who are in-service personnel must make their formal appeals to the director's office at the beginning of each semester in order for said office to determine whether there is sufficient data present to warrant scheduling a "proficiency examination" during that semester when the appeal is made.
4. A Criminal Justice major in Option A is also required to take eight hours in Science, Acc 301, Financial Reporting and Administration; Cps 302, Computers and Society, and a Mathematics elective.

Humanities

| | | |
|------------------------------|----|-------------------|
| Phl 103, el | 6 | |
| *Thl 100/200 level, el | 6 | |
| Eng 111, 112 | 7 | |
| Spe 101 | 3 | |
| Hum electives | 12 | 34 semester hours |

Social & Behavioral Sciences

| | | |
|--|----|-------------------|
| Pol 201, 301, 305, 360, 450, 475 | 18 | |
| Psy 201, 308 | 6 | |
| Soc 307, 332 | 6 | |
| Eco 203 | 3 | |
| Soc & Beh Sc els | 9 | 42 semester hours |

Criminal Justice

| | | |
|---|----|----------------|
| 200 (3) 213 (3) 320 (3) els (21) | 30 | semester hours |
| Sciences | 8 | semester hours |
| Accounting 301 | 3 | semester hours |
| Computer Science 302 | 3 | semester hours |
| Mathematics elective | 3 | semester hours |

Program total 123 semester hours minimum.

*If non-Catholic, substitute Hum elective.

PROGRAM—S4—Continued

Option B—Transfer Program

1. To be admitted as a major in this program under Option B, a student must have received an accredited Associate Degree in Corrections, Law Enforcement, Police Administration, Police Science or a similar field of Criminal Justice and achieved a 2.50 cumulative average on a 4.0 grading system. A candidate is required to complete a minimum of 66 semester hours beyond the Associate Degree to receive the B.S. Degree.

Those courses that are specifically required of the Criminal Justice candidate at the University of Dayton for his or her Baccalaureate Degree and were taken at the student's respected institution conferring the accredited associate degree, should not be duplicated if there is substantively evident an overlapping of academic course content. Said courses are to be "waivered" by the Director of the Program only upon the formal request of the student and replaced with another course in the same division.

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 semester hours is required in the program, chosen from courses in Communication Arts, English, History, Language, Performing and Visual Arts, Philosophy and Theological Studies. This must include Spe 101, Fundamentals of Effective Speaking; Phl 103, Introduction to Philosophy; and a philosophy elective. Catholic students are also required to take six credits in Theology.
4. Social and Behavioral Sciences: A minimum of 30 semester hours is required in the program, chosen from courses in Anthropology, Economics, Political Science, Psychology, Sociology, and Social Work. These must include: Eco 203, Principles of Microeconomics; Pol 301, American Judicial Process; Pol 305, Introduction to Public Administration; Pol 360, Urban Politics; Pol 450; Civil Liberties; Pol 475, American Political Thought; Psy 308, Social Psychology, and Soc 332, Urban Sociology.
5. A Criminal Justice major is also required to take Cps 302, Computers and Society.
6. Criminal Justice: A minimum of 15 hours is required in the program. Courses selected for matriculation should not duplicate previous accredited course work taken in one's Associate Degree Program as a criminal justice major. Courses chosen must be upper-divisional hours, i.e., 300-400 level courses.

"Proficiency examinations" are only available for in-service personnel, e.g., law enforcement officers, probation and parole representatives, and etc. No more than three semester hours (i.e., one course) of "proficiency examination" credit will be permitted under Option B, the "Complete Transferability" section. Those Criminal Justice majors who are inservice personnel must make their formal appeals to the director's office at the beginning of each semester in order for said office to determine whether there is sufficient data present to warrant scheduling a "proficiency examination" during that semester when the appeal is made.

Pre-requisites—required in addition to the degree requirements of 66 semester hours if not included in the associate program.

| | | |
|----------------------------|---------------------|------------|
| English | (Eng 111-112) | one year |
| Criminology | (Soc 307) | one course |
| Juvenile Delinquency | (Soc 213) | one course |

| | | |
|-------------------------|-----------------|------------|
| Intro. Sociology | (Soc 205) | one course |
| Intro. Psychology | (Psy 201) | one course |
| American Govt. | (Pol 201) | one course |

Humanities

| | | |
|------------------------------|---|---------|
| Phl 103 elective | 6 | |
| *Thl 100/200 level, E1 | 6 | |
| Spe 101 | 3 | |
| Hum electives | 3 | 18 hrs. |

Social & Behavioral Sciences

| | | |
|-----------------------------------|----|---------|
| Pol 301, 305, 360, 450, 475 | 15 | |
| Psy 308 | 3 | |
| Soc 332 | 3 | |
| Eco 203 | 3 | |
| Soc/Beh Sci Els | 6 | 30 hrs. |
| Computer Science 302 | | 3 hrs. |

Criminal Justice

| | | |
|-------------|--|---------|
| + Els | | 15 hrs. |
| Total | | 66 hrs. |

*If non-Catholic, substitute Hum elective.

+ Must be upper-divisional hours, i.e., 300-400 level courses in the Criminal Justice Program.

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

The following program is designed with the flexibility to present the student with the basic courses in the geological sciences and to enable him to construct a specific curriculum to suit his particular interests in areas of advanced study.

| | |
|---|--------------------|
| 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 103, elective | 6 semester hours |
| ⁴ Theology Electives | 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 | 40 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 103, elective | 6 semester hours |
| ² Theology electives | 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 | | |
| — ³ | — | Electives | 3-0-3 | 3-0-3 | |
| PHL | 103 | Intro. to Philosophy | | 3-0-3 | |
| THL ⁴ | — | 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 | |

PROGRAM—S6—Continued

| <i>Dept.</i> | <i>No.</i> | <i>Course</i> | <i>1st Term</i> ¹ | <i>2nd Term</i> | <i>3rd Term</i> |
|--------------------|------------|--------------------------------------|------------------------------|-----------------|-----------------|
| 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 | — | Elective | | 3-0-3 | |
| — ³ | — | Electives | 6-0-6 | | |
| THL ⁴ | — | Theology Elective | 3-0-3 | | |
| | | | 15 | 16 | |
| <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 | |
| — ⁵ | — | 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 | | |
| — ⁵ | — | Minor, Major, Elective | 9-0-9 | 12-0-12 | |
| | | | 15 | 12 | |

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 103, elective | 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 301 | 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 | 103 | Intro. to Philosophy | 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 | — | Elective | | 3-0-3 | |
| PSY | 201 | General Psychology | | 3-0-3 | |
| THL ² | — | Theology elective | | 3-0-3 | |
| — | — | Elective | 3-0-3 | | |
| | | | 17 | 16 | |
| <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 | |

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>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.
 2. FINE ARTS, HUMANITIES, AND BEHAVIORAL SCIENCE—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. Honor students may wish to follow a five-year program leading to a Master's degree in mathematics.

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

The Program leading to a Bachelor of Science 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 Schools of Medical Technology at St. Elizabeth Medical Center, Good Samaritan Hospital, Miami Valley Hospital and Kettering Medical Center. These Schools are accredited by the Registry of Medical Technologists of the American Society of Clinical Pathologists through the Council on Medical Education of the American Medical Association.

Completion of the Program results in a Bachelor of Science with a major in Medical Technology and qualifies the students to take the national examination given by the Registry of Medical Technologists. Because of his theoretical and practical experience in the various branches of the laboratory, the certified Medical Technologist will find positions available in all parts of the country, in hospitals, clinics, physicians offices, public health agencies, the armed services, pharmaceutical firms and research institutions.

Requirements for the pre-clinical years:

| | |
|---|-----------------|
| Biology | 20 credit hours |
| Chemistry | 20 credit hours |
| Mathematics | 3 credit hours |
| Science electives | 8 credit hours |
| Humanities | 36 credit hours |
| (including Philosophy, Theology, English, Language, Speech) | |
| General Electives | 9 credit hours |
| Total | 96 credit hours |

This program is planned to meet the requirements of the University, the hospitals and the Registry of Medical Technologists. 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.

Clinical Year

In planning for the clinical year, the student is required to make a formal applica-

tion to one or more of the local Schools of Medical Technology. This is usually done in the Fall semester of the Junior year. Students are then asked to arrange for an interview and a visit to one of the hospitals. Acceptance of students is based on academic performance and suitability for the profession of Medical Technology.

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. The Senior year curriculum involves formal lectures and laboratories in addition to a rotation period in the various departments of the clinical laboratories.

At the completion of the clinical year, students are granted the Bachelor of Science with a major in Medical Technology and are eligible to take the certification examination of the Registry of Medical Technologists. This examination is given twice a year in February and August at various centers throughout the country.

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 | |
| CHM | 201 | Quantitative Analysis | 2-4-4 | | |
| — ³ | — | Humanities | 6-0-6 | 6-0-6 | |
| | | | 14 or 15 | 17 | |
| <i>Junior Year</i> | | | | | |
| BIO | 411 | Bacteriology | 3-4-5 | | |
| BIO | 325 | Parasitology | | 2-3-3 | |
| — ⁴ | — | Science elective | 3-3-4 | 3-3-4 | |
| — ³ | — | Humanities | 3-0-3 | 3-0-3 | |
| — ⁵ | — | General electives | 3-0-3 | 6-0-6 | |
| MET | 380 | Seminar | | 1-0-1 | |
| | | | 15 | 17 | |

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>Senior Year</i> | | | | | |
| MET | 431 | Intro to Med. Lab. Science | | | 2 credit hours |
| MET | 431L | Intro to Med. Lab. Science Lab. | | | 2 credit hours |
| MET | 432 | Clinical Chemistry | | | 4 credit hours |
| MET | 432L | Clinical Chemistry Lab. | | | 4 credit hours |
| MET | 433 | Microbiology | | | 4 credit hours |
| MET | 433L | Microbiology Lab. | | | 3 credit hours |
| MET | 434 | Hematology | | | 2 credit hours |
| MET | 434L | Hematology Lab. | | | 4 credit hours |
| MET | 435 | Immunology | | | 1 credit hour |
| MET | 435L | Immunology Lab. | | | 2 credit hours |
| MET | 436 | Renal Function | | | 2 credit hours |
| MET | 436L | Renal Function Lab. | | | 2 credit hours |
| MET | 437 | Immunohematology | | | 1 credit hour |
| MET | 437L | Immunohematology Lab. | | | 2 credit hours |
| MET | 438 | Clinical Pathology | | | 2 credit hours |
| MET | 439 | Clinical Pathology Sem. | | | 1 credit hour |

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.

⁴The following are recommended: Bio 303, Bio 466, Phy 201-202, Chm 420.

⁵At 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, calls for 24-28 hours of college physics, 20-24 hours of chemistry and 21 hours of mathematics. There are sufficient hours to complete all necessary education requirements as outlined by our own School of Education for secondary school teachers. Students interested in this 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 |

PROGRAM—S10—Continued

| | |
|---|--------------------|
| 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 103, elective | 6 semester hours |
| ² Theology 100-200 electives | 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 | 103 | Intro. to Philosophy | 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 | 3-0-3 | 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 | — | Elective | 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 | 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 | 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.

³Minor can be replaced by electives.

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 and non-science courses | 24 semester hours |
| At least 12 of the 24 hours to be in Theology and Philosophy. | |
| It is recommended that 12 hours be in one subject area to encourage some depth of knowledge. | |
| 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 to plan individual programs.

²This can be in any academic University subject if a minor is chosen, otherwise this is a free elective. See p. 301 of the 1974-75 University Bulletin for additional details.

| <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> | | | | | |
| CHM | 123-4 | Chemistry | 3-0-3 | 3-0-3 | |
| MTH | 128-9 ² | Math-Calculus | 4-0-4 | 4-0-4 | |
| PHY | 196-207 | Physics I, II | 3-1¼-3 ¹ | 3-1¼-3 | |
| PHY | 196-207L | Laboratory | 0-3-1 | 0-3-1 | |

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> |
|-----------------------|------------------|--|------------------------------|-----------------|-----------------|
| — | — | Non-Science ² | 3-0-3 | 3-0-3 | |
| — | — | Basic Skill and Electives ³ | 3-0-3 | 3-0-3 | |
| | | | 17 | 17 | |
| <i>Sophomore Year</i> | | | | | |
| CHM | 123-4L | Chemistry Lab | 0-3-1 | 0-3-1 | |
| MTH | 228-9 | Mathematics | 4-0-4 | 3-0-3 | |
| PHY | 208 | Mechanics of Waves | 3-0-3 | | |
| PHY | 208L | Physics Lab | 0-3-1 | | |
| PHY | 301 ⁴ | Statistical Mech-Thermo | | 3-0-3 | |
| — | — | Electives and Basic Skills | 2-0-2 | 6-0-6 | |
| — | — | Non-Science | 6-0-6 | 3-0-3 | |
| | | | 17 | 16 | |
| <i>Junior Year</i> | | | | | |
| PHY | 303 | Intermediate Mechanics | 3-0-3 | | |
| PHY | 314 | Electronics | 2-4-4 | | |
| PHY | 390 | Quantum Mechanics | | 3-0-3 | |
| PHY | 421 | Nuclear Physics | 3-0-3 | | |
| PHY | 431 | Advanced Lab | | 0-4-2 | |
| PHY | 460 | Seminar | | 2-0-1 | |
| — | — ⁵ | Minor | 3-0-3 | 3-0-3 | |
| — | — | Electives | | 3-0-3 | |
| — | — | Non-Science | 3-0-3 | 3-0-3 | |
| | | | 16 | 15 | |
| <i>Senior Year</i> | | | | | |
| PHY | 408 | Intermediate Elect. Mag. | 3-0-3 | | |
| PHY | 420 | Solid State Physics | 3-0-3 | | |
| PHY | 432 | Advanced Lab | 0-4-2 | | |
| PHY | 460 | Seminar | | 2-0-1 | |
| — | — | Minor | 3-0-3 | 3-0-3 | |
| — | — | Electives | 3-0-3 | 12-0-12 | |
| | | | 14 | 16 ⁷ | |

¹The 3-1½-3 signifies 3 hours of lecture, 1½ hours of lab (or recitation), 3 semester hours credit.

²The 24 hours should include 6 hours of Philosophy and 6 hours of Theological studies for Catholic students.

³Students should show proficiency in composition by end of freshman year and facility in computer programming by the end of their sophomore year.

⁴In this example, 28 upper level credit hours in the major are shown.

⁵Consult Department Chairman concerning minor.

⁶Electives can be used for strengthening the major, a second minor, or be a "free" elective.

⁷In this example, 128 total hours are shown; the minimum required is 120; with some summer work, advanced credit, credit by examination, etc., a student can complete the program in 3½ or even 3 years.

PREMEDICAL AND PREDENTAL—Program—S12

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—S12. 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 predental students should attend the chapter meetings and are urged to join this society.

Both the Medical College Admissions Test and the Dental Aptitude Test-

ing 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: Phl 103, Phl elective (6 hours).

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

One Speech course (3 hours).

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

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 Term¹</i> | <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 |

PROGRAM—S12—Continued

| <i>Dept.</i> | <i>No.</i> | <i>Courses</i> | <i>1st Term¹</i> | <i>2nd Term</i> | <i>3rd Term</i> |
|--------------------|------------|------------------------|-----------------------------|-----------------|-----------------|
| PHY ⁴ | — | Physics | 3-2-4 | 3-2-4 | |
| ENG | — | English elective | 3-0-3 | | |
| —5 | — | Humanities | 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 | |
| <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 103, 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).
- ⁵A modern language is recommended. Language begun in secondary school must be started at 200 level, new language may start at 100 level. Otherwise take Eng, Hst, Eco, Spe, Soc, Psy, etc.
- ⁶Psy 201, 301, 306, Soc. 204, 301, 150, 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.
- ⁹Phl, Thl, non-Catholics take elective for Thl.

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

| | |
|---|--------------------|
| Psychology—101, 216, 217 ¹ , electives | 31 semester hours |
| May substitute Math 207 or Mth 215 for Psy 216 | |
| Science (Biology, Chemistry, Computer Science, Physics, Geology) | 24 |
| ² Mathematics 112-3 | 6 |
| ³ English—101 and 106 required | 6 |
| ⁴ Language | 6 |
| Philosophy 103, elective | 6 |
| Theology (3 credit hrs., 100-200 level, electives) | 6 |
| ³ Speech 101 | 3 |
| ⁵ General Academic Electives to total at least | 120 semester hours |

- ¹Physics 151 or Phl 330 or equivalent is a prerequisite for Psy 217 (consult your advisor).
- ²May substitute Mth 101 for Mth 112 and Mth 112 for 113.

PROGRAM—S13—Continued

³Proficiency may be demonstrated by compliance with alternatives on p. 73 of the undergraduate catalog.

⁴French, German or Russian preferred. However, student may substitute General Electives in lieu of a language. See advisor as graduate study often requires language.

⁵Senior Synthesis is recommended in Senior year (may include any of the transdisciplinary courses and/or Psy 495).

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

| | |
|---|--------------------|
| Social Work: SWK 206, 206L, 304, 337, 418, 421, 431, 432 | 28 semester hours |
| Sociology: 101, 401 | 6 semester hours |
| Social Work/Sociology/Anthropology electives | 15 semester hours |
| Minor: (300-400 level) | 12 semester hours |
| Psychology 201 | 3 semester hours |
| Political Science: 201, elective | 6 semester hours |
| Economics: 203 | 3 semester hours |
| Philosophy: 103, elective | 6 semester hours |
| ¹ Theology electives | 6 semester hours |
| History electives | 6 semester hours |
| English: 101-6, 200-level elective | 9 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

The program leading to the degree: *Bachelor of Science with a major in Systems Science* is interdisciplinary in nature with a major in Industrial and Systems Engineering and supporting courses in cognate fields of interest to the student. This program is administered by the Office of the Dean of the College of Arts and Sciences with the Division of Technical Studies and Services of the School of Engineering serving as academic advisor to all students in the program.*

The System Science Program prepares students to use applied mathematics in solving real-world problems. The program is extremely flexible since it provides approximately 40 percent of the curriculum as electives which may be selected by the student to meet his or her particular interests or needs. The principal constraint in selection of electives is that a student select courses that are relevant to his overall program and pertinent to achieving his educational and professional goals.

The basic difference between system science and traditional engineering disciplines is one of approach. The system scientist is trained to approach problems from the "top down." He is the one who accepts a problem in all its complexity (including socio-economic, political, and human relations aspects) and translates the problem into quantitative terms, including objectives, restrictions, and means of comparing various alternate solutions available. The systems scientist is naturally concerned with achieving the desired result at a minimum cost, where costs are measured in "people values" as well as money value.

PROGRAM—S15—Continued

| | |
|---|--------------------|
| Industrial and Systems Engineering courses (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 101, elective | 6 semester hours |
| English, 101, 106 | 6 semester hours |
| Philosophy 103, elective | 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.

*A detailed counselling booklet describing this program is available from the Dean's office.

PROGRAM—S16: BACHELOR OF SCIENCE IN URBAN LIFE PROGRAM**I. General Requirements: 48 credits**

| | |
|---|------------|
| English | 12 credits |
| History | 6 credits |
| Philosophy | 6 credits |
| Science (no lab necessary) | 6 credits |
| Theology | 6 credits |
| Economics 203—Principles of Microeconomics | 3 credits |
| Political Science 201—The American Political System | 3 credits |
| Psychology 201—Introductory Psychology | 3 credits |
| Speech 101—Fundamentals of Effective Speaking | 3 credits |

II. Tools of Research: 10-13 credits

Four semesters of the following, in any combination:

- Two semesters of Spanish language.
- Two semesters of Mathematics (MTH 101—Precalculus Mathematics; MTH 107—Fundamentals of Mathematics).
- Two semesters of Computer Science (CPS 107—Computing, General Survey; CPS 144—Scientific Programming).
- Sociology 401—Social Research Methods, and Mathematics 207—Statistical Concepts for the Behavioral Sciences.

III. Urban Life courses:**A. Required Courses: 24 credits**

| | |
|--|-----------|
| ANT 110 Perspectives on Urban Man | 3 credits |
| ANT 335 Urban Anthropology | 3 credits |
| ECO 485 Urban and Regional Economics | 3 credits |
| POL 360 Urban Politics | 3 credits |
| SOC 332 Urban Sociology | 3 credits |
| SOC 415 Senior Seminar—Sociology | 3 credits |
| SOC 436 Urban Life Practicum | 6 credits |

B. Elective Courses: 24 credit hours and chosen from the following:

AAS 242; ANT 406; BIO 399; CIE 390; CRJ 325; CRJ 400; GEO 208; POL 303; POL 305; POL 310; POL 311; PSY 308; SOC 213; SOC 250; SOC 307; SOC 315; SOC 318; SOC 325; SOC 330; SOC 350; SWK 337; SWK; 418; THL 363; THL 364.

IV. General Electives to total 120 credit hours

PROGRAM—S16A: ASSOCIATE DEGREE PROGRAM IN URBAN COMMUNITY DEVELOPMENT

The purpose of this program is to seek new ways to work for the betterment of life for those who reside and work in the cities. Among the ways that universities can articulate their urban concerns is through programs aimed at providing well trained people to work within agencies which are working to improve cities. One such effort is the Urban Life Program which may eventually encompass other programs dealing with specific concerns of the urban community. This program is designed primarily to create options for students who enter the university through normal admissions channels.

It is important that such a program is designed to insure training for real and currently existing jobs. Such training should provide as many options as possible to the students. These options can be defined in the following manner:

- a) *Career Ladder*—this concept can be described as upward mobility for an individual in several career areas. This would mean an individual could enter a career at one level of job responsibility and the possibility of being eventually promoted is real.
- b) *Career Lattice*—this concept can be as lateral movement for an individual in several career areas. This would mean an individual could enter a career at one level of job responsibility and should the job end, the individual would be qualified to work in another agency or institution at the same level of job responsibility.

Students enrolling in this program will design their individual courses of studies with the assistance of an advisor.

| | |
|--|-------------------|
| Afro-American Studies 242, 334 | 6 semester hours |
| Political Science 360 | 3 semester hours |
| Psychology 201 | 3 semester hours |
| Anthropology 110 | 3 semester hours |
| ¹ English 101, 200 elective | 6 semester hours |
| ² Theology elective | 3 semester hours |
| Humanities electives | 3 semester hours |
| Sciences and/or Math electives | 9 semester hours |
| Structured Practicum Experiences | 6 semester hours |
| General academic electives to total at least | 62 semester hours |

¹Students must demonstrate written and oral competencies as listed in the student bulletin under Communication Skills requirements for B.A. Programs.

²Non-Catholic students may substitute Humanities electives.



VII

School of Business Administration

WILLIAM J. HOBEN, *Dean*

ROBERT KNUEVEN, *Administrative Assistant*

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 54 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) Fifteen credits (or more) in the core courses required of all students enrolled in the Upper Division in the School of Business Administration.
 - b) Eighteen credits (or more) in one of the Upper Division areas of concentration offered in the School of Business Administration.

4. A minimum of one hundred and twenty semester hours.

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.

Students matriculating 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 School of Business Administration will need to process his application for admission to the teacher education program no later than the third semester of his matriculation. He will need to begin his professional education sequence no later than 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 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.

See program for teacher certification on page 133.

Cooperative Education

All students majoring in business administration have the option of entering the Cooperative Education program.

Application for entrance into the program is made by March 15th for first placement in either the May-August work term or the August-December work term provided the student has achieved sufficient competency in the major and has maintained

an acceptable Cumulative Point Average by the end of the first two trimesters of study. Transfer students who have accumulated approximately 60 trimester hours of credit before the transfer may apply for Cooperative Education appointment during the first trimester after their transfer.

Students planning eight trimesters of study on-campus ordinarily must spend five trimesters in work experience; those planning seven periods of study must spend four trimesters in work experience; transfer students must spend a minimum of three trimesters in work experience.

It is expected that those entering the program beginning with the May-August, 1974 work term will be able to earn at least additive academic credit for the work experience term.

Preference in placement of students is ordinarily given in the May-August and August-December trimesters to students who have completed their freshmen year of study.

Students desiring other information are invited to visit room 33, Miriam Hall, 9 a.m. to 5 p.m. daily or telephone (513) 229-3129. Letters of inquiry may be addressed to: Cooperative Education Coordinator, School of Business Administration, Box 147, Miriam Hall, University of Dayton, Dayton, Ohio 45469.

FRESHMAN-SOPHOMORE BUSINESS ADMINISTRATION PROGRAM

| <i>Dept.</i> | <i>No.</i> | <i>Course</i> | <i>1st Term</i> ¹ | <i>2nd Term</i> |
|--|------------|--|------------------------------|-----------------|
| The following are required of freshmen: | | | | |
| BUS ² | 102 | <i>American Business Environment</i> | 3-0-3 | |
| BUS | 110-111 | <i>Quantitative Analysis</i> ³ | 3-0-3 | 3-0-3 |
| ENG | 111-112 | <i>College Composition I and II</i> ⁴ | 4-0-4 | 3-0-3 |
| The following are ordinarily taken during the freshman year: ⁵ | | | | |
| SPE | 101 | <i>Fundamentals of Effective Speaking</i> ⁶ | 3-0-3 | |
| PHL | 103 | <i>Introduction to Philosophy</i> | 3-0-3 | |
| THL | — | <i>Theology Elective</i> ⁷ | | 3-0-3 |
| — | — | <i>Natural Science</i> ⁸ | | 3-1-4 |
| — | — | <i>Humanities Elective</i> ⁹ | | 3-0-3 |
| | | | 15-16 | 15-16 |
| The following are ordinarily taken during the sophomore year: ⁵ | | | | |
| Eco | 203-204 | <i>Principles of Economics</i> | 3-0-3 | 3-0-3 |
| Acc | 207-208 | <i>Principles of Accounting</i> | 3-0-3 | 3-0-3 |
| BUS | 210-211 | <i>Quantitative Analysis</i> | 3-0-3 | 3-0-3 |
| BUS | 215 | <i>Principles of Management</i> | 3-0-3 | |
| MKT | 105 | <i>Principles of Marketing</i> | | 3-0-3 |
| PHL | — | <i>Philosophy Elective</i> | 3-0-3 | |
| — | — | <i>Social Science Elective</i> ¹⁰ | | 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.

³BUS 108 is recommended for students with insufficient knowledge of secondary mathematics. This would be an additional course for those taking it.

⁴Students testing out of ENG 111 take ENG 112 first term and a general elective second term.

⁵Courses "ordinarily taken during the freshman year" may be transposed with courses "ordinarily taken during the sophomore year." For example, students may take SPE 101 as a sophomore; Bus 215 or Eco 203-204 as a freshman, etc. Consult with program advisor.

⁶Students testing out of SPE 101 will subsequently elect an additional speech course.

⁷Non-Catholic students take general elective.

⁸Choose a basic science course in Chemistry 110, Physics 105, Geology 109, or Biology 114.

⁹Choose a 100-200 level course from one of the following departments: History, English, Communication Arts, Performing and Visual Arts, Language, Philosophy, or Theology.

¹⁰Choose a 100-200 level course from one of the following departments: Psychology, Political Science, or Sociology.

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.

Double majors and minors can be arranged.

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>Junior Year</i> | | | | |
| Acc | 303 | Cost Accounting | | 3-0-3 |
| Acc | 305-306 | Intermediate Accounting | 3-0-3 | 3-0-3 |
| Bus ² | 301 | Corporation Finance | | 3-0-3 |
| Bus | 303 | Business Law I | | 3-0-3 |

PROGRAM—B1—Continued

| <i>Dept.</i> | <i>No.</i> | <i>Course</i> | <i>1st Term</i> ¹ | <i>2nd Term</i> |
|--------------------|------------|---|------------------------------|-----------------|
| Eco | 347 | <i>Intermediate Macroeconomics</i> | 3-0-3 | |
| — | — | Communications Electives ³ | 3-0-3 | 3-0-3 |
| Acc | 340 | <i>Fundamentals of Data Processing</i> ⁴ | 3-0-3 | |
| THL | — | Theology Elective ⁵ | 3-0-3 | |
| — | — | General Elective ⁷ | 3-0-3 | |
| | | | 18 | 15 |
| <i>Senior Year</i> | | | | |
| Acc | 407 | Federal Income Tax Auditing | 3-0-3 | |
| Acc | 301 | Auditing Principles | | 3-0-3 |
| Acc | — | Accounting Electives ⁶ | 3-0-3 | 3-0-3 |
| Bus | 423 | Business Policies & Management | | 3-0-3 |
| — | — | General Electives ⁷ | 9-0-9 | 6-0-6 |
| | | | 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.

³A total of 6 hrs. to be elected from the following courses: BUS 409 (3 hrs.); ENG 368 (2 hrs.); ENG 370 (2 hrs.); ENG 372 (2 hrs.); SPE 308 (3 hrs.); SPE 312 (3 hrs.); or JRN 398-99 (1-3 hrs.).

⁴A course in computer science programming or computer language may be substituted for ACC 340.

⁵Non-Catholic students take general elective.

⁶Select in consultation with program advisor.

⁷Choose either business or non-business courses. The following are specially recommended: Bus 304, Bus 316, Bus 401, Eco 346, Eco 442, MKT 340, and MKT 405. At last twelve of these hours must be at the 300-400 level.

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 MANAGEMENT¹

| <i>Dept.</i> | <i>No.</i> | <i>Course</i> | <i>1st Term</i> ¹ | <i>2nd 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 | |
| — | — | Communications Elective ³ | 3-0-3 | 3-0-3 |
| Acc | 340 | <i>Fundamentals of Bus. Data Processing</i> ⁴ | | 3-0-3 |
| Eco | 347 | <i>Intermediate Macroeconomics</i> | 3-0-3 | |

| <i>Dept.</i> | <i>No.</i> | <i>Course</i> | <i>1st Term</i> ¹ | <i>2nd Term</i> |
|--------------------|------------|--|------------------------------|-----------------|
| THL | — | Theology Elective ⁵ | | 3-0-3 |
| — | — | General Elective ⁷ | 3-0-3 | |
| | | | 15 | 15 |
| <i>Senior Year</i> | | | | |
| Eco | 346 | <i>Intermediate Microeconomics</i> | 3-0-3 | |
| BUS | 423 | <i>Business Policies and Management</i> | | 3-0-3 |
| BUS | — | Business Management Electives ⁶ | 6-0-6 | 3-0-3 |
| — | — | General Electives ⁷ | 6-0-6 | 9-0-9 |
| | | | 15 | 15 |

1. Under "Term" 3-0-3 means 3 hrs. class, 0 hrs. laboratory, and 3 hrs. credit.
2. Courses listed in italics may be taken in either the first or second term.
3. A total of 6 hrs. to be elected from the following courses: BUS 409 (3 hrs.); ENG 368 (2 hrs.); ENG 370 (2 hrs.); ENG 372 (2 hrs.); SPE 308 (3 hrs.); SPE 312 (3 hrs.); or JRN 398-99 (1-3 hrs.).
4. A course in computer science programming or computer language may be substituted for ACC 340.
5. Non-Catholic students take general elective.
6. Select three courses in department of business management (BUS) in consultation with program advisor.
7. At least fifteen of these hours must be taken at the 300-400 level.

ECONOMICS

The Department of Economics offers courses in the core business curriculum and in a major concentration. Economics 203 and 204 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 Intermediate Macroeconomics (Eco 347) and Intermediate Microeconomics (Eco 346).

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 economies of the United States and other countries. The student 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 203 and 204. To complete the major, eighteen hours of economics courses, in addition to Economics 346, and 347, 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>Junior Year²</i> | | | | |
| BUS | 301 | Corporate Finance | 3-0-3 | |
| BUS | 303 | Business Law I | | 3-0-3 |
| Eco | 346 | Intermediate Microeconomics | 3-0-3 | |
| Eco | 347 | Intermediate Macroeconomics | | 3-0-3 |
| — | — | Communications Electives ³ | 3-0-3 | 3-0-3 |
| Acc | 340 | Fundamentals of Bus. Data Processing ⁴ | | 3-0-3 |
| THL | — | Theology Elective ⁵ | 3-0-3 | |
| Eco | — | Economics Elective | | 3-0-3 |
| — | — | General Elective ⁶ | 3-0-3 | |
| | | | 15 | 15 |
| <i>Senior Year²</i> | | | | |
| BUS | 423 | Business Policies and Management | | 3-0-3 |
| Eco | — | Economics Electives | 6-0-6 | 6-0-6 |
| — | — | General Electives ⁶ | 9-0-9 | 6-0-6 |
| | | | 15 | 15 |

- Under "Term" 3-0-3 means 3 hrs. class, 0 hrs. laboratory, and 3 hrs. credit.
- Most courses may be taken either term. Consult with program advisor.
- A total of 6 hrs. to be selected from the following courses: BUS 409 (3 hrs.); ENG 368 (2 hrs.); ENG 370 (2 hrs.); ENG 372 (2 hrs.); SPE 308 (3 hrs.); SPE 312 (3 hrs.); or JRN 398-99 (1-3 hrs.).
- A course in computer science programming or computer language may be substituted for Acc 340.
- Non-Catholic students take general elective.
- At least fifteen of these hours must be at the 300-400 level.

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, the American Marketing Association, and the Sales and Marketing Executives International. The courses and programs of the department are in accord with the recommendations of these professional groups.

The breadth and selection of courses available provide for either a broad coverage of marketing or specialization in the form of one or more options. Thus the student with the help of an advisor can choose any of the marketing courses in fulfilling the required 18 credit hours of marketing electives.

Some of the options which provide limited specialization in the named fields 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.

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.

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.

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.

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.

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.

NOTE: A major in marketing requires three advanced marketing courses in addition to those listed in each option.

**PROGRAM—B4: BACHELOR OF SCIENCE WITH A MAJOR IN
MARKETING**

| <i>Dept.</i> | <i>No.</i> | <i>Course</i> | <i>1st Term¹</i> | <i>2nd 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 |
| — | — | Communications Electives ³ | 3-0-3 | 3-0-3 |
| ACC | 340 | <i>Fundamentals of Bus. Data Processing⁴</i> | 3-0-3 | |
| THL | — | <i>Theology Elective⁵</i> | 3-0-3 | |
| MKT | — | Marketing courses ⁶ | 6-0-6 | 3-0-3 |
| — | — | General Electives | | 3-0-3 |
| | | | 15 | 15 |
| <i>Senior Year</i> | | | | |
| ECO | 347 | <i>Intermediate Macroeconomics</i> | 3-0-3 | |
| BUS | 423 | <i>Business Policies and Management</i> | | 3-0-3 |
| MKT | — | Marketing courses ⁶ | 3-0-3 | 6-0-6 |
| — | — | General Electives ⁷ | 9-0-9 | 6-0-6 |
| | | | 15 | 15 |

- Under "Term" 3-0-3 means 3 hrs. class, 0 hrs. laboratory, and 3 hrs. credit.
- Courses listed in italics may be taken in either first or second term.
- A total of 6 hrs. to be elected from the following courses: BUS 409 (3 hrs.); ENG 368 (2 hrs.); ENG 370 (2 hrs.); ENG 372 (2 hrs.); SPE 308 (3 hrs.); SPE 312 (3 hrs.); or JRN 398-99 (1-3 hrs.).
- A course in computer science programming or computer language may be substituted for Acc 340.
- Non-Catholic students taken general elective.
- A total of three marketing courses selected in consultation with program advisor.
- At least fifteen of these hours must be at the 300-400 level.

**PROGRAM—B5: BACHELOR OF SCIENCE WITH A MAJOR IN
PACKAGING MANAGEMENT**

This program is offered as part of the Dayton/Miami Valley Consortium School of Packaging consisting of the University of Dayton, Sinclair Community College and Wright State University. All 100, 200 and 300 level packaging management courses are offered only at Sinclair Community College. 400 level courses will be offered at the University of Dayton beginning in the August-December trimester in 1976.

Freshmen and Sophomore Exceptions (Packaging Management Majors only)

Principles of Packaging (SCP 105) and Packaging Materials (SCP 215) are taken the first and second term of the freshman year respectively.

The required natural science for packaging management majors is General Physics (PHY 201 and 201L) which is taken the first term of the sophomore year.

One 300 level course in packaging is taken each term of the sophomore year.

Principles of Accounting (ACC 207 and ACC 208) are taken the first and second term of the junior year respectively.

Principles of Design (Art 111 and Art 112) or Graphic Arts (Art 251 and Art 252) are taken the first and second term of the sophomore year respectively.

| Dept. | No. | Course | 1st Term ¹ | 2nd Term |
|--------------------|---------|--|-----------------------|----------|
| <i>Junior Year</i> | | | | |
| Acc ² | 207-208 | Principles of Accounting | 3-0-3 | 3-0-3 |
| Eco | 347 | <i>Intermediate Macroeconomics</i> | 3-0-3 | |
| BUS | 301 | <i>Corporation Finance</i> | 3-0-3 | |
| BUS | 303 | <i>Business Law I</i> | | 3-0-3 |
| BUS | 316 | <i>Production Management</i> | | 3-0-3 |
| SCP | 3— | <i>Packaging Courses</i> ⁶ | 4-0-4 | 2-0-2 |
| — | — | Communications Electives ⁵ | 3-0-3 | 3-0-3 |
| — | — | General Elective | | 3-0-3 |
| | | | 16 | 17 |
| <i>Senior Year</i> | | | | |
| SCP | 440 | Packaging Processes and Operation Analysis | 3-0-3 | |
| SCP | 450 | Packaging and Physical Distribution Management | 3-0-3 | |
| SCP | 460 | Seminar in Packaging Problems | | 3-0-3 |
| BUS | 423 | <i>Business Policies and Management</i> | | 3-0-3 |
| ACC | 340 | <i>Fundamentals of Business Data Processing</i> ⁴ | 3-0-3 | |
| — | — | Theology Elective ³ | | 3-0-3 |
| — | — | General Electives | 6-0-6 | 6-0-6 |
| | | | 15 | 15 |

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

2. Courses listed in italics may be taken in either the first or second term.

3. Non-Catholic students take elective.

4. A course in computer science programming may be substituted for ACC 340.

5. A total of 6 hrs. to be elected from the following courses: BUS 409 (3 hrs.); ENG 368 (2 hrs.); ENG 370 (2 hrs.); ENG 372 (2 hrs.); SPE 308 (3 hrs.); SPE 312 (3 hrs.); or JRN 398-99 (1-3 hrs.).

