

## VI College of Arts and Sciences

Francis M. Lazarus, Dean

Richard E. Peterson, Assistant Dean

Ellen M. Murphy, O.P., Assistant Dean

Terrence D. Wong, S.M., Assistant to the Dean

The College of Arts and Sciences has as its primary responsibility the implementation of the fundamental commitment of the University of Dayton to the discovery, integration, dissemination, and application of truth. The College contributes to the fulfillment of this commitment through curricular programs in the liberal arts and sciences, which are central to the intellectual life of the University. The College provides students instruction in communication skills, critical thinking, social and cultural criticism, computation, scientific reasoning, historical analysis, and religious and moral awareness. These qualities are fundamental and essential to each student's full and integral development as a broadly educated person. The College serves not only its own students but also the students of the professional schools and insures that basic, as well as applied, fields of study are available to all students.

The faculty of the College of Arts and Sciences seek to live, as well as profess, the liberal arts and to pursue teaching and research, community service, and constructive social criticism within the framework of freedom of thought and expression. Within the tradition of liberal education, the faculty are committed to the full and integral development of students, cognizant of the priceless and timeless value of this tradition, and aware of the need to relate the liberal arts to the realities of time, place, and legitimate career aspirations.

The faculty of the College of Arts and Sciences, therefore, remind the students of all the resources within their reach: faculty guidance, especially in selecting courses and planning programs; the campus ministry; the social and professional clubs and societies; the campus publications; the many musical, dramatic, and art programs; and especially the opportunity for membership on departmental and campus-wide committees where students gain experience in working with others on projects of significance to the department or to the College.

The College of Arts and Sciences chooses from its own traditions and convictions, as well as from its role as the principal service unit of the University, a values-oriented approach to education. In all of its programs and throughout its curriculum, the College and its faculty seek to complement excellent substantive instruction with a sense of respect for the role of each person in society and an appreciation of the aesthetic and the spiritual life. These values emerge not only from the College's mission as the chief proponent of the liberal tradition at the University of Dayton, but also from its commitment to Christian educational principles and to the Marianist spirit in education, which is its heritage.

## MAJORS AND MINORS

The major is defined as a block of courses totalling at least 24 semester hours of upper-level work in a single discipline; it is sometimes supported by a minor, which is a block of courses totalling at least 12 semester hours of upper-level work. Some minors are defined specifically in the departmental listings.

The Bachelor of Arts is offered in the following areas:

|                  |                       |                   |
|------------------|-----------------------|-------------------|
| American Studies | History               | Photography       |
| Chemistry        | International Studies | Political Science |
| Communication    | Interior Design       | Psychology        |
| Economics        | Languages             | Religious Studies |
| English          | Mathematics           | Sociology         |
| Fine Arts        | Music                 | Theatre           |
| Geology          | Philosophy            |                   |

The Bachelor of Science is offered in the following areas:

|                          |                    |                  |
|--------------------------|--------------------|------------------|
| Biology                  | Home Economics     | Physics          |
| Chemistry                | Mathematics        | Predentistry     |
| Computer Science         | Medical Technology | Premedicine      |
| Computer Science-Physics | Nuclear Medicine   | Psychology       |
| Criminal Justice         | Technology         | Social Work      |
| Cytotechnology           | Physical Science   | Systems Analysis |
| Geology                  |                    |                  |

Other programs leading to the bachelor's degree:

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

### Established Interdisciplinary Majors

American Studies, International Studies, Premedicine, and Predentistry are present examples of established interdisciplinary concentrations. Such programs are established by interdisciplinary committees and administered by the chairpersons of the committees.

### Individually Designed Interdisciplinary Majors

Students demonstrating extraordinary interest, special skills or needs, and sound academic status may initiate individually designed majors. Such majors are negotiated between the students and the chairpersons of the appropriate departments. Long-range plans for the individually designed majors are submitted to the dean for final approval. Plans may be altered with appropriate supporting rationale and the approval of chairpersons and dean.

## DEGREE REQUIREMENTS

For the bachelor's degree, it is necessary to complete all the requirements listed in one of the programs in this chapter. The final 30 semester hours must be earned in residence at the University of Dayton.

GENERAL REQUIREMENTS FOR ALL  
BACHELOR OF ARTS PROGRAMS

A minimum of 120 semester hours of approved coursework must be presented for the B.A. At least 54 semester hours must be completed at the 300-400 level. For limitations on credit and restrictions on courses, consult the chairperson and the dean. For departmental or program requirements, consult program schedules A1-A21 or the department chairperson or program director.

Semester Hours

|   |       |
|---|-------|
| Major Concentration (with at least 24 semester hours at 300-400 level) . .  | 30-45 |
| Breadth Requirement (See Distribution Table below.) . . . . .   | 55-61 |
| General Education Requirements: These courses may also be counted for other requirements where applicable. (See Chapter V.) . . . . .   | 30    |
| Program and General Electives: These courses must be external to the major discipline. Electives should be approved by the chairperson or dean since some restrictions exist. . . . . | 14-35 |

Distribution Table for Breadth Requirement

Courses taken to fulfill the breadth requirement should be external to the major field. Students electing courses in any department should be aware that some introductory or background knowledge may be expected of them even when no specific prerequisite course is listed.

|  |     |
|--|-----|
| Natural Science: Four semester hours must be in an approved natural science course (Biology, Chemistry, Geology, Physics) with an accompanying laboratory. . . . .   | 7   |
| Mathematics: Three semester hours selected from approved courses in the Department of Mathematics. . . . .   | 3   |
| Social and Behavioral Sciences: Anthropology, Economics, Political Science, Psychology, and Sociology. Up to 6 of the 12 semester hours of social and behavioral sciences may, with the approval of the chairperson of the major department or the director of the program, be taken in applied social and professional studies: Criminal Justice, Education, Home Economics, Management, Marketing, Military Science, Social Work, and appropriate courses in ASI. . . . .  | 12  |
| Humanities: American Studies, Communication, English, History, Humanities Studies, Languages, Performing and Visual Arts, Philosophy, Religious Studies, and, with approval of the chairperson of the major department or the director of the program, appropriate courses in ASI. At least one unit of 9 semester hours in a humanities area with at least 3 semester hours at 300-400 level (except Languages and Performing and Visual Arts, in which a unit may be 9 semester hours at any level). The remaining 9 semester hours of electives are to be chosen from one or more other departments. (The basic Philosophy, Religious Studies, and communication skills courses do not fulfill this requirement.) . . . . . | 18  |
| Philosophy and/or Religious Studies. . . . .   | 12  |
| Communication Skills (ENG 101, 102, SPE 101): Each student must demonstrate competence in written and oral communication before the completion of the freshman year. This competence may be demonstrated through coursework, proficiency examinations, or advanced standing. Information on this matter should be sought in the office of the dean. . .  | 3-9 |

## GENERAL REQUIREMENTS FOR ALL BACHELOR OF SCIENCE PROGRAMS

A minimum of 120 semester hours of approved coursework must be presented for the B.S. For limitations on credit and restrictions on courses, consult the chairperson and the dean. For departmental or program requirements, consult program schedules S1-S14 or the department chairperson or program director.