6. Three of five packaging courses on the 300 level are selected.

23 trimester hours are required for a major in packaging management. 12 trimester hours are needed for a minor.

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 type-writing, shorthand, accounting, business machines, and office procedures, will prepare graduates for responsible positions in commerce and industry.

PROGRAM—B6: ASSOCIATE DEGREE IN BUSINESS ADMINISTRATION

| <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> | | | | | |
| — | — | Elective | | 3-0-3 | |
| ENG | 101 | English Composition ² | 4-0-4 | | |
| PHL | 103 | Introduction to Philosophy | | 3-0-3 | |
| SEC | 101 or | Fundamental Shorthand | | | |
| SEC | 101A | Refresher ³ | 5-0-3 | | |
| SEC | 102 | Intermediate Shorthand | | 5-0-3 | |
| SEC | 103 or | Fundamental Typing | | | |
| SEC | 103A | Refresher ³ | 5-0-3 | | |
| SEC | 104 | Intermediate Typing | | 5-0-3 | |
| SEC | 110 | Secretarial Mathematics | 3-0-3 | | |
| SPE ⁴ | 101 | <i>Fundamentals of Effective Speaking</i> | | 3-0-3 | |
| THL | — | Theology Elective 100-200 | | 3-0-3 | |
| | | | 15-16 | 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.

²Students testing out of ENG 111 will take ENG 112 (3 hrs.).

³Refresher courses for qualified students with prior training.

⁴Courses listed in italics may be taken in either the first or second term as directed by the program advisor.

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.

BUSINESS E-11-B (For Incoming Freshmen)

Freshman

| | | | | |
|-----|--------|--|-------|---------|
| BUS | 102 | Am. Business Environment | 3 | |
| BUS | 110-11 | Quant. Analysis | 3 | 3 |
| ENG | 111 | College Composition I | 4 | |
| ENG | 112 | College Composition II | | 3 |
| PHL | 103 | Intro. to Philosophy (Catholic & Non-Catholic) | 3 | |
| SPE | 101 | Fundamentals of Effective Speaking | | 3 |
| THL | 112 | Foundations in Theology (Catholics) (Open Elective for Non-Catholics) | | 3 |
| SCI | — | Natural Science—Biol, Phy, Geo, Chem | 4 | |
| BUS | 215 | Principles of Management | | 3 |
| EdF | 206 | Adolescent Growth | | 3 |
| | | | <hr/> | |
| | | | 17 | 18 = 35 |

Sophomore

| | | | | |
|-----|---------|-----------------------------------|-------|---------|
| BUS | 210-11 | Quant. Analysis | 3 | 3 |
| ACC | 207-8 | Principles of Accounting | 3 | 3 |
| ECO | 203-204 | Principles of Economics | 3 | 3 |
| MKT | 205 | Principles of Marketing | 3 | |
| PHL | 301 | Logic (Catholic and Non-Catholic) | | 3 |
| EdF | 208 | Learning Process | | 3 |
| SEC | 103-4 | Typewriting | 3 | 3 |
| | | | <hr/> | |
| | | | 15 | 18 = 33 |

Junior

| | | | | |
|----------|-----|---|-------|---------|
| M.B.E.A. | | Major Subject—Any required major field course | | 3 |
| BUS | 301 | Corporation Finance | 3 | |
| BUS | 303 | Law I | | 3 |
| ACC | 340 | Fundamentals of Business Data Processing* | | 3 |
| M.B.E.A. | | Major Subject—Any required major field course | | 3 |
| EdS | 351 | Secondary School, Self & Society (Tutoring w/ Eds. 351) | 3 | |
| ECO | 347 | Intermediate Macroeconomics | 3 | |
| — | | Open Elective | | 3 |
| M.B.E.A. | | Major Subject—Any required major field course | | 3 |
| M.B.E.A. | | Major Subject—Any required major field course | | 3 |
| MKT | 315 | Retail Merchandising | | 3 |
| | | | <hr/> | |
| | | | 18 | 15 = 33 |

Senior

| | | | | |
|----------|-----|---|-------|---------|
| EdS | 414 | Student Teaching | | 12 |
| EdF | 419 | Philosophy of Education | | 3 |
| MKT | 421 | Advertising | 3 | |
| BUS | 423 | Business Policies | 3 | |
| EdS | 327 | Methods of Teaching Business Subjects | 3 | |
| M.B.E.A. | | Major Subject—Any required major field course | | 3 |
| M.B.E.A. | | Major Subject—Any required major field course | | 3 |
| MKT | 310 | Salesmanship | 3 | |
| | | | <hr/> | |
| | | | 18 | 15 = 33 |

TOTAL HOURS = 134

M.B.E.A. = Marketing, Business Management, Economics, Accounting

*A Course in Computer Science Programming may be substituted for Acc 340.





VIII School of Education

DR. ELLIS A. JOSEPH, *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 for the professional education courses and for the principal teaching field. A 2.00 cumulative average is required for other teaching field(s).

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:

Th1 140 and 3 elective credits in Theology; Ph1 103, and elective in Philosophy.

Other students — 12 semester hours:

Ph1 103, elective in Philosophy, and 6 hours of Humanities electives.

7. Completion of 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 ordinarily permitted to carry more than three 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 the 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 Chairmen's Offices, C-205, C-211.

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 approximately one 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 normally 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-115. 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, Indiana, Kentucky, Maine, Maryland, Massachusetts, Michigan, New Hampshire, New York, New Jersey, North Carolina, Oklahoma, Pennsylvania, Rhode Island, South Dakota, Utah, Vermont, Virginia, Washington, West Virginia, 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 | | |
| ED ^E | 109-10 | Personal and Professional Development | 2-0-2 | 2-0-2 | |
| ED ^F 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 | 103 | Intro. to Philosophy | | 3-0-3 | |
| PHY | 105 | The Physical Sciences | | 4-0-4 | |
| THL ⁵ | 140 | Catholicism Today | 3-0-3 | | |
| ART | 101 | Foundations and Materials in Art | 2-0-2 | | |
| MUS | 103 | Music Appreciation | | 2-0-2 | |
| | | | 17 | 17 | |
| <i>Sophomore Year</i> | | | | | |
| ED ^F | 208 | Learning Process | 3-0-3 | | |
| ED ^P ⁷ | 102 | Personal and Community Health | 2-0-2 | | |
| ENG ⁸ | — | English 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 | — | Philosophy Elective | | 3-0-3 | |
| — ¹¹ | — | Social Science Elective | 3-0-3 | | |
| THL | — | Elective | 3-0-3 | | |
| ED ^E | 296 | Teaching in the Elementary School | 3-0-3 | | |
| — ¹² | — | Elective in Area of Specialization | | 3-0-3 | |
| | | | 17 | 15 | |
| <i>Junior Year</i> | | | | | |
| ED ^E | 320 | Reading and Language Arts | 6-0-6 | | |
| ED ^E | 325 | Interdisciplinary Approach to Social Studies | 3-0-3 | | |
| ED ^E | 360 | Children's Literature | 3-0-3 | | |
| ED ^E | 403 | Mathematics in the Elementary School | 3-0-3 | | |
| ED ^E | 481 | Art in Elementary Education | 2-0-2 | | |
| ED ^E | 413 | Student Teaching | | x-x-12 | |
| — ¹² | — | Elective in Area of Specialization | | 3-0-3 | |
| | | | 17 | 15 | |

PROGRAM—E1—Continued

| <i>Dept.</i> | <i>No.</i> | <i>Course</i> | <i>1st Term¹</i> | <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 ¹⁹ | 483-4 | 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-3 | | |
| EdE ¹⁶ | 413 | Student Teaching | x-x-9 | | |

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 ¹⁷ | 411 | Student Teaching-EMR | x-x-3 | | |
| EdE ¹⁸ | 413 | Student Teaching | x-x-9 | | |

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 103, 104, 105, 120, 275, 329, 357, 306.

⁵Or Humanities Elective for non-Catholics.

⁶Students without piano background take Mus 101.

⁷Or EdP 101 plus EdP 130.

⁸Possible choice: Eng 200 Level Elective.

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

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

¹¹Possible choices: Ant 150, 151, Soc 204, 325, 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.

¹⁷To be done in Senior year.

¹⁸To be done in Junior year.

¹⁹EdE 483 is for primary level; EdE 484 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 | 103 | Intro. to Philosophy | 3-0-3 | | |
| THL ² | 140 | Catholicism Today | | 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 | — | Philosophy Elective | 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. or Ant.

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

⁷Students will have seminar on campus once a week.

VOCATIONAL HOME ECONOMICS CERTIFICATION

A program for the Bachelor of Science in Education with certification in the field of Vocational Home Economics Education is offered to Secondary Education students in cooperation with the Home Economics Department. For specific course offerings, consult the Department Chairman.

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

Teaching Fields

Mathematics
 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 | Home Economics (Vocational) |
| Business Education | Mathematics |
| Chemistry and Physics | Music |
| English | Social Studies |
| History | 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 | 140 | Catholicism Today | 3-0-3 | | |
| PHL ³ | 103 | Intro. to Philosophy | | 3-0-3 | |
| EDD | 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 | | |
| EDP | 200 | Motor Learning | 2-0-2 | | |
| PHL ⁴ | — | Philosophy Elective | | 3-0-3 | |
| EDP | 223 | Movement Education | 2-2-3 | | |
| EDP | 213 | Principles & Hist. of Physical Ed. | | 2-0-2 | |
| EDD | 251 | School Health Program | | 3-0-3 | |
| EDP | — | Physical Education Activities | 0-8-2 | 0-4-1 | |
| — | — | General Electives | 3-0-3 | 2-0-2 | |
| EDP | — | Electives | | 2-0-2 | |
| | | | 16 | 16 | |
| <i>Junior Year</i> | | | | | |
| EDD | 305-6 | Anatomy and Physiology | 3-0-3 | 3-0-3 | |
| EDD | 336 | Standard First Aid and Personal Safety | | 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 | 2-0-2 | |
| — | — | General Electives | 5-0-5 | 3-0-3 | |
| | | | 16 | 16 | |
| <i>Senior Year</i> | | | | | |
| EDP | 409 | Kinesiology | 2-0-2 | | |
| EDP | 409L | Kinesiology Laboratory | 0-2-1 | | |
| 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 103.³Non-Catholic students will take Phl elective.⁴Non-Catholic students take elective in Humanities.**PROGRAM—E4: HEALTH 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> | | | | | |
| 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 | 140 | Catholicism Today | 3-0-3 | | |
| PHL ³ | 103 | Intro. to Philosophy | | 3-0-3 | |
| EDD | 109-10 | Personal and Professional Development | 2-0-2 | 2-0-2 | |
| EdH | 116 | Personal Health | 2-0-2 | | |
| EdH | 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 | |
| EDD | 251 | School Health Program | | 3-0-3 | |
| THL ⁵ | — | Elective | 3-0-3 | | |
| PHL ⁵ | — | Philosophy Elective | | 3-0-3 | |
| SOC | 204 | Modern Social Problems | 3-0-3 | | |
| EdH | — | Electives | 2-0-2 | 2-0-2 | |
| — | — | General Electives | 4-0-4 | 4-0-4 | |
| | | | 16 | 16 | |
| <i>Junior Year</i> | | | | | |
| EDD | 305-6 | Anatomy and Physiology | 3-0-3 | 3-0-3 | |
| EDH | 309 | School Health Instruction | 3-0-3 | | |
| EDD | 336 | Standard First Aid and Personal Safety | 2-0-2 | | |
| EdH | 337 | Advanced First Aid and Emergency Care | | 3-0-3 | |
| EdS | 351 | The Secondary School, Self, and Society | | 3-0-3 | |
| EdH | — | Electives | 2-0-2 | 2-0-2 | |
| — | — | General Electives | 6-0-6 | 6-0-6 | |
| | | | 16 | 17 | |
| <i>Senior Year</i> | | | | | |
| EdH | 430 | Principles of Health Education | 2-0-2 | | |
| EdH | 407 | Current Issues in Health Education | 2-0-2 | | |
| EDF | 419 | Philosophy of Education | 3-0-3 | | |
| EdH | 419 | Student Teaching (Health) | | x-x-12 | |
| — | — | General Electives | 9-0-9 | | |
| | | | 16 | 12 | |

PROGRAM—E4—Continued

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

²Non-Catholic students will take Phl 103.

³Non-Catholic students will take Phl elective.

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 Term¹</i> | <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 | 140 | Catholicism Today | 3-0-3 | | |
| PHL | 103 | Intro. to Philosophy | | 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 | |
| EdP | 102 | Personal and Community Health | 2-0-2 | | |
| HST | — | 100 level electives | 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 | 331 | Vocal Music in High School | | 2-0-2 | |
| PHL | — | Philosophy Elective | | 3-0-3 | |
| MUS ² | — | Applied Music | 2-0-2 | 2-0-2 | |
| THL ³ | — | Elective | 3-0-3 | | |
| | | | 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 | 335 | Music in Elementary Grades | 3-0-3 | 3-0-3 | |
| MUS | — | Music Electives | 2-0-2 | 2-0-2 | |
| MUS ² | 399 | Applied Music | 2-0-2 | 2-0-2 | |
| MTH | 111 | Mathematics and Its Cultural Aspects | | 3-0-3 | |
| EdS | 351 | Secondary School | 3-0-3 | | |
| | | | 15 | 15 | |

PROGRAM—E5—Continued

| <i>No.</i> | <i>Dept.</i> | <i>Courses</i> | <i>1st Term¹</i> | <i>2nd Term</i> | <i>3rd Term</i> |
|--------------------|--------------|---------------------------|-----------------------------|-----------------|-----------------|
| <i>Senior Year</i> | | | | | |
| Mus | 399 | Applied Music | 2-0-2 | | |
| 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 | 3-0-3 | | |
| Mus | — | Music Electives | 5-0-5 | | |
| | | | 15 | 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

| <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> | | | | | |
| ART | 103-4 | Introductory Drawing | 2-0-2 | 2-0-2 | |
| ART | 111-12 | Principles of Design | 2-0-2 | 2-0-2 | |
| ART | 226-227 | Introductory Painting | 2-0-2 | 2-0-2 | |
| ART | 191 | Lettering and Calligraphy | | 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 | | 1-0-1 | |
| PHL | 103 | Intro to Philosophy | | 3-0-3 | |
| THL ³ | 140 | Catholicism Today | 3-0-3 | | |
| MTH | 111 | Mathematics and Its Cultural Aspects | 3-0-3 | | |
| | | | 17 | 17 | |
| <i>Sophomore Year</i> | | | | | |
| ART | 231 | Sculpture | 2-0-2 | | |
| ART | 251 | Graphics | 2-0-2 | | |
| ART | 261 | Intro. Copper Enameling | | 2-0-2 | |
| ART | 228 | Watercolor | | 2-0-2 | |
| PHO | 101 | Basic Photography | | 3-0-3 | |
| ART | 341 | Weaving | 2-0-2 | | |
| EdF | 207 | Growth and Development | 3-0-3 | | |
| EdF | 208 | Learning Process | | 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> |
|--------------------|------------------|----------------------------------|------------------------------|-----------------|-----------------|
| EdP | 130 | Physical Education Activities | | 1-0-1 | |
| EdP | 102 | Personal and Community Health | 2-0-2 | | |
| PHL | — | Philosophy elective | | 3-0-3 | |
| THL ³ | — | Elective | 3-0-3 | | |
| HSt | — | 100 Level Elective | 3-0-3 | 3-0-3 | |
| | | | 17 | 17 | |
| <i>Junior Year</i> | | | | | |
| ART | 355 | Silk Screen Serigraphy | 2-0-2 | | |
| ART | 372 | Renaissance Art | 3-0-3 | | |
| ART | 472 | Art in Twentieth Century | | 3-0-3 | |
| ART | 363 | Jewelry Casting | | 2-0-2 | |
| ART ² | — | Electives | 2-0-2 | 2-0-2 | |
| DAI | 100 ⁶ | Ceramics | | 2-0-2 | |
| 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 | | 6-0-6 | |
| EdF | 419 | Philosophy of Education | | 3-0-3 | |
| EdS | 415 | Student Teaching | x-x-12 | | |
| | | | 12 | 15 | |

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

²Art electives from Design, Drawing, Crafts, Graphics, Painting, Sculpture, Photography, Interior Design, and Art History.

³Non-Catholic students take a Humanities elective.

⁴Take Bio 114 or Phy 105 or Geo 109.

⁵See Art 483.

⁶Take at Dayton Art Institute.

PROGRAM—E7: HOME ECONOMICS (VOCATIONAL)

| <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 | 114 | Biological Science | | 3-2-4 | |
| CHM | 110 | General Chemistry | 3-2-4 | | |
| EdS | 109-110 | 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 | |
| HEC ² | 200 | Introductory Foods | | 2-4-4 | |
| HEC ³ | 105 | Related Art | 3-0-3 | | |
| EdP ⁴ | 101 | Cultural and Personal Aspects of Physical Education | 1-0-1 | | |
| EdP ⁴ | 130 | Physical Education Activities | | 0-2-1 | |
| PHL | 103 | Introduction to Philosophy | | 3-0-3 | |
| THL ⁵ | 140 | Catholicism Today | 3-0-3 | | |
| | | | 16 | 17 | |

PROGRAM—E7—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> | | | | | |
| ECO | 208 | Principles of Economics I | | 3-0-3 | |
| EDF | 201 | Learning Process | 3-0-3 | | |
| HEC | 101-211 | Clothing I and II | 2-3-3 | 2-3-3 | |
| HEC | 214 | Textiles | | 3-0-3 | |
| HEC | 221 | Consumer Education & Home Mgmt. | 3-0-3 | | |
| HEC | 225-329 | Child Development I and II | 2-2-3 | 2-2-3 | |
| MTH ⁶ | — | Mathematics Course | 3-0-3 | | |
| PHL | — | Philosophy Elective | | 3-0-3 | |
| THL ⁵ | — | Theology Elective | 3-0-3 | | |
| | | | 18 | 15 | |
| <i>Junior Year</i> | | | | | |
| EDS | 351 | The Secondary School, Self and Society | | 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 | 323 | Demonstration Techniques | 2-0-2 | | |
| HEC | 328 | Housing and Home Furnishings | 3-0-3 | | |
| HEC | — | Home Economics Electives | 3-0-3 | 3-0-3 | |
| — | — | General Education Electives | 6-0-6 | 3-0-3 | |
| | | | 17 | 15 | |
| <i>Senior Year</i> | | | | | |
| EDF | 419 | Philosophy of Education | 3-0-3 | | |
| EDS | 415 | Student Teaching | | 1-x-12 | |
| HEC | 405 | Teaching of Home Economics | 3-0-3 | | |
| HEC | 406 | Home Management II | 1-4-3 | | |
| — | — | General Education Electives | 6-0-6 | | |
| | | | 15 | 12 | |

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

²Foods and Clothing I & II may be interchanged.

³Art 111-112 Principles of Design may be substituted.

⁴EdP 101 and 130 may be replaced by taking EdP 102 Personal and Community Health.

⁵Non-Catholic students take Humanities Elective.

⁶Choose from Mth 101, 107, 111, 207.

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:

PROGRAM—E8—Continued*Cr. Hrs.*

| | |
|---|---|
| 1. Teaching in the Elementary School | 3 |
| 2. Reading in the Elementary School | 3 |
| 3. Mathematics 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;

PROGRAM—E10—Continued

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.

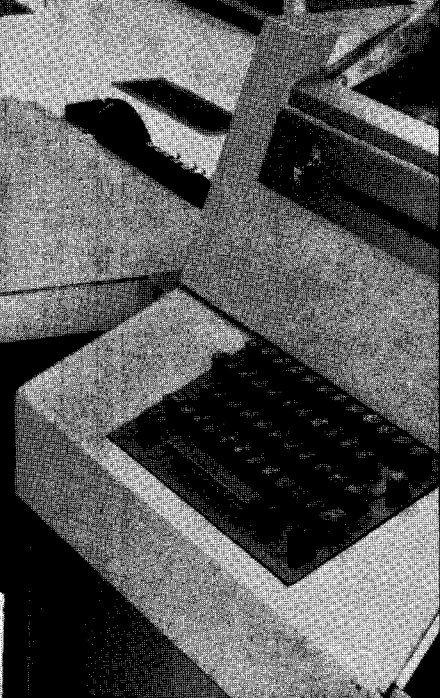
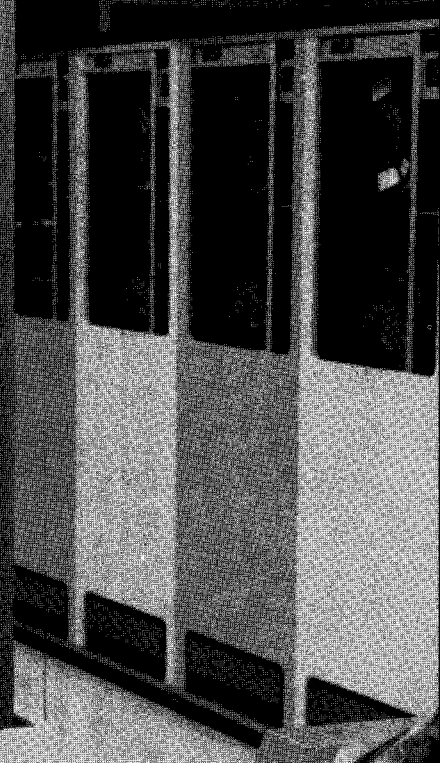
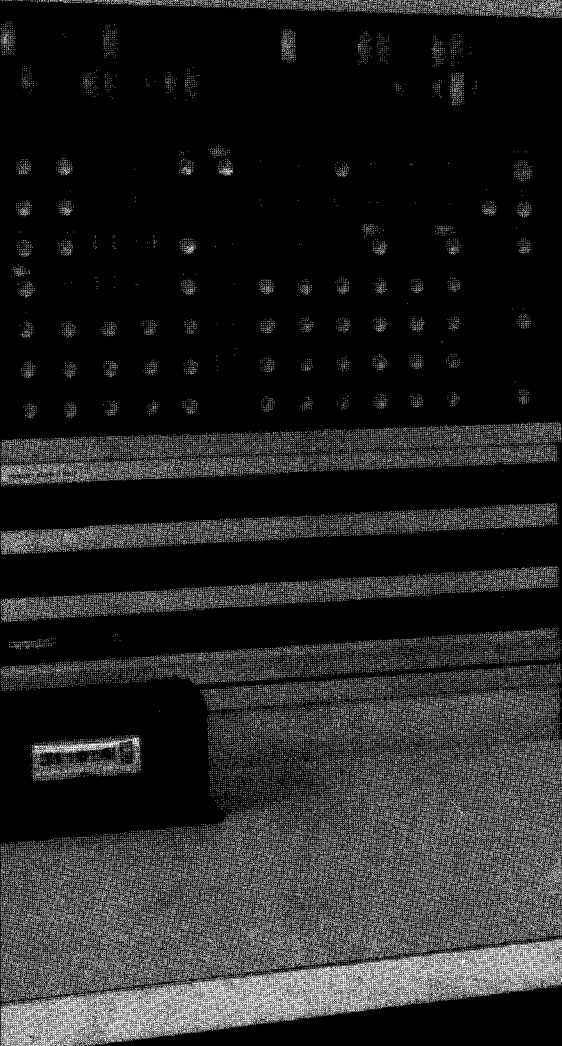
In order to finish in four years, a student in the College of Arts and Sciences or the School of Business Administration will need to process his application for admission to the teacher education program *during the third semester of his matriculation*. He will need to begin his professional education sequence in his fourth semester. Failure to enroll on time may 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. DAVID C. KRAFT, *Dean*

PROFESSOR JAMES L. MCGRAW, *Associate Dean for Engineering Technology*

DR. JAY D. PINSON, *Associate Dean for Graduate Studies and Research*

ENGINEERING

The School of Engineering has as its purpose the preparation of men and women for professional careers in engineering in order for them to assume responsible positions of a technical or semi-technical nature in business, industry, education, and government. Of primary concern is the development of professional competencies and philosophies within the various engineering disciplines as well as a broad outlook at the technical and social problems that confront society today. Additionally, the engineering programs provide an excellent background and training for other career areas.

The engineering program in each of the fields of Chemical, Civil, Electrical, Industrial and Systems (upper level program), and Mechanical Engineering is designed to lead to a Bachelor's degree in a four-year period. While each student pursues a curriculum of his choice, according to his field of interest, all the students take certain common core courses in mathematics, chemistry, physics, English, computer science, and basic engineering fundamentals. Each engineering program is flexible and permits additional concentrations of study in such areas as industrial engineering, environmental engineering, aerospace engineering, and materials science. Although emphasis is placed on fundamental theory, continued attention is paid to the solution of practical problems which the student will encounter in the practice of engineering. As an educational unit within a private University, strong emphasis is placed on the individualized engineering faculty/ engineering student counseling program which begins previous to the student's formal course work at the University. Emphasis in the counseling program is placed on assisting each student to be challenged and meet his educational objectives within the engineering programs.

The broader responsibilities of the engineering profession demand that the professional training of an engineer include a significant component of humanities and social science studies in order that the student will become aware of the urgent problems of society and develop a deeper appreciation of the cultural achievements of man. Additionally such humanistic-social studies provide the proper framework to insure that scientific discoveries and developments by engineers may result in the real advancement of man.

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 meet all of the requirements of the new curriculum.

The Degrees—Bachelor of Chemical, Civil, Electrical, Industrial and Systems Engineering, 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 in the student's engineering curriculum 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.

The semester hours of credit required for graduation in each engineering curriculum administered by the School of Engineering are as follows:

| | |
|------------------------------------|--------------------------------|
| Chemical Engineering | 135 |
| Civil Engineering | 133 |
| Electrical Engineering | 127 |
| Industrial and Systems Engineering | 66 credit hours at upper level |
| Mechanical Engineering | 132 |

TRANSFER STUDENTS

The School of Engineering welcomes transfer students from both community and senior colleges and works closely with many schools to facilitate transfers from pre-engineering programs. Students may complete the first two years of study in other accredited institutions and transfer to the University of Dayton with little or no loss of credit provided they follow a program similar to that prescribed by the University of Dayton School of Engineering.

MINORS IN ENGINEERING

Students majoring in Chemical, Electrical, or Mechanical Engineering are given the option of choosing a "minor" area of technical study. The primary purpose of this "minors" program in the School of Engineering is to provide the engineering student with an opportunity to specialize in a particular technical sub-area while still pursuing a program of study in one of the traditional and well recognized engineering disciplines. The "minors" program was designed in response to the needs of industry and government and opens up avenues of study corresponding to the educational needs and career objectives of students. Election of the minor is optional to the student and does not add additional courses or degree requirements for graduation.

The "minor" area of study is defined as 12 credit hours of work and can be composed of any number of 1 credit hour to 3 credit hour courses selected from the approved list of minor areas of study. The current approved list of "minor" study areas includes:

| | |
|---------------------------|---------------------|
| Aerospace Engineering | Chemical Processing |
| Automatic Control Systems | Circuit Analysis |

| | |
|--|-----------------------|
| Digital Systems | Magnetics |
| Dynamic Analysis of Mechanical Systems | Materials Engineering |
| Electromagnetics | Structures |
| Energy Conversion | Systems Engineering |
| Environmental Engineering | Thermal Engineering |

Students, in conjunction with their faculty advisors, normally select their minor area of study in the second semester of their Sophomore year. The designation of the "minor" study area appears on the student's transcript.

ENGINEERING FRESHMAN YEAR REQUIREMENTS

Students seeking admission to the School of Engineering who are recent high school graduates or who have earned less than 15 credit hours of collegiate credit are classified as new freshmen and must meet the common engineering program requirements as detailed below. Such credit requirements may be met in a number of ways including: (1) advanced college level course work at the University of Dayton or other collegiate institutions; (2) CLEP, CEEB or other advanced standing testing services; (3) departmental examination or work experience equivalent; or (4) taking the prescribed courses as part of the Freshman year. Each request for advanced standing by credit must be initiated by the student in consultation with his engineering faculty counselor to the Office of the Dean of Engineering.

FIRST YEAR ENGINEERING REQUIREMENTS

| <i>Dept.</i> | <i>No.</i> | <i>Course</i> | |
|---|------------|----------------------------------|---------------------------------|
| CHM | 123 | General Chemistry | 3 credits lecture, 1 credit lab |
| CPs | 144 | EGR 144—Fortran for Engineers | 2 credits |
| EGM | 101 | Mechanics I | 3 credits |
| EGR ² | 103 | Introduction to Engineering | 2 credits |
| ENG | 101 | Language and Thought | 3 credits |
| MTH | 118-9 | Analytical Geometry and Calculus | 8 credits |
| MEE | 106L | Engineering Graphics I | 2 credits lab |
| PHL | 103 | Introduction to Philosophy | 3 credits |
| PHY | 196 | General Physics I | 3 credits |
| THL ³ | — | Theology Elective | 3 credits |
| Total First Year Credit Requirements = 33 semester credit hours | | | |

¹An engineering/computer science team taught course for engineering students.

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

³Non-Catholics take H-S Elective.

CHEMICAL ENGINEERING DR. MICHAEL A. BOBAL, *Chairman*

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 Term</i> ¹ | <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 | — | Philosophy Elective | | 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 | |
| <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 | |

PROGRAM—EN1—Continued

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

²Non-Catholic students take H-S Elective.

CIVIL ENGINEERING Professor S. J. RYCKMAN, *Chairman*

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 civil engineering practice or 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 environmental, hydraulic, sanitary, structural, highway, soils, and traffic 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 the Junior year, students who appear to be qualified for graduate study may elect to plan their programs so as to complete certain pre-requisite 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 | |
| PHY | 207-8 | General Physics | 3-0-3 | 3-0-3 | |
| MEE | 227L | Engineering Graphics II | | 0-3-1 | |
| | | | 17 | 17 | 3 |

| <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> | | | | | |
| 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 | |
| — ⁵ | — | Free Elective | | 3-0-3 | |
| PHL | — | Philosophy Elective | 3-0-3 | | |
| THL ³ | — | Theology Elective | | 3-0-3 | |
| | | | 16 | 16 | |
| <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 | 3-0-3 | | |
| CIE | 418 | Structural Design II | | 1-6-3 | |
| 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.

⁵Free elective to be selected by student.

ELECTRICAL ENGINEERING DR. BERNHARD M. SCHMIDT, *Chairman*

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 Term¹</i> | <i>2nd Term</i> | <i>3rd Term</i> |
|-----------------------------------|------------|--|-----------------------------|-----------------|-----------------|
| <i>Sophomore Year²</i> | | | | | |
| 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 | — | Philosophy Elective | 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 Year²</i> | | | | | |
| 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 | |
| <i>Senior Year²</i> | | | | | |
| 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 | |
| ISE | 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.

MECHANICAL ENGINEERING Dr. HOWARD E. SMITH, *Chairman*

Mechanical Engineering is broadly concerned with energy, including its transformation from one form to another, its transmission, its utilization, and its conversion into useful work. Mechanical engineers conceive, plan, design, and direct the manufacture, distribution, and operation of a wide variety of devices, machines, and systems, including complex man-machine systems for energy conversion, environmental control, transportation, materials handling and processing, and other purposes.

Mechanical engineers are engaged in all the engineering functions, including creative design, applied research, development, application and sales engineering, and management. No other field of engineering provides a better professional base for interdisciplinary activities.

The curriculum is designed to introduce the student to fundamental scientific and engineering theories, to the use of these theories to solve practical problems, and to the humanities in order that the graduate engineer may better understand the nature of his fellow man and can apply his knowledge to problems relevant to the social-economic world in which he lives. The curriculum also provides the opportunity to continue study at the graduate level and complete the requirement for a Master's Degree at the University of Dayton in one additional year.

PROGRAM—EN4: 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 | |
| <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 | | |

PROGRAM—EN4—Continued

| <i>Dept.</i> | <i>No.</i> | <i>Course</i> | <i>1st Term</i> ¹ | <i>2nd Term</i> | <i>3rd Term</i> |
|------------------|------------|-------------------------------------|------------------------------|-----------------|-----------------|
| MEE | 435 | Feedback Control Systems | 3-0-3 | | |
| MEE | 450L | Mechanical Engineering Lab. Project | | 0-3-1 | |
| MEE | — | Technical Electives | 3-0-3 | 3-0-3 | |
| PHL | — | Philosophy Elective | | | 3-0-3 |
| — | — | Free Elective | 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.

INDUSTRIAL AND SYSTEMS ENGINEERING

DR. MERLE D. SCHMID, *Program Director*

Some years ago the American Institute of Industrial Engineers adopted a definition for 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 above 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 individual 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 information systems and systems of men, machines, and materials.
3. Designing new and 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 are

valid reasons for choosing Industrial and Systems Engineering. Whatever the reason, the student should be reminded that Industrial and Systems Engineering is a rigorous engineering discipline.

Industrial and Systems engineering is a 66 hour upper level program leading to the degree Bachelor of Industrial and Systems Engineering. Admission to the program requires a minimum of 60 hours of coursework including:

| | |
|---|----------|
| Mathematics (incl. Differential Equations) | 15 hours |
| Physics and/or Chemistry | 12 hours |
| English | 6 hours |
| Basic Engineering (incl. Dynamics and Thermodynamics) | 12 hours |
| Electric and Electronic Theory | 6 hours |

In addition the program requires, either as transfer credit, or courses taken in the junior and senior years:

| | |
|-------------------------------------|----------|
| Theology and/or Philosophy | 12 hours |
| Humanistic-Social Studies Electives | 9 hours |

Students who follow either the Electrical or Mechanical Engineering programs for the first two years (Freshman - Sophomore) will not lose any credit in transferring to Industrial and Systems Engineering.

PROGRAM—EN5: BACHELOR OF INDUSTRIAL AND SYSTEMS ENGINEERING

| Dept. | No. | Course | 1st Term ¹ | 2nd Term |
|----------------------------------|-------|-------------------------------------|-----------------------|---------------|
| <i>Junior Year^{2,4}</i> | | | | |
| BUS | | Two 1 hr. Business Mini-courses | 2-0-2 | |
| | | General Elective | | 3-0-3 |
| H-S | | Humanistic-Social Studies Elective | | (Second Term) |
| | | | | 3-0-3 |
| ISE | 302 | Engineering Economy | 3-0-3 | |
| ISE | 334 | Machine Computing Elements | | 2-2-3 |
| MTH | 367-8 | Statistical Methods | 3-0-3 | 3-0-3 |
| THL ³ | | Theology Elective | 3-0-3 | |
| | | Technical Electives | 6-0-6 | 5-0-5 |
| | | | 17 | 17 |
| <i>Senior Year⁴</i> | | | | |
| BUS | | Two 1 hr. Business Mini-courses | 1-0-1 | 1-0-1 |
| H-S | | Humanistic-Social Studies Electives | 3-0-3 | 3-0-3 |
| ISE ⁵ | 421 | Reliability and Maintainability | 3-0-3 | |
| ISE ⁵ | 423 | Quality Assurance | | 2-2-3 |
| ISE ⁵ | 428 | Design of Experiments | 2-2-3 | |
| ISE ⁵ | 451 | Production and Inventory Control | 2-2-3 | |
| ISE | 452-3 | Operations Research | 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 ⁵ | 456 | Discrete Time Series | | 2-2-3 |
| | | | 16 | 16 |

PROGRAM—EN5—Continued

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

²Courses may be scheduled in other terms than listed.

³Non-Catholic students take H-S elective.

⁴An Honors Course may be added each term for students designated by Director.

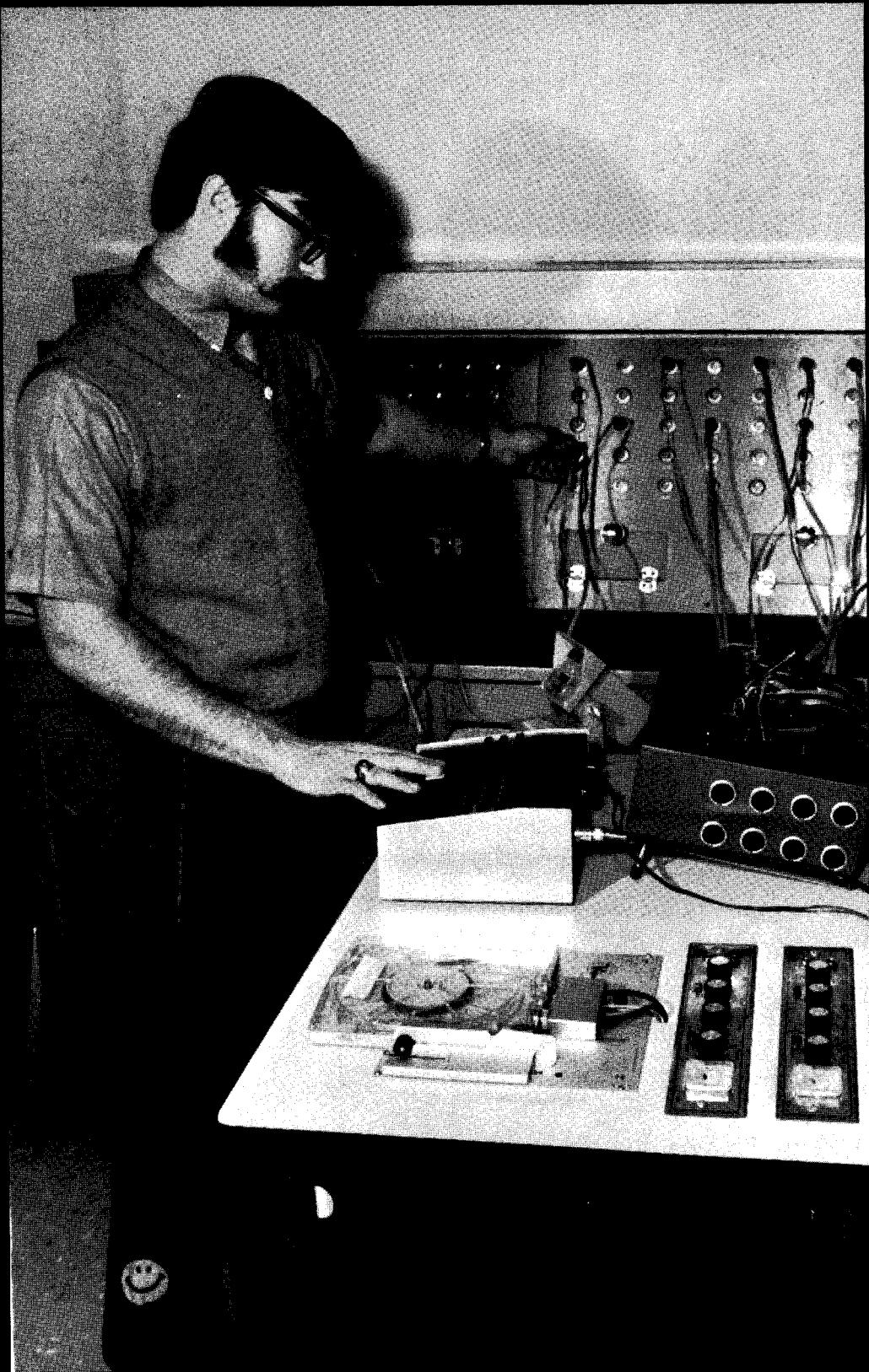
⁵Select five out of seven ISE courses.

DIVISION OF TECHNICAL STUDIES AND SERVICES

DR. MERLE D. SCHMID, *Director*

The Division of Technical Studies and Services of the School of Engineering is designed to address itself to the broad need of technical education and related support services to those individuals and groups both within the engineering profession and from other segments of society. The Division accomplishes this purpose in the following manner:

- (1) Development and offering of upper level Industrial and Systems Engineering courses to support program EN-5: Bachelor of Industrial and Systems Engineering.
- (2) Development and offering of minor areas of technical study for engineering and science majors.
- (3) Development and offering of courses and concentrations of study with engineering and technical content for non-engineering majors. This includes all Industrial and Systems Engineering upper level courses necessary to support Program S-15: Bachelor of Science with a Major in Systems Science.
- (4) Development and implementation of innovative teaching techniques, procedures, and materials for teaching engineering and technological subject matter.
- (5) Provide educational services to business, industry, and government for technically related material and subject matter.



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,

bio-engineering technology, electronic-chemical technology, environmental engineering technology, geochemical technology, industrial chemical technology, metallurgical technology, plastics 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 program 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

The Department of Chemical Technology offers eight programs leading to the Associate in Technology degree.

BIO-ENGINEERING TECHNOLOGY

CHEMICAL TECHNOLOGY

ELECTRONIC-CHEMICAL TECHNOLOGY

ENVIRONMENTAL ENGINEERING TECHNOLOGY

GEOCHEMICAL TECHNOLOGY

INDUSTRIAL-CHEMICAL TECHNOLOGY

METALLURGICAL TECHNOLOGY

PLASTICS TECHNOLOGY

These curricula are designed to develop the student into a responsible, Christian citizen with a strong fundamental background in technical subjects. From the technical standpoint, emphasis is placed upon understanding, analysis, and laboratory skills. Non-major technical subjects and humanistic-social courses complete the student's academic education. His overall education is enhanced by all the facilities and opportunities offered by a modern University. A close faculty-student relationship is maintained and students are encouraged, through elective courses and special projects, to pursue their own technical interests. Graduates are immediately employed in many fields ranging from research to development/production to sales to managerial.

**PROGRAM—T1: ASSOCIATE IN TECHNOLOGY WITH MAJOR IN
CHEMICAL 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> | | | | | |
| STI | 134 | Effective Speaking | 2-0-2 | | |
| CTI | 122 | General Chemistry | 3-3-4 | | |
| STI | 107 | Engr Tech Math I | 5-0-4 | | |
| ENG | 101 | Language and Thought | 3-0-3 | | |
| PHL | 103 | Introduction to Philosophy | 3-0-3 | | |
| MTI | 220 | Statics and Dynamics | | 3-0-3 | |
| CTI | 202 | Quantitative Analysis | | 2-2-4 | |
| STI | 108 | Engr Tech Math II | | 5-0-4 | |
| THL ² | — | Theology Elective | | 3-0-3 | |
| MTI | 103L | Technical Drawing | | 0-2-2 | |
| | | | 16 | 16 | |
| <i>Sophomore Year</i> | | | | | |
| CTI | 208 | Organic Chemistry I | 3-3-4 | | |
| STI | 207 | Engr Tech Math III | 5-0-4 | | |
| STI | 251 | Economics of Industry | 3-0-3 | | |
| ITI | 315 | Organization and Management | 3-0-3 | | |
| | | Technical Elective | 3-0-3 | | |
| CTI | 209 | Organic Chemistry II | | 3-3-4 | |
| CTI | 316 | Analytical Instrumentation | | 5-0-4 | |
| CTI | 305 | Materials Science | | 3-0-3 | |
| ETI | 110 | Electrical Circuits I | | 3-0-3 | |
| STI | 252 | American Political Ideas | | 3-0-3 | |
| | | | 17 | 17 | |
| <i>Junior Year</i> | | | | | |
| CTI | 313 | Topics in Phys. Chem. | 3-0-3 | | |
| CTI | 300 | Seminar | 1-0-1 | | |
| STI | 334 | Technical Writing | 2-0-2 | | |
| ETI | 111 | Electrical Circuits II | 5-0-4 | | |
| | | Technical Elective | 3-0-3 | | |
| PHY | — | Physics | 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 | 104 | Introduction to Electronic Engr. Tech. | 3-0-3 | | |
| ETI | 110 | Electrical Circuits I | | 3-0-3 | |
| MTI | 220 | Statics and Dynamics | | 3-0-3 | |
| PHL | 103 | Introduction to Philosophy | | 3-0-3 | |
| STI | 107 | Engineering Technology Math I | 5-0-4 | | |
| STI | 108 | Engineering Technology Math II | | 5-0-4 | |
| STI | 151 | Introduction to Engineering Technology | 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 | 223 | Schematics and Diagrams | 1-0-1 | | |
| 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 | |
| PHY | | Physics | 3-0-3 | | |
| STI | 207 | Engineering Technology Math III | 5-0-4 | | |
| STI | 134 | Effective Speaking | 2-0-2 | | |
| 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 | | |
| STI | 252 | American Political Ideas | 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 Term</i> ¹ | <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 | | 0-3-1 | |
| STI | 107-8 | Engineering Technology Math I, II | 5-0-4 | 5-0-4 | |
| MTI | 220 | Statics and Dynamics | | 3-0-3 | |
| 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 | 103 | Introduction to Philosophy | 3-0-3 | | |
| THL ² | — | 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 | | |
| ETI | 201 | Fundamentals of Electronic Technology | | 3-0-3 | |
| PHY | | Physics | 3-0-3 | | |
| STI | 251 | Economics of Industry | | 3-0-3 | |
| STI | 252 | American Political Ideas | 3-0-3 | | |
| | | | 16 | 17 | |
| <i>Junior Year</i> | | | | | |
| ITI | 305 | Labor and Wage Administration | 3-0-3 | | |
| ITI | 315 | Organization and Management | 3-0-3 | | |

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> |
|--------------|------------|-----------------------------|------------------------------|-----------------|-----------------|
| 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 | 103 | Introduction to Philosophy | 3-0-3 | | |
| STI | 107-8 | Engineering Technology Math I, II | 5-0-4 | 5-0-4 | |
| MTI | 215 | Statics | | 3-0-3 | |
| 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 | |
| <i>Sophomore Year</i> | | | | | |
| MTI | 104L | Graphical Computations | 0-6-2 | | |
| STI | 134 | Effective Speaking | | 2-0-2 | |

PROGRAM—T4—Continued

| <i>Dept.</i> | <i>No.</i> | <i>Course</i> | <i>1st Term¹</i> | <i>2nd Term</i> | <i>3rd Term</i> |
|--------------------|------------|---------------------------------------|-----------------------------|-----------------|-----------------|
| MTI | 108L | Manufacturing Processes I Lab | 0-3-1 | | |
| MTI | 221 | Strength of Materials | | 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 | | |
| PHY | — | Physics | 3-0-3 | | |
| ETI | 201 | Fundamentals of Electronic Technology | | 3-0-3 | |
| STI | 251 | Economics of Industry | 3-0-3 | | |
| | | | 17 | 17 | |
| <i>Junior Year</i> | | | | | |
| MTI | 329 | Fluid Power | 2-3-3 | | |
| MTI | 323 | Machine Design | 2-3-3 | | |
| ITI | 315 | Organization and Management | 3-0-3 | | |
| MTI | — | Mechanical Elective | 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 ¹ | — | Theology Elective | 3 |
| — | — | Humanistic-Social Electives | 6 |
| — | — | Approved Technical Electives (Min. 6 cr. in major) | 24 |
| STI | 499 | Seminar | 1 |
| | | | 46 |

¹Non-Catholic students may substitute a Humanistic-Social elective.

**PROGRAM—T6: ASSOCIATE IN TECHNOLOGY WITH MAJOR IN
BIO-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> | | | | | | |
| STI | 134 | Effective Speaking | 2-0-2 | | | |
| BIO | 101 | General Biology I | 3-0-3 | | | |
| CTI | 122 | General Chemistry | 3-3-4 | | | |
| ENG | 101 | Language and Thought | 3-0-3 | | | |
| STI | 107 | Engineering Technology Math I | 5-0-4 | | | |
| BIO | 102 | General Biology II | | 3-3-4 | | |
| STI | 108 | Engineering Technology Math II | | 5-0-4 | | |
| PHL | 103 | Introduction to Philosophy | | 3-0-3 | | |
| MTI | 220 | Statics and Dynamics | | 3-0-3 | | |
| ETI | 110 | DC Circuits | | 3-0-3 | | |
| | | | 16 | 17 | | |
| <i>Sophomore Year</i> | | | | | | |
| THL ² | | Theology Elective | 3-0-3 | | | |
| CTI | 208 | Organic Chemistry I | 3-0-3 | | | |
| STI | 207 | Engineering Technology Math III | 5-0-4 | | | |
| ETI | 111 | AC Circuits | 3-3-4 | | | |
| STI | 251 | Economics of Industry | 3-0-3 | | | |
| BIO | 207 | Anatomy | | 1-0-1 | | |
| ETI | 206 | Electron Devices I | | 3-3-4 | | |
| CTI | 209 | Organic Chemistry II | | 3-0-3 | | |
| STI | 252 | American Political Ideas | | 3-0-3 | | |
| MTI | 221 | Strength of Materials | } Any two | | | |
| MTI | 231 | Fluid Mechanics | | | 6-0-6 | |
| MTI | 232 | Thermodynamics | | | | |
| | | | 17 | 17 | | |
| <i>Junior Year</i> | | | | | | |
| PHY | — | Physics | 3-0-3 | | | |
| BIO | 303 | Physiology | 3-0-3 | | | |
| ITI | 315 | Organization and Management | 3-0-3 | | | |
| MTI | 400 | BioMechanics | 3-0-3 | | | |
| ETI | 400 | BioElectronics | 3-0-3 | | | |
| STI | 334 | Technical Writing | 2-0-2 | | | |
| CTI | 300 | Seminar | 1-0-1 | | | |
| | | | 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.

**PROGRAM—T7: ASSOCIATE IN TECHNOLOGY WITH A MAJOR IN
ELECTRONIC-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> | | | | | |
| STI | 134 | Effective Speaking | 2-0-2 | | |
| CTI | 122 | General Chemistry | 3-3-4 | | |
| STI | 107 | Engineering Technology Math I | 5-0-4 | | |

PROGRAM—T7 Continued

| <i>Dept.</i> | <i>No.</i> | <i>Course</i> | <i>1st Term</i> ¹ | <i>2nd Term</i> | <i>3rd Term</i> |
|-----------------------|------------|---------------------------------|------------------------------|-----------------|-----------------|
| ENG | 101 | Language and Thought | 3-0-3 | | |
| PHL | 103 | Introduction to Philosophy | 3-0-3 | | |
| CTI | 202 | Quantitative Analysis | | 2-2-4 | |
| ETI | 110 | Electrical Circuits I | | 3-0-3 | |
| STI | 108 | Engineering Technology Math II | | 5-0-4 | |
| THL ² | — | Theology Elective | | 3-0-3 | |
| MTI | 220 | Statics and Dynamics | | 3-0-3 | |
| | | | 16 | 17 | |
| <i>Sophomore Year</i> | | | | | |
| CTI | 208 | Organic Chemistry I | 3-3-4 | | |
| ETI | 111 | AC Circuits | 3-3-4 | | |
| STI | 207 | Engineering Technology Math III | 5-0-4 | | |
| STI | 251 | Economics of Industry | 3-0-3 | | |
| MTI | 106L | Testing and Measurements | 0-1-1 | | |
| CTI | 209 | Organic Chemistry II | | 3-3-4 | |
| CTI | 316 | Analytical Instrumentation | | 5-0-4 | |
| STI | 252 | American Political Ideas | | 3-0-3 | |
| CTI | 305 | Materials Science | | 3-0-3 | |
| ETI | — | Technical Elective | | 3-0-3 | |
| | | | 16 | 17 | |
| <i>Junior Year</i> | | | | | |
| CTI | 300 | Seminar | 1-0-1 | | |
| ITI | 315 | Organization and Management | 3-0-3 | | |
| PHY | — | Physics | 3-0-3 | | |
| CTI | 313 | Topics in Phys. Chem. | 3-0-3 | | |
| STI | 334 | Technical Writing | 2-0-2 | | |
| ETI | — | Technical Elective | 5-0-4 | | |
| | | | 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.

PROGRAM—T8: ASSOCIATE IN TECHNOLOGY WITH MAJOR IN ENVIRONMENTAL 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 I | 3-3-4 | | |
| STI | 107 | Engineering Technology Math I | 5-0-4 | | |
| STI | 134 | Effective Speaking | 2-0-2 | | |
| ENG | 101 | Language & Thought | 3-0-3 | | |
| PHL | 103 | Introduction to Philosophy | 3-0-3 | | |
| CTI | 202 | Quantitative Analysis | | 3-3-4 | |
| STI | 108 | Engineering Technology Math II | | 5-0-4 | |
| MTI | 220 | Statics & Dynamics | | 3-0-3 | |
| THL ² | — | Theology Elective | | 3-0-3 | |
| ITI | 315 | Organization & Management | | 3-0-3 | |
| | | | 16 | 17 | |

PROGRAM—T8—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> | | | | | |
| CTI | 208 | Organic Chemistry I | 3-3-4 | | |
| STI | 207 | Engineering Technology Math III | 5-0-4 | | |
| STI | 251 | Economics of Industry | 3-0-3 | | |
| BIO | 101 | General Biology I | 3-0-3 | | |
| STI | 334 | Technical Writing | 2-0-2 | | |
| CTI | 209 | Organic Chemistry II | | 3-3-4 | |
| CTI | 316 | Analytical Instrumentation | | 5-0-4 | |
| CTI | 451 | Environmental Pollution | | 3-0-3 | |
| ETI | 201 | Fund. of Elec. Tech. | | 3-0-3 | |
| BIO | 102 | General Biology II | | 3-0-3 | |
| | | | 16 | 17 | |
| <i>Junior Year</i> | | | | | |
| CTI | 300 | Seminar | 1-0-1 | | |
| GEO | 208 | Environmental Geology | 5-0-4 | | |
| ETI | 454 | Environmental Noise Control | 3-0-3 | | |
| CIE | 390 | Environmental Pollution Control | 3-0-3 | | |
| STI | 252 | American Political Ideas | 3-0-3 | | |
| PHY | — | Physics | 3-0-3 | | |
| | | | 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.

PROGRAM—T9: ASSOCIATE IN TECHNOLOGY WITH MAJOR IN GEOCHEMICAL TECHNOLOGY

| <i>Dept.</i> | <i>Dept.</i> | <i>Course</i> | <i>1st Term</i> ¹ | <i>2nd Term</i> | <i>3rd Term</i> |
|-----------------------|--------------|---------------------------------|------------------------------|-----------------|-----------------|
| <i>Freshman Year</i> | | | | | |
| STI | 134 | Effective Speaking | 2-0-2 | | |
| CTI | 122 | General Chemistry I | 3-3-4 | | |
| STI | 107 | Engineering Technology Math I | 5-0-4 | | |
| GEO | 115 | Physical Geology | 3-3-4 | | |
| ENG | 101 | Language and Thought | 3-0-3 | | |
| CTI | 202 | Quantitative Analysis | | 2-2-4 | |
| MTI | 220 | Statics & Dynamics | | 3-0-3 | |
| STI | 108 | Engineering Technology Math II | | 5-0-4 | |
| GEO | 116 | Historical Geology | | 3-3-4 | |
| THL ² | — | Theology Elective | | 3-0-3 | |
| | | | 17 | 18 | |
| <i>Sophomore Year</i> | | | | | |
| STI | 334 | Technical Writing | 2-0-2 | | |
| GEO | 201 | Minerology | 3-3-4 | | |
| STI | 207 | Engineering Technology Math III | 5-0-4 | | |
| CTI | 313 | Topics in Phys Chem | 3-0-3 | | |

PROGRAM—EN3—Continued

| <i>Dept.</i> | <i>No.</i> | <i>Course</i> | | |
|--------------------|------------|---------------------------------------|-------|-------|
| STI | 251 | Economics of Industry | 3-0-3 | |
| CTI | 316 | Analytical Instrumentation | | 5-0-4 |
| GEO | — | GEO Elective | | 3-0-3 |
| MTI | 221 | Strength of Materials | | 3-0-3 |
| CTI | 305 | Materials Science | | 3-0-3 |
| ETI | 201 | Fundamentals of Electronic Technology | | 3-0-3 |
| | | | 16 | 16 |
| <i>Junior Year</i> | | | | |
| GEO | — | GEO Elective | 5-0-4 | |
| STI | 252 | American Political Ideas | 3-0-3 | |
| MTI | 231 | Fluid Mechanics | 3-0-3 | |
| CTI | 300 | Seminar | 1-0-1 | |
| PHY | — | Physics | 3-0-3 | |
| PHL | 103 | Introduction to Philosophy | 3-0-3 | |
| | | | 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.

PROGRAM—T10: ASSOCIATE IN TECHNOLOGY WITH MAJOR IN INDUSTRIAL-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 I | 3-3-4 | | |
| ENG | 101 | Language and Thought | 3-0-3 | | |
| PHL | 103 | Introduction to Philosophy | 3-0-3 | | |
| STI | 107 | Engineering Technology Math I | 5-0-4 | | |
| MTI | 103L | Technical Drawing | 0-2-2 | | |
| ITI | 215 | Elem of Cost Control | | 2-0-2 | |
| THL ² | — | Theology Elective | | 3-0-3 | |
| CTI | 202 | Quantitative Analysis | | 2-2-4 | |
| STI | 108 | Engineering Technology Math II | | 5-0-4 | |
| MTI | 220 | Statics and Dynamics | | 3-0-3 | |
| | | | 16 | 16 | |
| <i>Sophomore Year</i> | | | | | |
| STI | 207 | Engineering Technology Math III | 5-0-4 | | |
| ITI | 108 | Prod Meth and Cont | 3-0-3 | | |
| CTI | 208 | Organic Chemistry I | 3-3-4 | | |
| STI | 251 | Economics of Industry | 3-0-3 | | |
| STI | 334 | Technical Writing | 2-0-2 | | |
| ITI | 230 | Motion and Time Study I | | 2-2-3 | |
| STI | 252 | American Political Ideas | | 3-0-3 | |
| CTI | 305 | Materials Science | | 3-0-3 | |
| CTI | 209 | Organic Chemistry II | | 3-3-4 | |
| ETI | 201 | Fundamentals of Electronic Technology | | 3-0-3 | |
| | | | 16 | 16 | |

PROGRAM—T10—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> | | | | | |
| STI | 134 | Effective Speaking | 2-0-2 | | |
| ITI | 315 | Organization and Management | 3-0-3 | | |
| CTI | 300 | Seminar | 1-0-1 | | |
| ITI | 318 | Statistical Quality Control | 3-0-3 | | |
| ITI | 332 | Plant Layout | 3-0-3 | | |
| MTI | 226L | Mechanisms | 0-2-2 | | |
| PHY | — | Physics | 3-0-3 | | |
| | | | 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.

PROGRAM—T11: ASSOCIATE IN TECHNOLOGY WITH MAJOR IN METALLURGICAL 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 | | |
| STI | 107 | Engineering Technology Math I | 5-0-4 | | |
| ITI | 104 | Indust. Mat. and Proc. | 3-0-3 | | |
| PHL | 103 | Introduction to Philosophy | 3-0-3 | | |
| ENG | 101 | Language and Thought | 3-0-3 | | |
| MTI | 220 | Statics and Dynamics | | 3-0-3 | |
| STI | 108 | Engineering Technology Math II | | 5-0-4 | |
| MTI | 103L | Technical Drawing | | 0-2-2 | |
| CTI | 202 | Quantitative Analysis | | 2-2-4 | |
| THL ² | — | Theology Elective | | 3-0-3 | |
| | | | 17 | 16 | |
| <i>Sophomore Year</i> | | | | | |
| MTI | 106L | Testing and Measurements | 0-1-1 | | |
| MTI | 108L | Management and Process I | 0-1-1 | | |
| STI | 207 | Engineering Technology Math III | 5-0-4 | | |
| — | — | Technical Elective | 3-0-3 | | |
| — | — | Technical Elective | 3-0-3 | | |
| STI | 251 | Economics of Industry | 3-0-3 | | |
| STI | 134 | Effective Speaking | 2-0-2 | | |
| MEE | 303 | Metallurgy | | 2-2-3 | |
| MTI | 221 | Strength of Materials | | 3-0-3 | |
| CTI | 305 | Materials Science | | 3-0-3 | |
| STI | 252 | American Political Ideas | | 3-0-3 | |
| ETI | 201 | Fundamentals of Electronic Technology | | 3-0-3 | |
| | | | 17 | 15 | |

PROGRAM—T11—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> | | | | | |
| CTI | 300 | Seminar | 1-0-1 | | |
| CTI | 313 | Topics in Phys. Chem. | 3-0-3 | | |
| ITI | 315 | Organization and Management | 3-0-3 | | |
| STI | 334 | Technical Writing | 2-0-2 | | |
| MTI | 324L | Designs for Mfgs. | 0-2-2 | | |
| — | — | Technical Elective | 3-0-3 | | |
| PHY | — | Physics | 3-0-3 | | |
| | | | 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.

PROGRAM—T12: ASSOCIATE IN TECHNOLOGY WITH MAJOR IN PLASTICS 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> | | | | | |
| STI | 134 | Effective Speaking | 2-0-2 | | |
| CTI | 122 | General Chemistry I | 3-3-4 | | |
| ENG | 101 | Language and Thought | 3-0-3 | | |
| PHL | 103 | Introduction to Philosophy | 3-0-3 | | |
| STI | 107 | Engineering Technology Math I | 5-0-4 | | |
| CTI | 202 | Quantitative Analysis | | 2-2-4 | |
| STI | 334 | Technical Writing | | 2-0-2 | |
| STI | 108 | Engineering Technology Math II | | 5-0-4 | |
| MTI | 106L | Testing and Measurements | | 0-1-1 | |
| THL ² | — | Theology Elective | | 3-0-3 | |
| MTI | 220 | Statics and Dynamics | | 3-0-3 | |
| | | | 16 | 17 | |
| <i>Sophomore Year</i> | | | | | |
| STI | 207 | Engineering Technology Math III | 5-0-4 | | |
| CTI | 208 | Organic Chemistry I | 3-3-4 | | |
| STI | 251 | Economics of Industry | 3-0-3 | | |
| ETI | 201 | Fundamentals of Electronic Technology | 3-0-3 | | |
| — | — | Polymers | 3-0-3 | | |
| ITI | 318 | Statistical Quality Control | | 3-0-3 | |
| CTI | 316 | Analytical Instrumentation | | 5-0-4 | |
| — | — | Polymers II | | 3-0-3 | |
| CTI | 305 | Materials Science | | 3-0-3 | |
| CTI | 209 | Organic Chemistry II | | 3-3-4 | |
| | | | 17 | 17 | |

PROGRAM—T12—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> | | | | | |
| MTI | 221 | Strength of Materials | 3-0-3 | | |
| ITI | 315 | Organization and Management | 3-0-3 | | |
| CTI | 300 | Seminar | 1-0-1 | | |
| PHY | — | Physics | 3-0-3 | | |
| STI | 252 | American Political Ideas | 3-0-3 | | |
| CTI | 313 | Topics in Phys. Chem. | 3-0-3 | | |
| MTI | 108L | Management and Process I | 0-1-1 | | |
| | | | 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.





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English.....Dr. Bernard J. Bedard
Executive Secretarial StudiesMrs. Mary C. Civile
Foundations of EducationDr. M. Audrey Bourgeois
Geology.....George H. Springer
Physical and Health Education.....James B. LaVanche
History.....Leroy V. Eid
Home Economics.....Elizabeth L. Schroeder
Industrial Engineering Technology.....Raymond B. Puckett
Languages.....Dr. Gordon A. Neufang
Marketing.....Harry C. Murphy
MathematicsDr. Harold G. Mushenheim, S.M.
Mechanical EngineeringDr. Howard E. Smith
Mechanical Engineering Technology.....Jesse H. Wilder
Military ScienceLt. Col. Billy R. Smith
Performing and Visual ArtsPatrick S. Gilvary
PhilosophyDr. Raymond M. Herbenick
PhysicsDr. Joseph J. Kepes
Political ScienceDr. Antonio E. Lapitan
PsychologyDr. Richard J. Popp
Secondary EducationRobert E. Kriegbaum*
SociologyRev. John G. Dickson, S.M.*
Theological StudiesRev. Matthew F. Kohmescher, S.M.
 (* Acting Chairman)

**ACADEMIC
PROGRAMS**

Administrative ScienceWilliam J. Hoben
American StudiesDr. Francis J. Henninger
Center for Afro-American Affairs.....James A. Stocks
Center for Experimental StudiesJames N. Nesmith
Criminal JusticeJames A. Adamitis
Humanities StudiesDr. Eugene R. August

| | |
|---|-------------------------|
| <i>Industrial and Systems Engineering</i> (upper level program) | Dr. Merle D. Schmid |
| <i>Internships and Cooperative Education</i> in the School of Business | Bro. Paul Merland, S.M. |
| <i>Medical Technology</i> | Dr. Rene C. Lachapelle |
| <i>Program for Self-Directed Learning</i> | Dr. Joseph C. Kunkel |
| <i>Premedical and Pre dental</i> | Dr. Charles J. Chantell |
| <i>Social Work</i> | Jack P. McDonald |
| <i>Technical Studies and Services</i> | Dr. Merle D. Schmid |
| <i>Urban Community Development</i> | James A. Stocks |

INSTRUCTIONAL STAFF

Emeriti

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.

Abramson, William (1970), *Medical Technology*, Clinical Professor — B.A. Temple University, 1933; M.D. Hahne-man Medical School, 1937.

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

Albers, F. Gerard (1973), *Aerospace Engineering*, Assistant Professor — B.E.E., University of Detroit, 1967; M.E., University of Detroit, 1967; D.E., University of Detroit, 1969.

Alexander, Roberta S. (1969), *History*, Assistant Professor—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*, Associate 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*, Associate 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 (on leave) — B.A., Rutgers University, 1958; M.A., University of Connecticut, 1960; Ph.D., University of Pittsburgh, 1965.
- August, Robert L. (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.
- Baldwin, Jr., Matthew S. (1973), *Sociology*, Instructor — B.S., Loyola University, 1965; M.A., Ohio State University, 1969.
- 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, 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.
- Bauer, Paul T. (1967), *Mechanical Engineering*, Associate 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. Reg. Prof. Engr.
- 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.
- Beitzel, William A. (1973), *Elementary Education*, Assistant Professor — B.S., Kent State University, 1946; M.A., Kent State University, 1949.
- Benedum, Richard P. (1973), *Performing and Visual Arts—Music*, Instructor — B.A., Concordia Teachers College, 1966; D.M.A., University of Oregon, 1972.
- Berger, Robert N. (1964), *Business Management*, Assistant Professor — B.S., University of Dayton, 1960; M.A., Ohio University, 1963; J. D., Chase School of Law, 1970.
- 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.
- Berry, Robert A. (1972), *Biology*, Visiting Professor — B.S., New Mexico State University, 1961; M.S., New Mexico State University, 1968; Ph.D., New Mexico State University, 1971.
- 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.
- 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. Reg. Prof. Engr.
- 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*, Associate 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.
- 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.
- Brown, Thomas V. (1970), *Psychology*, Assistant Professor—B.S., Massachusetts Institute of Technology, 1960.
- Browne, 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.
- Buckley, David M. (1968), *Library*, Assistant Professor—B.A., Miami University, 1966; M.A. in L.S., Western Michigan University, 1968.
- Bueche, Frederick J. (1961), *Physics*, Professor (on leave)—B.S., University of Michigan, 1944; Ph.D., Cornell University, 1948.
- Burky, Albert J. (1973), *Biology*, Assistant Professor—B.A., Hartwick College, 1964; Ph.D., Syracuse University, 1969.
- Burns, S.M., Rev. Norbert C. (1959), *Theological Studies*, 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.
- Cameron, Alex J. (1964), *English*, Assistant Professor—A.B., University of Notre Dame, 1959; Ph.D., University of Notre Dame, 1973.
- Carroll, Margaret R. (1972), *Medical Technology*, Clinical Assistant Professor—B.S., University of Dayton, 1945; M.T. (ASCP) Registry of Medical Technologists, 1946.
- Cartagenova, Gonzalo C. (1965), *Philosophy*, Associate Professor (on leave)—

- 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.
- Cassell, Charles R. (1973), *Military Science*, Assistant Professor—B.A. in Ed., Marshall University, 1968; M.S. in Ed., University of Dayton, 1972.
- Castello-Lamas, Maria J. (1964), *Languages*, Assistant Professor—A.B., Hogar de Estudios Femenino, Spain, 1956; M.A., Tulane University, 1960.
- 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.
- 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, 1962.
- 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.
- 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*, Assistant Professor—B.A., Immaculate Conception Seminary, 1965; M.L.S., University of Pittsburgh, 1968.
- Cooney, Joseph J. (1965), *Biology*, Professor—B.S., Lemoyne College, 1956; M.S., Syracuse University 1958; Ph.D., Syracuse University 1961.
- Cothern Charles R. (1965), *Physics*, Associate Professor—B.A., Miami University, 1959; M.S., Yale University, 1960; Ph.D., University of Manitoba, 1965.
- Crisp, John N. (1973), *Mechanical Engineering*, Assistant Professor—B.M.E., Georgia Institute of Technology, 1958; M.S.E., University of Akron, 1964; Ph.D., Carnegie-Mellon University, 1968.
- 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*, Associate Professor—B.A., University of Washington, 1937; Ph.D., Kent State University, 1970.
- DaPolito, Frank J. (1970), *Psychology*, Associate Professor — B.A., Bowling Green State University, 1959; Ph.D., Indiana University, 1966.
- 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*, Assoc. Professor of Materials Engineering — B.S., St. Louis University, 1960; M.S., Iowa State University, 1964; Ph.D., Iowa State University, 1966.
- DeWire, Marian I. (1973), *Sociology*, Instructor A.B., Albright College, 1938; M.Sc., Case-Western Reserve University, 1940.
- Dickson, S.M., Rev. John G. (1957), *Sociology*, 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 Reserve University, 1952; D.Ed., Western Reserve University, 1966.
- 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.
- Downey, Ethel A. (1973), *Home Economics*, Clinical Assistant Professor—B.Sc., Catawba College, 1944; Internship—University Hospital, Ohio State University, 1946; M.Sc., Ohio State University, 1955.
- 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.
- Eid, Leroy V. (1961), *History*, Associate Professor—B.S. in Ed., 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.

- Ellis, Jr., John E. (1966), *Accounting*, Associate Professor — B.C.S., Bowling Green College of Commerce, 1934; M.B.A., University of Michigan, 1951; C.P.A., Ohio, 1971.
- Emling, S.M., John F. (1958), *Education*, Associate 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), *Technical Studies and Services*, Associate Professor of Systems Engineering — B.S., University of Dayton, 1947; M.S., University of Cincinnati, 1949.
- Evers, Anthony J. (1966), *Electrical Engineering*, Associate Professor — B.E.E., University of Dayton, 1953; M.S.E.E., University of Notre Dame, 1955. Reg. Prof. Engr.
- 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.
- Farrelly, James P. (1967), *English*, Assistant Professor — 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.
- 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 (on leave) — B.A., Indiana University, 1965.
- Fioriti, 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.
- Fitz, S.M., Raymond L. (1969), *Electrical Engineering and Engineering Management*, 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.
- 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.
- Frasca, Ralph R. (1972), *Economics*, Assistant Professor — B.A., C. W. Post College, 1967; M.A., Indiana University, 1971.
- Fratini, Albert V. (1967), *Chemistry*, Associate 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*, Associate Professor —B.S., University of Dayton, 1953.
- Fresina, Anthony J. (1972) *Sociology*, Instructor — B.A., LeMoyné College, 1971; M.S., Florida State University, 1972.
- Friel, J. William (1963), *Mathematics*, Assistant Professor—B.S., Loras College, 1959; M.A., Duquesne University, 1962.
- Frost, Rev. William P. (1967), *Theological Studies*, Associate Professor—Drs. Th., Carolus Magnus University (Netherlands), 1961; M.A., Loyola University, 1966.
- 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 — B.S., University of Wisconsin, 1958; M.S., University of Wisconsin, 1961.
- Fuchs, Walter P. (1971), *Engineering Management*, Assistant Professor of Engineering Management—B.S., University of Dayton, 1962; M.S., Case Institute of Technology, 1965; Ph.D., University of Pennsylvania, 1970.
- Funkhouser, James W. (1972), *Medical Technology*, Clinical Professor — B.S. University of Dayton, 1951; M.T. (ASCP) Registry of Medical Technologists, 1951; M.S. Ohio State University, 1953; M.D. Ohio State University, 1957.
- 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*, Associate Professor — B.A., Ohio University, 1951; M.A., University of Wisconsin, 1956; D.Ed., University of Maryland, 1972.
- Gee, Martell J. (1969), *Director of Computing Activities*, Assistant Professor—B.S., Brigham Young University, 1961; Ph.D., Brigham Young University, 1967.
- 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*, 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*, Assistant Professor—B.A., Marquette University, 1966; Ph.D., Marquette University, 1970.

- 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), *Engineering Management*, 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.
- Gillespie, George F. (1972), *Business Management*, Assistant Professor — B.S.M.E., Air Force Institute of Technology, 1950; M.S.I.M., Purdue University, 1958
- Gilvary, Patrick S. (1955), *Performing and Visual Arts*, Associate Professor—B.S., University of Dayton, 1950; M.A., Xavier University, 1963.
- 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*, Associate Professor—B.S., Providence College, 1956; Ph.D., Iowa State University, 1967.
- Gray, Kathryn H. (1953), *Geology*, Assistant Professor (on leave) — A.B., Wooster College, 1947.
- Gray, William M. (1969), *Foundations of Education*, Assistant Professor—B.A., State University of New York, 1965; M.A., State University of New York, 1966.
- Greely, John M. (1967), *Languages*, Assistant Professor — 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.
- Hall, Capt. Donald Z. (1971), *Military Science*, Assistant Professor — B.S., Ohio Northern University, 1962.
- Halverson, Richard F. (1972), *Political Science*, Assistant Professor — B.S., University of Wisconsin, 1964; M.A., Columbia University, 1966.
- 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; Ph.D., Ohio University, 1972.
- 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.
- Hatch, Edward L. (1972), *Languages*, Instructor — B.A., Haverford College, 1961; M.A., University of Michigan, 1964 and 1968.
- Haynes, John (1973), *Communication Arts*, Instructor—B.A., University of Dayton, 1971; M.A., University of Dayton, 1973.
- Hazen, Richard R. (1953), *Electronic Engineering Technology*, Professor — B.E.E., University of Dayton, 1953; M.S., University of Cincinnati, 1962; Reg. Prof. Engr.
- Hedrick, Willa H. (1972), *Medical Technology*, Clinical Assistant Professor — B.S., Loma Linda University, 1946; M.T. (A.S.C.P.) Registry of Medical Technologists, 1946.