### Semester Hours

|   |       |
|---|-------|
| <i>Major Concentration</i> (with at least 24 semester hours at 300-400 level).  | 30-60 |
| <i>Breadth Requirement</i> (See Distribution Table below.)  | 44-50 |
| <i>General Education Requirements:</i> These courses may also be counted for other requirements where applicable. (See Chapter V.)        | 30    |
| <i>Program Requirements and General Electives:</i> Electives should be approved by the chairperson or dean since some restrictions exist. | 10-46 |

### Distribution Table for Breadth Requirement

Courses taken to fulfill the breadth requirement should be external to the major concentration. Students electing courses in any department should be aware that some introductory or background knowledge may be expected of them even when no specific prerequisite course is listed.

|  |     |
|--|-----|
| <i>Natural Science:</i> Selected from Biology, Chemistry, Geology, and Physics courses with accompanying laboratories.   | 8   |
| <i>Mathematics, Computer Science:</i> At least 3 semester hours must be in Mathematics, the courses(s) to be determined by placement and major program.  | 6   |
| <i>Social and Behavioral Sciences:</i> Anthropology, Economics, Political Science, Psychology, Sociology. Up to 3 of the 6 semester hours of social and behavioral sciences may, with the approval of the chairperson of the major department or the director of the program, be taken in applied social and professional studies: Criminal Justice, Education, Home Economics, Management, Marketing, Military Science, Social Work, and appropriate courses in ASI | 6   |
| <i>Humanities:</i> American Studies, Communication, English, History, Humanities Studies, Languages, Performing and Visual Arts, Philosophy, Religious Studies, and, with the approval of the chairperson of the major department or director of the program, appropriate courses in ASI. (The basic Philosophy, Religious Studies, and communication skills courses do not fulfill this requirement.)   | 9   |
| <i>Philosophy and/or Religious Studies</i>   | 12  |
| <i>Communication Skills</i> (ENG 101, 102, SPE 101): Each student must demonstrate competence in written and oral communication before the completion of the freshman year. This competence may be demonstrated through coursework, proficiency examinations, or advanced standing. Information on this matter should be sought in the office of the dean.   | 3-9 |

## GRADUATION REQUIREMENTS

1. It is the responsibility of the student to file his or her Candidate for Graduation card in the office of the Dean of the College of Arts and Sciences.

2. For graduation, it is necessary that the student successfully complete an approved program of studies in the College; 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 Bachelor of Fine Arts and Bachelor of Music Programs, a 2.0 cumulative grade point average is required in the nonprofessional courses as well as in the professional courses.

## INTERNSHIP PROGRAM

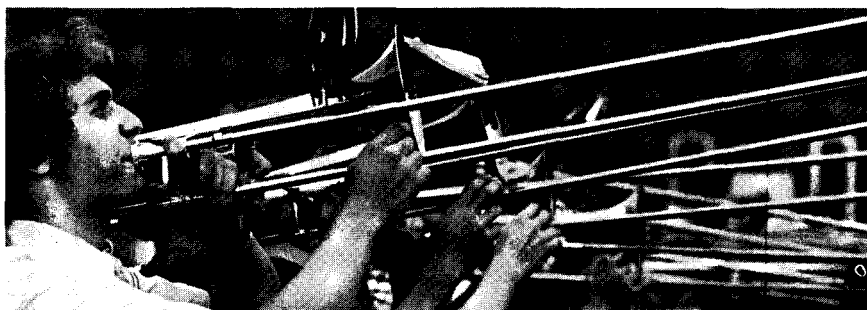
The Internship Program is an educational work experience with an outside agency, in which a full-time student registers for on-the-job work performed without direct supervision by academic personnel. Such work can be performed in a variety of areas; however, the general purpose of all internships is to serve as transition between the world of study and the world of work.

Normally a departmental internship director or another designated faculty member will make all contacts with prospective agencies for placing students as interns. While students themselves may initiate contacts at possible sites, all sites must be ruled acceptable by the director before an internship may begin.

In order to accomplish the general purpose of an internship, the student must adhere to the following requirements:

- To be eligible for an internship, a student must be in good standing at the University of Dayton and have successfully completed course work in areas appropriate to the internship sought.
  - An intern may receive no more than six semester hours of credit in any semester for internship.
  - No more than twelve semester hours of work experience credit in any kind of internship or work experience program can be accepted toward a baccalaureate degree.
  - The student intern will submit a daily log and a written report to the internship director at the conclusion of the internship.
- Other procedures and requirements in addition to those mandated by the College may be imposed by departments for individual programs to meet the specific nature of a given internship.

Interested students should see the internship directors in their respective departments for further details.



## AMERICAN STUDIES (AMS)

The course requirement for American Studies majors is 48 semester hours, distributed as follows:

1. American Studies 300, 301, and 400; and
2. Courses in each of the three areas identified below as Groups A, B, and C, as follows:
  - a. An area of concentration consisting of 24 semester hours. (Fifteen must be chosen from the recommended American courses as listed in Group A, B, or C below. The other 9 must be non-American courses in the same group.)
  - b. A second area, consisting of 9 semester hours, to be chosen from one of the two remaining groups listed below.
  - c. A third area, consisting of 6 semester hours, to be chosen from the remaining group.

*Group A*

ENG 305, 317<sup>1</sup>, 319<sup>1</sup>, 320<sup>1</sup>, 325, 327, 329<sup>1</sup>, 331<sup>1</sup>, 335, 337, 339, 380<sup>1</sup>, 451, 453,  
455, 468, 490<sup>1</sup>  
ART 376, 472, 490<sup>1</sup>  
MUS 304, 305, 306, 307, 344

*Group B*

HST 351, 355, 360, 365, 370, 375, 376, 380, 390, 391, 398, 399, 417, 450, 454,  
455, 456, 460, 461, 465, 466, 470, 472, 473, 476, 477, 495, 499<sup>1</sup>  
PHL 304, 310, 311, 314, 317, 318, 320, 323, 330, 331, 340<sup>1</sup>, 361  
REL 301, 326, 327, 364, 367, 372, 373, 408<sup>1</sup>, 428<sup>1</sup>, 448<sup>1</sup>, 478

*Group C*

ECO 346, 347, 430, 442, 445, 471, 485, 490<sup>2</sup>  
POL 301, 303, 310, 311, 313, 360, 408, 411, 450, 475  
PSY 334, 341, 351, 361, 363, 443, 461, 462, 471  
SOC 303, 328, 333, 337, 339, 341, 343, 351, 439  
ANT 310, 315, 406, 449  
SWK 337

No minor is required of American Studies majors.

The American Studies curriculum is shaped with the advice of a committee composed of professors Alexander, Arons, Bregenzer, Henninger, Kimble, and Kunkel.

<sup>1</sup>Courses which are to be considered "listed" only when their content is entirely or mostly "American."

<sup>2</sup>Each of the economics courses has one or two 200-level prerequisites; consult the director.

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PROGRAM—A1: BACHELOR OF ARTS WITH A MAJOR IN  
AMERICAN STUDIES (AMS)<sup>1</sup>

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|  | <i>Semester Hours</i> |
|--|-----------------------|
| AMS 300, 301, 400 .....  | 9                     |
| First area electives from Group A, B, or C, as listed above .....        | 24                    |
| Second area electives from one of the two remaining groups .....         | 9                     |
| Third area electives from the remaining group .....                      | 6                     |
| Natural science .....  | 7                     |
| Mathematics .....  | 3                     |
| Social and behavioral science .....                                      | 12                    |
| Humanities .....   | 18                    |
| Philosophy and/or religious studies .....                                | 12                    |
| Communication skills .....   | 3-9                   |
| General education courses and academic electives to total at least ..... | 120                   |

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<sup>1</sup>See also Distribution Table for Bachelor of Arts programs and Chapter V for General Education Requirements.

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## FACULTY

Francis J. Henninger, *Director*

*Associate Professors:* Alexander, Henninger, Palermo

## COURSES OF INSTRUCTION

AMS 300. AMERICAN CULTURES: A study of American artifacts to discern how they indicate the periods in the life of our civilization and how like artifacts can be used to determine the stages of development of various peoples. 3 sem. hrs.

AMS 301. INTERPRETATIONS OF AMERICAN CULTURE: Critical study of various interpretations of American culture through more than a hundred years. 3 sem. hrs.

AMS 400. INTERDISCIPLINARY RESEARCH: Study of the principles of interdisciplinary scholarship; what can and probably cannot be accomplished by it; successful interdisciplinary accomplishments. Students will complete interdisciplinary projects. 3 sem. hrs.

## ANTHROPOLOGY (ANT)

Anthropology is the study of people at all times and places. It emphasizes understanding total cultural systems. The Department of Sociology and Anthropology offers a minor in anthropology. Students intending to minor in anthropology should consult with the department chairperson to plan their selection of courses, which must include ANT 150 and four courses at the 300-400 level. See also SOC.

## COURSES OF INSTRUCTION

\*ANT 150. CULTURAL ANTHROPOLOGY: Basic principles of cultural anthropology. Survey of human adaptation to and adjustment of the environment by means of culture; comparison of ways of life among peoples of the world for inferences toward understanding human behavior. Required for anthropology minors. 3 sem. hrs.