- Held, Roger L. (1972), *Performing and Visual Arts-Theatre*, Instructor—B.A., University of Toledo, 1966; M.A., University of Michigan, 1966.
- Henninger, Francis J. (1965), *English*, Associate 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*, Associate Professor — B.A., Duquesne University, 1964; M.A., DePaul University, 1965; M.B.A., University of Pittsburgh, 1968; Ph.D., Georgetown University, 1968.
- Hitt, Terry K. (1973), *Performing and Visual Arts-Art*, Instructor — B.A., Otterbein College, 1959; M.D., United Theological Seminary, 1963.
- 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), *Administrative Director, Admissions and Financial Aid*, Assistant Professor—B.S. in Ed., Miami University, 1951; M.S., University of Dayton, 1965.
- Horst, S.M., Rev. Bernard L. (1965), *English*, Assistant Professor — B.S. in Ed., University of Dayton, 1938; M.A., University of Cincinnati, 1952; Ph.D., Fordham University, 1973.
- 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., University 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; Ph.D., University of Arizona, 1972.
- Huff, Janice R. (1968), *Executive Secretarial Studies*, Assistant Professor — B.S., University of Dayton, 1966; M.S., University of Dayton, 1971.
- 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*, Professor (on leave)—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*, Assistant Professor—B.M.E., Marquette University, 1946; B.S.E.E., Massachusetts Institute of Technology, 1947; M.S.E.M., University of Dayton, 1972.
- Jacobson, Marsha B. (1972), *Psychology*, Assistant Professor—B.A., State University of New York at Buffalo, 1968; Ph.D., New York University, 1972.
- Jaffee, Oscar C. (1966), *Biology*, Professor (on leave) — 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.
- Jayson, Patricia J. (1973), *Physical and Health Education*, Instructor — B.S., University of Dayton, 1967; M.S., Miami University, 1972.
- Jehn, Lawrence A. (1946), *Computer Science*, Associate Professor—B.M.E., University of Dayton, 1943; M.S., Uni-

- versity of Michigan, 1949; Reg. Prof. Engr.
- 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.
- Katsuyama, Ronald M. (1973), *Psychology*, Assistant Professor—B.S., University of California, 1966.
- Kauffman, John E. (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 (on leave) — B.S., University of Dayton, 1968; M.S., Purdue University, 1969.
- 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*, Associate 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.
- Keyes, John P. (1972), *Accounting*, Instructor—B.B.S., Miami of Ohio University, 1967; M.B.A., Southern Methodist University, 1971; C.P.A., Texas.
- 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.
- Kimble, Charles E. (1973), *Psychology*, Assistant Professor—B.A., Baylor University, 1966; M.A., Baylor University, 1969; Ph.D., University of Texas, 1972.
- Kimbrough, R. Alan (1969), *English*, Assistant Professor—B.A., Carthage College, 1965; M.A., Brown University, 1966.
- King, Alan L. (1972), *Marketing*, Assistant Professor—B.S., Ohio State University, 1967; M.A., Ohio State University, 1969; Ph.D., Ohio State University, 1972.
- King, Edwin R. (1953), *History*, Associate Professor — B.S., University of Dayton, 1949; M.A., Western Reserve University, 1950.
- Klar, Joan L. (1972), *Medical Technology*, Clinical Assistant Professor—B.S., University of Dayton, 1950; M.T. (A.S.C.P.) Registry of Medical Technologists, 1950.
- Kline, Jr., Raymond A. (1967), *Marketing*, Assistant Professor—B.A., Wittenberg University, 1957; M.B.A., Indiana University, 1959.
- Klosterman, Rita (1960), *Education*, 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.
- Korte, John R. (1973), *Psychology*, Assistant Professor—A.B., University of California, 1967; M.S., Purdue University, 1970; Ph.D., Purdue University, 1973.
- Kovacs, Arthur Z. (1968), *Technical Studies and Services*, Associate Professor — A.B., Wabash College, 1957; Ph.D., Duke University, 1963.
- Kraft, David C. (1965) *Civil Engineering*, 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*, Associate 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; Ph.D., University of Cincinnati, 1974.
- 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.
- 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.
- 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*, Assistant Professor — B.B.A., University of Cincinnati, 1950; M.Ed., Miami University, 1968.
- L'Heureux, Conrad E. (1970), *Theological Studies*, Assistant Professor—B.A., St. Paul's College, 1962; M.A., Catholic University of America, 1966; Ph.D., Harvard University, 1972.
- 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, Mary T. (1956), *Physical and Health Education*, Associate Professor

- A.B., Radcliffe College, 1948; M.S., MacMurray College, 1951; D.Ed., Boston University, 1960.
- Leonard, Thomas J. (1969), *Library*, Associate 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.
- Lick, Judith E. (1974), *Psychology*, Assistant Professor—B.S., University of Illinois, 1966; M.S., Northwestern University, 1970.
- Liebler, S.M., Richard A. (1948), *Political Science*, Associate Professor (on leave)—B.S., University of Dayton, 1939; M.A., Western Reserve University, 1947.
- Louis, Msgr. Paul P. (1964), *Economics*, 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.
- Ludwigsen, Kristina R. (1972), *Psychology*, Assistant Professor—B.S., Florida Presbyterian College, 1967; M.A., Emory University, 1969; Ph.D., Emory University, 1972.
- 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.
- McClaine, Richard E. (1973), *Business Management*, Professor—B.S., Ohio State University, 1953; M.B.A., Indiana University, 1954; Ph.D., Ohio 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.
- 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.
- McNally, John J. (1966), *Education*, 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.
- 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., Univer-

- sity 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.
- Marciniak, Ronald J. (1973), *Physical and Health Education*, Instructor — B.A., Kansas State University, 1955; M.S., Southern Illinois University, 1967.
- 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.
- Marre, Louis A. (1965), *English*, Assistant Professor—A.B., University of Notre Dame, 1961; M.A., University of Notre Dame, 1963; Ph.D., University of Notre Dame, 1972.
- Marrinan, Jr., Edward L. (1965), *Business Management*, Associate 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; M.L., Middlebury College, 1972.
- Martin, Thomas M. (1965), *Theological Studies*, Assistant Professor — B.S., Spring Hill College, 1962; M.A., Fordham University, 1965; Ph.D., Syracuse University, 1972.
- 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; Ph.D., Fordham University, 1972.
- 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.
- 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.
- Miller, R. Clair (1972), *Performing and Visual Arts-Music*, Instructor — B.S., Miami University, 1958; M.Ed., Xavier University, 1969.
- 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; Ph.D., University of Cincinnati, 1973.
- Minton, Constance L. (1969), *Performing and Visual Arts-Music*, Instructor —B. Mus., University of Dayton, 1960.
- Monasterio, Xavier O. (1966), *Philosophy*, Associate Professor — B.A., In-

- stituto 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
- 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*, Associate Professor—B.M.E., General Motors Institute, 1963; M.S.M.E., Purdue University, 1965; Reg. Prof. Eng.
- Moulin, Eugene K. (1968), *Counselor Education*, 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*, Associate 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; Ph.D., University of Rochester, 1973.
- Murphy, Harry C. (1950), *Marketing*, Professor—B.B.A., University of Minnesota, 1948; B.S., University of Minnesota, 1949; M.A., University of Minnesota, 1951.
- Murphy, Lorraine M. (1953), *English*, Associate 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.
- 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.
- 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 Students*, 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), *Computer Science*, 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*, Associate 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.
- Nykolyshyn, Helen (1970), *Library*, Assistant Professor — 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.
- Oyen, Duane B. (1971), *Economics*, Assistant Professor — B.A., Luther College, 1966; M.A., University of Iowa, 1969; Ph.D., University of Iowa, 1973.
- Palermo, Patrick F. (1971), *History*, Instructor — B.A., Fordham College, 1966; M.A., State University of New York, 1967; Ph.D., State University of New York, 1974.
- Palumbo, Suzanne D. (1965), *English*, Assistant Professor—B.A., Northwestern University, 1957; M.A., University of Dayton, 1965.
- Phillip, 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.
- Payne, Elmer H. (1961), *Civil Engineering*, Assistant Professor — B.S.C.E., Washington University, 1958; M.S., Washington University 1961; Reg. Prof. Eng.
- Pedretti, Michael A. (1971), *Performing and Visual Arts*, Assistant Professor—B.S., Wisconsin State University, 1965; M.A., University of Kansas, 1969.
- 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, Emil W. (1972), *Medical Technology*, Clinical Professor—B.A., Andrews University, 1953; M.S., Loma Linda University, 1957; M.D., Loma Linda University, 1958.
- 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.
- Phillips, Norman S. (1974), *Civil Engineering*, Assistant Professor — B.A.E., Ohio State University, 1955; M.S., University of Dayton, 1968.
- 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.
- Pohl, Shirley A. (1972), *Medical Technology*, Clinical Assistant Professor — B.S., University of Dayton, 1957; M.T., (A.S.C.P.) Registry of Medical Technologists, 1957.

- Polzella, Donald J. (1972), *Psychology*, Assistant Professor — B.A., University of Rochester, 1967; M.A., Bucknell University, 1969.
- Popp, Richard J. (1973), *Psychology*, Associate Professor—B.S., University of Maryland, 1972; M.A., Hollins College, 1964; Ph.D., University of Pittsburgh, 1969.
- 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.
- Ramsey, James M. (1964), *Biology*, Associate Professor — B.S., Wilmington College, 1948; M.S., Miami University, 1951.
- 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.
- Rapp, Ann D. (1973), *Elementary Education*, Assistant Professor—B.S., University of Missouri at Columbia, 1960; M.S., Indiana University, 1972.
- Rapp, John E. (1972), *Economics*, Professor — B.A., University of Missouri, 1959; M.A., University of Missouri, 1960; Ph.D., University of Missouri, 1964.
- Ray, Alden E. (1961), *Mechanical Engineering*, Professor of Materials Engineering—B.A., Southern Illinois University, 1953; Ph.D., Iowa State University, 1959.
- Reichard, Maurice R. (1929), *Performing and Visual Arts-Music*, Professor—A.B., University of Dayton, 1935; M.A., Ohio State University, 1945.
- Reynolds, John K. (1972), *Sociology*, Instructor — B.A., University of Michigan, 1969; M.A., Pennsylvania State University, 1971.
- 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, William M. (1970), *Philosophy*, Assistant Professor — B.A., LeMoyné 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*, Associate 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 Pro-

- fessor—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*, 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.
- 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*, Assistant Professor—B.A., University of Dayton, 1965; M.A., Ohio University, 1966.
- Rooney, Victor M. (1966), *Electronic Engineering Technology*, Associate Professor—A.E.E., University of Dayton, 1959; B.E.E., University of Dayton, 1965; M.S.E.E., Ohio State University, 1970; Reg. Prof. Eng.
- 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.
- Rotton, James G. (1973), *Psychology*, Assistant Professor—B.S., Purdue University, 1967; M.S., Purdue University, 1971; Ph.D., Purdue University, 1973.
- Rougier, Harry J. (1939), *English*, Associate Professor — B.S., University of Minnesota, 1933; M.A., University of Minnesota, 1939.
- Royer, Edwin J. (1968), *Marketing*, Associate 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; C.P.A., Wisconsin, 1948; M.B.A., DePaul University, 1968.
- Schauer, John J. (1968), *Mechanical Engineering*, Associate Professor — B.M.E.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*, Associate Professor — B.S., Ohio State University, 1961; M.A., Ohio State University, 1963; Ph.D., Ohio State University, 1972.
- Schmid, Merle D. (1960), *Technical Studies and Services*, 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, 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, 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*, Distinguished Service Professor — A.B., University of Illinois, 1936; M.A., University of Cincinnati, 1938; Ph.D., University of Cincinnati, 1940.
- Schroeder, Elizabeth (1950), *Home Economics*, Associate Professor — B.S., Mount Joseph-on-the-Ohio, 1942; M.S., Ohio State University, 1958.
- Schwelitz, Faye D. (1971), *Biology*, Assistant Professor—B.A., Alverno College, 1953; M.S., Purdue University, 1967; Ph.D., Purdue University, 1971.
- Scott, Alfred E., Jr. (1967), *Mechanical Engineering*, Assistant Professor—B.M.E., University of Dayton, 1965; M.S.E., University of Dayton, 1972.
- Selka, Lawrence L. (1968), *Performing and Visual Arts-Theatre*, 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; M.S. in Chemistry, University of Dayton, 1973.
- 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*, Assistant Professor—B.A., University of Portland, 1969; M.L.S., University of Kentucky, 1970.
- 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.
- Singer, Sanford S. (1972), *Chemistry*, Assistant Professor—B.S., Brooklyn College, 1962; M.S., University of Michigan, 1964; Ph.D., University of Michigan, 1967.
- Smith, Billy R. (1973), *Military Science*, Professor — B.S., University of Tennessee, 1952; M.Ed., West Texas State University, 1969.
- 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.
- Springer, George H. (1946), *Geology*, Professor — A.B., Brown University, 1938; Sc.M., Brown University, 1940.
- Srinivasan, Seshadri (1968), *Chemical Engineering*, Associate 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*, Professor—B.S., University of Dayton, 1949; M.S., Catholic University of America, 1957; Ph.D., Catholic University of America, 1959.
- Stanley, Patricia (1972), *Home Economics*, Instructor—B.S. in Ed., Wittenberg University, 1960; M.S., University of Southern Mississippi, 1971.
- Stanley, Philip L. (1966), *Physical and Health Education*, Associate Professor — B.S., Wittenberg University, 1959; M.S., Eastern Kentucky University, 1964; D.Ed., University of Southern Mississippi, 1972.
- Staub, Albert E. (1956), *Engineering Technology*, Assistant Professor (on leave)—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.
- Stocks, James A. (1972), *Director Afro-American Affairs*, Assistant Professor — B.S. in Ed., Central State University, 1965; M.S. in Ed., Xavier University, 1968.
- Stockum, Eleanor K. (1957), *English*, Associate 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.
- Strnat, Karl J. (1968), *Electrical Engineering*, Tait Professor — Ing.f.Maschinenbau, Technol. 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 (on leave)—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; Ph.D., Fordham University, 1973.

- 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), *Assistant Dean of Students*, 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.
- 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.
- Tibbetts, Paul E., Jr. (1969), *Philosophy*, Assistant Professor—A.E., Worcester Junior College, 1959; B.A., Clark University, 1964; M.A., Boston University, 1965; Ph.D., Purdue University, 1973.
- 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.
- Tsui, Susan L. (1965), *Library*, Assistant Professor—B.A., National Taiwan University, 1961; M.L.S., University of Illinois, 1964.
- Turbok, James M. (1973), *Military Science*, Assistant Professor—B.S., Ohio University, 1962; M.B.A., University of Dayton, 1973.
- Ulrich, Lawrence P. (1964), *Philosophy*, Associate Professor—A.B., Catholic University of America, 1961; M.A., Catholic University of America, 1962; M.Ed., Xavier University, 1965; Ph.D., University of Toronto, 1972.
- Updyke, Joseph F. (1947), *Accounting*, Associate Professor—B.S., University of Dayton, 1947.
- Van Der Hoeven, Ludolph H. (1972), *Medical Technology*, Clinical Professor—M.D., University of Vtrecht, Netherlands, 1942.
- 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.
- VonderBrink, Gerald W. (1961), *Accounting*, Associate Professor—B.S., Xavier University, 1950; M.B.A., University of Dayton, 1966.
- Walker, Mary Ann (1970), *Library*, Instructor—B.S. in Ed., Kent State University, 1966; M.L.S., Kent State University, 1968.
- 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*, Assistant Professor—B.S. in Ed., Ohio University, 1969; M.Ed., Ohio University, 1969.
- Waters, S.N.D., Sister Elizabeth M. (1963), *Education*, Associate Professor—B.S. in Ed. Athenaeum of Ohio, 1946; M.A. in Ed., Xavier University, 1962.
- Weatherly, Michael (1968), *Communication Arts*, Assistant Professor—B.A., Stephen F. Austin State College, 1958; M.A., Bowling Green State University, 1961; Ph.D., Ohio State University, 1972.
- Weber, Louis A. (1954), *Performing and Visual Arts-Art*, Associate Professor—B.S., University of Dayton, 1941; M.A., Ohio State University, 1947.

- Weiler, John E. (1967), *Economics*, Associate Professor—B.A., University of Cincinnati, 1960; M.A., University of Cincinnati, 1961; Ph.D., University of Cincinnati, 1973.
- Weiss, Roger F. (1965), *Civil Engineering*, Assistant Professor — B.S.C.E., University of Dayton, 1965; M.S.E., University of Dayton, 1969. Reg. Prof. Eng.
- Wening, Gerald G. (1964), *Philosophy*, Assistant Professor—A.B., Athenaeum of Ohio, 1960; M.A., University of Dayton, 1964.
- 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 Professor — 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.
- Wilkinson, Sean D. (1973), *Performing and Visual Arts-Photography*, Instructor — B.A., Antioch College, 1970; M.A., Rhode Island School of Design, 1972.
- Williams, Patrick K. (1973), *Biology*, Assistant Professor—B.A., University of Texas, 1966; M.S., University of Minnesota, 1969; Ph.D., Indiana University, 1973.
- Willis, Gerald L. (1962), *Biology*, Assistant Professor—B.S., University of Dayton, 1959; M.S.T., Miami University, 1963.
- 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*, Associate Professor—B.B.A., Ohio University, 1963; M.B.A., Ohio University, 1966; C.P.A., Accountancy Board of Ohio, 1968.
- Wisemiller, James P. (1972), *Accounting*, Instructor — B.S., Ohio State University, 1969; M.B.A., University of Wisconsin, 1971.
- 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*, Associate 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.
- 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.
- 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

- Andrews, Charles R. (1952), *Senior Research Engineer*—B.M.E., University of Dayton, 1951; M.B.A., Xavier University, 1963; Registered Professional Engineer.
- Artman, Robert E. (1973), *Assistant to the Director, Research Institute*—B.S., University of Cincinnati, 1954.
- Askins, Donald R. (1964), *Associate Research Engineer*—B.Ch.E., University of Dayton, 1963.
- Balster, Ralph A. (1969) *Data Acquisition and Instrumentation Engineer*—B.S.E.E., University of Dayton, 1969.
- Benner, Charles L. (1963), *Associate 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.
- 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.
- Cashin, John (1961), *Associate Research Biologist*—B.S., University of Dayton, 1961.
- 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.
- Dominic, Robert J. (1960), *Research Engineer*—B.E.E., University of Dayton, 1955.

- Drake, Michael L. (1973), *Assistant Research Engineer*—B.S., University of Cincinnati, 1972; M.S., University of Cincinnati, 1973.
- 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 University, 1951; M.S., University of Dayton, 1971.
- Earley, Duane (1965), *Assistant Research Chemist*—B.A., University of Dayton, 1971.
- Engler, Nicholas A. (1952), *Senior Research Physicist*—B.S., University of Dayton, 1947; M.S., University of Cincinnati, 1949.
- Evans, Paul D. (1973), *Programmer/Analyst*—B.S., University of Dayton, 1971.
- Evans, Susan M. (1973), *Assistant Research Programmer*—B.S., University of Dayton, 1973.
- Faile, Samuel P. (1973), *Associate Research Scientist*—B.S., Lehigh University, 1957; M.S., University of Rochester, 1963; Ph.D., Penn State University, 1973.
- Fieldman, John W. (1962), *Associate Research Mathematician*—B.S., University of Cincinnati, 1958.
- 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.
- Franklin, Priscilla (1972), *Assistant Research Chemist*—B.S., Xavier University, 1971.
- Fudge, Kim Alan (1973), *Associate Research Metallurgist*—B.S., Case Institute of Technology, 1969.
- Gerdeman, Dennis A. (1962), *Associate Research Engineer*—B.M.E., University of Dayton, 1962; M.S.E., University of Dayton, 1970; Registered Professional Engineer.
- Gillio, Aldo (1972), *Assistant Research Engineer*—B.S., University of Dayton, 1970; M.S., University of Dayton, 1972.
- Godfrey, John J. (1972), *Research Linguist*—A.B., Fordham University, 1965; M.A., Fordham University, 1966; Ph.D., Georgetown University, 1970.
- Goldschmidt, Mark A. (1959), *Assistant Research Physicist*—B.S., University of Dayton, 1967.
- Graves, George A., Jr. (1965), *Research Ceramist*—B.S.Cer.E., Alfred University, 1960; M.S., University of Dayton, 1973.
- Grood, Edward (1972), *Research Engineer*—B.S., Rensselaer Polytechnic Institute, 1965; M.S., State University of New York, 1968.
- Guignard, John C. (1972), *Research Physiologist*—M.B., ChB., University of Edinburgh Medical School; Registered Medical Practitioner.
- Harmer, Richard S. (1970), *Research Ceramist*—B.S., University of Illinois, 1963; M.S., University of Illinois, 1967; Ph.D., University of Illinois, 1971.
- Harris, Richard (1972), *Assistant Research Physicist*—B.S., Miami University, 1967; M.S., Yale, 1968.
- Hearsey, Richard M. (1971), *Research Engineer*—Diploma of Imperial College, 1961.
- Hecht, Norman L. (1963), *Research Ceramist*—B.S.Cer.E., Alfred University, 1960; M.S., Alfred University, 1968; Ph.D., Alfred University, 1972.
- Hill, Michael C. (1973), *Assistant Research Programmer*—B.S., University of Dayton, 1973.
- House, Willard E. (1967), *Associate Research Chemist*—B.S., Texas Southern University, 1966.

- Hovey, William J. (1953), *Senior 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.
- Johnston, George T. III (1973), *Research Physicist*—B.S., Michigan State University, 1962; M.S., Michigan State University, 1965; Ph.D., Michigan State University, 1967.
- 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.
- Kester, Jeffrey M. (1973), *Assistant Electrical Engineer*—B.E.E., University of Dayton, 1972.
- Kordick, John Jr. (1973), *Assistant Research Programmer*—B.S., University of Dayton, 1973.
- Kovar, Robert F. (1967), *Associate Research Chemist*—B.S., Brooklyn Polytechnic Institute, 1963; Ph.D., University of Massachusetts, 1967.
- Kramer, Denise M. (1973) *Programmer*—B.S., Case Western Reserve University, 1973.
- 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), *Senior 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.
- Manthuruthil, Jose C. (1973), *Research Physicist*—Ph.D., Indiana University, 1965.
- March, Jacqueline F. (1968), *Associate Information Scientist*—B.S., Flora Stone Mather College, 1937; M.A., Western Reserve, 1939.
- Meese, Jon M. (1970), *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.
- Moddeman, William (1972), *Associate Research Chemist*—B.S., Eastern Kentucky University, 1963; M.S., University of Tennessee, 1968; Ph.D., University of Tennessee, 1970.

- Mohlman, Henry T. (1960), *Associate Research Mathematician*—B.S., University of Dayton, 1960.
- Mullen, Donald (1966), *Assistant Research Engineer*—MTI, University of Dayton, 1965.
- Newman, Ronald K. (1957), *Research Engineer*—B.M.E., University of Dayton, 1957; M.S.E., University of Dayton, 1967.
- 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.
- Phillips, Chandler A. (1972), *Research Physician*—A.B., Stanford University, 1965; M.D., University of Southern California, 1969; Physician and Surgeon License, 1970; Registered Professional Engineer.
- Piekutowski, Andrew J. (1971), *Assistant Mechanical Engineer*—B.S.M.E., University of Dayton, 1970.
- 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), *Associate Research Mathematician*—B.S., University of Dayton, 1965; B.S., University of Dayton, 1969.
- Reeves, Jerry B. (1967), *Research Physicist*—B.S., North Texas State University, 1965; M.S., North Texas State University, 1968.
- Roth, George J. (1954), *Research Engineer*—B.M.E., University of Dayton, 1954.
- Royer, David L. (1972), *Associate Research Engineer*—B.S.E.E., University of Dayton, 1966; M.S.E.E., University of Dayton, 1969.
- Rubey, Wayne A. (1968), *Assistant Chemical Technologist*—B.S., University of Dayton, 1968.
- Ryan, John P. (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.
- Scofield, Linda W. (1972), *Assistant Research Engineer*—B.S., University of California, 1972.
- Searle, Clark W. (1972), *Visiting Scientist*—B.S., University of Minnesota, 1961; M.S., University of Minnesota, 1962; Ph.D., University of Minnesota, 1965.
- Shirazi, Mehdi (1968), *Research Mathematician*—B.S.M.E., University of Bombay, 1946; B.S.E.E., University of Bombay, 1947; M.A., University of Kansas, 1954.
- Solomon, James (1969), *Associate Research Chemist*—B.S., University of Dayton, 1964.
- Soloski, Edward J. (1959), *Associate Research Chemist*—B.S., John Carroll University, 1955.
- Stevens, Sara C. (1972), *Assistant Research Chemist*—B.S., University of Dayton, 1965.
- Stevenson, Gary E. (1963), *Associate Research Chemist*—B.S., University of Dayton, 1963.
- Stocker, Hans J. (1973), *Research Physicist*—Ph.D., Syracuse University, 1965.
- Swartzbaugh, Joseph T. (1965), *Associate Research Physicist*—B.S., University of Dayton, 1960; M.S., Worcester Polytechnical Institute, 1962; Ph.D., Arizona State University, 1971.

- Swift, Hallock F. (1966), *Senior Research Physicist*—B.S., Cornell University, 1957.
- Walsh, David A. (1965), *Assistant Research Chemist*—B.S., University of Dayton, 1972.
- Wekesser, John U. (1970), *Assistant to the Director, Research Institute*—B.S., University of Dayton, 1966; M.B.A., University of Dayton, 1973.
- 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.
- Wild, Thomas J. (1973), *Assistant Research Physicist*—B.S., Loras College, 1968.
- Wilt, Benjamin H. (1971), *Associate Research Engineer*—B.M.E., Villanova University, 1965.
- Wurst, John C. (1957), *Senior 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.
- Yu, Phil W. (1972), *Associate Research Physicist*—B.S., Inha Institute of Technology, 1961; M.S., Yonsei University, 1964; Ph.D., Brown University, 1972.
- Ziegenhagen, John (1967), *Assistant Research Chemist*—B.A., University of Wisconsin, 1963.

SUPPORTING RESEARCH STAFF

Charles Acton, *Senior Electro-Mechanical Technician*; Samuel M. Askins, *Senior Electronics Technician*; Frederick M. Azama, *Senior Machinist*; Lynn E. Baggett, *Electronic Technician*; Arthur K. Behme, *Plastics Technician*; Charles E. Bell, *Senior Mechanical Technician*; Robert V. Bertke, *Physics Technician*; Adolph T. Biermann, *Senior Metallurgical Technician*; Robert F. Brown, *Technical Illustrator*; Sigmund W. Brzezicki, *Senior Materials Technician*; George Buchhalter, *Electro-Mechanical Technician*; John M. Buob, *Electronics Technician*; Jerald L. Burkett, *Senior Chemical Technician*; John D. Camping, *Junior Mechanical Technician*; Lawrence R. Cash, *Junior Elastomers Technician*; William E. Click, *Senior Plastics Technician*; Gary A. Clinehens, *Senior Coatings Technician*; John R. Conner, *Junior Elastomers Technician*; Ronald Cornwall, *Senior Fibers Technician*; Timothy J. Courtney, *Junior Coatings Technician*; Michael R. Craycraft, *Junior Plastics Technician*; Gene D. D'Aloiso, *Chemical Technician*; Henry A. DeMarey, *Supervisor, Graphic Arts*; David V. Dempsey, *Senior Research Technician*; Roland W. Ditmer, *Senior Elastomers Technician*; Gary W. Doll, *Chemical Technician*; John N. Dues, *Senior Materials Technician*; Thomas A. Dusz, *Metallographic Technician*; John H. Eblin, *Mechanical Technician*; Richard N. Ely, *Senior Electronics Technician*; Dale E. Ernst, *Fibers Technician*; Howard B. Evans, *Chief Electronics Technician*; Howard W. Fischbach, *Physics Technician*; Charles C. Fowler, *Senior Plastics Technician*; Robert W. French II, *Electronics Technician*; George W. Fultz, *Senior Lubricants Technician*; Anthony James Furlong, *Computer Operator*; Richard L. Fusek, *Senior Electro-Optical Technician*; Ronald B. Glett, Jr., *Materials 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 Materials Technician*; David A. Hahn, *Senior Lubricants Technician*; Stephen J. Hanchak, *Senior Materials Technician*; Norman L. Harruff, *Senior Metallurgical Technician*; Dale Lee Hart, *Technician*; John T. Hartness, *Plastics Technician*; Jacques D. Henes, *Physics Technician*; John Stanley Hilton, *Ceramics Technician*; Barbara E. Hoertt, *Programmer Trainee*; Dennis F. Holthaus, *Machinist*; James C. Holverstott, *Chief Technician*; Charles J. Hurley, *Chief Coatings Technician*; Rudolph T. Iezzi, *Radiographer*; Blaise N. Ipsaro, *Junior Lab Technician*; John P. Jones, *Machinist*; Earnest E. Keppler, *Mechanical Technician*; Phillip Kern, *Junior Electro-Mechanical Technician*; Keith Kettler, *Senior Electronics Technician*; Raymond E. Kimbrough, *Electronic Technician*; Edward L. Klosterman, *Hydraulic Technician*; Andrew Kraus, *Metallographic Technician*; Ronald J. Kuhbander, *Chief Materials Technician*; Patrick Larger, *Junior Metallurgical Technician*; Robert E. Leasure, *Senior Metallurgical Technician*; Robert Leese, *Metallurgical Technician*; Michael F. Lehman, *Senior Electro-Mechanical Technician*; Charles Lovett, *Plastics Technician*; Samuel Macy, *Senior Electronics Technician*; Richard J. Marton, *Senior Electro-Mechanical Technician*; Robert J. McBroom, *Electro-Optical Technician*; George E. Mescher, Jr., *Senior Electronic Technician*; Judith A. Mescher, *Chemical Technician*; Victor Meyers, Jr., *Physics Technician*; Raymond J. Miller, *Senior Plastics Technician*; William C. Miller, *Fibers Technician*; John E. Moreau, *Senior Photographic Technician*; Ronald P. Mortimer, *Elastomers Technician*; Louis A. Muhic, *Senior Electronics Technician*; John W. Muracki, *Electronic Lab Trainee*; Peter Muth, *Senior Machinist*; Dale E. McCullum, *Senior Ceramics Technician*; James C. McKiernan, *Senior Polymers Technician*; James W. Naughton, *Senior Electro-Mechanical Technician*; Dale S. Opela, *Senior Electro-Mechanical Technician*; Michael L. Parin, *Mechanical Technician*; Donnie Partin, *Electronics Technician*; Frederick J. Pestian, *Senior Machinist Supervisor*; Roger D. Petty, *Senior Electro-Optical Technician*; L. Dee Pike, *Senior Plastics Technician*; Howard W. Polley, *Elastomers Technician*; Gary E. Price, *Electronics Technician*; Paul L. Proshok, *Senior Coatings Technician*; William R. Ragland, *Junior Fibers Technician*; Terry L. Richardson, *Electro-Mechanical Technician*; Paul Von Richter, *Physics Technician*; Michael P. Riley, *Senior Draftsman*; Bruce F. Schreiber, *Senior Electro-Mechanical Technician*; Charles W. Schroll, *Materials Technician*; Larry Shields, *Junior Field Technician*; Clyde E. Smith, *Supervisor, Electronics Laboratory*; Kenneth L. Smith, *Junior Electronic Technician*; Eugene J. Soltis, *Senior Instrumentation Technician*; Timothy J. Span, *Technical Illustrator*; Edward A. Strader, *Electro-Mechanical Technician*; Rolland J. Strong, *Photographic Technician*; Stephen G. Swearingen, *Junior Machinist*; Henry R. Taylor, *Senior Electro-Mechanical Technician*; Francis W. Timko, *Mechanical Technician*; Frank Tittl, *Senior Mechanical Technician*; Charles A. Tobin, *Senior Chemical Technician*; Joseph F. Umina, *Senior Electronics Technician*; Vincent T. Vidoni, *Senior Metallographic Technician*; Roger L. Vissoc, *Coatings Technician*; David Weldy, *Junior Materials Technician*; LeRoy Whittaker, *Plastics Technician*; Thomas H. Wical, *Senior Elastomers Technician*; Henry L. Williams, *Mechanical Technician*; James M. Willoughby, Jr., *Junior Mechanical Technician*; Lawrence A. Wogoman, *Senior Electro-Mechanical Technician*; David Woleslagle, *Electronics 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
 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, 1960.
 Drerup, John (1971), *Systems Analyst*—A.B., University of Dayton, 1957.
 Brush, Anne (1968), *Programmer*
 Hunter, Don (1964), *Programmer*
 Cron, Steve (1969), *Programmer/Analyst*
 Hoertt, Barbara (1972), *Programmer Trainee*
 Honingford, William A. (1960), *Manager*—B.S., University of Dayton, 1969.
 Michel, Daniel (1966), *System Controller*
 Goodpaster, Patricia (1967), *Supervisor of Data Preparation*
 Allen, Marjorie (1972), *Supervisor of Unit Record Section*
 Hitchcock, Karen (1969), *Programmer*
 Turner, Gary (1971), *Programmer*
 May, Alan M. (1969), *Manager*—Ph.D., University of Cincinnati, 1968.
 Zeh, Richard (1962), *Programmer*
 Pugh, John (1969), *Manager*—B.S., Ohio University, 1952.
 Koo, Ping (1969), *Systems Design Analyst*—M.S., Univ. of Missouri, 1963

PSYCHOLOGICAL SERVICES CENTER STAFF

- Charles H. Scheidler, *Director*
 John E. Riley, *Director of Veterans Guidance, and Staff Psychologist*
 Howard P. Stevens, *Staff Psychologist*
 Eleanor J. Anderson, *Staff Psychologist*
 Dennis P. Maloy, *Staff Psychologist*
 Eileen A. Myers, *Administrative Assistant*
 Mary E. Donohue, *Chief Psychometrist*
 Mary H. Fussner, *Senior Secretary*
 Christel Conrad, *Secretary and Assistant Psychometrist*
 Cindi Robinson, *Secretary and Receptionist*

ATHLETIC STAFF

- John E. McVay, *Director of Athletics*; Harry C. Baujan, *Consultant to Athletic Director*;
 Donald J. Donoher, *Head Basketball Coach*; William B. Cassidy, *Assistant Basketball Coach*;
 Jack Butler, *Assistant Basketball Coach*; Steve Hess, *Assistant Basketball Coach*;
 Ron Marciniak, *Head Football Coach*; Bob Mazie, *Assistant Football Coach*; Bill Dudley,
Assistant Football Coach; Bob Palcic, *Assistant Football Coach*; Tony DeBiase, *Assistant Football Coach*,
 Jim Edwards, *Assistant Football Coach*; Billy R. Mayo, *Director of Intramurals*;
 Edward C. Kwest, *Trainer*; Ken Keck, *Assistant Business Manager*; Dr. Edward Leschansky,
Team Physician; Dale Miller, *Golf Coach*; Joe Pici, *Tennis Coach*; Walt DeAnna,
Ice Hockey Coach; Bob Richardson, *Soccer Coach*; Jim Edwards, *Wrestling Coach*;
 Joe Mitch, *Sports Information Director*; 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*; Joe Eaglowski, *Director of Promotions*.

HEALTH SERVICE STAFF

Medical Director: John H. Dirckx, M.D.

Religious Services: Rev. Andrew Seebold, S.M.

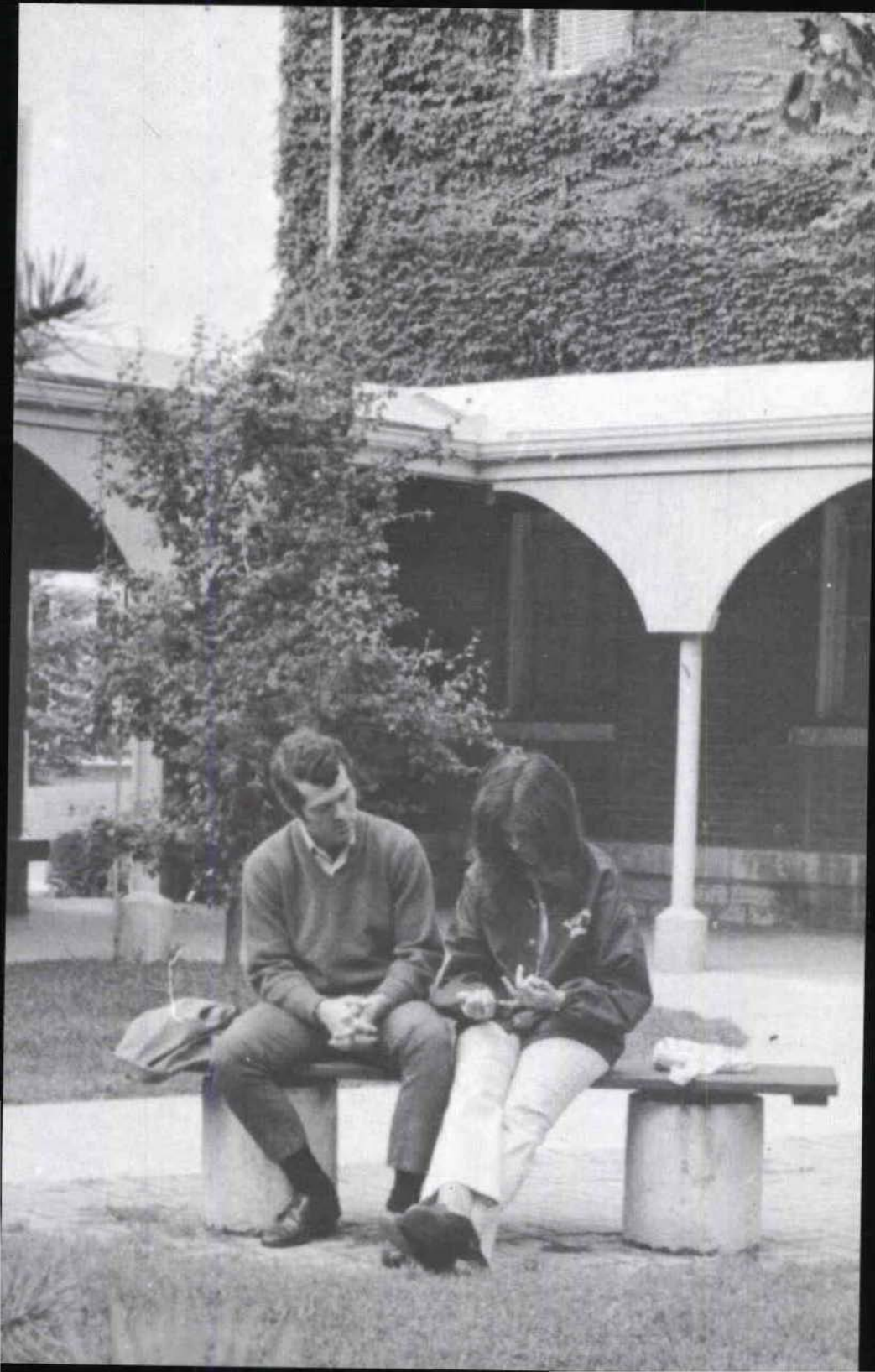
Supervisor: Catherine Kirk, R.N.

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

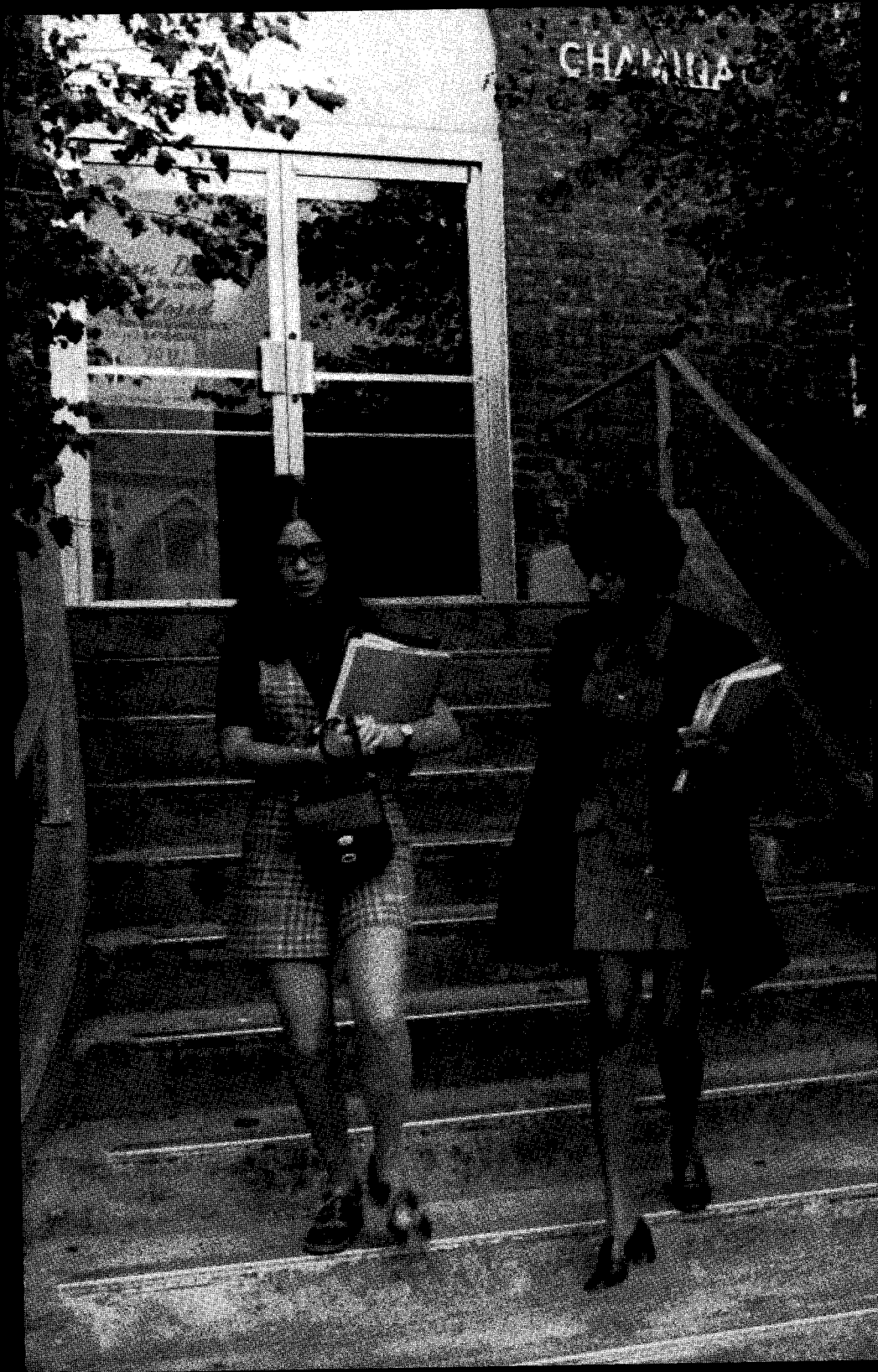
SUPPORTING STAFF: Georgia Bowen, Rosemary Gossage, Helen Heindl, Jane Macklin, Callie Moore, Percy McDonald, Ruth Norris, Bro. T. Schick.

THE CAMPUS MINISTRY STAFF

Rev. Urban Rupp, S.M., *Director, also Main Chapel and Marycrest*; Rev. Cyril Middendorf, S.M., *Religious Activities*; Rev. Joseph McDonald, S.M., *Campus South*; Rev. Bernard Horst, S.M., *University Hall*; Bro. Kenneth Templin, S.M., *Stuart Hall*; Sr. Ruth Grathwohl, *FMI, Marycrest*; Sr. Christine Hucik, *FMI, Music and Liturgy*.



CHAMILLA



XI Courses of Instruction

ACCOUNTING (ACC)

Edward W. Rodgers, *Chairman*

Professors: Hoben, Rodgers

Associate Professors: Clark, Eley, Ellis, Fioriti, Updyke, Wise

Assistant Professor: Sanford

Instructors: Keyes, Wisemiller

Part-time Instructors: Brack, Kusel, Lieven, Schubert, Snow, Trentman,
Weckesser, VonderBrink, Waganer

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

See also ACC 301

ACC 207-208. PRINCIPLES OF ACCOUNTING SIX CREDIT HOURS

An introduction to accounting concepts, terminology, and procedures, for the business student. Develops an understanding of the purposes of all financial statements, including published reports and those used internally for the management of the business firm or institution; also furnishes an introduction to cost accounting and managerial accounting concepts. 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 concepts, terminology, purposes and applications for the non-business student; this course is *not available* to students in the school of business administration. It will provide students, especially social science majors, with a useful introduction to financial statements, financial control procedures, institutional budgets, and other accounting reports and techniques.

ACC 302. INTRODUCTION TO MANAGERIAL ACCOUNTING THREE CREDIT HOURS

Develops an understanding of the uses of accounting information in the management and policy making in a business firm or institution. Cost accounting procedures and systems are studied, along with other quantified cost information used by business managers. Available to all students who have completed Acc 207-208 or Acc 301, except for accounting majors. This course is especially recommended for other business students, especially management or marketing majors.

ACC 303. COST ACCOUNTING THREE CREDIT HOURS

An introduction to cost accounting procedures and the uses of cost accounting data. Covers common procedures for determining product costs and the use of cost data for managerial decision making; emphasizes methods and procedures used to control costs. Prerequisites: Acc 207-208.

ACC 304. ADVANCED COST ACCOUNTING THREE CREDIT HOURS

This course examines cost accounting methods and explores the literature, relating concepts and methods to the needs of managers and other users of accounting data. Emphasizes quantitative models for decision making, especially those that are understandable and usable by managers with limited quantitative skills. Prerequisite: Acc 303.

ACC 305-306. INTERMEDIATE ACCOUNTING SIX CREDIT HOURS

This is a two-trimester study of fundamental accounting procedures and the underlying concepts; gives a comprehensive coverage of accounting concepts and practices for the professional accountant, and a basis for advanced courses in accounting. Prerequisites: Acc 207-208.

ACC 308. ADVANCED ACCOUNTING **THREE CREDIT HOURS**
 Covers accounting theory and practice applied to related corporations and groups of corporations, thus is concerned with consolidated statements, mergers, acquisitions, etc. Also deals with partnerships, installment and consignment sales, fiduciaries, and institutions. Prerequisites: Acc 305-306.

ACC 340. FUNDAMENTALS OF BUSINESS DATA PROCESSING **THREE CREDIT HOURS**
 This course is designed to give students a comprehensive understanding of modern business data processing equipment and procedures, with an emphasis on the data flows throughout business organizations and the needs which cause the data flows. Requires an understanding of business operations, and describes systems that will provide managers with the information needed for decision making. Prerequisites: Acc 207-208 or Acc 301.

ACC 341. MANAGEMENT INFORMATION SYSTEMS **THREE CREDIT HOURS**
 This course develops for the business student an understanding of the simple and complex data processing systems now found in business organizations, and how those systems evolve into integrated systems to produce information for managers. The use of computers for this purpose is studied and evaluated, so that a comprehensive knowledge of the capabilities and limitations of computers, for these purposes, is developed. Also covers the impact of computerized systems on the organization structure, and emphasizes the use of "structured decision making" to make computers more useful to managers. Prerequisite: Acc 340.

ACC 401. AUDITING PRINCIPLES **THREE CREDIT HOURS**
 Introduction to the work of the independent public accountant that leads to his stated opinions on financial statements. The standards for auditing procedures are extensively covered, and generally accepted accounting principles are comprehensively reviewed. Includes considerable orientation to the environment in which the auditor works, and the scope and depth of his professional responsibilities. Prerequisite: Acc 305-306.

ACC 407. FEDERAL INCOME TAXES **THREE CREDIT HOURS**
 A conceptual, rather than a procedural, examination of the income tax statutes and regulations, comprehending economic and social objectives of the tax laws, and the impact and influence of the tax laws on business decisions of individuals and firms. Develops a broad understanding of the interaction between social and economic conditions and the tax laws.

ACC 413. ADVANCED ACCOUNTING PROBLEMS **THREE CREDIT HOURS**
 A comprehensive review of the application of accounting principles, using specific problem situations, and development of approaches to problem solving. Useful as intensive preparation for the C.P.A. examination. Prerequisites: Acc 305-306, Acc 303 and Acc 308.

ACC 414. SEMINAR IN ACCOUNTING **THREE CREDIT HOURS**
 A study of current accounting issues and recent authoritative pronouncements, by student panel discussions, case studies, presentations by professional accountants, and extensive access to accounting literature. Prerequisites: Fifteen hours of upper level accounting courses or permission of the instructor.

ACC 497. LABORATORY WORK EXPERIENCE **THREE TO SIX CREDIT HOURS**
 Off-campus work experience, in a business firm or other institution; assignments are arranged by the School of Business Administration cooperating with the sponsoring firm or institution. Prerequisites: Approval of department chairman.

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 administra-

tion, its environment, and other fields.

Center For Afro-American Affairs (AAS)

Mr. James A. Stocks, *Director*
 Mr. Alvin C. Gay, *Assistant Director*
Assistant Professor, Herbert Martin
Part-time Instructors, Hyman, King

AAS 201. AFRO-AMERICAN LITERATURE I THREE CREDIT HOURS
 An historical overview of black literature and how it is connected to the developmental history of the Black man. Students will be involved in preparing literary documents of their own as such material relates to a certain historical period. Emphasis will be upon the contributions of noted black literary artists before 1900.

AAS 202. AFRO-AMERICAN LITERATURE II THREE CREDIT HOURS
 An historical overview of black literature and how it is connected to the developmental history of the Black man. Students will be involved in preparing literary documents of their own as such material relates to a certain historical period. Emphasis will be upon the contributions of noted black literary artists after 1900.

AAS 210. AFRO-AMERICAN AND THE POLITICAL PROCESS THREE CREDIT HOURS
 The Political Process is a document of development which is not always written. This course will stress the relationship between the growth of politics and how it has contributed to Afro-Americans' development.

AAS 241. AFRO-AMERICAN HISTORY BEFORE 1900 THREE CREDIT HOURS
 This course will explore the historical perspectives of Afro-American development and current trends which are products of this experience. Emphasis will be placed upon the Black man within certain periods of history before 1900.

AAS 242. AFRO-AMERICAN HISTORY AFTER 1900 THREE CREDIT HOURS
 This course will explore the historical perspectives of Afro-American development and current trends which are products of this experience. Emphasis will be placed upon the Black man within certain periods of history after 1900.

AAS 307. FOUR AFRICAN POLITICAL PHILOSOPHERS THREE CREDIT HOURS
 This course is designed to provide students with an ability to analyze problems of development in Africa by exposing them to a thorough knowledge of the political ideologies of several selected African leaders and their respective countries. Emphasis will be placed on an understanding of the practical and theoretical aspects of the emerging political philosophers of African leaders.

AAS 315. HISTORICAL DEVELOPMENT OF BLACK POLITICAL THOUGHT THREE CREDIT HOURS
 This course is designed to facilitate a thorough understanding and working knowledge of the historical contributions to the development of black political thought, as made by selected black political activists and/or intellectuals.

AAS 316. CONTEMPORARY BLACK POLITICAL THOUGHT THREE CREDIT HOURS
 This course is designed to thoroughly examine and discuss selected, differing contemporary political philosophies which are germane to the continuous political development of Africans and Afro-Americans.

AAS 333. SEMINAR: URBAN PROBLEMS THREE CREDIT HOURS
 The seminar will involve studies in an examination of community problems and institutions which affect the quality of urban life and in particular the black community. Included will be such areas as education, social welfare, criminal justice, housing, health, government, etc.

AAS 334. PATTERNS OF MINORITY RELATIONSHIPS (First Term) THREE CREDIT HOURS
 This course is designed for upper class students. It will attempt to provide a basic understanding of non-whites. It will explore the relationships, positive and negative, between whites and non-whites. It will discuss the principles of the relationships as they pertain to social changes and provide methods used by minority groups in relation to each other and the total white population.

AAS 335. PATTERNS OF MINORITY RELATIONSHIPS (Second Term) THREE CREDIT HOURS
 This course is designed for upper class students. It will attempt to provide a basic understanding of non-whites. It will explore the relationships, positive and negative, between whites and non-whites. It will discuss the principles of the relationships as they pertain to social changes and provide methods used by minority groups in relation to each other and the total white population.

AAS 337. CLIENT INTERVENTION IN THE URBAN COMMUNITY THREE CREDIT HOURS
 This course is designed to develop an understanding of the conditions in American society which negatively affect the lives of Black people. To develop an appreciation for and an understanding of the mechanisms and the processes by which Black people have adapted to these conditions; to develop an understanding of and an appreciation for Cultural differences among various groups in American society; to develop an understanding of the influence of social conditions on the need for social services; to acquire knowledge of the factors to be considered in providing social services to Black people.

AAS 360. EDUCATIONAL SYSTEMS AND 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 361. SEMINAR: STUDIES OF BLACK CHILDREN TWO CREDIT HOURS
 This seminar will critique studies that have been conducted concerning the learning abilities and patterns, and intellectual capabilities of black children.

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

AAS 494. RESEARCH: AFRO-AMERICAN STUDIES THREE CREDIT HOURS
 Advanced Research is primarily constructed to present the tools and knowledge of research. Its intent is to motivate students to seek monies for graduate school which may be available for original research. Advanced Research generally concerns itself with the methodology of research and the search for organizations and institutions which act as a repository for the kind of information and knowledge sought, pertaining to the Afro-American.

American Studies (AmS)

Dr. Francis J. Henninger, Director
Associate Professor: Henninger
Instructor: Palermo

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 Director.)

- 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 | 359 | 455 | 340 | (202) |
| 307 | 364 | 456 | 341 | (201) |
| 332 (American) | 390 | 472 | 430 | (201) |
| 352 (American) | 396 | 474 | 442 | (201) |
| 450 | 451 | 475 | 445 | (201 & 202) |
| 452 | 452 | 476 | 471 | (201) |
| 454 | 454 | 477 | 480 | (201 & 202) |
| 456 | | | 485 | (201 & 202) |
| 474 | Philosophy | | 490 | (202 & 340) |
| 476 | 304 | 323 | Political Science | |
| | 311 | 330 | 301 | 360 |
| Fine Arts | 314 | 340 | 303 | 408 |
| 471 | 320 | 452 | 310 | 411 |
| 472 | 321 | 470 | 311 | 413 |
| 490 | Theological Studies | | 312 | 450 |
| | | | 313 | 475 |
| Music | | | Psychology | |
| 304 | | 326 | 306 | 408 |
| 305 | | 363 | 315 | 409 |
| 310 | | 370 | 406 | 420 |
| | | 448 | Sociology-Anthropology | |
| | | 478 | 150 | 325 |
| | | | 206 | 330 |
| | | | 206L | 332 |
| | | | 250 | 406 |
| | | | 310 | 422 |
| | | | 315 | 435W |
| | | | 318 | 439 |
| | | | 322 | 449 |
| | | | 323 | |

A, B, or C: AmS 405, by consultation with the Director.

No minor is required for American Studies majors.

AMS 300. AMERICAN CULTURES

THREE CREDIT HOURS

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 Terms

AMS 301. INTERPRETATIONS OF AMERICAN CULTURE

THREE CREDIT HOURS

A critical study of various interpretations of American culture through more than a hundred years.

Second Terms

AMS 400. INTERDISCIPLINARY RESEARCH

THREE CREDIT HOURS

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.

Alternate Second Terms

AMS 405. TOPICS IN AMERICAN CULTURE ONE TO THREE CREDIT HOURS

A course designed to offer students in all disciplines an opportunity to study American topics of wide interest whose most effective approach is interdisciplinary.

AMS 410. FIELD STUDIES IN AMERICAN CULTURE THREE TO NINE CREDIT HOURS

A course which brings the methods of interdisciplinary inquiry directly to bear upon characteristic American activities. Prerequisite: interdisciplinary course work, instructor's permission.

Biology (Bio)

Dr. George B. Noland, *Chairman*

Professors: Cooney, Geiger, Jaffee, Joly, Noland

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

Adjunct Associate Professor: Fleischman

Assistant Professors: Burky, Laufersweiler, Schwelitz, Williams, Willis

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 things. This course (and Bio 102) 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** ONE CREDIT HOUR
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 304. HISTOLOGY** THREE CREDIT HOURS
Fundamentals of cell structure, tissue organization and the microscopic anatomy of organs of the vertebrate animal with special stress on the mammals. Kodachromes will take the place of microscopic laboratory work.
- 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 336. ECOLOGY AND EVOLUTION** THREE CREDIT HOURS
A course stressing the principles of evolutionary biology and ecology and the relationship between the two. Core biology course.
- 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 336. 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 398. HEREDITY AND SOCIETY** **THREE CREDIT HOURS**
A course designed to acquaint the student with the fundamental principles of inheritance and the application of genetics to contemporary problems of society. Topics such as genetic engineering, the green revolution and environmental mutagenesis will be considered.
- 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 462. ADVANCED GENETICS** TWO 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. 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, Leimkuhler, Snyder,

Associate Professors: Holt, Marrinan

Assistant Professors: Berger, Casey, Fuszara, Gillespie, Kussman, Miller, Stough, White

Part-Time Instructors: Baughan, Gaston, Gibson, Gordhammer, Hample, Hickey, Holland, Maiorano, 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 109. COLLEGE MATHEMATICS FOR BUSINESS AND ECONOMICS** FOUR CREDIT HOURS
 The mathematics of business and economics, including topics from college algebra, analytic geometry, trigonometry, modern algebra, and introductory calculus. Credit is obtainable only through College-Level Examination Program.
- 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 110A-111A. APPLICATION IN QUANTITATIVE ANALYSIS**
TWO CREDIT HOURS
 FOR BUSINESS
 Linear equations and systems, linear programming, and matrix algebra with emphasis on business applications.
 Mathematics of finance. Introduction to calculus with emphasis on business applications.

- BUS 210-211. QUANTITATIVE ANALYSIS** **SIX CREDIT HOURS**
 A course in applied statistics covering the broad areas of probability, statistical inference, time series, regression and correlation, and sampling methods. Prerequisite: Bus 110-111.
- BUS 215. PRINCIPLES OF MANAGEMENT** **THREE CREDIT HOURS**
 A basic course in the managerial functions of planning, organizing, assembling resources and directing operations for a business.
- BUS 301. CORPORATION FINANCE** **THREE CREDIT HOURS**
 Principles of financial organizations. A study of corporate securities; financial structures; financing of new and established corporations; management of corporate funds; corporate expansions, mergers and reorganizations.
- BUS 303. BUSINESS LAW I: CONTRACTS** **THREE CREDIT HOURS**
 The basic course in business law treating the nature and classification of law, the courts and court procedure and considering in some detail the law of contracts and agency.
- BUS 304. BUSINESS LAW II: SALES AND NEGOTIABLE INSTRUMENTS** **THREE CREDIT HOURS**
 A consideration of the law of sales and negotiable instruments. Prerequisite: Bus 303.
- BUS 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 330. PRINCIPLES OF RISK AND INSURANCE**
 A study of the basic concepts of business and personal risks from the standpoint of creation, identification, reduction elimination and evaluation of risks. Emphasis will be placed on the use of insurance in meeting problems of risk.
- BUS 336. PRINCIPLES OF REAL ESTATE**
 Survey of real estate industry with emphasis on its structure, regulation, growth, needs, financing and future. Analysis of the methods of determining land use and evaluation of the theories of city development.
- 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. ANALYSIS OF DECISIONS UNDER UNCERTAINTY** 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 431. FINANCIAL INSTITUTIONS**
 Integrated and comprehensive analysis of financial institutions with particular emphasis on financial intermediaries and the influence of government on the business system.

BUS 432. PROPERTY, LIABILITY AND CASUALTY INSURANCE

Examination of the types of insurers, contracts and functional aspects in the field of property, liability and casualty insurance. Prerequisite: Bus 330.

BUS 433. LIFE AND HEALTH INSURANCE

Analysis of the type and nature of life and health insurance and annuity contracts used in meeting personal risks. Examination of factors affecting morality, morality rates and nonforfeiture values. Analysis of group insurance, employee benefit plans and social security.

BUS 434. PERSONAL FINANCE

Procedures and methods of managing personal finances and property. Examination and analysis of expenditures, budgeting, consumerism, taxation, financial institutions, investments, pensions and estate planning. Designed to serve the needs of both non-business and business majors.

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.

BUS 497. LABORATORY WORK EXPERIENCE**THREE TO SIX CREDIT HOURS**

An off-campus laboratory work position carried out under the auspices of a participating industrial, commercial, educational, health care, or governmental organization located in the greater Dayton area under the ordinary supervisory authority of the participating organization. Positions offered to students are compensatory or non-compensatory. Non-compensatory positions are oriented toward a research project or a special project for the benefit of the participating organization. This offering is available to full-time undergraduate students pursuing a two-year or four-year program.

Chemical Engineering (Cme)

Dr. Michael A. Bobal, *Chairman*

Professor: Bobal

Associate Professors: Olinger, Srinivasan

Assistant Professor: 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 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, Fratini

Assistant Professors: Keil, Singer, Knachel

Adjunct Assistant Professors: Nelson, Spencer, Hilt, Martin

- 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, pre dental, 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, pre dental, 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. *Second Term, Each Year*
- CHM 313-314. ORGANIC CHEMISTRY** **SIX CREDIT HOURS**
 This course is designed for premedical, pre dental, 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 one three-hour session per week (1 credit hour); Chm 316L consists of two three-hour laboratories per week (2 credit hours).

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.
First 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 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 Mechanics

Seymour J. Ryckman, *Chairman*

Professors: Driscoll, Kraft, Ryckman, Thomson

Assistant Professors: Payne, Phillips, Shaw, Weiss

Civil Engineering (Cie)

CIE 205L. SURVEYING FIELD PRACTICE THREE CREDIT HOURS
Field work and computation in topography, highway surveying, triangulation, level net,

celestial observations, evaluation of errors, and preparation of plans. Five eight-hour days a week for three weeks. Prerequisite: Cie 208. *Summer*

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

CIE 208. SURVEYING II THREE CREDIT HOURS
Study of photogrammetry, circular and spiral curves, vertical curves, grade lines, 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 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 315. THEORY OF STRUCTURES THREE CREDIT HOURS
Analysis of statically determinate trusses, beams and frames subjected to fixed and moving loads. 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
 Analysis of statically indeterminate trusses, beams and frames subjected to fixed and moving loads. Prerequisite: Cie 315.
- 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 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
 Design and behavior of structural steel connections, columns, beams, plate girders subjected to tension, compression, bending, shear, torsion and composite action. Prerequisite: Egm 304.
- CIE 417. REINFORCED CONCRETE** THREE CREDIT HOURS
 Design and behavior of reinforced concrete slabs, beams, columns, walls and footings subjected to tension, compression, bending, shear and torsion. Prerequisite: Cie 315.
- CIE 418. STRUCTURAL DESIGN II** THREE CREDIT HOURS
 A continuation of Cie 417 and Cie 415 where the student puts his acquired knowledge of reinforced concrete and structural steel to work in designing and studying the behavior of complete structures. Prerequisite: Cie 415, Cie 417; Corequisite: Cie 406.
- 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** ONE 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. Corequisite: Mth 119.

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.

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.

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*

Professor: Biersack

Assistant Professors: Blatt, Harwood, Kiernan, Trent, Weatherly, Wolf

Instructors: Caggiano, Devine, Haynes, Scalenghe

Part-time Instructors: Dougherty, Sennet, Staats, Vlahos

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.

FOR CONCENTRATED MAJOR IN COMMUNICATION ARTS:

- (1) Speech 101 and appropriate 200 level course.
- (2) 24 credit hours of upper level courses with a minimum of 15 hours in Speech, or Broadcasting-Journalism.

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.

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 308. INTERPERSONAL COMMUNICATIONS THREE CREDIT HOURS
 The study of your own communication behavior through face-to-face spontaneous interaction with others. Prerequisites: SPC 101 for majors; none for non-majors.

COM 391. INDEPENDENT STUDY I THREE TO SIX CREDIT HOURS
 Supervised study involving directed readings, individual research (library, field or experimental) or specialized projects in the specialized areas of Communication Arts. Prerequisites: Spe 101; Jrn 200 or Spe 201. Permission of the instructor.

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 430. DEVELOPMENT OF MASS MEDIA THREE CREDIT HOURS
History and analysis of the development and interdependence of Mass Media, print and electronic. Emphasis on its role in political and economic progress of U.S. and attendant responsibility.

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: Kester, Krall, Lokai, Neuendorf
Instructor: Keim

Cps 140. INTRODUCTION TO ALGORITHMIC PROCESSES *THREE CREDIT HOURS
Algorithms, programs, and computers. Basic programming and program structure. Programming and computing systems. Debugging and verification of programs. Data representation. Computer solution of numerical and non-numerical problems using a compiler language as PL/I or Fortran.

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 140 or 144.

Cps 246. ADVANCED ASSEMBLER PROGRAMMING *TWO CREDIT HOURS
Macros, interrupt handling, input/output topics. Prerequisite: Cps 245.

Cps 300-301. COMPUTER SCIENCE FOR (NAMED AREA) EACH 1-3 CREDITS
Various topics of Computer Science of primary interest to students in the Humanities, Business, Education, and Biological Sciences. The title will reflect the material covered in any particular instance. Cps 300: no prerequisite.

Cps 310. SYSTEMS ANALYSIS THREE CREDIT HOURS
Basic system analysis tools; identifying requirements, planning, and measuring effective-

ness of computer information systems; system life cycle studies. Prerequisite: programming ability.

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 144 or equivalent.

CPS 346. OPERATING SYSTEM *THREE CREDIT HOURS
Study of DOS/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. COMPUTER SYSTEMS DESIGN THREE CREDIT HOURS
Principles of design for arithmetic operations, including a survey of functional units for implementation; memory devices, central processors, input/output units; telecommunication principles, techniques, and devices. Prerequisite: Cps 341.

CPS 404. SYSTEMS MODELING TECHNIQUES THREE CREDIT HOURS
Linear programming models, game theory, network analysis, queueing models, inventory models, and simulation. Prerequisites: Cps 353, Cps 341, 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. 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. Prerequisite: Cps 415.

CPS 444-445. SYSTEMS PROGRAMMING *FOUR TO 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 482. AUTOMATA THEORY THREE CREDIT HOURS
Finite automata, sequential machines, survey of formal languages, introduction to computability, recursive functions and Turing machines. Prerequisite: Cps 341 or equivalent.

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*
 Assistant Professor: Forschner

Students in other degree programs at the University of Dayton may minor in criminal justice. A minor requires 18 semester hours which is to include CrJ 200, Principles of Criminal Justice and CrJ 213, Criminal Law.

CRJ 200. PRINCIPLES OF CRIMINAL JUSTICE THREE 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 THREE 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 327. CORPORATE SECURITY MANAGEMENT THREE CREDIT HOURS
 A comprehensive managerial approach in developing adequate security systems with emphasis on personnel identification and theft control procedures including the establishment of intra-security surveys for deterring espionage, sabotage, and subversive line and staff activities within a private corporate structure.

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 335. COMPARATIVE POLICE AND CORRECTION SYSTEMS THREE CREDIT HOURS
 A comparative survey of cross cultural uniformities and diversities in law enforcement agencies and correctional systems in selected countries.

- 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 nonviolence 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 the 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 criminal justice majors only. Prerequisite: permission of the Director.

Economics (Eco)

Dr. John Rapp, Chairman

Professors: Rapp, Matlin, Louis, Whalen (on leave)

Associate Professors: Raney, Weiler

Assistant Professors: Winger, Oyen, Frasca

Part-time Instructor: Bandt

Eco 203-204 are prerequisites for most advanced courses in Economics.

ECO 203. PRINCIPLES OF MICROECONOMICS **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 204. PRINCIPLES OF MACROECONOMICS **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 346. INTERMEDIATE MICROECONOMIC 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 347. INTERMEDIATE MACROECONOMIC 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**
Regression analysis applied to the empirical measurement of micro- and macro-economic phenomena from field data; mathematical model-building; testing of the mathematical model for goodness-of-fit; statistical testing of the model parameters for establishing their significance. Use of computer for determining parameters and their statistical characteristics. Prerequisite: Permission of instructor.
- 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 485. URBAN AND REGIONAL ECONOMICS** **THREE CREDIT HOURS**
Treats certain theoretical concepts such as location theory, theories of land use and land rent and provides an economic interpretation for the existence of cities. Emphasis is also placed on applying economic analysis to the problems of traffic congestion, pollution, race, poverty, and urban sprawl. Student research on a topic of interest is requisite.
- ECO 490. MARKET PERFORMANCE AND ANTITRUST** **THREE CREDIT HOURS**
An analysis of industrial organization, including the economics of pertinent antitrust laws.
- ECO 497. LABORATORY WORK EXPERIENCE** **THREE TO SIX CREDIT HOURS**
An off-campus laboratory work position carried out under the auspices of a participating industrial, commercial, educational, health care, or government organization located in the greater Dayton area under the ordinary supervisory authority of the participating organization. Positions offered to students are compensatory or non-compensatory. Non-compensatory positions are oriented toward a research project or a special project for the benefit of the participating organization. This offering is available to full-time undergradu-

ate students pursuing a two-year or four-year program.

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

Professor: Faerber

Associate Professors: Bourgeois, Britt, Anderson, Rupp, Petit, Emling

Assistant Professor: Gray, Geiger

Part-time Instructors: Wening

EdF 205. EDUCATIONAL PSYCHOLOGY I: 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. EDUCATIONAL PSYCHOLOGY I: 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. EDUCATIONAL PSYCHOLOGY I: 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: 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

Through an analysis of underlying educational assumptions of philosophies, educators, and agencies of society, the course attempts to aid the student in developing a coherency and consistency in his thinking about educational principles, policies, and practices. Accredited in Philosophy. Prerequisites: EdF 205, 206, or 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, Klosterman, O'Donnell

Associate Professor: Anderson, Daily, Waters

Assistant Professors: Beitzel, Fuchs, Lutz, Rapp

Part-time Instructors: Bankston, Jende, Reinders

**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. If taken for certification, EdE 410 should be taken concurrently.

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 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 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 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 **THREE OR SIX CREDIT HOURS**

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 Chairman.

EDE 413. STUDENT TEACHING (ELEMENTARY) **SIX-TWELVE CREDIT HOURS**

Consists of teaching in actual classroom situations for full semester under close super-

vision. 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 413, 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 1/2 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)

- Robert E. Kriegbaum, *Acting Chairman*
- Associate Professors: Frye, Gay, Kriegbaum, Metzger, Ritter
- Assistant Professors: McNally, Taylor
- Instructors: Frederick, Zahner
- Part-time Instructors: Corless, 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 half day each 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 half day each week to practicum experiences. *Second Term*

EdS 251. COMPUTER AIDED INSTRUCTION TWO TO THREE CREDIT HOURS

The course is designed for those who need help in basic English skills or reading. The student will pick up the basic skills needed through regular work on a terminal. Grades will be based on the number of hours spent on the terminal.

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 AND SPEECH 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 goals of junior and senior high school mathematics; methods and materials; individualizing instruction. Students should be prepared to devote one half a day each week to practicum experiences. Prerequisite: EdF 208 *Second Term*

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
 Instructional methods and materials with an emphasis on inquiry; individualizing instruction. Students should be prepared to devote one half a day each week to practicum experiences. Prerequisite: EdF 208. *Second Term*

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 post graduate 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 in junior and senior high schools 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 fourteen 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.

Physical and Health Education (EdP)

- James B. LaVanche, *Chairman*
- Dr. Philip Stanley, *Director of Men's Division*
- Associate Professor:* LaVanche, Schleppe, Stanley
- Assistant Professors:* Morefield, Wanke
- Instructors:* Donoher, Marciniak
- Dr. Doris Drees, *Director of Women's Division*
- Associate Professors:* Drees, Leonard
- Assistant Professors:* Dreidame, Roberts, Siciliano
- Instructor:* Jayson

*General Program**Co-Educational — Open to all University students*

- EdP 101. **SPORT IN THE CULTURE** ONE CREDIT HOUR
Development of appreciation and understanding of sport in the society of a number of sports and related areas are studied. Sport and related areas in the American and selected European cultures is studied.
- EdH 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

- EdD 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 weaknesses 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.
- EdH 116. **PERSONAL HEALTH** TWO CREDIT HOURS
Evaluation of personal health attitudes, habits, and knowledge by surveying current health topics appropriate to college students. *Second Term, Each Year*
- EdH 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 200. **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. Prerequisite for EdP 300.

- 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*

EDD 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. Prerequisite: EdP 200.

EDD 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.

EDH 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.

EDP 310M. 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*
- EdD 336. STANDARD FIRST AID AND PERSONAL SAFETY TWO CREDIT HOURS
Study of basic principles involving personal safety and accident prevention. Application of first aid knowledge and skills in emergency situations. National Red Cross Instructor's certificate for Standard First Aid and Personal Safety may be obtained. *First Term, each year*
- EdH 337. ADVANCED FIRST AID AND EMERGENCY CARE THREE CREDIT HOURS
Study and application of advanced first aid knowledge and skills in emergency situations. National Red Cross Instructor's certificate for Advanced First Aid and Emergency Care may be obtained. (Prerequisite: Edd 336) *Second Term, Each Year*
- 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*
- EdH 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*
- EdH 361. HEALTH CONSUMERSHIP (ELECTIVE) TWO CREDIT HOURS
Sorting fad from fact in using products and services from the present market; includes fad diets, nutrition nonsense, quackery, advertising tricks, beauty gimmicks, a survey of medical hoaxes, and protection that is available to all consumers. *Offered on Demand*
- EdH 362. ENVIRONMENTAL HEALTH AND 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

EdH 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*

EdH 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

Examines basic principles and techniques involved in solving organizational and administrative problems in physical education, intramurals and athletics.

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.

EdH 407. CURRENT ISSUES IN HEALTH EDUCATION

TWO CREDIT HOURS

A seminar on current health topics with emphasis on prevention, solution and the related roles 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: EdD 305-306.

EDP 409. KINESIOLOGY

TWO CREDIT HOURS

The investigation and analysis of human motion based on anatomical, physiological and mechanical principles. Prerequisites: EdD 305-306.

EDP 409L. KINESIOLOGY LABORATORY

ONE CREDIT HOUR

Course to accompany EdP 409. One two-hour laboratory per week in which the practical applications of Kinesiology will be stressed.

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.

EdH 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:

site: Formal admission to student teaching a full semester in advance.

EdH 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.

EdP 420. SENIOR LIFE SAVING (ELECTIVE) ONE CREDIT HOUR
 The American Red Cross Senior Life Saving Course. Prerequisite: Advanced Swimming. *First Term, Each Year*

EdP 421. WATER SAFETY INSTRUCTION (ELECTIVE) TWO CREDIT HOURS
 The American Red Cross Safety Instructor's Course. Prerequisite: EdP 420. *Second Term, Each Year*

EdH 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 (ELECTIVE) ONE-THREE CREDIT HOURS
 Investigating, analyzing, and reporting on a problem in the areas of physical education, or recreation. Permission by Chairman.

EdH 450. SELECTED STUDIES IN HEALTH (ELECTIVE) ONE-THREE CREDIT HOURS
 Investigating, analyzing and reporting on a problem in the area of Health. Permission by Chairman.

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.

Conselor Education and Human Services (EdC)

Dr. Eugene K. Moulin, *Chairman*
 Professor: Moulin
 Associate Professors: Anderson, Diethorn

Courses are listed in the Graduate Catalog Issue of the Bulletin.

Educational 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
Assistant Professor: Fitz

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. Corequisite: 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 and 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 332.
- 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, clampers, 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** **ONE 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, Henninger, Macklin, K. Marre, McCarthy, Means, Murphy, Patrouch, Rougier, Ruff, Stockum, Sturm

Assistant Professors: Cameron, Farrelly, Geibel, Horst, Kimbrough, Labadie, Marre, Martin, Mundell, Palumbo, Pici

Students majoring in English must complete at least 36 hours of English courses, at least 24 of which must be at the 300-400 level. Various recommended tracks have been developed to serve the needs of students electing English as a pre-professional program—particularly pre-law, as a teaching concentration, as a pre-graduate program, as a linguistics program, as a writing concentration, etc. Information about the requirements can be obtained from the department office and from the student's advisor. Majors should consult the departmental chairman for advisor assignment. English minors must take 12 hours of upper divisional (300-400) courses in addition to the lower divisional requirements. Linguistics minors should consult the department office for specific requirements. The Department sponsors one co-curricular, activity ORPHEUS, the literary magazine of the University.