ANT 300. EVOLUTION OF PEOPLE AND CULTURE: Survey of human biological and cultural evolution from prehuman ancestors to settled city-states. Consideration of contemporary peoples at various levels of social complexity. 3 sem. hrs.

ANT 310. CULTURE AND PERSONALITY: Survey of studies investigating the relationship between cultural environment and the individual. Material drawn from both literate and nonliterate societies. 3 sem. hrs.

ANT 315. LANGUAGE AND CULTURE: Introduction to the scientific study of language and its relationship to other aspects of human behavior. 3 sem. hrs.

ANT 335. URBAN ANTHROPOLOGY: Survey of the emergence of civilization in a number of regions including China, India, Mesopotamia, Egypt, Mexico, and Peru. 3 sem. hrs.

ANT 351. CULTURES OF THE CARIBBEAN: Variety of African- and Old World-derived cultures in the Caribbean and on its borders. 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. 3 sem. hrs.

ANT 352. CULTURES OF LATIN AMERICA: Origin and development of ancient civilizations including the Aztec, the Maya, and the Inca. Survey of contemporary cultures, with special emphasis on peasant life. 3 sem. hrs.

ANT 353. NATIVE CULTURES OF NORTH AMERICA: Consideration of the origins and diversity of American Indian cultures north of the Rio Grande, with attention to language, cultural adaptation to environment, and acculturation without assimilation. The present situation of the Indian in relation to the surrounding culture. 3 sem. hrs.

ANT 406. CULTURAL CHANGE: 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. Prerequisite: ANT 150 or permission of instructor. 3 sem. hrs.



**ANT 449. ANTHROPOLOGICAL FIELD WORK:** Formulation and carrying out of a research design in archaeology, physical anthropology, linguistics, or cultural anthropology. Prerequisite: Consent of instructor. *1-6 sem. hrs.*

**ANT 498. INDEPENDENT STUDY:** Research problems or readings of special interest investigated under the guidance of an anthropology staff member. Permission of the chairperson. *1-6 sem. hrs.*

\*General education course. See Chapter V.



# BIOLOGY (BIO)

## CURRICULUM DESCRIPTION FOR BACHELOR OF SCIENCE WITH A MAJOR IN BIOLOGY

| <i>Curriculum Summary</i>                            | <i>Semester Hours</i> |
|--|-----------------------|
| Biology core courses .....                           | 21                    |
| Biology electives (may include other sciences) ..... | 20                    |
| Supporting sciences .....                            | 30                    |
| Communication skills (ENG, SPE) .....                | 12                    |
| Philosophy and/or religious studies .....            | 12                    |
| Humanities electives .....                           | 12                    |
| Social-behavioral science electives .....            | 12                    |
| General electives .....                              | 6                     |
|  | <b>125</b>            |

### *Major Concentration*

**Biology Core:** Concepts of Biology I, II (BIO 151, 152, 152L, 201L), Genetics (BIO 412), Sophomore and Senior Seminars (BIO 299, 420), one environmentally oriented course from Group A, one molecularly oriented course from Group B, each with accompanying laboratory.

**Biology electives:** Six courses chosen from any of the areas listed below (Groups A, B, C). Laboratory sections must accompany two of these six electives. Qualified students may carry out independent study and research projects for laboratory credit (Biological Problems, BIO 421-422, 1-2 sem. hrs.).

| <i>Group A</i>                     | <i>Group B</i>                      |
|------------------------------------|-------------------------------------|
| BIO 314, 314L Plant Biology        | BIO 403, 403L Physiology            |
| BIO 430, 430L Ecology              | BIO 411, 411L Microbiology          |
| BIO 452, 452L Aquatic Biology      | BIO 440, 440L Cell Biology          |
| BIO 461, 461L Invertebrate Zoology | BIO 442, 442L Developmental Biology |

### *Group C* All other biology courses (See Courses of Instruction.)

Because of differing career plans, majors may take some middle or upper-level elective courses in other science or engineering departments as long as the courses have direct relevance to the major in biology. However, biology majors must have a minimum of 24 semester hours of 300-400-level *biology* courses.

**Supporting Sciences:** Two mathematics courses—MTH 112, 113. (Substitute MTH 101, precalculus, and MTH 112 if indicated by mathematics placement.) Four chemistry courses—CHM 123, 124, 313, 314, all with laboratories. (CHM 115 must precede CHM 123 if chemistry background is inadequate.) Two physics courses—PHY 201, 202, with laboratories.

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**PROGRAM—S1: BACHELOR OF SCIENCE WITH A MAJOR IN BIOLOGY (BIO)<sup>1</sup>**


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| <i>Dept.</i>          | <i>No.</i> | <i>Course</i>  | <i>1st Term<sup>2</sup></i> | <i>2nd Term</i> |
|-----------------------|------------|--|-----------------------------|-----------------|
| <b>Freshman Year</b>  |            |  |                             |                 |
| BIO                   | 100        | Freshman Seminar   | 1-0-0                       |                 |
| BIO                   | 151-152    | Concepts of Biology  | 3-0-3 <sup>2</sup>          | 3-3-4           |
| CHM                   | 123-124    | General Chemistry <sup>3</sup>                             | 3-3-4                       | 3-3-4           |
| MTH                   | 112-113    | Introductory Calculus <sup>4</sup>                         | 3-0-3                       | 3-0-3           |
| ENG                   | 101-102    | College Composition I and II                               | 3-0-3                       | 3-0-3           |
| SPE                   | 101        | Fundamentals of Effective Speaking                         |                             | 3-0-3           |
| —                     | —          | General education requirements <sup>5</sup>                | 3-0-3                       |                 |
|                       |            |  | 16                          | 17              |
| <b>Sophomore Year</b> |            |  |                             |                 |
| BIO                   | 201L       | Biology Laboratory Investigations                          |                             | 0-3-1           |
| BIO                   | 299        | Sophomore Seminar  | 1-0-1                       |                 |
| BIO                   | —          | Biology core elective                                      |                             | 3-3-4           |
| CHM                   | 313-314    | Organic Chemistry  | 3-3-4                       | 3-3-4           |
| PHY                   | 201-202    | General Physics <sup>6</sup>                               | 3-2-4                       | 3-2-4           |
| HST                   | 101 or 102 | History of Western Civilization                            |                             | 3-0-3           |
| —                     | —          | General education requirements <sup>5</sup>                | 6-0-6                       |                 |
|                       |            |  | 15                          | 16              |
| <b>Junior Year</b>    |            |  |                             |                 |
| BIO                   | 412        | General Genetics   | 3-0-3                       |                 |
| BIO                   | —          | Biology core elective                                      | 3-3-4                       |                 |
| BIO                   | —          | Biology electives <sup>7</sup>                             |                             | 6-3-7           |
| ENG                   | —          | English elective <sup>8</sup>                              | 3-0-3                       |                 |
| HST                   | —          | History elective <sup>9</sup>                              |                             | 3-0-3           |
| —                     | —          | General education requirements                             | 6-0-6                       | 6-0-6           |
|                       |            |  | 16                          | 16              |
| <b>Senior Year</b>    |            |  |                             |                 |
| BIO                   | 420        | Senior Seminar   | 1-0-1                       |                 |
| BIO                   | —          | Biology electives  | 6-3-7                       | 6-0-6           |
| —                     | —          | General education requirements and electives <sup>10</sup> | 6-0-6                       | 9-0-9           |
|                       |            |  | 14                          | 15              |

<sup>1</sup>Consult General Requirements for All Bachelor of Science Programs and Chapter V for General Education Requirements.

<sup>2</sup>For example, 3-0-3 means 3 hrs. class, 0 hrs. lab., 3 sem. hrs. credit.

<sup>3</sup>Begin in CHM 115 if background is insufficient for CHM 123.

<sup>4</sup>Placement test may necessitate initial course in precalculus (MTH 101). Depending on background and interests, two calculus sequences are available, MTH 112-113, MTH 118-119. (See Mathematics Courses of Instruction.)