Commencing in the first term 1974-75, the University requirement in English will be satisfied by successful completion of English 111 and 112. During the New Student Orientation, all freshman students will be required to take a verbal skills test administered by the Department of English. Students who score above average on this test may have English 111 waived. Students who are so placed in English 112 do not receive credit for English 111 but are free to take elective course work in place of the waived course. International Students for whom English is a second language must submit TOEFL scores and also take the verbal skills test for placement in English 111 or 112. Particulars about the Freshman Program and testing procedures can be obtained from the Director of Freshman English. (English 101 and 106 will be replaced by English 111 and 112.)

- 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 111. COLLEGE COMPOSITION I** **FOUR CREDIT HOURS**
Reading analysis and writing proficiency development. Required of every student. Waiver granted by successful performance on a "Verbal Skills Proficiency Test."
- ENG 112. COLLEGE COMPOSITION II** **THREE CREDIT HOURS**
An analysis of the logical, linguistic, and rhetorical structure of exposition and argument. Practical application aimed at developing perceptive readers and responsible writers. Emphasis on research and writing. Required conferences. Required of every student. Prerequisite: Successful performance on a "Verbal Skills Proficiency Test" or English 111.
- ENG 114H. FRESHMAN HONORS** **THREE CREDIT HOURS**
Specific honors section of college composition for first semester freshman who show high proficiency in the English Composition Test. Prerequisite: Superior scores in entrance exams.
- ENG 118. TOPICS IN COMPOSITION AND READING** **ONE TO SIX CREDIT HOURS**
Exploration of subjects in composition, reading, or related problems in developing writing skills.
- 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 112 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 112 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 112 or its equivalent.
- ENG 208. TOPICS IN LITERATURE** **THREE CREDIT HOURS**
Exploration of varying approaches to the study of literature. Could be repeated under special circumstances. Prerequisite: Eng 112 or its equivalent.
- ENG 210. POETRY** **THREE CREDIT HOURS**
A study of representative examples of a major literary genre. Prerequisite: Eng 112 or its equivalent.
- ENG 212. DRAMA** **THREE CREDIT HOURS**
A study of representative examples of a major literary genre. Prerequisite: Eng 112 or its equivalent.
- ENG 214. FICTION** **THREE CREDIT HOURS**
A study of fiction as a major genre. Prerequisite: Eng 112 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: A 200 level English course.

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: A 200 level English course.

ENG 305. SURVEY OF AMERICAN LITERATURE **THREE CREDIT HOURS**
 A survey of American literature from the Colonial period to the present day. Prerequisite: A 200 level English course.

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: A 200 level English course.

ENG 318. CREATIVE WRITING **THREE CREDIT HOURS**
 The principles for writing the short story, the informal and formal essay, and the biographical sketch. May be repeated under special circumstances. 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: A 200 level English course.

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: A 200 level English course.

ENG 323. DANTE **THREE CREDIT HOURS**
 A comprehensive study of the three Canticles of the *Divine Comedy*; *Inferno*, *Purgatorio*, and *Paradiso*. Prerequisite: A 200 level English course.

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: A 200 level English course.

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. Prerequisite: A 200 level English course.

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: A 200 level English course.

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: A 200 level English course.

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. Could be repeated under special circumstances. Prerequisite: A 200 level English course.

- 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: A 200 level English course.
- ENG 368. THEME AND IDEA IN LITERATURE TWO CREDIT HOURS
 Selected texts illustrating a universal theme or a consistent idea will serve as a base for developing critical and analytical insights and writing skills; offered in seminar format. Prerequisite: Eng 112.
- ENG 370. REPORT WRITING TWO CREDIT HOURS
 Analyzing and practicing the techniques of preparing written reports, beginning with basic forms and moving on through those which are more complex to the long, formal report. Prerequisite: 112
- ENG 372. APPLIED WRITTEN COMMUNICATIONS TWO CREDIT HOURS
 Written communications appropriate to business and industrial organizations, including forms of correspondence and a job-application project but excluding formal reports. Prerequisite: 112
- 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: A 200 level English course.
- ENG 384. DIRECTED READINGS ONE TO THREE CREDIT HOURS
 A program of readings and reports in literature and the humanities, utilizing Seminar and/or individual conferences. May be repeated with permission. Prerequisite: Eng 112.
- 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: A 200 level English course.
- 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: A 200 level English course.
- 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: A 200 level English course.
- 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: A 200 level English course.
- ENG 420. RENAISSANCE DRAMA THREE CREDIT HOURS
 A study of the drama of the Elizabethan, Jacobean, and Caroline periods, exclusive of Shakespeare. Prerequisite: A 200 level English course.
- 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: A 200 level English course.
- ENG 431. MILTON THREE CREDIT HOURS
 A study of the major and minor poems and of selected prose of Milton. Prerequisite: A 200 level English course.

- 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: A 200 level English course.
- 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: A 200 level English course.
- 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: A 200 level English course.
- ENG 438. THE AGE OF ROMANTICISM THREE CREDIT HOURS
A study of the major poets and critics of the Romantic Age. Prerequisite: A 200 level English course.
- ENG 441. POETRY OF NINETEENTH CENTURY ENGLAND THREE CREDIT HOURS
A study of the major British poets from Tennyson to Housman. Prerequisite: A 200 level English course.
- ENG 442. PROSE OF NINETEENTH CENTURY ENGLAND THREE CREDIT HOURS
English prose writers from Carlyle to Pater. Eng 441 is not a prerequisite. Prerequisite: A 200 level English course.
- 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: A 200 level English course.
- ENG 446. MODERN ENGLISH POETRY THREE CREDIT HOURS
A study of tradition and innovation in English poetry from Yeats to the present day. Prerequisite: A 200 level English course.
- 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: A 200 level English course.
- 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: A 200 level English course.
- 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: A 200 level English course.
- 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: A 200 level English course.
- 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. May be repeated when topic changes. Consult departmental catalog for specific prerequisites for each section. With permission.

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 103. INTRODUCTION TO ENGINEERING****TWO CREDIT HOURS**

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

EGR 144. FORTRAN FOR ENGINEERS (CPS 144)**TWO CREDIT HOURS**

An engineering/computer science team taught course for engineering students emphasizing basic programming theory and application to engineering problems.

Experimental and Interdisciplinary Studies (UDI)-(ASI)-(BAI)-(EDI)-(ENI)-(TII)-(SDL)*University-wide (UDI)*

Contact JAMES N. NESMITH, *Assistant Provost*

UDI 110-111. SOCIETY AND TECHNOLOGY**THREE CREDITS/TERM**

Primarily for non-engineering students. A study of significant current problems in which concepts provide understanding. Interaction of science, technology and society; matching technology to people, society and the environment; use of technological concepts for analyzing and making decisions about complex problems. Must be taken with UDI 110L-111L. Prerequisite: none.

UDI 110L-111L. SOCIETY AND TECHNOLOGY LAB**ONE CREDIT/TERM**

Laboratory to accompany UDI 110-111.

UDI 200M. IMMORALITY**ONE CREDIT**

An examination of several modern positions regarding the question of immortality.

UDI 205. THE SELF-DIRECTED LEARNER**THREE CREDITS**

This introductory course is designed to help students become more aware of their own needs and behavioral styles as learners. Various models for learning will be examined. Attention will also be given to improving student abilities as problem-solvers and decision-makers as well as to developing greater self-reliance and self-motivation.

UDI 210M. FACE TO FACE: AN ALTERNATIVE APPROACH TO LEARNING**ONE/HALF-ONE CREDIT**

Two to five experience-based sessions examining some of the factors involved in person-to-person relationships and their effect on learning in both formal and informal settings. Opportunity to develop interpersonal skills in observing, listening, paraphrasing, describing feelings, checking perceptions, giving feedback.

- UDI 262M. ECONOMICS OF PERSONAL TRANSPORTATION** ONE CREDIT
 A significant part of an individual's real income is expended on transportation which has become a necessity rather than a luxury. This course surveys not only the economic aspects but also the legal, social, environmental, and recreational aspects of modern transportation, particularly those associated with owning and operating an automobile.
- UDI 264M. SHORT HISTORY OF TRANSPORTATION IN THE U. S.** ONE CREDIT
 A study of transportation by water, land and air with emphasis on Ohio and Dayton's regional transportation problems.
- UDI 322M. PHILOSOPHY OF WOMEN** ONE CREDIT
 Presents the issue of Women's rights in relation to the philosophical issue of what it means to be a human being, specifically, a woman human being. Different schools of philosophy will be surveyed, with major emphasis on the way the existentialist philosopher Simone de Beauvoir develops the issue.
- UDI 363M. PEACE IN THE KINGDOM WITHIN** ONE CREDIT
 Re-examines the Judaeo-Christian tradition for understanding the age-old experience and knowledge of the sources of conflict within man. This inquiry includes some basic insights of Eastern Cultural systems and Western wisdom, updated in a secular interpretation by the finding of behavioral sciences.
- UDI 344. PARAMETERS OF PEACE** THREE CREDITS
 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 399M. INDEPENDENT PEACE STUDY** ONE/FOURTH-TWO CREDITS
 An independent study of topics in peace; by permission only.
- UDI 404M. CONCEPTS OF WORLD DEVELOPMENT** ONE CREDIT
 This course is a segment of the 3-credit "Parameters of Peace" course, concentrating on the relationship between world development and peace. This course will be team-taught by four faculty members, offering a diversity of educational background and experience.
- UDI 405M. NON-VIOLENCE** ONE CREDIT
 A comparative study of violence and non-violence. Violence will be studied on four levels: as a cultural adaptation, as an inherited tendency, as a learned behavior, and as a tactical alternative. Non-violence will be approached from the following perspectives: tactically (another alternative), historically (its development as a school of thought, with emphasis on American Transcendentalism), philosophically (Gandhian and Quaker), and practically (applications in everyday life).
- UDI 451M. COMPUTER AIDED INSTRUCTION** TWO CREDITS
 A basic course to study computer-aided instruction to be used in the schools. The course will cover three levels: Problem-solving, CAI-student authored courses. The student will be exposed to materials now being used in CAI, and become familiar with the formation of educational objectives for CAI. No prior experience necessary.
- UDI 454. THE CHRISTIAN: POLITICS, RELIGION AND BUSINESS** ONE-THREE CREDITS
 A course dealing with the Christian's conduct in the world of commerce, the world of politics, and the world where the Christian has an added responsibility because he is a Christian. Ethical, political and sociological issues will be discussed in the context of Christianity.
- UDI 479M. INTRODUCTION TO MASS TRANSIT** ONE CREDIT
 An introduction to the methods of group problem solving, followed by applying these techniques to developing methods for effective mass communication, directed at public acceptance of mass transit. (Must be followed by UDI 481 in which the process will be completed and acted upon.)
- UDI 480. SEMINAR IN COMMUNITY PROBLEM-SOLVING** THREE-FOUR CREDITS
 Students, faculty, businessmen, and community leaders will meet to analyze a particular problem which exists in the Dayton area, and will devise and implement plans of action that will positively and successfully impact on the problem area. The four seminars will each

focus on one of the following topics: Human Resource Development, Changing Attitudes and Values. The Metropolitan Challenge, and The Economics of Poverty.

UDI 481. SEMINAR IN COMMUNITY PROBLEM-SOLVING II ONE-THREE CREDIT
Continuation of UDI 480.

Arts and Sciences Interdisciplinary (ASI)

Contact BRO. LEONARD MANN, S.M., *Dean, Arts and Sciences*

ASI 210M. TO BE THE CHURCH ONE CREDIT HOUR
A mini-course with the pastoral orientation of recognizing and identifying the faith-stance of a Catholic Christian in the modern world.

ASI 305. APPALACHIAN STUDIES THREE CREDIT HOURS
Appalachian studies is the study of the Appalachian culture in a manner involving the disciplines of history, political science, economics, psychology, sociology, education and religion. Topics to be studied are Appalachian history and its influence on the present, problems and solutions of recent events in Appalachia, influence of local government and federal programs on the people, economic problems of underprivileged peoples and the future of industrial development in the region, ecology of the Appalachian region, literature, art and music of the area, psychology of social change and community development in the under developed regions, the area of health and mental health, and the problems of the Appalachian migrant.

ASI 456. CIVILIZATION OF EARLY ENGLAND THREE CREDIT HOURS
A study of the political, intellectual, and artistic triumphs by which England developed into a great nation during the high Middle Ages and early Renaissance. May be taken for fulfilling the Senior Synthesis requirement or for Political Science, Philosophy or English credit.

ASI 489. HISTORY OF BEAVERCREEK TOWNSHIP I THREE CREDIT HOURS
Research into primary and secondary sources concerning the history and prehistory of Beaver Creek Township in Greene County, Ohio. Materials will include, but not be limited to County records, school records, interviews, back issues of newspapers, federal and state documents. The course will be independent study in format and the research developed will eventually result in a book.

ASI 490. HISTORY OF BEAVERCREEK TOWNSHIP II THREE CREDIT HOURS
A continuation of ASI 489.

Business Administration Interdisciplinary (BAI)

Contact WILLIAM HOBEN, *Dean, School of Business*

BAI 497. LABORATORY WORK EXPERIENCE ONE TO SIX CREDIT HOURS
An off-campus laboratory work position carried out under the auspices of a participating industrial, commercial, educational, health care or governmental organization located in the greater Dayton area under the ordinary supervisory authority of the participating organization. Positions offered to students are compensatory or non-compensatory. Non-compensatory positions are oriented toward a research project or a special project for the benefit of the participating organization. This offering is available to full-time undergraduate students pursuing a two-year or four-year program.

Education Interdisciplinary (EDI)

Contact ELLIS JOSEPH, *Dean, School of Education*

EdI 481. THE TEACHER IN THE INDIVIDUALIZED CLASSROOM THREE CREDIT HOURS
FIVE QUARTER HOURS

An examination of the various roles a teacher in the individualized classroom is called on to model. The course presents not only a theoretical model for teacher role but also lab experience in which the student can try out various behaviors called for. *First Term*

EdI 482. THE STUDENT IN THE INDIVIDUALIZED CLASSROOM THREE CREDIT HOURS
FIVE QUARTER HOURS

Focus on ways in which the structure of the classroom can be used to enhance the learning

capacities of the individual student. As part of the course, students are required to keep a log on certain students regarding the impact of various educational strategies on the learner.
Second Term

Engineering Interdisciplinary (ENI)

Contact RUTH L. KELLY, *Dean's Office, Engineering*

ENI 110-111. SOCIETY AND TECHNOLOGY SIX CREDIT HOURS
 Primarily for non-engineering students. A study of significant, current problems in which concepts provide understanding. Interaction of science, technology and society; matching technology to people, society and the environment; use of technological concepts for analyzing and making decisions about complex problems. Prerequisite: None.

ENI 110L-111L. SOCIETY AND TECHNOLOGY LABORATORY TWO CREDIT HOURS
 Laboratory to accompany Eni 110-111. Corequisite: Eni 110-111.

Engineering Technology Interdisciplinary (TII)

Contact JAMES L. MCGRAW, *Associate Dean for Engineering Technology*

TII 401. DESIGN OF SYSTEMS THREE CREDIT HOURS
 An interdisciplinary course in which a team of students solves a complex problem using a three-phased systems approach. Projects vary from term to term, but all are concerned with societal problems, such as transportation, energy, or environment.

Program for Self-Directed Learning (SDL)

Contact JOSEPH C. KUNKEL, *Director*

See the course descriptions under the alphabetical listing for Program for Self-Directed Learning, p. 308.

Fine Arts—See Performing and Visual Arts

Geology (GEO)

George H. Springer, *Chairman*

Professor: Springer

Associate Professors: Horvath, Ritter

Assistant Professor: Gray

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, land forms, oceans.

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. May be taken without laboratory.

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. Laboratory optional for non-majors.

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. Laboratory optional. *Second Term, 1974-1975*
- GEO 208L. ENVIRONMENTAL GEOLOGY LABORATORY ONE CREDIT HOUR
Second Term, 1974-1975
- 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, 1975-1976*
- GEO 301L. STRUCTURAL GEOLOGY LABORATORY ONE CREDIT HOUR
Course to accompany Geo 301. Two hours per week. *First Term, 1975-1976*
- 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 Quaternary ice advances. Prerequisites: Geo 115, 116. *First Term, 1975-1976*
- GEO 302L. GLACIAL GEOLOGY LABORATORY ONE CREDIT HOUR
Course to accompany Geo 302. Two hours per week. *First Term, 1975-1976*
- 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, 1974-1975*
- GEO 307L. GEOMORPHOLOGY LABORATORY ONE CREDIT HOUR
Course to accompany Geo 307. Two hours per week. *Second Term, 1974-1975*
- 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*

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| GEO 309L. PETROGRAPHY LABORATORY | ONE CREDIT HOUR |
| Course to accompany Geo 309. Two hours per week. | <i>First Term, Each Year</i> |
| GEO 310. STRATIGRAPHY | THREE CREDIT HOURS |
| The interpretation of specific lithotypes and the synthesis of the stratigraphic record. | |
| Prerequisites: Geo 116, 301. | <i>Second Term, 1974-1975</i> |
| GEO 310L. STRATIGRAPHY LABORATORY | ONE CREDIT HOUR |
| Course to accompany Geo 310. Two hours per week. | <i>Second Term, 1974-1975</i> |
| GEO 401. PALEONTOLOGY | THREE CREDIT HOURS |
| A study of animal life of the geologic past as shown by the fossil record. | |
| | <i>First Term, 1975-1976</i> |
| GEO 401L. PALEONTOLOGY LABORATORY | ONE CREDIT HOUR |
| Course to accompany Geo 401. Two hours per week. | <i>First Term, 1975-1976</i> |
| 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. | |
| | <i>First Term, 1974-1975</i> |
| GEO 403L. SEDIMENTATION LABORATORY | ONE CREDIT HOUR |
| Course to accompany Geo 403. Two hours per week. | <i>First Term, 1974-1975</i> |
| 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. | |
| | <i>Second Term, Each Year</i> |
| GEO 411L. IGNEOUS PETROLOGY LABORATORY | ONE CREDIT HOUR |
| Course to accompany Geo 411. Two hours per week. | <i>Second Term, Each Year</i> |
| 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. | |
| | <i>Second Term, 1975-1976</i> |
| GEO 412L. INTRODUCTORY GEOCHEMISTRY LABORATORY | ONE CREDIT HOUR |
| Course to accompany Geo 412. Three hours per week. | <i>Second Term, 1975-1976</i> |

History (HST)

Dr. Leroy V. Eid, *Chairman*

Professors: Beauregard, Donatelli, Maras, Ruppel, Steiner

Associate Professors: Eid, King, Mathias, Rhee, Soffer

Assistant Professors: Alexander, Bannan, Taylor, Vines

Instructors: Palermo, Ridgway

Part-time Instructor & Counsellor: Perkins

Part-time Instructors: Bradshaw, Efthimiou, Gannon

Adjunct Assistant Professor: Millett

The course requirement for History majors is 38 credit hours, distributed as follows:

- (1) Four courses (12 credit hours) should be selected from the 100/200 sequences;
- (2) Four courses from the 300/400 sequences should be selected from the American History area and four courses from the 300/400 sequences should be selected from the non-American History area;
- (3) History 301—2 credit hours;

- (4) Honors Tutorial courses (Hst. 497 and 498) and History 299 and 499 may be substituted for any course except History 301.

The course requirement for History minors is 24 credit hours. Four courses (12 credit hours) should be selected from the 100/200 sequence. Two courses should be selected from the 302-350 and 400-450 sequences, and two courses from the 351-399 and 451-495 sequences.

HST 103. HISTORY OF WESTERN CIVILIZATION I THREE CREDIT HOURS
A study of mankind from earliest times to 1453 A.D. The course stresses the social, cultural and political aspects of the pre-historic, ancient, and medieval eras.

HST 104. HISTORY OF WESTERN CIVILIZATION II THREE CREDIT HOURS
A survey of mankind from 1453 to 1815. Emphasis will be placed on the Renaissance and Reformation, the Age of the Enlightenment and the French Revolutionary and Napoleonic era.

HST 105. HISTORY OF WESTERN CIVILIZATION III THREE CREDIT HOURS
A survey of mankind from 1815 to the present. Emphasis will be placed on the era of Nationalism and Revolution, the New Industrialism, Socialism, Imperialism and 20th Century developments.

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 131. INTRODUCTION TO THE MIDDLE EAST THREE CREDIT HOURS
Introduces the student to the history of the Middle East, its unity and diversity of geography, ethnic background, and national aspirations and trends.

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 299. HISTORY TOPICS** ONE TO SIX CREDIT HOURS
 Specific sub-titles and descriptions to be announced in the composite and posted in the History Department Office.
- HST 301. PRO-SEMINAR** TWO CREDIT HOURS
 History methods, philosophy, and introductory historiography . . . the latter based on the professor's field of specialization. Required for junior history majors.
First Term, each year
- 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 320. MODERN ITALIAN HISTORY** THREE CREDIT HOURS
 A Survey of Italian history from the restoration of Italy's rulers in 1815 until the declaration of a republic in 1946, with emphasis on the Risorgimento and the fascist experiment, 1922-1945.
- HST 321. ENGLAND SINCE 1688** THREE CREDIT HOURS
 A study of England and Great Britain from the Glorious Revolution to the present. Important topics will be: the Four Georges; Industrial Revolution; Victorian Age; Britain's role in world wars; and development from Empire to Welfare State.
- 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 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 405. MEDIEVAL EUROPE **THREE CREDIT HOURS**
 The development of European history from the fourth to fourteenth century. Topics include: birth of Middle Ages; development of Christianity; Byzantine, Islamic and Carolingian Empires; feudalism; Crusades; rise of universities; and the birth of national cultures.

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 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 418. MILITARY HISTORY** **THREE CREDIT HOURS**
 A Military History Survey from ancient times to the present highlighting the military's role in society, the philosophy of war and military institutions, organization and weapons.
- 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 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 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 451. 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 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 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.

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 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.

HST 499. TOPICS IN HISTORY ONE TO SIX CREDIT HOURS
 Specific sub-titles and descriptions to be announced in the composite and posted in the History Department office.

Home Economics (HEC)

Elizabeth L. Schroeder, *Chairman*
 Associate Professors: Metzger, Schroeder
 Assistant Professor: Lefler
 Clinical Assistant Professor: Downey
 Instructor: Stanley
 Part-time: Freeman, Palmert, Britt, Knupp, Alexander

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.
- 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. *First Term, Each Year*
- *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. *Second Term, Each Year*
- 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. *Second Term, Each Year*
- 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 404. FASHION MERCHANDISING THREE CREDIT HOURS
 A study of the movement of fashion, the promotion of fashion including advertising and display and the trends in retail fashion distribution.

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.

First Term, Each Year

HEC 415L. TAILORING LABORATORY TWO CREDIT HOURS
 Course to accompany Hec 415 lecture. Two two-hour periods per week.

First 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 ONE 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 PROGRAM DIVISION OF TECHNICAL STUDIES AND SERVICES

Dr. Merle D. Schmid, *Director*

Professor: Schmid

Associate Professors: Engler, Kovacs

Adjunct Associate Professor: Nagle

COURSES IN SUPPORT OF: ENGINEERING INTERDISCIPLINARY STUDIES (ENI)

ENI 110-111. SOCIETY AND TECHNOLOGY SIX CREDIT HOURS

Primarily for non-engineering students. A study of significant, current problems in which concepts provide understanding. Interaction of science, technology and society; matching technology to people, society and the environment; use of technological concepts for analyzing and making decisions about complex problems. Prerequisite: None.

ENI 110L-111L. SOCIETY AND TECHNOLOGY LABORATORY TWO CREDIT HOURS

Laboratory to accompany Eni 110-111. Corequisites: Eni 110-111.

COURSES IN SUPPORT OF: SYSTEMS SCIENCE (ISE)

ISE 199. SPECIAL PROBLEMS IN SYSTEMS (FRESHMAN) ONE TO SIX CREDIT HOURS

Particular assignments to be arranged and approved by Director of the Division.

ISE 210. ATTRIBUTE AND FORM ANALYSIS THREE CREDIT HOURS

A course in applied statistics covering the broad areas of probability, tests of hypothesis, time series, regression and correlation and attribute sampling. Prerequisite: Mth 113 or Mth 119 or Bus 111.

ISE 211. VARIABLE AND MAGNITUDE ANALYSIS THREE CREDIT HOURS

A second course in applied statistics covering variable sampling, confidence intervals, statistical inference, multiple regression, analysis of variance, applications of Modern Decision Theory and Bayesian statistics. Prerequisite: Ise 210.

ISE 299. SPECIAL PROBLEMS IN SYSTEMS (SOPHOMORE) ONE TO SIX CREDIT HOURS

Particular assignments to be arranged and approved by Director of the Division.

ISE 302. ENGINEERING ECONOMY THREE CREDIT HOURS

Emphasis on rational scientific methods of economic analysis for engineering and management decision making. Prerequisite: Mth 118.

ISE 313. ENGINEERING LAW TWO CREDIT HOURS

Legal principles applied to engineering.

ISE 334. MACHINES COMPUTING ELEMENTS IN ENGINEERING SYSTEMS

TWO CREDIT HOURS

The basic principles underlying the operation of digital analog computing machines presented with emphasis on the functions computers play in the overall design of engineering systems. Prerequisites: Mth 219, Mth 368 or Ise 210.

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, digital and hybrid computer. Corequisite: Ise 334.

ISE 399. SPECIAL PROBLEMS IN SYSTEMS (JUNIOR) ONE TO SIX CREDIT HOURS
Particular assignments to be arranged and approved by Director of the Division.

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 or Ise 210.

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 or Ise 210.

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 process. 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 or Ise 210.

ISE 428L. DESIGN AND ANALYSIS OF ENGINEERING EXPERIMENTS LABORATORY ONE CREDIT HOUR
Laboratory to accompany Ise 428. Consists of one two-hour laboratory period each week. Real-world and simulated experiments used as source of data for experimental designs. Corequisite: Ise 428.

ISE 451. PRODUCTION AND INVENTORY PLANNING AND CONTROL TWO CREDIT HOURS
Analysis and design of systems of man and machines 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 or Ise 210.

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 interaction digital, analog, or hybrid computer read-outs or through a multi-station visual simulator. Corequisite: Ise 451.

ISE 452-453. OPERATIONS RESEARCH I AND 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 or Ise 210.

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 or Ise 210.

ISE 455. PRINCIPLES OF SYSTEMS THREE CREDIT HOURS
Basic concepts of structure in dynamic systems course serve as a starting point for in-

voking a systems approach to dynamic systems in multi-disciplinary courses on urban, ecological, corporate or other social systems. Prerequisites: Cps 144, Mth 368 or Ise 210.

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 or Ise 210.

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 499. SPECIAL PROBLEMS IN SYSTEMS (SENIOR) ONE TO SIX CREDIT HOURS
 Particular assignments to be arranged and approved by Director of the Division.

HUMANITIES STUDIES (HMS)

(No major concentration available)

Dr. Eugene R. August, *Chairman of the Interdepartmental Committee*
 Interdepartmental Committee: August (English), Conard (Languages), Gilvary (Performing and Visual Arts), Greene (Philosophy), Vines, (History), Frost (Theological Studies).

HMS 101. THE GREEK EXPERIENCE THREE CREDIT HOURS
 The development of Greek ideas and ideals is traced in the literature, art, and archaeology of ancient Greece. Among those read in English translation are Homer, the lyric poets, Aeschylus, Sophocles, Euripides, Aristophanes, Herodotus, Thucydides, and Plato.

HMS 102. OUR ROMAN HERITAGE THREE CREDIT HOURS
 A study of Roman contributions to the modern world as evidence in the literature, art, and archaeology of ancient Rome. Readings in Plautus, Lucretius, Catullus, Cicero, Vergil, Horace, Livy, Ovid, and Seneca—in English translation.

HMS 301. CIVILISATION THREE CREDIT HOURS
 An interdisciplinary course using Sir Kenneth Clark's *Civilisation* film series as the basis for exploring western thought and culture from the early Middle Ages to the present. Some selected readings pertinent to western civilization are also studied. The course is taught by three teachers from three different Humanities disciplines; the disciplines represented may vary from year to year.

HMS 305. THE ROOTS OF THE MODERN SIX CREDIT HOURS
 A Philosophy-English interdisciplinary course. The philosophical inquiry explores man in time and the moral context of man's existence; the literary studies focus on the modern sensibility and the characteristic forms in which it has defined itself. Prerequisites: Phl 103 (or equivalent), Eng 101/106 (or equivalent). Also offered as Eng 352 (3 credit hours) and Phl 340 (3 credit hours).

Program of Judaic Studies (JUD)

The Program of Judaic Studies brings Jewish scholars to our campus for specialized offerings relative to the Jewish people, the literature of the Hebrew scriptures, the archaeology and history of Israel, the Hebrew language and culture. Some scholarship funds from the Joseph and Pearl Thal Scholarship Fund (1966) are available.

Visiting Instructors: Rabbi Herbert Brichto, Dr. Eric Friedland, Dr. Samuel Greengus, Dr. Ellis Rivkin

JUD 304. JEWISH IDENTITY IN THE MODERN WORLD TWO CREDIT HOURS
Introduction to the sociology of Jewish identity in the twentieth century, reflecting on the problem of anti-Semitism, the existence of Israel, and the new relation of the Jew to the Church.

JUD 305. JEWISH IDENTIFICATION MINICOURSE, SECOND SEMESTER ONE CREDIT HOUR
A seminar with field work including contacts with Jewish agencies, synagogues, the local rabbinate. Resume of content of Jud 304.

JUD 307. JUDAISM THREE CREDIT HOURS
A basic introduction to Judaism: its history, its faith, its worship.

JUD 322. HISTORY OF ANCIENT ISRAEL TWO CREDIT HOURS
A survey of history of the chosen people from Abraham through the biblical period and through the Common Era to modern times.

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.

JUD 341. SEMINAR: MODERN DEVELOPMENTS IN ARCHAEOLOGY ONE CREDIT HOUR

JUD 370. THE WORLD OF THE PSALMIST TWO 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.

JUD 371. SEMINARS PROBLEMS OF THE PSALMS ONE CREDIT HOUR
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.)

JUD 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.

JUD 422. A HISTORY OF MODERN ISRAEL TWO CREDIT HOURS
A survey of history of secular Israel since 1900: the Jews under the Nazi movement; Zionism; the State of Israel.

LANGUAGES

Dr. Gordon A Neufang, Jr., *Chairman*

Professor: Ferrigno

Associate Professors: Conard, McKenzie, Neufang, Zeinz

Assistant Professors: Castello-Lamas, Galeano, Greely, Romaguera

Instructors: Chiodo, Frederick, Hasham, Hatch

Part-time Instructor: Liaugminas

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 20 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 in a language other than their major, 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.

French (FRN)

FRN 103, 104. ELEMENTARY FRENCH I, II FOUR CREDIT HOURS
Basic elements of the French language with emphasis on audio-oral skills. Language Laboratory required.

FRN 199. FRENCH LANGUAGE TABLE ONE CREDIT HOUR PER TERM
Weekly informal practice in conversation. Faculty supervised. Repeatable up to 3 credits. Does not count toward major or minor. Prerequisite: Enrollment in French 103 or equivalent proficiency. Native speakers welcome as guests. S/NC option only.

FRN 201, 202. INTERMEDIATE FRENCH I, II THREE CREDIT HOURS
Intensive review of French grammar, selected readings in French literature or culture, practice in spoken and written language skills. Language Laboratory required.

NOTE: Frn 300 (or 301) prerequisite for all other upper level courses in French.

FRN 300, 301. FRENCH CONVERSATION THREE CREDIT HOURS
Intensive drill to develop communication skills through vocabulary development, pattern drills, and use of idioms in discussions centered around French life and cultural situations. May be taken in either sequence. One term required for majors and minors.

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.

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. Recommended for all French majors and prospective teachers.
First Term, Each Year

FRN 306. FRENCH PHONETICS AND DICTION THREE CREDIT HOURS
Formation of the sounds of French, rules of pronunciation, use of phonetic transcription, practical exercises in interpretive reading. Recommended for French majors and required for prospective teachers.

FRN 307. FRENCH CULTURE AND CIVILIZATION THREE CREDIT HOURS
Introduction to the study of French Culture with emphasis upon modern social and cultural trends. Conducted in French.

FRN 313, 314. SURVEY OF FRENCH LITERATURE THREE CREDIT HOURS
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. Recommended for all French majors and prospective teachers.

FRN 350. FRENCH LITERATURE IN TRANSLATION THREE CREDIT HOURS
Designed for non-majors and non-minors to acquaint the student with major French writers and literary movements. Conducted in English. Repeatable when sub-title changes.

FRN 405. FRENCH LITERATURE **THREE CREDIT HOURS**
Lectures and discussions in French in such specialized areas as those listed below. Repeatable when sub-title and content change.

| | |
|---------------------------------|--------------------|
| Medieval French Literature | French Classicism |
| Twentieth Century French Poetry | The Enlightenment |
| French Drama | French Novel |
| | French Renaissance |

FRN 491. INDEPENDENT STUDY **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.

German (GER)

GER 103, 104. ELEMENTARY GERMAN I, II **FOUR CREDIT HOURS**
Basic elements of German language with emphasis upon pronunciation, speaking, reading, and grammar. Language Laboratory required. No prerequisite.

GER 199. GERMAN LANGUAGE TABLE **ONE CREDIT HOUR PER TERM**
Weekly informal practice in conversation. Faculty supervised. Repeatable up to 3 credits. Does not count toward major or minor. Prerequisite: Enrollment in German 103 or equivalent proficiency. Native speakers welcome as guests. S/NC option only.

GER 201. INTERMEDIATE GERMAN I **THREE CREDIT HOURS**
Systematic grammar review. Increased use of the language in written exercises and classroom discussions based upon selected readings. Prerequisite: successful completion of German 104 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 304, 305. SPOKEN GERMAN **THREE CREDIT HOURS**
Intensive drill to develop communication skills through vocabulary development, pattern drills, and use of idioms in discussions and oral reports centered around German daily life and culture. May be taken in either sequence. One term required for 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.

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.

GER 350. GERMAN LITERATURE IN TRANSLATION **THREE CREDIT HOURS**
Designed for non-majors and non-minors to acquaint the student with major German writers and literary movements. Conducted in English. Repeatable when sub-title changes.

GER 440. GERMAN LITERATURE **THREE CREDIT HOURS**
Lectures and discussions in German in such specialized areas as those listed below. Repeatable when sub-title and content change.

| | |
|--------------------------------|---------------------------|
| Medieval German Lyric | Modern German Drama |
| Romanticism | Individual Author Studies |
| Twentieth Century German Novel | |

GER 491. INDEPENDENT STUDY **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.

Greek (GRK)

GRK 103, 104. ELEMENTARY GREEK I, II FOUR CREDIT HOURS
 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 104.

GRK 350. GREEK LITERATURE THREE CREDIT HOURS
 Lectures and discussions in such specialized areas as those listed below. Repeatable when
 sub-title and content change.

New Testament Greek Individual Author Studies
 Lyric Poetry Genre Studies

Italian (ITA)

ITA 103, 104. ELEMENTARY ITALIAN I, II FOUR CREDIT HOURS
 Elements of Italian, including pronunciation, reading, translation, grammar, dictation
 and conversation.

ITA 199. ITALIAN LANGUAGE TABLE ONE CREDIT HOUR PER TERM
 Weekly informal practice in conversation. Faculty supervised. Repeatable up to 3 credits.
 Does not count toward major or minor. Prerequisite: Enrollment in Italian 103 or equiv-
 alent proficiency. Native speakers welcome as guests. S/NC option only.

ITA 201, 202. INTERMEDIATE ITALIAN I, II THREE CREDIT HOURS
 Grammar review, selected readings from modern authors, exercises in composition and
 conversation. Prerequisite: Ita 104.

ITA 301, 302. MASTERPIECES OF ITALIAN LITERATURE THREE CREDIT HOURS
 Major works from Dante to D'Annunzio, presented in literary-historical perspective. Pre-
 requisite: Ita 202 or permission of the Department. 1971-1972

ITA 307, 308. SPOKEN ITALIAN THREE CREDIT HOURS
 Development of communication skills through discussions, reports, debates. May be taken
 in either sequence.

ITA 491. INDEPENDENT STUDY 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.

Latin (LAT)

LAT 103, 104. ELEMENTARY LATIN I, II FOUR CREDIT HOURS
 A college course in Latin fundamentals.

LAT 201, 202. INTERMEDIATE LATIN I, II THREE CREDIT HOURS
 Second year course in Latin. Readings from classical authors of the pre-Christian
 periods. Prerequisite: Lat 104.

LAT 301. LATIN COMPOSITION AND SYNTAX THREE CREDIT HOURS
 This course aims to give an intensive review of inflections and syntax with emphasis on
 original style and fluency of expression.

LAT 350. LATIN LITERATURE THREE CREDIT HOURS
 Lectures and discussions in such specialized areas as those listed below. Repeatable when
 sub-title and content change.
 Genre Studies: Poetry, Satire, Drama
 Individual Author Studies

LAT 491. INDEPENDENT STUDY**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.

Classics (CLA)**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.

See course offerings listed under Humanities Studies.

Russian (RUS)**RUS 103, 104. ELEMENTARY RUSSIAN I, II****FOUR CREDIT HOURS**

Designed to familiarize the beginner with the essentials of the spoken and written language. Vocabulary practice, simple sentence structure, conversational drills, and reading, stress on pronunciation and handwriting.