<sup>5</sup>Some general education courses are specified in the program (e.g., BIO 152); others are to be chosen from the listing of approved courses. See Chapter V.

<sup>6</sup>Well qualified students are strongly advised to take PHY 206-207-208 with PHY 201-202 laboratories. (MTH 118-119 is a prerequisite.)

<sup>7</sup>A CPS course is strongly recommended.

<sup>8</sup>Select from ENG 272, 316, 370, 378, or (with approval of advisor) other ENG course that emphasizes writing.

<sup>9</sup>Select HST 340 or 341.

<sup>10</sup>A full year of a modern foreign language is recommended.

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## CURRICULUM DESCRIPTION FOR COMBINED BACHELOR AND MASTER OF SCIENCE WITH A MAJOR IN BIOLOGY

The B.S./M.S. in Biology is an accelerated, highly structured program that is designed for students who show an early interest in, and a strong potential for, research in the biological sciences. The combined program provides an undergraduate liberal arts education, a broad, basic background in the biological sciences, the development of expertise in a biological subfield, and a thorough introduction to research instrumentation and techniques. Graduates from the program are prepared for either direct entry into the job market or continuation toward the Ph.D.

An early commitment to the program and utilization of third-term sessions during the third and fourth years allows completion of all required B.S. and M.S. course work in five years. Normally the bachelor's degree is awarded at the end of the first term of the fourth year. Qualifying examinations for master's candidacy take place during the first term of the fifth year. The M.S. component of the combined program requires a research thesis. If the thesis work is under way during the fourth year, it can ideally be finished by the end of the fifth year. The master's degree is awarded upon the successful defense of the M.S. thesis.

Specialization in a biological subfield is accomplished by selection of undergraduate and graduate elective courses, choice of thesis topic, and participation in appropriate seminars. Subfield specialization, botanical or zoological, is available in physiology, ecology and field biology, cell and development biology, and genetics and microbiology. Depending upon subfield specialization, special problems courses may be conducted at clinical and/or industrial laboratories in the local community.

Indication of intent to enter the combined B.S./M.S. program should be made during the second year. Formal entry into the program occurs during the fourth year; applications are submitted during the first term, and acceptance and matriculation are begun during the second term. Students accepted into the program will be supported as follows:

Second and third terms, fourth year, partial stipend plus complete remission of tuition and fees

First, second, and third terms, fifth year, full stipend and complete remission of tuition and fees

Service as a laboratory teaching assistant may be required during the fourth and fifth years.

Admissions criteria include the following:

1. Completion of all first-, second-, and third-year courses as specifically listed in the Bulletin description of the Combined B.S./M.S. Program in Biology. Course equivalents will be determined by the departmental committee on graduate admissions.
2. Total cumulative and science grade-point averages of 3.3 or higher.
3. Reference letters from three biology faculty members (one of whom will be the applicant's graduate advisor and research director).

It is essential that potential applicants to the B.S./M.S. Program in Biology declare their intentions to the department chairperson as soon as possible.

## FACULTY

Kenneth J. McDougall, *Chairperson*

*Professors:* Bajpai, Geiger, Jaffee, McDougall, Noland, Ramsey, Shay

*Associate Professors:* Burky, Chantell, Laufersweiler, Rowe, Schwelitz, Ventullo, Williams

*Adjunct Associate Professor:* Fleischman

*Clinical Associate Professors:* Moss, Stull, Taylor

*Assistant Professors:* Kearns, Vesper

## COURSES OF INSTRUCTION

\*BIO 101. GENERAL BIOLOGY I: A study of the more important biological processes and principles through analysis and synthesis, dealing primarily with the organizational aspects of living things. This course (and BIO 102) is designed for students not following the biology core curriculum. 3 sem. hrs.

BIO 101L. GENERAL BIOLOGY LABORATORY I: Course to accompany BIO 101. One 2-hour laboratory per week stressing the investigational and experimental approach. 1 sem. hr.

\*BIO 102. GENERAL BIOLOGY II: A continuation of BIO 101, stressing primarily the operational aspects of living matter. Prerequisite: BIO 101. 3 sem. hrs.

BIO 102L. GENERAL BIOLOGY LABORATORY II: Course to accompany BIO 102. One 2-hour laboratory per week. 1 sem. hr.

BIO 104. INTRODUCTORY BIOLOGY FIELD COURSE: An introduction to the ecology, behavior, morphology, taxonomy, and life history of plants and animals. One week on campus; three weeks in the Rocky Mountains near Denver, Colorado; one week of travel to and from the field site. For non-biological science majors only. Corequisites: GEO 104; BIO 104L or GEO 104L. Third term only. 3 sem. hrs.

BIO 104L. INTRODUCTORY BIOLOGY FIELD LABORATORY: Field trip laboratory in the biological sciences to accompany BIO 104. GEO 104L can be substituted for this course. Third term only. 1 sem. hr.

\*BIO 114. BIOLOGICAL SCIENCE: Introduction to the various biological sciences for nonscience majors, stressing principles that apply to all forms of life, taking examples from plant, animal, and microbial life. 3 sem. hrs.

BIO 114L. BIOLOGICAL SCIENCE LABORATORY: Course to demonstrate and emphasize principles discussed in BIO 114. One 2-hour laboratory per week. 1 sem. hr.

BIO 151. CONCEPTS OF BIOLOGY I: 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.). 3 sem. hrs.

\*BIO 152. CONCEPTS OF BIOLOGY II: 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. 3 sem. hrs.

BIO 152L. BIOLOGY LABORATORY INVESTIGATIONS I: An introduction to biological laboratory procedures and instrumentation through a series of experimental exercises employing a wide variety of organisms. Core biology course. 1 sem. hr.

BIO 201L. BIOLOGY LABORATORY INVESTIGATIONS II: Specialized laboratory investigations at the organization levels of cells, systems, and organisms. Emphasis on both plant and animal studies. Sophomore-level biology core course with special section for medical technology majors. 1 sem. hr.

**BIO 299. BIOLOGY SEMINAR:** Introduction to biological journals and abstracting materials. Practice in the reviewing, abstracting, and presentation of biological information. Primarily for sophomores; not open to seniors. *1 sem. hr.*

**\*BIO 301. EVOLUTION:** Survey of manifestations and examination of mechanisms of the theory of organic evolution with primary emphasis on vertebrate animals. Minimum prerequisite: BIO 101-102/114. *3 sem. hrs.*

**BIO 309. COMPARATIVE ANATOMY OF THE VERTEBRATES:** Study of changes that have occurred in the chordate body with the passage of time, and analysis of their significance. Prerequisite: Minimum of one year of introductory biology. *3 sem. hrs.*

**BIO 309L. COMPARATIVE ANATOMY LABORATORY:** Course to accompany BIO 309 lecture. Dissection and study of representative vertebrate animals. Two 3-hour periods per week. *2 sem. hrs.*

**BIO 310. HISTOLOGY AND MICROTECHNIQUE:** Fundamentals of cell morphology, microscopic structure of tissues and organs, and discussion of techniques in their study. Prerequisite: BIO 101-102 or 151-152. *3 sem. hrs.*

**BIO 310L. HISTOLOGY AND MICROTECHNIQUE LABORATORY:** Fundamentals of fixing and processing various tissues in the preparation of slides; aims at recognition of microstructure of normal tissues. *1 sem. hr.*

**BIO 314. PLANT BIOLOGY:** Consideration of structure, function, reproduction, and inheritance as applicable in the plant patterns of life. Emphasis on the vascular plants. Minimum prerequisite: A course in biology. *3 sem. hrs.*

**BIO 314L. PLANT BIOLOGY LABORATORY:** Laboratory exercises to accompany BIO 314. Emphasis on generalized structure and function of plants. One 3-hour laboratory per week. *1 sem. hr.*

**BIO 320. MARINE BIOLOGY:** Introduction to the diversity of marine life including the physical-chemical environment. Third term only. *2 sem. hrs.*

**BIO 320L. MARINE BIOLOGY LABORATORY:** Examination of marine organisms and processes. Laboratory work conducted on UD campus and at off-campus field sites in the South. Third term only. *2 sem. hrs.*

**BIO 350. APPLIED MICROBIOLOGY:** Fundamentals of applied and environmental microbiology for environmental scientists and engineers. Introduction to microorganisms and their role in bioenvironmental engineering and industrial processes. For non-biological-science majors only. Prerequisites: Introductory biology; general and organic chemistry. *3 sem. hrs.*

**BIO 350L. APPLIED MICROBIOLOGY LABORATORY:** An introductory laboratory to acquaint students with basic microbiology laboratory techniques as applied to environmental pollution and industrial fermentations. *1 sem. hr.*

**BIO 380. MEDICAL TECHNOLOGY SEMINAR:** Discussion to relate academic courses and clinical laboratory sciences. Prerequisite: Junior standing. *1 sem. hr.*

- \*BIO 390. PHYSIOLOGY OF SEX AND FERTILITY REGULATION:** Introduction to the role of hormones, glands, organs, and devices in the regulation of sexual functions and fertility. No science credit for biological science majors. Prerequisite: Introductory biology. 3 sem. hrs.
- \*BIO 395. BIOLOGY AND SOCIAL ISSUES:** Presentation of the biological principles needed for critical discussion and evaluation of current societal issues including food production, biomass for energy, medicine, biotechnology, and conservation of agricultural, recreational, and forest resources. No science credit for biological science majors. Prerequisite: Introductory biology. 3 sem. hrs.
- \*BIO 398. HEREDITY AND SOCIETY:** Survey of the fundamental principles of inheritance and the application of genetics to contemporary problems of society. Topics such as genetic engineering, the green revolution, environmental mutagenesis. Not open to biological science majors. 3 sem. hrs.
- BIO 402. VERTEBRATE ZOOLOGY:** The morphology, physiology, ecology, and distribution of representative vertebrate groups. Prerequisite: Junior-senior standing. 3 sem. hrs.
- BIO 402L. VERTEBRATE ZOOLOGY LABORATORY:** 1 sem. hr.
- BIO 403. PHYSIOLOGY:** A physico-chemical examination of the physiological events occurring in a living system with emphasis on mammalian systems. Prerequisites: BIO 101-102 or 151-152; CHM 313-314. 3 sem. hrs.
- BIO 403L. PHYSIOLOGY LABORATORY:** Course to accompany BIO 403. Systematic approach to the acquisition and interpretation of information about the physiology of living systems. 1 sem. hr.
- BIO 407. EMBRYOLOGY:** Analysis of vertebrate development with emphasis on morphogenesis, especially organogenesis. Topics include congenital defects. Prerequisites: BIO 101-102 or 151-152; 309 recommended. 3 sem. hrs.
- BIO 407L. EMBRYOLOGY LABORATORY:** Course to accompany BIO 407. 2 sem. hrs.
- BIO 410. RADIATION BIOLOGY:** Principles concerning the nature of ionizing radiation, its use in studying biological systems, and its effects on organisms. Two hours lecture and two 2-hour laboratory periods per week. Prerequisites: Junior-senior standing. 4 sem. hrs.
- BIO 411. GENERAL MICROBIOLOGY:** Rigorous introductory course stressing the physiology, cultivation, and classification of microbial organisms; their role in medicine, agriculture, and industry. Prerequisites: BIO 101-102 or 151-152; CHM 313-314. 3 sem. hrs.
- BIO 411L. GENERAL MICROBIOLOGY LABORATORY:** Course to accompany BIO 411. Two 2-hour periods per week. 2 sem. hrs.
- \*BIO 412. GENERAL GENETICS:** Study of the principles of variation and heredity covering both Mendelian and molecular genetics. Core biology course. 3 sem. hrs.
- BIO 412L. GENETICS LABORATORY:** Laboratory exercises to accompany BIO 412. May be taken concurrent with or following the lecture course. 1 sem. hr.
- BIO 417. ENDOCRINOLOGY:** Discussion of hormonal regulation of metabolism, growth, and reproduction in the higher vertebrates. Prerequisite: BIO 403. 3 sem. hrs.
- BIO 417L. ENDOCRINOLOGY LABORATORY:** Laboratory dealing with the functional analysis of mechanisms and the activity of the endocrine system. 1 sem. hr.

**BIO 420. SEMINAR:** Practice in development, presentation, and discussion of papers dealing with biological research problems. Prerequisite: Junior or senior standing.

*1 sem. hr.*

**BIO 421. BIOLOGICAL PROBLEMS:** Laboratory research problems. Topics arranged with faculty advisors. Prerequisite: Chairperson's permission.

*1-2 sem. hrs.*

**BIO 422. BIOLOGICAL PROBLEMS:** Library research problems. Topics arranged with faculty advisors. Prerequisite: Chairperson's permission.

*1-2 sem. hrs.*

**BIO 423. ADVANCED MICROBIOLOGY:** Lectures, readings, and discussions on modern concepts in basic and applied microbiology, with emphasis on modern methods of microbial taxonomy, major groups of bacteria, microbial ecology, and industrial fermentation. Prerequisite: BIO 411.

*3 sem. hrs.*

**BIO 424. CELL PHYSIOLOGY:** The molecular basis for structure, function, and energy transduction in animal and plant cells as well as the organization, function, and development of membrane and subcellular organelles. Prerequisite: BIO 440.

*3 sem. hrs.*

**BIO 424L. CELL PHYSIOLOGY LABORATORY:** Isolation and chemical characterization of cellular organelles; study of cell structure by light microscopy.

*1 sem. hr.*

**BIO 425. PARASITOLOGY:** Introduction to the morphology, life history, and clinical significance of parasites and other symbionts. Prerequisite: BIO 101-102 or 151-152.

*3 sem. hrs.*

**BIO 425L. PARASITOLOGY LABORATORY:** Course to accompany BIO 425. Recognition of common human parasites. Study of both living and preserved forms. One 3-hour period per week.

*1 sem. hr.*

**BIO 427. IMMUNOLOGY:** Discussions of antigens, antibodies, antigenicity, immunogenicity, and antigen-antibody reactions including hypersensitivity, immune tolerance, and transplants. Prerequisite: CHM 420.

*3 sem. hrs.*

**BIO 430. ECOLOGY:** Interrelationship of plants, animals, and microorganisms with the physical-chemical environment: nutrient cycles, energy flow, ecosystems, and factors affecting distribution and abundance of organisms. Prerequisite: One year of biology.

*3 sem. hrs.*

**BIO 430L. ECOLOGY LABORATORY:** Field and laboratory exercises to accompany BIO 430. May be taken concurrently with or following BIO 430.

*1 sem. hr.*

**BIO 431. EXPERIMENTAL EMBRYOLOGY:** Morphological and physiological aspects of development including an introduction to teratology. Prerequisite: BIO 407.

*3 sem. hrs.*

**BIO 431L. EXPERIMENTAL EMBRYOLOGY LABORATORY:**

*1 sem. hr.*

**BIO 435. MICROBIAL ECOLOGY:** Study of the diversity and activity of microorganisms and the interrelationships between microorganisms and their environments with emphasis on aquatic ecosystems. Prerequisites: BIO 411; CHM 313-314.

*3 sem. hrs.*

**BIO 435L. MICROBIAL ECOLOGY LABORATORY:** Examination of the methods of isolation and enumeration of microorganisms and techniques for determining their activities in the field and laboratory.

*1 sem. hr.*

**BIO 440. CELL BIOLOGY:** Function, structure, composition, heredity, and growth of cells. Analysis of cell concept in biochemical terms. Prerequisites: BIO 101-102 or 151-152; CHM 313-314.