RUS 201, 202. INTERMEDIATE RUSSIAN I, II**THREE CREDIT HOURS**

Review of the essentials of grammar, intensive conversational and comprehension exercises, reading of graded modern and contemporary prose and poetry. Prerequisite: Rus 104 or equivalent.

RUS 301, 302. RUSSIAN READING AND CONVERSATION I, II**THREE CREDIT HOURS**

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 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.

Spanish (SPN)**SPN 103, 104. ELEMENTARY SPANISH I, II****FOUR CREDIT HOURS**

Development of a foundation for understanding, speaking, reading and writing Spanish. Language laboratory required.

SPN 199. SPANISH LANGUAGE TABLE**ONE CREDIT HOUR PER TERM**

Weekly informal practice in conversation. Faculty supervised. Repeatable up to 3 credits. Does not count toward major or minor. Prerequisite: Enrollment in Spanish 103 or equivalent proficiency. Native speakers welcome as guests. S/NC option only.

SPN 201, 202. INTERMEDIATE SPANISH I, II**THREE CREDIT HOURS**

Review of the basic principles of the language through composition and conversation, stressing fluency in the use of Spanish. Language laboratory required.

SPN 301, 302. SPANISH LITERATURE I, II**THREE CREDIT HOURS**

A survey of Spanish literature, with special emphasis on the Golden Age and the modern period. Lectures, discussions and reports on assigned readings.

- SPN 305, 306. 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. May be taken in either sequence. One term required for majors and minors.
- SPN 307. COMPOSITION AND SYNTAX** **THREE CREDIT HOURS**
 Intensive study of the structure of Spanish. Emphasis on correct written Spanish. Recommended for majors and prospective teachers.
- SPN 310. SPANISH PHONETICS AND DICTION** **THREE CREDIT HOURS**
 Formation of the sounds of Spanish, rules of pronunciation, use of phonetic transcription, practical exercises in interpretive reading. Recommended for Spanish majors and required for 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. Recommended for 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 350. HISPANIC LITERATURE IN TRANSLATION** **THREE CREDIT HOURS**
 Designed for non-majors and non-minors to acquaint the student with major Spanish and Spanish-American writers and literary movements. Conducted in English. Repeatable when sub-title changes.
- SPN 407, 408. SPANISH LITERATURE OF THE 20TH CENTURY I, II** **THREE CREDIT HOURS**
 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 420. SPANISH-AMERICAN LITERATURE** **THREE CREDIT HOURS**
 Lectures and discussions in Spanish in such specialized areas as those listed below. Repeatable when sub-title and content change.
 Contemporary Spanish-American Novel Spanish-American Poetry
 Spanish-American Colonial Literature Spanish-American Prose
- SPN 440. SPANISH LITERATURE** **THREE CREDIT HOURS**
 Lectures and discussions in Spanish in such specialized areas as those listed below. Repeatable when sub-title and content change.
 Medieval Spanish Literature Spanish Drama of the Golden Age
 Contemporary Spanish Drama 19th Century Spanish Novel
 Cervantes
- SPN 491. INDEPENDENT STUDY** **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.

Marketing (MKT)

Harry C. Murphy, *Chairman*
 Professor: Murphy
 Associate Professors: Comer, Jain, Royer
 Assistant Professors: King, Kline
 Part Time: Metzger, Szecsy

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 497. LABORATORY WORK EXPERIENCE THREE TO SIX CREDIT HOURS
An off-campus laboratory work position carried out under the auspices of a participating industrial, commercial, educational, health care or governmental organization located in the greater Dayton area under the supervisory authority of the participating organization. Positions offered to students are compensatory or non-compensatory. Non-compensatory positions are oriented toward a research project or a special project for the benefit of the participating organization. This offering is available to full-time undergraduate students pursuing a four-year program.

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)

H. G. Mushenheim, S.M., *Chairman*

Distinguished Service Professor: Schraut

Professor: Stander

*Associate Professors: Back, Gantner, McCloskey, Mushenheim, Peterson,
Rice, Steinlage*

Assistant Professors: Friel, Gorton, Kauflin, Potoczny, Shaughnessy

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: One year of high school algebra.

MTH 111. MATHEMATICS AND ITS CULTURAL ASPECTS THREE CREDIT HOURS
Historical development of mathematics, the axiomatic approach, various mathematical systems, applications. Prerequisite: One year of high school algebra.

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: Mth 101 or the equivalent.

MTH 118. ANALYTICAL GEOMETRY AND CALCULUS I TWO/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: Mth 101 or the equivalent.

MTH 119. ANALYTICAL GEOMETRY AND CALCULUS II TWO/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, infinite series; indeterminate forms Taylor's theorem. Prerequisite: Mth 118.

MTH 128. ANALYTICAL GEOMETRY AND CALCULUS I TWO/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: Mth 101 or the equivalent.

MTH 129. ANALYTICAL GEOMETRY AND CALCULUS II TWO/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. Multivariable calculus, solid analytic geometry, partial differentiation, multiple integrals. Prerequisite: Mth 119.

MTH 219. APPLIED DIFFERENTIAL EQUATIONS THREE CREDIT HOURS
First order equations, linear differential equations of higher order with constant coefficients, power series solutions, the Laplace transformation, numerical methods, applications to physics and engineering. Corequisite: Mth 218 or 228.

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 219 or 229 or permission of the instructor.
- 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, functions of a real variable, the Riemann integral. Prerequisite: Mth 218 or 228. *First Term, Each Year*
- MTH 422. ADVANCED CALCULUS II** THREE CREDIT HOURS
 Infinite series, uniform convergence, line integrals, multivariable calculus. 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.

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 or 119 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. Students in the Honors Program are invited to inquire about the five-year Master's Degree program.

Mechanical Engineering (MEE)

- Dr. Howard E. Smith, *Chairman*
 Professors: Ray, Smith
 Associate Professors: Bauer, Boehman, Chuang, Crouch, Davison, Minardi,
 Pinson, Schauer
 Assistant Professors: Bogner, Browne, Crisp, Harmer, Scott, Wurst

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**
 Introduction to the structure and properties of materials and the metallurgy of steel and cast iron, casting processes, powder metallurgy, and welding. Prerequisite: Chm 123, Mee 106L, Phy 196. Corequisite: Mee 211L.

MEE 211L. MATERIALS AND PROCESSES LABORATORY **ONE CREDIT HOUR**
 Mechanics of metal cutting, study of machining processes and machine tools. Basic experiments in metal cutting (tool life, measurement of forces in metal cutting), experiments in workshop metrology, industrial trips. One lecture hour and two laboratory hours per week. Corequisite: Mee 211.

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 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. Prerequisite: 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. Corequisite: Mee 303.

MEE 304. THEORY OF ENGINEERING EXPERIMENTATION **ONE CREDIT HOUR**
 Design of experimentation; instrumentation theory; statistical analysis of data. Prerequisite: Mth 218.

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 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. Prerequisite: Egm 301. Corequisite: Mee 321L.
- MEE 321L. THEORY OF MACHINES LABORATORY** ONE CREDIT HOUR
Laboratory exercises based on the principles covered in Mee 321. Prerequisite: Egm 301. Corequisite: 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 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. Applications to spark and compression ignition thermal jet, rocket, and gas turbine engines. Special emphasis given to understanding of air pollution problems caused by internal combustion engines. Idealized and actual cycles are studied in preparation for laboratory testing of I. C. engines. 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
Topics dealing with thermal environments and methods of control. Included are: psychrometrics, solar radiation, heat transmission through solid boundaries, industrial-residential environments, air conditioning load calculations and systems design, refrigeration principles. Prerequisite: Mee 301, or permission of instructor.
- 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, radiation and condensation. Special heat transfer projects arranged by instructor. Prerequisites: Mee 305L or Mee 341L, Mee 410.

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. Prerequisites: Egm 303, 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 TWO 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 project in thermal engineering, material sciences and aerospace engineering areas. Individual or group projects to be arranged by student and the instructor before the term starts. 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*

Clinical Professors: Abramson, Funkhouser, Peterson, Van Der Hoeven

Clinical Assistant Professors: Carroll, Hedrick, Klar, Pohl

The courses taken during the first three years at the University of Dayton are listed under Program S-9 and described under the individual departments. The senior year is performed at St. Elizabeth Medical Center, Good Samaritan Hospital, Miami Valley Hospital or Kettering Medical Center.

MET 380. MEDICAL TECHNOLOGY SEMINAR ONE CREDIT HOUR
 Discussion to relate academic courses and clinical laboratory sciences. Prerequisite: Junior standing.

- MET 431. INTRODUCTION TO MEDICAL LABORATORY SCIENCE** TWO CREDIT HOURS
 A study of basic hospital and laboratory routine, terminology, ethics instrumentation, laboratory mathematics and quality control.
- MET 431L. INTRODUCTION LABORATORY** TWO CREDIT HOURS
 Laboratory manipulations to accompany Met 431.
- MET 432. CLINICAL CHEMISTRY.** FOUR CREDIT HOURS
 The study of human physiological chemistry with application of analytical techniques to the examination of body fluids and tissues.
- MET 432L. CLINICAL CHEMISTRY LABORATORY** FOUR CREDIT HOURS
 Laboratory manipulations to accompany Met 432.
- MET 433. MICROBIOLOGY** FOUR CREDIT HOURS
 Study of microorganisms found in human infection, their isolation, identification and prophylaxis. Included are bacteria, fungi, parasites and viruses.
- MET 433L. MICROBIOLOGY LABORATORY** THREE CREDIT HOURS
 Laboratory manipulations to accompany Met 433.
- MET 434. HEMATLOGY** TWO CREDIT HOURS
 Instruction in the morphology of the blood and blood-forming tissues.
- MET 434L. HEMATOLOGY LABORATORY** FOUR CREDIT HOURS
 Laboratory manipulations to accompany Met 434.
- MET 435. IMMUNOLOGY** ONE CREDIT HOUR
 The study of the immune system, in particular antigen-antibody reaction in vitro.
- MET 435L. IMMUNOLOGY LABORATORY** TWO CREDIT HOURS
 Laboratory manipulations to accompany Met 435.
- MET 436. RENAL FUNCTION** TWO CREDIT HOURS
 Various methods of performing urine and other kidney function tests with correlation based on anatomical and physiological functions of the organs.
- MET 436L. RENAL FUNCTION LABORATORY** TWO CREDIT HOURS
 Laboratory manipulations to accompany Met 436.
- MET 437. IMMUNOHEMATOLOGY** ONE CREDIT HOUR
 Study of the principles of blood banking, transplatation immunity and autoimmunity.
- MET 437L. IMMUNOHEMATOLOGY LABORATORY** TWO CREDIT HOURS
 Laboratory manipulations to accompany Met 437.
- MET 438. CLINICAL PATHOLOGY** TWO CREDIT HOURS
 Lecture stressing the correlation of physiological changes in diseased states and laboratory procedures.
- MET 439. CLINICAL PATHOLOGY SEMINAR** ONE CREDIT HOUR
 Current developments and special topics.

Military Science (MIL)

LTC Billy R. Smith, *Chairman*

Professor: Smith

Assistant Professors: Turbok, Cassell, Basilotto, Hall

Students desiring to obtain a commission as an officer in the United States Army are required to successfully complete four years of Military Science or the equivalent 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. 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)

(Fine Arts—Music—Theatre—Photography (Cinema))

Patrick S. Gilvary, *Chairman*

Dr. Bernard E. Plogman, *Division Head*

Associate Professors: Plogman, Weber

Assistant Professor: Barrish

Instructors: Fiehler, Hitt, Richardson, Zahner

Part-time Instructors: Black, Kujawski, Lamden, Smith

The Fine Arts Division offers four programs:

1. Bachelor of Arts with a Major in Fine Arts
2. Bachelor of Fine Arts
3. Bachelor of Fine Arts with Teacher Certification
4. Bachelor of Fine Arts in Commercial Design

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 degreed programs are required to present an art portfolio of at least five pieces of work. Photos or slides are acceptable. Transfer students entering a B.F.A. pro-

gram 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. 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 of basic visual concepts, various drawing media, and approaches to experimental technique. Emphasis is placed on perspective, perceptual awareness and expressive freedom. Art 104 will include an introduction to figure drawing.

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 206. ANATOMICAL DRAWING **TWO CREDIT HOURS
Studies from the nude model, skeleton, anatomy diagrams and drawings of the great masters. Emphasis upon knowledge of skeletal-muscular structure, external contour and "norms" for body proportion. Prerequisite Art 103, 104.

ART 207. FIGURE DRAWING **TWO CREDIT HOURS
This course encourages the integration of previous studies of visual concepts, anatomy, and expressive freedom into a personally distinctive figure drawing approach. Prerequisite Art 104, 206 and/or instructor's 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. 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, acrylics and water color from still life, landscape figure and abstraction. Emphasis is placed on composition and techniques. 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.

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. GRAPHIC ARTS***TWO CREDIT HOURS**

Basic principles of relief printing as applied to the linoleum 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. GRAPHIC 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 week. Prerequisite is Art 251.

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 prerequisites are Art 103 and 104, 111 and 112 or permission of instructor.

ART 263. JEWELRY CONSTRUCTION***TWO CREDIT HOURS**

Original design and creativity emphasized. Individual construction procedures used rather than casting, smithing or forging. Silver soldering is an integral part of course. Prerequisites: Art 103-104, 111-112.

ART 299. SOPHOMORE COMMERCIAL DESIGN SEMINAR**TWO CREDIT HOURS**

A program of professionally oriented studies and reports to introduce the student to the commercial design field. Prerequisites: Mkt 205, Art 112.

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 individual creativity and original style. One two-hour course each week. Prerequisite for Art 304 is Art 303.

ART 316. DESIGN AND COLOR**TWO CREDIT HOURS**

The study of color based principally on Albers' Theories of Color and its use in expressing and integrating various design problems. Prerequisite: Art 111, 112 or permission of instructor.

ART 318. INTERMEDIATE DESIGN**TWO 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. ADVANCED PAINTING**FOUR CREDIT HOURS**

A continuation of Art 226-227 Introductory Painting, with increased emphasis on the

personal interpretation of the subject. The use of various painting media are encouraged, such as oils, watercolor, opaque watercolor and synthetic paints. These courses must be taken in sequence, or with instructors permission.

ART 325. FIGURE PAINTING **TWO CREDIT HOURS
This course deals with the fundamentals and practice of painting from the model. Approaches will be both representational and abstract, with stress on technical quality and personal expression. Prerequisites for this course are Art 103-104, 209, 226, 227 or permission of instructor.

ART 326. NEW FORMS PAINTING TWO CREDIT HOURS
The investigation of new techniques in painting such as sculptural painting, staining, use of colored cloth, plastics, wood, styrofoam, metal, shaped canvases, dyes, environmentals, and assemblages. Prerequisite courses are Art 231 or 217, 226, 227, 321, or permission of instructor.

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 341. WEAVING **TWO CREDIT HOURS
Creative exploration of fabrics with emphasis on the functional aspects of handweaving, including use of the loom. Includes fiber construction, basketry, stitchery, hooking, batik and macrame. Prerequisites Art 111-112.

ART 345. TYPOGRAPHY TWO CREDIT HOURS
An introduction to the basics in typography for those entering the commercial design field. Type styles, type measurements, preparing copy for printing are topics covered.

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. Prerequisites are 111, 112, 251, 252, or permission of the instructor.

ART 361. ADVANCED ENAMELING *TWO CREDIT HOURS
Student explores such new processes as cloisonne, champleve, basse-taille, and plique-à-jour in depth. Prerequisites: Art 103, 104, 111, 112, 261 or permission of instructor.

ART 363. JEWELRY CASTING *TWO CREDIT HOURS
A complete experience in designing original pieces, making wax models, burning out, casting, and finishing pieces. The course requirements are Introductory Drawing 103 and 104, also Principles of Design 111 and 112, or permission of instructor.

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 385. COMMERCIAL GRAPHICS—TECHNICAL PROBLEMS TWO CREDIT HOURS
Current aesthetic design principles. Theory and practice in typesetting, copy preparation and production procedures are explored.

ART 399. JUNIOR COMMERCIAL DESIGN SEMINAR TWO CREDIT HOURS
A continuation of the sophomore seminar program with special emphasis on the preparation of finished art for reproduction. Some assignments will be designed in collaboration

with University Relations Department. Prerequisite: Sophomore Seminar Course, Art 299.

ART 413-414. **COMMERCIAL DESIGN** FOUR CREDIT HOURS

The study of commercial techniques such as layout, keyline, preparing roughs, color separation, illustration type, investigated through various design problems. Stress is upon the preparation of a portfolio. Prerequisite courses are Art 111, 112, 316, 318, or permission of instructor.

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 sculptural content of the pieces. Permission of instructor. 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 483. **CREATIVE ART TEACHING IN ELEMENTARY AND SECONDARY SCHOOLS** FOUR CREDIT HOURS

This course deals with the philosophy of art education, creative teaching, use and care of tools and equipment, class management, art therapy, curriculum planning, art media, and actual teaching experience in children's classes. Art Education majors only.

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.

ART 490. **INDIVIDUAL STUDIES** ONE TO FIVE 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.

ART 499. **SENIOR COMMERCIAL DESIGN SEMINAR** TWO CREDIT HOURS

The course is an immediate preparation for portfolio presentation and graduation. Personal portfolio critiques and approval by staff and invited professional designers are a required part of the seminar and the commercial design program. Pre-requisite: Junior and Sophomore Seminar Course.

*Studio fee \$15.00

**Model fee \$5.00 (not to include Art 103)

Music (MUS)

Lawrence E. Tagg, *Division Head*

Professors: Berk, Reichard

Associate Professors: Tagg, Zech

Assistant Professor: Ritter

Instructors: Baxter, Benedum, C. Miller, Minton

Special Applied Music Instructors: L. Blair, Piano; R. Cavally, Flute; J. Cavally, Flute; D. Gilley, Flute; J. Green, Percussion; R. Miller, Oboe; A. Pasquale, Clarinet; A. Pepitone, Guitar;

A. Hotopp, Voice;
C. Waddell, French Horn

The Music Division offers the following programs:

1. Bachelor of Music
2. Bachelor of Music in Music Education (E-11 supplement)
3. Bachelor of Music in Music Therapy
4. Bachelor of Arts with a Major in Music

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.

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 280. MUSIC AND MOVEMENT FOR THE HANDICAPPED I ONE CREDIT HOURS
Use of music and movement in the training of handicapped children. Students work with AIM, Inc. for supervised training in dealing with handicapped children. Prerequisite: sophomore standing in Music.

MUS 281. MUSIC AND MOVEMENT FOR THE HANDICAPPED II ONE CREDIT HOUR
Continuation of Music 280. Experience is gained in working with blind, deaf, cerebral palsied and the retarded. Prerequisite: Mus 280 and sophomore standing in Music.

MUS 285. INTRODUCTION TO MUSIC THERAPY I TWO CREDIT HOURS
History and development of the profession of music therapy. Survey of theoretical bases and current trends for the use of music in therapy. Survey of disability areas using music therapy. Prerequisites: Psy 201 and Psy 313.

MUS 286. INTRODUCTION TO MUSIC THERAPY II TWO CREDIT HOURS
Continuation of Introduction to Music Therapy I, with orientation to the profession of music therapy through lectures, readings, audiovisual materials, and field trips. Supervised field experience through observation and participation in music therapy programs. Prerequisite: Mus 285.

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 299. May be repeated up to 4 credits.

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
Development of music in America, dating from its early psalmody of the 17th century through 19th century 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. MUSIC IN THE TWENTIETH CENTURY TWO CREDIT HOURS
A survey of twentieth-century music, its style, and its cultural context, from Post-Romantic composers through the avant-garde. For music majors only.

MUS 310. INTRODUCTION TO MUSIC OF THE TWENTIETH CENTURY TWO CREDIT HOURS
A survey of twentieth-century music, its relation to the other arts, and to its historical context. Electronic music, music of the avant-garde, and the relation of classical to popular 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. Open to all university students.

- MUS 317-18. ORGAN CLASS** **FOUR CREDIT HOURS**
 A general survey of organ performance techniques, registration, and literature. Students must have ability to read music, keyboard experience, and must attend the weekly organ master class. Prerequisite: permission of instructor.
- 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.
- 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.
- MUS 323. RECORDER CLASS** **ONE CREDIT HOUR**
 Basic technique and solo literature: history and performance practice. Prerequisite: ability to read music and permission of instructor.
- 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- MUS 335. MUSIC IN THE ELEMENTARY GRADES** **THREE CREDIT HOURS**
 The music education program in the elementary grades; materials and their presenta-

tion; problems and responsibilities of the music teacher. Prerequisite: Sophomore standing in music education.

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.

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 385. INFLUENCE OF MUSIC ON BEHAVIOR THREE CREDIT HOURS
Review of the theoretical bases and experimental evidence of the influence of music on human behavior, and the function of music in personality adjustment and development. Characteristics of functional music in various world cultures, and its importance in personal and cultural realization. Prerequisites: 12 hours of behavior science coursework and junior standing in music.

MUS 386. MUSIC IN THERAPY THREE CREDIT HOURS
Development of procedures for the use of music in a clinical setting. Study and application of techniques and survey of materials for use in music therapy programs. Relating theory to practice with field projects. Prerequisites: Mus 285, 286, 385.

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.

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 433-434. RESEARCH IN THEORY OR COMPOSITION FOUR CREDIT HOURS
 Practical experience in analysis for Theory majors; original composition for Composition majors. Prerequisite: Senior standing in music and permission of 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 485. PSYCHOLOGICAL FOUNDATIONS OF MUSIC I TWO CREDIT HOURS
 Study of the psycho-socio-physiological processes involved in responses of man to music and sound. Physiology of sound perception. Nature of music ability and its measurement; survey of musical aptitude and achievement tests. Prerequisites: Psy 201, senior standing in Music, permission.

MUS 486. PSYCHOLOGICAL FOUNDATIONS OF MUSIC II TWO CREDIT HOURS
 Continuation of Psychological Foundations of Music I. Study of research through review of literature on experimental studies concerning the psychological foundations of music. Critique original research studies, with proposal and formal written paper for an experimental research study. Prerequisites: Mus 485.

MUS 489. MUSIC THERAPY INTERNSHIP TWO CREDIT HOURS
 A minimum of six months supervised clinical training through resident internship in an approved neuropsychiatric hospital with an established music therapy program. This precedes the granting of the degree. Prerequisite: senior standing in Music Therapy and permission.

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 teh 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 Piano | Term Fee \$10.00 |
| Mus 399 | Piano, Organ, Voice, Strings, Reed, Woodwind or Brass Instruments | Term Fee \$40.00 |
| Mus 499 | Four-credit hour courses for Applied Music Majors | Term Fee \$80.00 |
| Mus 325, 326, 327, 329 | Stringed Instruments I | Term Fee \$10.00 |
| | Reed and Woodwind Instruments | |
| | Brass Instruments | |
| | Stringed Instruments II | |

ENSEMBLES

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.

Candidates for Teacher certification must participate in one large ensemble each term.

Theater (THR)

Lawrence Selka, *Division Head*

Associate Professor: Gilvary

Assistant Professors: Selka, Pedretti

Instructor: Held

Part-time Instructor: Saylor

Bachelor of Arts with a Major in Fine Arts

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. Three hours required of all majors from Thr 100 or Thr 300.

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. THEATRE LIGHTING** THREE CREDIT HOURS
 Study and application of lighting for the stage. Covers instrument, controls, sources, elements of electricity and lighting design for all types of theatres, as well as graph representation. 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 303. SCENE PAINTING** THREE CREDIT HOURS
 Investigation of the basic principles of color paint theory and materials. Investigation of various scene painting techniques. Four hours a week—two hours lecture, two hours studio. Students provide brushes; all other materials provided.
- 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.
- 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. Prerequisite: Thr 105. Thr 325 or 326 may be taken to meet this requirement of majors. *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. Prerequisite: Thr 105. Thr 325 or Thr 326 may be taken to meet this requirement of majors. *Second Term, Each Year*
- THR 330. CONCEPTS OF SCENIC DESIGN** THREE CREDIT HOURS
 Studies in the principles of composition and aesthetic theory as applicable to scene design. Development of personal design approach to plays of various styles.
- THR 340. THE DIRECTOR IN THE THEATRE** THREE CREDIT HOURS
 Treats the basic functions of a director in the production of a play; interpretation, composition, movement, characterization, rhythm, design concept, and actor training. Prerequisites: Thr 105, 205, 210, 211.
- 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. SCENE DESIGN** THREE CREDIT HOURS
 Individual development in scenic design through instruction in graph representation, scene painting, and the execution of designs to the point of construction. Prerequisites: Thr 205, 207, 330.

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. Either Thr 414 or Thr 415 required of all majors. Open to all University students.

THR 424. PLAY DIRECTING **THREE CREDIT HOURS**
 A study of the evolution of the modern director and the direction of two one-act plays. Prerequisite Thr 340.

THR 425. HISTORY OF THEATRE II **THREE CREDIT HOURS**
 A continuance of Thr 415 from French Renaissance to present day. Open to all University students. Either Thr 424 or Thr 425 required of all majors.

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.

Photography-Cinematography (PHO)

Instructor: Sean Wilkinson

Part-time Instructor: Jean DeBrue

PHO 101. BASIC PHOTOGRAPHY **THREE CREDIT HOURS**
 Fundamentals of black and white still photography with no previous experience required. The course would cover camera function; exposure, film processing and printing, with the emphasis on gaining sound technical and creative control of the medium. One semester. Studio fee \$25.00.

PHO 201. INTERMEDIATE PHOTOGRAPHY **THREE CREDIT HOURS**
 Specific projects designed to increase technical competence and expand visual awareness are combined with a review of historical and contemporary trends and influences in photography. Prerequisite: 101 Basic photography or equivalent. Studio fee \$25.00.

PHO 225. PHOTOGRAPHIC METHODS—TECHNIQUES **THREE CREDIT HOURS**
 Experiments and discoveries in the control of photographic materials. Relationships and variables in photographic chemistry, exposure interpretation and print manipulation, as well as the uses of graphic arts, color and non-silver imagery. Prerequisite: Pho 101 or equivalent. Studio fee \$25.00.

PHO 251. HISTORY OF FILM I "SILENT CINEMA" **THREE CREDIT HOURS**
 Analysis of the international development of film in the silent era; includes history and criticism of major contributors—e.g. Griffith, Lubitsch, Clair, Pabst, Eisenstein and Pudovkin, accompanied by screening of selected films. Film rental fee \$10.00.

PHO 252. HISTORY OF FILM II "SOUND CINEMA" **THREE CREDIT HOURS**
 An analysis of the effects of sound evolution on cinema, including history and analysis

of major films from silent era through contemporary time. Includes such contributors as Mamoulian, Marx Brothers, Ford, Mitchcock, Selznick, Renoir, Rossilini, DeSica, Wells, Antonieux, Bergman, Bunuel, Truffaut and others. Selected film screenings. Film rental fee \$10.00.

PHO 301. ADVANCED PHOTOGRAPHY THREE CREDIT HOURS
Students with a substantial commitment to photography and with demonstrated technical skills will work on individual projects and participate in group critiques and discussion. Prerequisite: PHO 201 Intermediate Photography or equivalent. Studio fee \$25.00.

PHO 325. PHOTOGRAPHIC METHODS—APPLICATION THREE CREDIT HOURS
An examination of the uses of photographic imagery in a wide variety of contexts. Those qualities that are characteristic of the medium and that influence its commercial and aesthetic applications will be explored through contact with working photographers and individual projects. Prerequisite: Pho 225. Studio fee \$25.00.

PHO 371. THE MOVING IMAGE AS COMMUNICATION THREE CREDIT HOURS
A study of photographic images (still and motion picture) as media of communication in terms of purpose, content, design and effects upon selected audiences.

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: Pho 301. Studio fee \$25.00.

PHO 402. COLOR PHOTOGRAPHY THREE CREDIT HOURS
An 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: Pho 301. Studio fee \$25.00.

Philosophy (PHL)

Dr. Raymond M. Herbenick, *Chairman*

Professors: Baker, Dieska

Associate Professors: Cartagenova, Herbenick, Kunkel, Monasterio, Nersoyan, Rhodes, Ulrich

Assistant Professors: Edelenyi, Greene, Quinn, Richards, Rinderly, Thompson, Tibbetts, Wening

Courses required for a major: Phl 103 plus 27 semester hours of upper division courses. A minimum of 15 semester hours must be on the 400 level (exclusive of Phl 495).

Courses required for a minor: Phl 103 plus 12 semester hours of upper division courses. At least 3 of these hours must be on the 400 level (exclusive of Phl 495).

Students should consult the chairman or program advisor concerning electives.

PHL 103. INTRODUCTION TO PHILOSOPHY THREE CREDIT HOURS
An introduction to the areas of philosophy through an examination of the central concerns which philosophers address. Such issues as the nature of philosophy, man's place in the world, moral responsibility, the problems of knowledge, the notion of existence, and the problem of God will be considered. Prerequisite to upper-level courses.

PHL 301. LOGIC THREE CREDIT HOURS
Introduction to valid and reliable forms of argument. Formal and informal fallacies with special emphasis on practical reasoning. Induction and deduction.

PHL 303. PHILOSOPHY OF NATURE THREE CREDIT HOURS
Introduction to the philosophical presuppositions and implications of man in nature with special emphasis on understanding population issues and consumption issues in an ecologically concerned era.

- PHL 304. PHILOSOPHY OF MAN** **THREE CREDIT HOURS**
 A study 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 consideration 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**
 An exploration 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 significant political ideas of the leading Western philosophers from Plato to Marx. Considered 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.
- PHL 320. PHILOSOPHY OF ART** **THREE CREDIT HOURS**
 A consideration 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 offer 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**
 A study of the subject-matter, characteristics and special processes of literature compared with those of philosophy. Examples such as Dostoevsky, Nietzsche, Hesse and Camus are considered where both are combined.
- PHL 330. PHILOSOPHY OF SCIENCE** **THREE CREDIT HOURS**
 A study of the philosophical presuppositions and implications of scientific methodology from a humanistic viewpoint. Included are the ethics and logic of scientific discovery and scientific explanation. Emphasis may be given to the natural sciences, the life sciences, or the social and behavioral sciences.

- 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. GREEK PHILOSOPHY** THREE CREDIT HOURS
The major philosophical problems as formulated by the Greek philosophers, especially Plato and Aristotle, with consideration of their relevance for current thinking.
- PHL 351. MEDIEVAL PHILOSOPHY** THREE CREDIT HOURS
The major philosophical problems from the 4th through 16th centuries and their importance for shaping current beliefs and traditions in the Augustinian, Jewish, Islamic, Thomist and Oxford cultural settings. Such problems as human action, conscience, freedom and law will be considered.
- PHL 352. MODERN PHILOSOPHY** THREE CREDIT HOURS
The development of philosophical thought in the 17th, 18th and 19th centuries; its impact on the culture of the age and on current philosophical thinking.
- PHL 353. CONTEMPORARY PHILOSOPHY** THREE CREDIT HOURS
Recent 20th century philosophers and issues. Different styles of philosophy, e.g. phenomenology, logical empiricism, pragmatism, marxism, ordinary language philosophy.
- 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 358. 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 recent interpretations of his thought.
- PHL 360. EXISTENTIALISM** THREE CREDIT HOURS
The major themes found in the chief representatives of the Existentialist movement. Such themes as human freedom, the absurdity of human existence, the primacy of action and the role of speculation and the emotions will be considered.
- PHL 390. SUMMER NON-RESIDENCE COURSE** THREE CREDIT HOURS
This course is designed for those students who are regularly enrolled at the University of Dayton and who cannot attend classes in the third term. The course will be done by correspondence with the professor involved. Topics will be determined by the professor. Prerequisites: three hours of philosophy and the permission of the instructor.
- 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 414. CONTINENTAL RATIONALISM** THREE CREDIT HOURS
An in-depth study of the philosophies of Descartes, Spinoza and Leibniz; their views on man, the world and God.
- 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 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**
 Readings and seminar discussion of the basic texts of St. Thomas, treating God, Man, Law, Habit, Virtue and Emotions.

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. Such authors as Marcel, Jaspers, Maritain and Gilson will be treated.

PHL 440. ADVANCED PROBLEMS IN PHILISOPHY **THREE CREDIT HOURS**
 This seminar examines in a detailed way some of the more technical problems of philosophy as well as those problems which arise in interdisciplinary settings upon which philosophers have brought their technical skills to bear. May be repeated when the topic varies.

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 ORDINARY LANGUAGE **THREE CREDIT HOURS**
 An introduction to recent trends in language philosophy with concentration on the problems of meaning and truth, in order to clarify 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**
 An 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, three, or four credit hours. This course may be repeated when the topic varies. Permission required.

PHL 495. SENIOR SYNTHESIS**THREE CREDIT HOURS**

An opportunity for students in their senior year to integrate, in an interdisciplinary way, their learning from a variety of different areas. The seminar context will include attention to knowing skills, value commitments, etc. of each area of study and their contribution to the formation of humanistic values. Specific topics within the context will be determined by the students. Not counted toward the fulfillment of 400 level requirements of a philosophy major or minor. Pre-requisite is three hours of philosophy.

Physics (PHY)

Dr. Joseph J. Kepes, Chairman

Professors: Bueche, Kepes, L. Mann

Associate Professors: Cothorn, Graham, R. Mann, O'Hare, Schneider, Yaney

Assistant Professor: Crivello

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 314 | Phy 304 | Mth 362 |
| Phy 303 | Phy 420 | Phy 404 | Mth 367 |
| Phy 390 | Phy 421 | 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 using minimal mathematical formalism. The role of Physics in contemporary society is also explored. No laboratory is required with this course. Prerequisites: None. *First Term, Each Year*

PHY 151L. GENERAL PHYSICS LABORATORY **ONE CREDIT HOUR**
 For students who wish to have a laboratory experience. Students choose a group of traditional laboratory experiments or work on projects of their own making in Physics or on the relation of Physics to Society. Prerequisites: None. *First Term, Each Year*

PHY 152. GENERAL PHYSICS **THREE CREDIT HOURS**
 This course is a continuation of Phy 151. Because of the choice of topics, the Phy 151 course is not a prerequisite. No laboratory is required with this course. Prerequisites: None. *Second Term, Each Year*

PHY 152L. GENERAL PHYSICS LABORATORY **ONE CREDIT HOUR**
 A continuation of Phy 151L for students seeking a laboratory experience. Prerequisites: None. *Second Term, Each Year*

PHY 196. GENERAL PHYSICS I MECHANICS **THREE CREDIT HOURS**
 An introductory course in Mechanics, any calculus concepts used are developed as needed. Three lectures, one and $\frac{1}{4}$ hours recitation per week. May replace Phy 201.

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 118 or 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 or 119; or Phy 201-2, Mth 113.

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 250. DESCRIPTIVE ASTRONOMY THREE OR FOUR CREDIT HOURS
 A descriptive course designed for all students who have little or no previous exposure to Astronomy. Material covered extends from ancient times up through the recent discoveries including pulsars and quasi-stellar objects. Prerequisite: None.

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 descriptions of many particle 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 314. ELECTRONICS FOR SCIENTISTS FOUR CREDIT HOURS
 Introduction to electronic circuits covering transistors, FET, SCR, linear IC, digital IC, and other semiconductor devices. Includes demonstrations and bench-top experience. Prerequisites: Phy 202L or 207L or equivalent.
First 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 399. 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. Prerequisite or Corequisite: Normally an introductory course in Physics.

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 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 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 451-452-453. INTERMEDIATE PHYSICS **FOUR CREDIT HOURS, EACH COURSE**
 A selection of modern and classical physics from the junior-senior curriculum chosen to emphasize understanding of principles and explanation of the physics as opposed to the detailed mathematical analysis. The Laboratory involves basic laboratory practice, demonstration, and independent design of experiments. For students of Physical Science and Physical Science Education. Prerequisite: Phy 208, 208L.

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*

Associate Professors: Abbott, Kerns, Lapitan, Liebler, Patyk

Assistant Professors: Fogel, Howard, Halverson

Part-time Professors: Rose, Steinbicker

Lecturers: Anderson, Schneider

A major in Political Science includes Pol 201, 202, 415 or 416 and 421, 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, Urban Affairs or Public Administration 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 303. STATE GOVERNMENT AND POLITICS **THREE CREDIT HOURS**
 A comparative study of the political institutions, processes, and systems of the fifty states and their effect upon the content and administration of selected public policies, programs, and services.

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 306. PUBLIC POLICY ANALYSIS **THREE CREDIT HOURS**
 An introduction to the study of public policy making systems and the methodology of policy analysis. Emphasis is given to theories of policy formulation, the policy-making process, means for measuring policy effectiveness and the analysis of proposals for policy change.

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 321—Russia and Eastern Europe

Pol 322—The Far East

Pol 323—Latin America

Pol 324—Southern Asia

Pol 325—The Middle East

Pol 326—Africa

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 406. INTERNATIONAL LAW AND ORGANIZATION **THREE CREDIT HOURS**
 Study of rules governing the community of nations; their nature, sources, and development; and the international agencies which are responsible for their development, interpretation, and administration.

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 410. COMPARATIVE FOREIGN POLICY **THREE CREDIT HOURS**
 Comparative analysis of the foreign policies of major states with emphasis on the process of policy development and on the national and international determinants of policy behavior.

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 415. CLASSICAL POLITICAL THEORY **THREE CREDIT HOURS**
 An analysis of the significant political ideas of the leading Western political philosophers from Plato to Machiavelli. Special emphasis will be placed upon their interpretations of the nature of man and of government. Concepts such as freedom, authority, justice, legitimacy and power will be emphasized.

POL 416. MODERN POLITICAL THEORY **THREE CREDIT HOURS**
 An analysis of the significant political ideas of the leading Western political philosophers from the Protestant Reformation to Lenin. Special emphasis will be placed upon their conceptions of freedom, authority, justice, legitimacy, power, and property.

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 more than 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 479. SELECTED TOPICS IN PUBLIC POLICY **THREE CREDIT HOURS**
 An intensive examination of the policy process, policy outcomes and policy impact in a specific area or areas of American public policy selected by the instructor. The particular policy area will vary from semester to semester among such topics as transportation, education, welfare, national defense, urban and community development, civil rights, and science and technology. May be repeated once when the topic changes.

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.

Program For Self-Directed Learning (PSDL)

Director: Dr. Joseph C. Kunkel

Staff: Kalven (Associate Director), Arons (English), Brady (Theology)

PSDL offers students a learning experience outside the regular selection of course offerings. It is not a major degree program, but it gives students an opportunity to earn credits toward graduation while working at learning projects of their own choice centering around

their own needs and interests. Open to all full-time students for 8 to 17 credits per semester—on a Satisfactory/No Credit basis—PSDL provides an opportunity for students to determine their own goals and to work out, in consultation with the faculty, the methods for reaching them. Work done in PSDL earns ASI credits, which are applicable to a student's general electives, and may also, with permission of the department chairman of the student's major field, be applied to departmental requirements.

ASI-SDL. PROGRAM FOR SELF-DIRECTED LEARNING

EIGHT TO SEVENTEEN CREDIT HOURS EACH TERM

Upon acceptance into the Program the PSDL student registers for a block of ASI-SDL credit. At the end of the semester this block of credit is subdivided into the principal areas of learning. Appropriate titles are then listed on the student's transcript with the number of credits awarded in each area. Student rationales which describe the work of the semester and justify the credits awarded are kept on file by the Dean.

Psychology (PSY)

Richard J. Popp, *Chairman*

Associate Professors: S. Bowers, F. DaPolito, R. Popp

Assistant Professors: T. Brown, E. Butter, M. Jacobson, R. Katsuyama, C. Kimble,
J. Korte, K. Kuntz, J. Lick, M. Ludwigsen, D. Polzella, J. Rotton

Part-time Instructors: D. Dieterly, S. Lehr, T. Moore, C. Nixon, G. Peters, T. Rueth,
S. Seeman, C. Scheidler, N. Schindler

The student, in consultation with his advisor, selects a program leading to either a Bachelor of Arts or a Bachelor of Science degree with their appropriate elective credits. Advisors are assigned by the Psychology Department office. All Psychology majors must complete the following required courses (and their attendant prerequisites): Psy 101, 216, and 217 which must be taken in sequence and early in the student's academic career.

All graduate courses (500 level) are open for credit in Psychology to undergraduates upon permission of the student's advisor and with the instructor's permission. See graduate catalogue for listing of courses.

Not more than a total of six (6) credits of 400 level courses from whatever source, i.e. either taken at this University or Transfer Graduate credits will apply toward a Master's degree.

PSY 101. INTRODUCTORY PSYCHOLOGY

THREE CREDIT HOURS

Studies man as an integrated personality including development, motivation, emotion, adjustment, learning, perception, and the general application of psychological principles to personal, social, and industrial problems. Required of all Psychology majors.

PSY 101 IS THE PREREQUISITE TO ALL OTHER PSYCHOLOGY COURSES

PSY 216. ELEMENTARY STATISTICS

THREE CREDIT HOURS

An introduction to basic probability and applied statistics, this course covers combinational arithmetic, binomial probability, measures of central tendency and dispersion, sampling, estimation, hypothesis testing, tests between means, linear regression, and correlation. Prerequisites: Psy 101, and Math 107 or equivalents.

PSY 217. 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. Methodology

covered is applicable to all areas of psychology. Required of all Psychology majors. Prerequisites: Psy 101, 216; Physics 151, or equivalent.

PSY 261. DYNAMICS OF ADJUSTMENT **THREE CREDIT HOURS**
Explains the psychology of adjustment through the relation of social, psychological, and biological factors. Emphasis is placed on personality dynamics and effective behavior.

PSY 318. 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. Students work with instructor to design and conduct their own experiments. Prerequisites: Psy 101, 216 or equivalent.

PSY 321. COGNITIVE PROCESSES **THREE CREDIT HOURS**
An information processing approach to attention, perception, memory imagery, and thought. Theoretical structures including neuron modeling of higher cognitive and experiential process are discussed. Prerequisite: Psy 101.

PSY 322. LEARNING **THREE CREDIT HOURS**
The foundations of the learning process. Classical and instrumental paradigms and variants of each are considered prior to investigations of complex learning. Prerequisite: Psy 101.

PSY 323. PSYCHOLOGY OF PERCEPTION **THREE CREDIT HOURS**
Introduction to the major theoretical and experimental work in perception. Includes visual, auditory, proprioceptive, and other sensory systems. Prerequisite: Psy 101.

PSY 331. INTERVIEWING AND COUNSELING **THREE CREDIT HOURS**
Techniques and theories of interviewing and counseling are discussed and evaluated. Practice is provided through role playing and case study. Prerequisite: Psy 101, or permission of the instructor.

PSY 333. PSYCHOLOGICAL TESTS AND MEASUREMENTS **THREE CREDIT HOURS**
Survey of major tests of intelligence, aptitude, interest and personality as presently used in clinics, schools, personnel offices and research settings. Emphasis is placed on evaluation and comparison of tests, rationale of test construction, and ethical considerations. Prerequisites: Psy 101, 216 or equivalent.

PSY 334. 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. Prerequisites: Psy 101, 216.

PSY 341. SOCIAL PSYCHOLOGY **THREE CREDIT HOURS**
Covers the major theoretical and experimental work in the field. Topics include attitudes, conformity, emotions, group dynamics. Prerequisite: Psy 101.

PSY 342. COMMUNITY PROBLEMS AND PSYCHOLOGY **THREE CREDIT HOURS**
A more advanced course in the practical application of psychology to community problems such as crime, drug abuse, alcoholism, poverty, race relations, overcrowding, suicide, and mental health. Students will be required to do one of several term projects, such as volunteer work for a community organization that addresses itself to one or more of these problems. Prerequisite: Psy 341.

PSY 351. CHILD PSYCHOLOGY **THREE CREDIT HOURS**
An introduction to the study of psychological processes from the developmental point of view. Emphasis will be placed on developmental changes in perception, cognition, emotion, and social behavior during infancy and through the preschool and elementary school years. Prerequisite: Psy 101.

- PSY 352. FIELD EXPERIENCE IN CHILD PSYCHOLOGY** **ONE CREDIT HOUR**
 An opportunity to participate with one of several agencies in the community which provides instructional, recreational, therapeutic services for children. (Between 3-5 hours per week must be spent at the agency selected in consultation with the instructor.) Prerequisites: Psy 101, and previous or concurrent registration in Psy 351. Satisfactory/No credit option only.
- PSY 355. PSYCHOLOGY OF EXCEPTIONAL CHILDREN** **THREE CREDIT HOURS**
 An overview of the problems facing those children with exceptional intellectual, emotional, sensory, and/or motor developmental patterns. Provides an introduction to concepts of learning and motivation as related to the processes which result in differences between these children and their normal peers. Prerequisite: 351.
- PSY 356. INTRODUCTION TO MENTAL RETARDATION** **THREE CREDIT HOURS**
 History, definitions, incidence, etiology, psychological theories, and special research problems of mental retardation will be discussed. 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 351.
- PSY 358. ADOLESCENT PSYCHOLOGY** **THREE CREDIT HOURS**
 An overview of the interrelated physical, social, emotional, and cognitive development of adolescents. Prerequisite: Psy 101.
- PSY 361. PERSONALITY** **THREE CREDIT HOURS**
 An introduction to the study of personality through theoretical views and clinical and experimental findings. Prerequisites: Psy 101.
- PSY 363. BEHAVIOR DISORDERS** **THREE CREDIT HOURS**
 Describes patterns of disordered behavior. Examines social, psychological, and physiological factors in addition to theoretical explanations of abnormal behavior. Prerequisite: Psy 101.
- PSY 367. BEHAVIOR MODIFICATION** **THREE CREDIT HOURS**
 A description of approaches to the modification of behavior integrating material from and fields of Learning theory, abnormal behavior and psychotherapy. Prerequisite: Psy 322 or equivalent.
- PSY 421. PSYCHOLINGUISTICS** **THREE CREDIT HOURS**
 This course will explore several areas of investigation including the relationship between language and perception and thought, the acquisition of speech and language, and pathological language. Prerequisite: Psy 101.
- PSY 422. PHYSIOLOGICAL PSYCHOLOGY** **THREE CREDIT HOURS**
 Neurophysiological analysis of attention, sensation, perception, emotion, motivation, and learning. Electrophysiological methods are discussed as techniques in the study of the nervous system. Prerequisite: Psy 101.
- PSY 435. HUMAN FACTORS** **THREE CREDIT HOURS**
 Designed to provide the 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 216.
- PSY 436. 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 216, concurrent registration in Psy 435.

PSY 443. PSYCHOLOGY OF WOMEN **THREE CREDIT HOURS**
 The course is intended to be a scholarly approach to a current topic. Areas to be covered include sex role learning, images of women in the mass media, sex differences, and pros and cons of the women's liberation movement. While being *about* women, the course is not designed to be exclusively *for* women. It is open to all interested students. Students will be required to write a term paper on some aspect of the area. Prerequisite: Psy 101.

PSY 452. COGNITIVE DEVELOPMENT IN CHILDREN **THREE CREDIT HOURS**
 Major theories and approaches to the study of cognitive development will be considered. Topics include attentional and mediational development as demonstrated in children's learning, information processing, memory, and problem solving, followed by a survey of concepts and findings relevant to language development and Piagetian theory. Prerequisites: Psy 351, or by permission of the instructor.

PSY 471. HISTORY OF PSYCHOLOGY **THREE CREDIT HOURS**
 Traces the evolution of psychology from its origins in philosophy, science, clinical, and applied settings. Emphasis is placed on integrating these systems and schools of thought with the spectrum of modern psychology. Prerequisite: Psy 101 or permission of the instructor.

PSY 491. HONORS SEMINAR FOR SENIORS IN PSYCHOLOGY **THREE CREDIT HOURS**
 This course will allow Senior students with a high academic achievement to equate and discuss a comprehensive overview of a selective topic, allowing him to further discuss and integrate the knowledge he has obtained through the Psychology Department's curriculum. Prerequisite: Permission of instructor.

PSY 493. INDEPENDENT STUDY **ONE TO SIX CREDIT HOURS**
 Problems of special interest to the student are investigated under individual faculty direction. Area and criteria for evaluation to be specified prior to registration. May be repeated for up to six hours total credit. Permission of the instructor is required.

PSY 494. READINGS IN PSYCHOLOGY **ONE TO SIX CREDIT HOURS**
 Directed reading in a specific area of interest to the student, conducted under faculty supervision. Topic and criteria for evaluation to be specified prior to registration. May be repeated for up to six hours total credit. Permission of instructor is required.

PSY 495. SPECIAL TOPICS IN PSYCHOLOGY **ONE TO THREE CREDIT HOURS**
 Covers various topics of special interest to faculty and students, provides an intensive critical evaluation of the appropriate literature in the field. Permission of instructor is required.

Executive Secretarial Studies (SEC)

Mary C. Civile, *Chairman*
 Associate Professors: M. Civile, V. Miller
 Assistant Professor: 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**
 An introductory course in the Gregg Diamond Jubilee Series Shorthand. The entire theory is covered. 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 rapid 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 skills in the operation of the typewriter. Introduces basic typing problems and stresses fundamentals needed in office employment. Five class periods a week.

SEC 107. PERSONAL TYPEWRITING TWO CREDIT HOURS
 Typing is taught for personal use—knowledge of the typewriter and preparation of outlines, manuscripts, business letters, fill-in forms, rough drafts, etc. Three class periods a week.

SEC 110. SECRETARIAL MATHEMATICS THREE CREDIT HOURS
 Review and development of mathematical skills needed in preparation for a business career. Emphasis is on application of theory through realistic problems.

SEC 201. DICTATION AND TRANSCRIPTION THREE CREDIT HOURS
 Gregg principles are reviewed. Emphasis is placed on sustained writing periods and transcription. Five class periods a week.

SEC 202. ADVANCED DICTATION AND TRANSCRIPTION THREE CREDIT HOURS
 This course is intended to develop competency in dictation and transcription necessary for high-level secretarial positions. Five class periods a week.

SEC 203. ADVANCED TYPEWRITING THREE CREDIT HOURS
 Stresses advanced typing problems and emphasizes techniques, knowledges, and skills necessary 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 and development of competency in the use of dictating-transcribing machines. Supervised secretarial work experience. Four class periods a week. Prerequisites: Sec 102 and Sec 104 (Intermediate Shorthand and Intermediate Typewriting).

SEC 206. ADVANCED ADMINISTRATIVE SECRETARIAL PRACTICUM THREE CREDIT HOURS
 A study of business filing fundamentals and records control. Training in the principles and application of effective business communications. Executive secretarial development in modern office procedures. Four class periods a week. Prerequisite: Sec 205 (Administrative Secretarial Practicum).

SEC 207. BUSINESS MACHINES**THREE CREDIT HOURS**

Basic training on the correct usage of the principal types of ten key adding machines, full-bank adding machines, electronic 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 study of the principles of business accounting especially designed for private secretaries. Application is 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 further develops the accrual basis of accounting for mercantile enterprises through application to selected business situations. Emphasis is on partnership transactions, 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 and 209 or equivalent.

SEC 297. LABORATORY WORK EXPERIENCE**THREE TO SIX CREDIT HOURS**

An off-campus laboratory work position carried out under the auspices of a participating industrial, commercial, educational, health care, or government organization located in the greater Dayton area under the ordinary supervisory authority of the participating organization. Positions offered to students are compensatory or non-compensatory. Non-compensatory positions are oriented toward a research project or a special project for the benefit of the participating organization. This offering is available to full-time undergraduate students pursuing a two-year or four-year program.

Sociology, Anthropology, and Social Work

Rev. John G. Dickson, S.M., *Chairman*

Professor Jack McDonald, *Assistant Chairman* (for Social Work)

Full-time Faculty:

Professors: J. Dickson, M. Huth

Associate Professor: J. McDonald

Assistant Professor: J. Bregenzer, T. Sens

Instructors: M. Baldwin, M. DeWire, A. Fresina, J. Reynolds

STATEMENT OF PURPOSES: The curriculum of the Department of Sociology, Anthropology, and Social Work is organized to cluster around the five basic social institutions: 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 in Sociology: Majors 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 36 hours of course work in the department, including Sociology 101, 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.

Major in Anthropology: Majors 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 36 hours of course work in the department, including Anthropology 150, 151, 310, and 351 or 352; Soc 415 and Soc 401.

Major, Minor, and Certification in Social Work: The Department of Sociology, Anthropology, and Social Work is an accredited member of the Council on Social Work Education, an international accrediting agency for undergraduate and graduate Schools of Social Work. Students wishing to major, minor or receive certification in Social Work should consult the director of the program in planning their particular course programs. A minimum of 46 hours of course work must be completed in the department including Soc 101 and 401; Swk 206 and 206L, Swk 304, Swk 337, Swk 418, 421, 431, and 432. Those wishing to receive a minor in Social Work must have Swk 206 and 206L, Swk 304, Swk 337, Swk 418, Soc 101. Students holding BA or BS degrees in other fields may receive a certification in Social Work upon completion of 21 hours of planned course work. Requirements for certification are planned with the director on an individual basis.

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 101. INTRODUCTION TO SOCIOLOGY **THREE CREDIT HOURS**
Introduction to the nature of sociological inquiry and to concepts and principles of sociology. Analysis focuses on structure and function of society and culture. Required for Sociology and Social Work Majors and Minors and non-departmental majors taking a bloc of Sociology courses.

Soc 204. MODERN SOCIAL PROBLEMS **THREE CREDIT HOURS**
The sociological perspective is used to examine aspects of American culture and institutions which are the course of behaviors associated with areas of contemporary concern such as criminality, minority groups, mental and emotional disorders, economic dislocations, etc.

Soc 213. 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.

- Soc 250. 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.
- Soc 301. MARRIAGE AND THE FAMILY** **THREE CREDIT HOURS**
Factors in problems in parent-child and interspousal relationships. Research, education, counseling, legislation, cultural reconstruction relevant to treatment or prevention of such problems.
- Soc 307. CRIMINOLOGY AND PENOLOGY** **THREE CREDIT HOURS**
Cultural nature, origin and development of crime; trends in criminal law; psychological and sociological factors involved in criminal behavior; current programs for treatment and prevention.
- 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.
- Soc 311. SOCIOLOGY OF RELIGION** **THREE CREDIT HOURS**
Objective analysis of the interrelations between religious phenomena and social institutions, social structure and behavior.
- Soc 315. INDUSTRIAL SOCIOLOGY** **THREE CREDIT HOURS**
Sociological aspects of work as related to facets, conditions, consequences of industrialization.
- Soc 317. 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.
- Soc 318. SOCIAL STRATIFICATION** **THREE CREDIT HOURS**
Survey of empirical and theoretical literature on the formation and changes in social class systems. Social mobility, class, status and their impact on personality, ethnic relations, political power.
- Soc 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.
- Soc 330. SOCIOLOGY OF MASS COMMUNICATION** **THREE CREDIT HOURS**
A social-psychological analysis of the role of mass media in modern society. The impact of the media will be examined in such diverse areas as family relationships, advertising, religion, recreational patterns, etc.
- 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.
- 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 upon South European and surrounding cultures.
- Soc 350. POPULATION AND HUMAN ECOLOGY** **THREE CREDIT HOURS**
Economic and social significance of world population trends. Changing composition of population, relation of population to natural resources, standard of living and markets, national policies affecting population.

- Soc 360. POLITICAL SOCIOLOGY** **THREE CREDIT HOURS**
 Analysis of law and legal structure in its social context with emphasis on the Anglo-American legal system and the socio-economic factors which influence political processes.
- Soc 363. SOCIOLOGY OF LAW** **THREE CREDIT HOURS**
 An examination of the phenomena of law from a sociological standpoint. Particular emphasis will be placed upon the evolution, maintenance, and termination of various laws, as well as the unique nature of law in a mass society. Recommended for upper level sociology and appropriate related majors.
- 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.
- Soc 402. STATISTICS** **THREE CREDIT HOURS**
 Optional for Majors. A further and more detailed study of statistical techniques in social research.
- 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 and Anthropology Majors.
- 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.
- 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.
- Soc 425. SOCIOLOGY OF DEVIANCE** **THREE CREDIT HOURS**
 An examination of the phenomena of deviance from a sociological perspective. Particular emphasis will be placed on the methodological and ethical problems, social interaction within the deviant sub-cultures which have arisen, and the reaction of society to the deviant. Recommended for upper-level Sociology and related majors.
- Soc 435W. HUMAN RELATIONS WORKSHOP** **SIX CREDIT HOURS**
 The objective of this workshop is to provide an opportunity for gaining greater knowledge and understanding of the principles and techniques leading to good human relations. Causes of tension and conflict in American society are examined and effective solutions for interpersonal and intergroup problems will be studied and evaluated. Lectures by the workshop staff and by community leaders, discussions in small groups, individual projects, demonstration of audio-visual materials, field trips, library research, daily lunch together and a picnic are all considered integral facets of the workshop process.
- Soc 436. URBAN LIFE PRACTICUM** **SIX CREDIT HOURS**
 Students majoring or minoring in the Urban Life Program will be required to devote 12 hours each week for one term to service as a community organizer, research assistant, or administrative intern in a local public or private agency under the combined direction of a University of Dayton Practicum coordinator and agency supervisors. All students participating in the practicum must attend periodic evaluative seminars and submit a final research paper summarizing their learning experiences. Required.
- 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.

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.

ANTHROPOLOGY COURSES

ANT 110. PERSPECTIVES ON URBAN MAN **THREE CREDIT HOURS**
Human problems in an urban setting will be studied from the perspectives of Biology, Economics, History, Philosophy, Political Science, Psychology, Sociology, Anthropology, and Social Work. Required introductory course for Urban Life Majors.

ANT 150. CULTURAL ANTHROPOLOGY **THREE CREDIT HOURS**
Survey of man's adaptation to, and creation of his environment by means of culture. Comparison of ways of life among peoples of the world. Implications of these styles of life for understanding of human behavior. Covers the basic principles of cultural anthropology.

ANT 151. 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. Role of hereditary and environmental factors, human genetics, meaning of "race," racial classification, and fossil record.

ANT 250. SURVEY OF WORLD CULTURES **THREE CREDIT HOURS**
A general survey of the world's cultures and their historical development. Includes North America, Latin America, Africa, India, China, Southeast Asia, Australia, and Oceania. Application of the general principles of anthropology to the understanding of a variety of specific cultures.

ANT 300. ANTHROPOLOGY OF RELIGION **THREE CREDIT HOURS**
Survey of anthropological studies of religion; emphasizes how religion relates to other aspects of culture; the worldwide variety of religious beliefs and practices.

ANT 310. CULTURE AND PERSONALITY **THREE CREDIT HOURS**
Survey of studies investigating the relationship between cultural environment and the individual. Material is drawn from both literature and non-literature societies.

ANT 315. LANGUAGE AND CULTURE **THREE CREDIT HOURS**
Introduction to the scientific study of language and its relationship to other aspects of human behavior.

ANT 335. URBAN ANTHROPOLOGY **THREE CREDIT HOURS**
A survey of the socio-cultural effects of urbanization in the developed and developing areas of the world. The objective of the course will be to seek understanding of the process of urbanization and to consider what the anthropological approach has to offer in the area of urban studies.

ANT 351. CULTURES OF THE CARIBBEAN **THREE CREDIT HOURS**
Variety of African and old World derived cultures in the caribbean and its borders. Examination of social-scientific topics, such as effects of mother-centered families on personality, importance of verbal behavior in these cultures, problems of I.Q. testing in cultures other than where the tests originate, economic adaptations, political movements, religious practices.

ANT 352. CULTURES OF LATIN AMERICA **THREE CREDIT HOURS**
Origin and development of ancient civilizations including the Aztecs, the Maya, and the Inca. Survey of contemporary cultures, with special emphasis on peasant life.

ANT 406. CULTURAL CHANGE **THREE CREDIT HOURS**
 The process of social changes in the modern world; culture lag and conflict of norms; individual and social problems arising from conflicting systems of values and norms.

ANT 440. INDEPENDENT STUDY **THREE CREDIT HOURS**
 Research problems or special readings that are of interest to the student are investigated under the guidance of an anthropology staff member. Permission of the chairman is necessary. Not to be taken for more than three credit hours.

ANT 449. ANTHROPOLOGICAL FIELD WORK **SIX CREDIT HOURS**
 Formulation and carrying out of a research design in archaeology, physical anthropology, linguistics or cultural anthropology. Prerequisite: consent of instructor.

SOCIAL WORK COURSES

SWK 206. INTRODUCTION TO SOCIAL WORK **THREE CREDIT HOURS**
 A comprehensive over-view of social work as a professional discipline. To include the historical development of the field, social work methodology, community social work resources, and roles and responsibilities of the social worker in the community. A prerequisite for all courses in social work. Must be taken with 206L. Offered each semester each year.

SWK 206L. INTRODUCTION TO SOCIAL WORK LAB **ONE CREDIT HOUR**
 An introduction to field instruction. Students are assigned to community agencies to observe the roles and responsibilities of professional social workers in practice. Must be taken with Swk 206. A prerequisite for all majors and minors in Social Work.

SWK 304. SOCIAL WORK METHODS **THREE CREDIT HOURS**
 An in-depth exploration of casework and group work processes and methods. To include: a survey of humanistic theories related to behavior and personality, such as Transactional Analysis; an introduction to basic interviewing techniques; an understanding of the helping therapeutic relationship; and the problem solving methodology and approach to diagnosis and treatment of psychosocial problems. Required of all social work majors and minors. Offered each semester each year.

SWK 334. THE PROBLEM FAMILY IN THE COMMUNITY **THREE CREDIT HOURS**
 An examination of the troubled family in the community with emphasis on treatment approaches. Family situations such as single parent families, unmarried parenthood, low-income families, families with mental retardation, or chronic physical illnesses, families where abuse or neglect is suspected, and multi-problem families will be considered as to how these situations may interfere or interrupt normal family functioning and how to assist the family in making a better adjustment in the community. Special emphasis placed on what effect ethnic and racial minority family patterns may have on working with families as well as how attitudes toward human sexuality may affect family functioning and counseling approaches. Elective credit. No prerequisites. Offered each semester each year.

SWK 337. PUBLIC WELFARE **THREE CREDIT HOURS**
 A survey of the historical development of the public welfare system and a critical analysis of present social security and public assistance policies and programs. Alternatives to the present welfare system are examined: reform proposals, negative income tax, guaranteed annual income, revenue sharing, national health insurance. Special emphasis is placed on the effect of present programs on the social service system: the caseworker role and recipient concerns. Public welfare services to ethnic and minority groups examined. Required of all social work majors. Offered each semester.

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. Elective credit. Offered the first semester each year.

SWK 418. COMMUNITY ORGANIZATION**THREE CREDIT HOURS**

An examination of community organization and social planning within the context of social work; developing a framework for practice based on a study of various approaches to C.O.; evaluations of types of agencies such as voluntary self-help, service, and planning bodies; consideration of the role of the social worker as related to the dynamics of leadership and group processes; methods of developing, maintaining, extending, and coordinating social welfare agencies to meet changing community needs. Practicum. Required of all social work majors and minors. Offered each semester each year.

SWK 421. SENIOR SEMINAR IN SOCIAL WORK**THREE CREDIT HOURS**

A concentrated integration of social work philosophy, theory, and methodology. Primary focus is upon current trends taking place in social work research, administration, and practice. Required of all social work majors. Offered each 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. Emphasis is placed on the role of the social work profession in social policy-making and planning. Understanding of the political process and how social workers might influence legislation is examined and involvement in the legislative process during the semester is required. Analysis of the advocacy role of social work. Elective credit. Offered second semester each year.

Students majoring in Social Work are required to complete an internship involving 12 hours of service each week for two terms in a local community social welfare agency or institution under the combined supervision of the University of Dayton's Field Experience Director and an agency staff member.

SWK 431. SOCIAL WORK FIELD EXPERIENCE**SIX CREDIT HOURS**

Students involved in the field experience program will be expected to spend 12 hours each week in the agency they are placed with, to attend seminar meetings at the University and to complete an evaluation of their work. It is expected during this semester that students begin to develop basic social work skills and become aware of the operation of health and welfare services in the community. They will be expected to begin to assess their own interest in, and motivation for, a career in Social Service; and to test their capacity to enter the Social Work profession. Prerequisites: Swk 206 and 206L, Swk 304, Swk 418, Swk 337. Offered each semester each year.

SWK 432. SOCIAL WORK FIELD EXPERIENCE**SIX CREDIT HOURS**

This student is expected to meet the same requirements as outlined for Swk 431. The goal of this course is to provide students with an opportunity for more intensive exposure to social welfare and to provide opportunity for expanded client-worker involvement. Experience gained through this semester will more fully acquaint the student with the social work profession and provide him with beginning social work skills. Prerequisites: Swk 206 and 206L, Swk 304, Swk 337, Swk 418, and Swk 431. Offered each semester each year.

SWK 443. THANATOLOGY: A STUDY OF DEATH, DYING AND SUICIDE**THREE CREDIT HOURS**

An in-depth study of the phenomena of death and dying. Explores the personal meaning of one's own death and the view of professionals in working with dying individuals. A comprehensive study of suicide in this society. No prerequisite requirement. Offered the first semester of each year. Elective credit.

Theological Studies (THL)

Rev. Matthew F. Kohmescher, S.M., *Chairman*

Professors: Burns, Cole, Kohmescher

Associate Professors: Anderson, Boulet, Brady, Frost

Assistant Professors: Barnes, Donnellan, Fox, Friedland,
L'Heureux, Martin, Mellert, Murray, Ryan

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.

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) and minors (18 credits) should consult the chairman.

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 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 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 211. THE OLD TESTAMENT IN MODERN STUDY **THREE CREDIT HOURS**
An introduction to the historical and prophetic literature of the Old Testament. The material is surveyed in the light of contemporary historical, literary and form-critical methodologies.

THL 212. THE NEW TESTAMENT IN MODERN STUDY **THREE CREDIT HOURS**
An introduction to selected books of the New Testament. The material is surveyed in the light of contemporary historical, literary, form-critical and redaction-critical methodologies.

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 311. RELIGION OF ISRAEL **THREE CREDIT HOURS**
A historical survey of the religious faith and practice of ancient Israel from the age of the Patriarchs to the emergence of Judaism in the post-Exilic period. The biblical traditions are constantly seen against the background of Ancient Near Eastern history and religion.

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 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. EVOLUTION OF THE EARLY CHURCH 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 140. CATHOLICISM TODAY THREE CREDIT HOURS

A general course to acquaint students with current theological thinking on Catholic belief and practice.

THL 145. MAN AND RELIGION THREE CREDIT HOURS

A study of the relation between the human quest for personal values and identity, and the religious experience of man.

THL 243. MODERN RELIGIOUS THOUGHT 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 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 344. ISSUES OF THE CHURCH TODAY THREE CREDIT HOURS

Contemporary theological thought on an aspect of the mystery of the church today, e.g., nature of the church, sacraments, liturgy. May be repeated when a different issue is discussed.

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 300. SEMINAR** ONE CREDIT HOUR
Subject matter to be covered will include: Use of technical handbooks, review of basic computer fundamentals and calculations, use of the library, discussions of employment and continued education, student papers, presentations, projects.
- 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, Rodney

ETI 104. INTRODUCTION TO ELECTRONIC ENGINEERING TECHNOLOGY **THREE CREDIT HOURS**
Selected topics in Electronic Engineering Technology including circuits, electron devices, measurements, computers, power and machinery.

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 104.

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 223. SCHEMATICS AND DIAGRAMS ONE CREDIT HOUR
 Procedures, standards and symbols used on electronic circuit diagrams.
- 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.
- ETI 455. BIOTECHNOLOGY I THREE CREDIT HOURS
 An engineering technology approach to the medical field including resistance analogy, storage analogy and biological systems analysis. Student participation at local hospitals is an essential part of the course.

Industrial Engineering Technology (ITI)

Raymond B. Puckett, *Chairman*
 Associate Professor: Puckett
 Assistant Professor: Staudter, 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. Prerequisite: 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

Associate Professors: Mott, Wolff

Assistant Professors: Rolle, Kretzler

- 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: Mti 220.
- 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 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 220. STATISTICS AND DYNAMICS** **THREE CREDIT HOURS**
 Principles of applied engineering mechanics. Three hours of class per week. Corequisite: Sti 108.
- 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 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 217.
- 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. Prerequisite: Sti 207.
- 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 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 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

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 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 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 451. TECHNOLOGY: IMPACT AND IMPLICATIONS **THREE CREDIT HOURS**
 Study of the revolutionary impact of technology upon society; its implications for the future; criticism and defense of technology as a social force and identification of responsibility of technologists for social change.

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.

Engineering Technology Interdisciplinary Courses

TII 401. DESIGN OF SYSTEMS **THREE CREDIT HOURS**
 An interdisciplinary course in which a team of students solves a complex problem using a three-phased systems approach. Projects vary from term to term, but all are concerned with societal problems, such as transportation, energy, or environment.

Index

- Academic regulations 58-67
- Academic Programs 177-178
- Academic standing 62-63, 71
- Accounting 116-117, 209-210
- Accreditation 10
- Achievement tests 33
- Administration, Officers of 174-178
- Administrative Sciences 210
- Admissions 33-36
- Admissions, requirements 33
- Advanced placement 34
- Afro-American Affairs 14-15, 211-212
- Aims and Purposes 8
- American Studies 75, 212-214
- Anthropology 75, 318-319
- Application and Admission procedures 33-36
- Art Education 138-139
- Arts and Sciences, College of 10, 69-111
- Assistant Provost, Office of 12
- Associate degrees 122-123, 157-170
- Athletics 29-30, 205
- Attendance 66
- Awards 63-66
- Bachelor of Arts Program, general requirements 72-74
- Bio-Engineering Technology 164
- Biology 89-90, 214-217
- Business Administration, Evening Programs 123
- Business Administration, School of 11, 113-124
- Business Administration, Packaging Management 121-122
- Business Management 117-118, 217-220
- Calendar 3-6, 18
- Campus and buildings 19-22
- Campus Ministry 26, 206
- Cancellation and refunds 41-42
- Certification Program 141-142
- Chemical Engineering 147-148, 220-221
- Chemical Technology 158-159, 324-326
- Chemistry 76-77, 91, 222-223
- Civil Engineering and Engineering Mechanics 149-150, 223-226
- College Level Examination Program (CLEP) 34
- Communication Arts 77, 226-230
- Computer Science 92, 230-232
- Concentration requirement 70-72
- Consortium for Higher Education Religion Studies (CHERS) 18
- Cooperative Education 114-115
- Corrective therapy certification 130
- Courses of Instruction 209-332
- Counselling 129
- Counselor Education and Human Services 244
- Credits 58
- Criminal Justice 93-95, 232-233
- Cultural activities 28-29
- Data Processing 92
- Dayton-Miami Valley Consortium 15
- Degree requirements 58, 69, 113-114, 127-128, 145-146
- Degree, second 58, 141-142
- Degrees 58
- Departmental chairmen 177
- Dietetic Internship 98-99
- Dining facilities 25
- Directories 173-206
- East Campus 7
- Economics 78, 119, 233-235
- Education, School of 11, 127-142
- Educational Administration 244
- Electrical Engineering 150-151, 245-247
- Electronic-Chemical Technology 160, 326-328
- Elementary Education 131-132, 236-237
- Employment, student 56
- Engineering 252
- Engineering, School of 11, 145-170
- Engineering Interdisciplinary Studies 266-268
- Engineering Technology 157-170, 324-332
- Engineering Technology Service Courses 331-332
- English 78-79, 247-252
- Environmental Technology 165
- Executive Secretarial Studies 312-314
- Experimental and Interdisciplinary Studies 13, 211-214, 252-255, 268, 308
- Fees 40-43
- Financial information 39-57
- Fine Arts 79-80, 155, 284-288
- Foundations of Education 235
- Food service 25
- General curriculum requirements 60
- General Studies Program 75
- Geo-Chemical Technology 166
- Geology 95, 255-257
- Governing and Advisory Bodies 173
- Grades and scholarship 60-61
- Grade point averages 62
- Graduate and alumni placement 27
- Graduate Programs 131
- Grants 50-54
- Health Service 27, 206
- Hebrew Union College Consortium 18
- High School teaching field requirements 134

History 80, 257-263
 Home Economics 96-99, 263-265
 Honors 63-66
 Honors courses 60
 Humanities Studies 268
 Identification card 27-28
 Independent Study Program and
 Honors courses 60
 Industrial-Chemical Technology 167
 Industrial Engineering Technology
 160-162, 328-329
 Instructional staff 178-198
 International Education, Office of 18
 Journalism 228-229
 Judaic Studies 268
 Languages 80-81, 269-274
 Law, School of 11-12
 Library 21
 Loans 54-56
 Location 19
 Map (Campus) 16
 Map (Dayton) 17
 Marianists 7
 Marketing 119-121, 274-276
 Mathematical Statistics 99-100
 Mathematics 81, 99-100, 276-279
 Mechanical Engineering 151, 152-153,
 279-282
 Mechanical Engineering Technology
 162-163, 329-331
 Medical Technology 100-102, 282-283
 Metallurgical Technology 168
 Military Science 283-284
 Mini courses 13
 Music 81-83, 288-294
 Music Education 137-138
 Parking 28
 Payments 39
 Performing and Visual Arts 284-296
 Photography 296-297
 Philosophy 83-84, 297-301
 Physical and Health Education
 135-137, 239-244
 Physical Science 102-104
 Physics 104-105, 301-305
 Plastics Technology 169
 Political Science 84-86, 306-309
 Pre dental 106-108
 Pre-Law 75, 78, 80, 83, 84
 Premedical 106-108
 Probation policy 62-63
 Programs 72-170
 Program for Self Directed Learning
 (PSDL) 308
 Psychological services 26-27
 Psychology 87, 309-313
 Radio 15
 Recreation 29
 Refunds 41-42
 Registration 33
 Religious services 26
 Research Institute 15
 Research staff 199-204
 Reserve Officers Training Corps
 (ROTC) 22-23
 Residence facilities 25-26
 Retraining Program 140-141
 Scholarships 44-50
 Secondary Education 133, 237-239
 Social life 29
 Social Work 109
 Sociology, Anthropology and Social
 Work 87-88, 314-320
 Special educational options 71-72
 Special Sessions 12
 Student employment 56-57
 Student financial aid 43-44
 Student handbook 30
 Student health service and insurance 27
 Student identification cards 27-28
 Student organizations 25-26
 Student Teaching 129
 Students, foreign 35-36
 Students, full-time 41
 Students, part-time 41
 Students, special 41
 Summer Session 4-6
 Systems Science 109-110, 266-268
 Teacher certification 71, 74, 130, 142
 Teacher placement 129-130
 Technical Studies and Services 155, 266
 Technology degree 163
 Television 15
 Testing center 26-27
 Theater 88, 228, 294-296
 Theological Studies 88, 321-324
 Transcripts 67
 Transfer students 35, 146, 158
 Transcient status 58
 Trustees 173
 Tuition 40-43
 Tuition reductions 56
 University Art Series 28-29
 University, General Information 7-23
 University goals 8
 University history 8-9
 University programs 9-10
 Urban Life 110-111
 Veterans 35
 Vocational Home Economics
 certification 133
 West Campus 7, 22
 WVUD-FM and UD-CCTV 13 15

NOTES

NOTES

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
- ③⑤ U. S. Routes
- ⑦⑦ Interstate Routes