*3 sem. hrs.*



**BIO 440L. CELL BIOLOGY LABORATORY:** Laboratory exercises to accompany BIO 440. May be taken concurrently with or following BIO 440. *1 sem. hr.*

**BIO 441. PLANT PHYSIOLOGY:** Current concepts concerning the physiology of higher plants. Topics include uptake and transfer of materials, metabolism, and regulation of growth and reproduction. Prerequisite: Junior or senior standing. *3 sem. hrs.*

**BIO 442. DEVELOPMENTAL BIOLOGY:** Analysis of growth and differentiation from standpoint of nucleo-cytoplasmic relationships, and biochemical/physiological aspects. Topics include regeneration and metamorphosis. *3 sem. hrs.*

**BIO 442L. DEVELOPMENTAL BIOLOGY LABORATORY:** Laboratory exercises to accompany BIO 442. May be taken concurrently with or following BIO 442. *1 sem. hr.*

**BIO 444. PLANT DIVERSITY:** Broad survey of the major divisions of the plant kingdom; consideration of algae, fungi, bryophytes, vascular plant groups; their generalized life histories, ecological and physiological characteristics, evolutionary relationships. *3 sem. hrs.*

**BIO 444L. PLANT DIVERSITY LABORATORY:** Laboratory studies of the plant groups, including life cycles and evolutionary, physiological, and ecological adaptations. One 3-hour laboratory per week. *1 sem. hr.*

**BIO 446. PLANT DEVELOPMENT:** Study of the major organ systems of the vascular plants with emphasis on the nature of their cell-types and tissue composition and their patterns of development. *3 sem. hrs.*

**BIO 446L. PLANT DEVELOPMENT AND PHYSIOLOGY LABORATORY:** Laboratory to complement BIO 441 and BIO 446. *1 sem. hr.*

**BIO 450. COMPARATIVE ANIMAL PHYSIOLOGY:** Organized on a function-system basis, course dealing with environment-organism interaction and with integrative systems of the principal phyla of animals. *3 sem. hrs.*

**BIO 450L. COMPARATIVE ANIMAL PHYSIOLOGY LABORATORY:** Laboratory to accompany BIO 450. Must be taken concurrently with BIO 450. *1 sem. hr.*

**BIO 452. AQUATIC BIOLOGY:** The interrelationship of organisms and stream and lake ecosystems, including nutrient cycles, oceanic and lake current development, chemical limnology, adaptation to the aquatic environment, and pollution ecology. *3 sem. hrs.*

**BIO 452L. AQUATIC BIOLOGY LABORATORY:** Laboratory and field exercises emphasizing chemical and physical limnology, evolution of aquatic ecosystems, and pollution ecology. One laboratory or field trip per week. *1 sem. hr.*

**BIO 461. INVERTEBRATE ZOOLOGY:** Survey 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. *3 sem. hrs.*

**BIO 461L. INVERTEBRATE ZOOLOGICAL LABORATORY:** Course to accompany BIO 461. One 3-hour laboratory per week. *1 sem. hr.*

**BIO 462. ADVANCED GENETICS:** Analysis of the nature of the gene and gene action. Particular attention to genetic regulation and to recent advances in molecular genetics. Prerequisites: BIO 412, CHM 314. *2 sem. hrs.*

**BIO 462L. ADVANCED GENETICS LABORATORY:** Laboratory to accompany BIO 462, employing an experimental approach to genetic problems. Students work the entire term on projects of their choice. *1 sem. hr.*

**BIO 464. PATHOPHYSIOLOGY:** The role of physiological stress in human physiology and its relation to the disease process. Attention to stress assessment through critical interpretation of clinical laboratory data. Prerequisite: Junior-senior standing; BIO 403. *3 sem. hrs.*

**BIO 464L. PATHOPHYSIOLOGY LABORATORY:** *1 sem. hr.*

**BIO 466. PATHOGENIC BACTERIOLOGY AND IMMUNOLOGY:** The nature of infectious diseases, host-parasite relationships in resistance and infection, defense mechanism (antigen-antibody response); survey of the bacteria causing disease in humans. Prerequisites: BIO 411. *3 sem. hrs.*

**BIO 466L. PATHOGENIC BACTERIOLOGY AND IMMUNOLOGY LABORATORY:** Laboratory experiments to demonstrate immunological, serological, determinative, and medical bacteriology. Two 2-hour laboratory periods per week. *1 sem. hr.*

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\*General education course. See Chapter V.



## CHEMISTRY (CHM)

The B.A. program in chemistry provides a framework of scientific courses which serve as a preparation for a number of interdisciplinary professions. The traditional B.S. curriculum has been modified in the B.A. program, most notably in mathematics, physics, and advanced chemistry. The program is sufficiently flexible to afford a wide selection of courses in the humanities. Science courses may be chosen to provide a preparation for professions such as medicine, dentistry, optometry, veterinary medicine, biochemistry, education, and law, as well as for employment in many other areas which require a background in science.

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**PROGRAM—A2: BACHELOR OF ARTS WITH A MAJOR IN CHEMISTRY (CHA)<sup>1</sup>**


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| <i>Summary of Requirements</i>                                  | <i>Semester Hours</i> |
|---|-----------------------|
| Chemistry .....   | 31-37                 |
| Physics .....   | 8                     |
| Science electives .....   | 0-6                   |
| Mathematics .....   | 8-9                   |
| Social and behavioral sciences .....                            | 12                    |
| Humanities .....  | 18                    |
| Philosophy and/or religious studies .....                       | 12                    |
| Communication skills .....                                      | 3-9                   |
| General education courses and electives to total at least ..... | 126                   |

| <i>Dept.</i>          | <i>No.</i> | <i>Course</i>   | <i>1st Term<sup>2</sup></i> | <i>2nd Term</i> |
|-----------------------|------------|---|-----------------------------|-----------------|
| <b>Freshman Year</b>  |            |   |                             |                 |
| CHM                   | 100        | Arts and Sciences Orientation                           | 1-0-0                       |                 |
| CHM                   | 123-124    | General Chemistry <sup>3</sup>                          | 3-3-4                       | 3-3-4           |
| MTH                   | 112-113    | Introductory Calculus I and II <sup>4</sup>             | 3-0-3                       | 3-0-3           |
| SPE                   | 101        | Fundamentals of Effective Speaking <sup>5</sup>         |                             | 3-0-3           |
| ENG                   | 101-102    | College Composition I and II <sup>5</sup>               | 3-0-3                       | 3-0-3           |
| —                     | —          | General education and breadth requirements <sup>1</sup> | 6-0-6                       | 3-0-3           |
|                       |            |   | <u>16</u>                   | <u>16</u>       |
| <b>Sophomore Year</b> |            |   |                             |                 |
| CHM                   | 201        | Quantitative Analysis <sup>3</sup>                      | 2-4-4                       |                 |
| CHM                   | 313-314    | Organic Chemistry <sup>6</sup>                          | 3-3-4                       | 3-3-4           |
| MTH                   | 215        | Basic Statistics <sup>4</sup>                           |                             | 3-0-3           |
| PHY                   | 201-202    | General Physics <sup>3</sup>                            | 3-3-4                       | 3-3-4           |
| —                     | —          | General education and breadth requirements <sup>7</sup> | 3-0-3                       | 6-0-6           |
|                       |            |   | <u>15</u>                   | <u>17</u>       |
| <b>Junior Year</b>    |            |   |                             |                 |
| CHM                   | 302        | Physical Chemistry <sup>8</sup>                         | 3-0-3                       |                 |
| CHM                   | —          | Chemistry elective <sup>9</sup>                         |                             | 3-0-3           |
| —                     | —          | General education and breadth requirements <sup>7</sup> | 6-0-6                       | 6-0-6           |
| —                     | —          | Electives <sup>7</sup>                                  | 6-0-6                       | 6-0-6           |
|                       |            |   | <u>15</u>                   | <u>15</u>       |

|     |     | Senior Year                       |       |         |
|-----|-----|-----------------------------------|-------|---------|
| CHM | 496 | Professional Practices Seminar    | 1-0-1 |         |
| CHM | —   | Chemistry electives <sup>10</sup> | 6-0-6 | 3-0-3   |
| —   | —   | Electives                         | 9-0-9 | 12-0-12 |
|     |     |                                   | 16    | 15      |

<sup>1</sup>See also Distribution Table for Bachelor of Arts programs and Chapter V for General Education Requirements. Some general education courses are specified in the program (e.g., CHM 123-124); others are to be chosen from the listing of approved courses.

<sup>2</sup>For example: 3-0-3 means 3 class hrs., 0 lab. hrs., 3 sem. hrs. of credit.

<sup>3</sup>May substitute more advanced course depending on background, placement test, or permission of department chairperson.

<sup>4</sup>May substitute MTH 118-119 for MTH 112-113, 215.

<sup>5</sup>In the event of waiver or advanced placement, take another English course or nonscience elective.

<sup>6</sup>CHM 315L-316L may be elected to satisfy laboratory requirements.

<sup>7</sup>A minimum of two courses in a modern foreign language is recommended.

<sup>8</sup>May substitute CHM 303-304.

<sup>9</sup>Must include one of the following courses: CHM 404, 406, 412, 415, 417, 420, 498, 499, 551, 552, or any graduate chemistry course with permission of the instructor.

<sup>10</sup>Must include either two additional courses listed in footnote 9 or two related science courses approved by the chairperson.

The B.S. program in chemistry is a rigorous curriculum which satisfies the requirements of the American Chemical Society for the training of professional chemists. Students who choose this program of study normally have careers in chemistry as their objective. Qualified students may participate in a co-operative education program following completion of the sophomore year.

Each student in the B.S. program is required to conduct an original research project, thereby gaining practical experience in library and laboratory research and in reporting results. Satisfaction of this requirement normally begins with enrollment in CHM 495 and selection of a research professor and project during the second term of the junior year. The research project, conducted during the entire senior year, normally requires two work periods of 3 to 4 hours each a week. The project culminates in the final term of the senior year with enrollment in CHM 498 or 499 (3 semester hours), the submission of an acceptable thesis, and the presentation of a seminar in CHM 497. Additional research work to a maximum total of 6 semester hours may be elected provided that the work extends beyond two semesters. Co-operative education students substitute work experience for research.

#### PROGRAM—S2: BACHELOR OF SCIENCE WITH A MAJOR IN CHEMISTRY (CHM)<sup>1</sup>

| Summary of Requirements   | Semester Hours |
|---|----------------|
| Chemistry .....   | 50             |
| Physics .....   | 11             |
| Mathematics and computer science .....  | 15             |
| Foreign language .....  | 6-8            |
| Social and behavioral sciences .....  | 6              |
| Humanities .....  | 9              |
| Philosophy and/or religious studies .....                                     | 12             |
| Communication skills .....  | 3-9            |
| General education courses, breadth requirements, and electives to total ..... | 127-129        |

| Dept.          | No.       | Course  | 1st Term <sup>2</sup> | 2nd Term |
|----------------|-----------|---|-----------------------|----------|
| Freshman Year  |           |   |                       |          |
| CHM            | 100       | Arts and Sciences Orientation                         | 1-0-0                 |          |
| CHM            | 123-124   | General Chemistry <sup>3</sup>                        | 3-3-4                 | 3-3-4    |
| MTH            | 118-119   | Analytical Geometry and Calculus I and II             | 4-0-4                 | 4-0-4    |
| PHY            | 206       | General Physics                                       |                       | 3-0-3    |
| PHY            | 210L      | Physics Laboratory                                    |                       | 0-3-1    |
| ENG            | 101-102   | College Composition I and II <sup>4</sup>             | 3-0-3                 | 3-0-3    |
| SPE            | 101       | Fundamentals of Effective Speaking <sup>4</sup>       | 3-0-3                 |          |
| —              | —         | General education or breadth requirement <sup>1</sup> | 3-0-3                 |          |
|                |           |   | 17                    | 15       |
| Sophomore Year |           |   |                       |          |
| CHM            | 201       | Quantitative Analysis                                 |                       | 2-4-4    |
| CHM            | 313-314   | Organic Chemistry                                     | 3-0-3                 | 3-0-3    |
| CHM            | 315L-316L | Organic Chemistry Laboratory                          | 0-3-1                 | 0-3-1    |
| MTH            | 218       | Analytical Geometry and Calculus III                  | 4-0-4                 |          |
| PHY            | 207-208   | General Physics II and III                            | 3-0-3                 | 3-0-3    |
| PHY            | 211L      | Physics Laboratory                                    | 0-3-1                 |          |
| —              | —         | Foreign language <sup>5</sup>                         | 4-0-4                 | 4-0-4    |
|                |           |   | 16                    | 15       |
| Junior Year    |           |   |                       |          |
| CHM            | 303-304   | Physical Chemistry                                    | 3-3-4                 | 3-3-4    |
| CHM            | 406       | Qualitative Organic Analysis                          | 2-6-4                 |          |
| CHM            | 495       | Introduction to Research                              |                       | 1-0-0    |
| CHM            | 417       | Inorganic Chemistry                                   |                       | 3-0-3    |
| CPS            | 132       | Computer Programming for Science                      | 3-0-3                 |          |
| —              | —         | General education and breadth requirements            | 6-0-6                 | 9-0-9    |
|                |           |   | 17                    | 16       |
| Senior Year    |           |   |                       |          |
| CHM            | 415       | Analytical Chemistry                                  | 2-6-4                 |          |
| CHM            | 496-497   | Chemistry Seminar                                     | 1-0-1                 | 1-0-1    |
| CHM            | 498       | Research and Thesis                                   | 3-0-3                 |          |
| CHM            | —         | Chemistry electives <sup>6</sup>                      | 3-0-3                 | 3-0-3    |
| —              | —         | General education and breadth requirements            | 3-0-3                 | 6-0-6    |
| —              | —         | Electives <sup>7</sup>                                | 3-0-3                 | 6-0-6    |
|                |           |   | 17                    | 16       |

<sup>1</sup>Consult General Requirements for All Bachelor of Science Programs and Chapter V for General Education Requirements. Some general education courses are specified in the program (e.g., CHM 123-124); others are to be chosen from the listing of approved courses.

<sup>2</sup>For example 3-3-4 means 3 class hrs., 3 lab. hrs., 4 sem. hrs. of credit.

<sup>3</sup>May substitute more advanced courses depending on background. Consult chairperson. Students with weak or no chemistry background begin with CHM 115.

<sup>4</sup>In the event of waiver or advanced placement, take another English course or nonscience elective.

<sup>5</sup>For advanced placement, consult chairperson, Department of Languages.

<sup>6</sup>Choose any 400-level chemistry or, with the permission of the chairperson, any graduate-level chemistry course. With the permission of the chemistry chairperson, one advanced course in physics, mathematics, computer science, or biology may be substituted.

<sup>7</sup>Any courses for which the student has the prerequisites. CPT 401, 401L; MAT 509 are recommended for students interested in industrial chemistry.

## FACULTY

B. Lawrence Fox, *Chairperson*

*Professors:* Eveslage, Fox, Fratini, Keil, Lucier, Michaelis, Singer

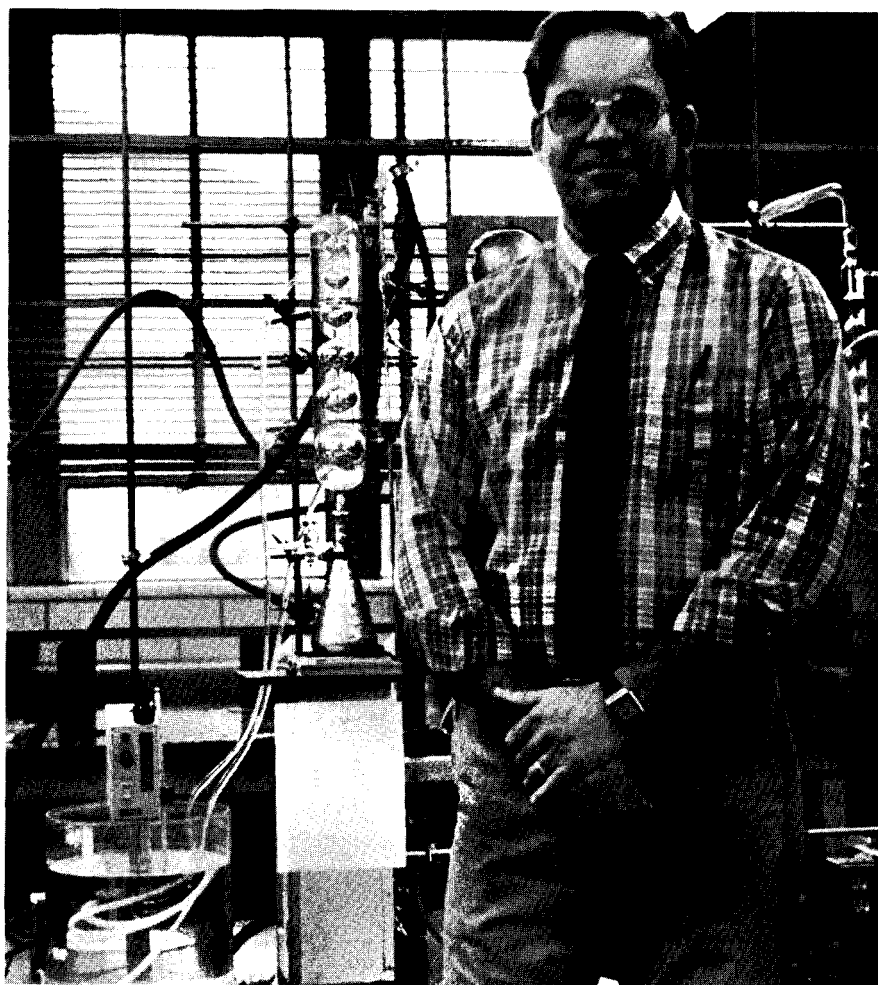
*Associate Professor:* Knachel

*Assistant Professor:* Johnson

## COURSES OF INSTRUCTION

**\*CHM 110. GENERAL CHEMISTRY:** A terminal course for the nonscience major involving fundamental chemical principles and their applications to problems of modern society. *3 sem. hrs.*

**CHM 110L. GENERAL CHEMISTRY LABORATORY:** Laboratory course to complement CHM 110. *1 sem. hr*



**\*CHM 115. COLLEGE PREPARATORY CHEMISTRY:** A one-term course for students desiring to enter a science or engineering program but whose background is insufficient for CHM 123-124. Unacceptable for credit toward chemistry requirements in any chemistry program. *3 sem. hrs.*

**CHM 115L. COLLEGE PREPARATORY CHEMISTRY LABORATORY:** Laboratory course to complement CHM 115. *1 sem. hr.*

**\*CHM 123-124. GENERAL CHEMISTRY:** Comprehensive treatment of the fundamentals of general chemistry. Prerequisite: Competence in high school chemistry or successful completion of CHM 115. A placement examination is available for students whose background is doubtful. CHM 123 is a prerequisite for CHM 124. *6 sem. hrs.*

**CHM 123L-124L. GENERAL CHEMISTRY LABORATORY:** Laboratory course to complement CHM 123-124. One 3-hour laboratory session per week. CHM 123 is a corequisite for CHM 123L. CHM 124 is a corequisite for CHM 124L. *2 sem. hrs.*

**CHM 201. QUANTITATIVE ANALYSIS:** Fundamental theory and techniques of gravimetric, volumetric, spectrophotometric, and electroanalytical methods of chemical analysis. Two class periods per week. Prerequisites: CHM 124, 124L. *2 sem. hrs.*

**CHM 201L. QUANTITATIVE ANALYSIS LABORATORY:** Course to accompany CHM 201 lecture. One 4-hour laboratory period per week. *2 sem. hrs.*

**CHM 302. PHYSICAL CHEMISTRY:** Course especially designed for premedical, pre dental, or biology majors. Three lectures per week. Prerequisite: CHM 124. First term, each year. *3 sem. hrs.*

**CHM 303-304. PHYSICAL CHEMISTRY:** Course for chemistry majors and chemical engineers. Three lecture hours per week. Prerequisite: CHM 201 or equivalent; corequisite: MTH 218. Successful completion of CHM 303 required for enrollment in CHM 304. *6 sem. hrs.*

**CHM 303L-304L. PHYSICAL CHEMISTRY LABORATORY:** Course to accompany CHM 303-304. One 3-hour laboratory each week. Corequisite: MTH 218. *2 sem. hrs.*

**CHM 309. CHEMICAL LITERATURE:** The use of chemical literature, indexing methods, and patent procedure. Second term, each year. *1 sem. hr.*

**CHM 313-314. ORGANIC CHEMISTRY:** Major topics in organic chemistry including synthesis, mechanisms, stereochemistry, and spectroscopy. Required of all chemistry majors and students in the life sciences. Prerequisite: CHM 124. CHM 313 is a prerequisite for CHM 314. *6 sem. hrs.*

**CHM 313L-314L. ORGANIC CHEMISTRY LABORATORY:** Course designed for students in the life sciences. Common separation, purification, and analytical techniques including chromatography and spectroscopy. One 3-hour laboratory per week. Prerequisite: CHM 124L. CHM 313L is a prerequisite for CHM 314L. *2 sem. hrs.*

**CHM 315L-316L. ORGANIC CHEMISTRY LABORATORY:** Emphasis on synthesis. Required of all B.S. chemistry majors. Prerequisite: CHM 124L. 315L is a prerequisite for 316L. *2 sem. hrs.*

**CHM 404. SPECIAL TOPICS IN PHYSICAL CHEMISTRY:** Thorough treatment of topics such as macromolecules, spectroscopy, photochemistry, and electrochemistry. *3 sem. hrs.*

CHM 406. QUALITATIVE ORGANIC ANALYSIS: Course in the identification of organic compounds based upon chemical, physical, and spectral properties. Two class periods per week. Prerequisite: CHM 314. *2 sem. hrs.*

CHM 406L. QUALITATIVE ORGANIC ANALYSIS LABORATORY: Course to accompany CHM 406. Two 3-hour laboratory periods each week. *2 sem. hrs.*

CHM 412. INTERMEDIATE ORGANIC CHEMISTRY: Modern theory and practice of organic chemistry. May include structure-reactivity relationships, reaction mechanism, and synthetic topics not normally treated in introductory courses. Prerequisites: CHM 302 or equivalent, CHM 313-314, and senior standing *3 sem. hrs.*

CHM 415. ANALYTICAL CHEMISTRY: Methods of analysis based on modern instrumentation, including chemical, electrical, and spectral methods. Prerequisites: CHM 201, and 302 or 303-304. *2 sem. hrs.*

CHM 415L. ANALYTICAL CHEMISTRY LABORATORY: Course to accompany CHM 415. Two 3-hour laboratory sessions each week. Prerequisites: CHM 201L, CHM 302 or equivalent. *2 sem. hrs.*

CHM 417. INORGANIC CHEMISTRY: Introductory course in fundamentals of modern inorganic chemistry: atomic structure, principles of structure and bonding, acid-base chemistry, periodicity, coordination compounds, nonaqueous solvents, electrochemistry, molecular symmetry, and the chemistry of selected representative elements. Prerequisites: CHM 124, 314. Corequisite: CHM 302 or 304. *3 sem. hrs.*

CHM 420. BIOCHEMISTRY: The fundamentals of biochemistry. Prerequisite: CHM 314. Second term, each year. Recommended for nonchemistry majors. *3 sem. hrs.*

CHM 490L. SCIENTIFIC GLASSBLOWING: The theory and practice of glass working. Under the supervision of a professional glassblower, students learn to make several standard seals and fabricate pieces of glass apparatus. Enrollment limited. Permission of departmental chairperson required. One 3-hour laboratory each week. *1 sem. hrs.*

CHM 495. INTRODUCTION TO RESEARCH SEMINAR: Research topics presented by visiting scientists and faculty, and the results of thesis research by senior students. Required of all junior chemistry majors in the B.S. program. Grading option 2. *No credit*

\*CHM 496. PROFESSIONAL PRACTICES SEMINAR: Topics are career opportunities in chemistry, resumé preparation, and interviewing. Some practical experience in technical report writing and oral presentation. Required of all chemistry majors. *1 sem. hrs.*

CHM 497. RESEARCH SEMINAR: A series of seminars as described under CHM 495. Required of all senior chemistry majors in the B.S. program. *1 sem. hrs.*

CHM 498-499. RESEARCH AND THESIS: All students in the B.S. program (except Co-op) are required to enroll for a minimum of 3 semester hours in a research course (CHM 498). Students may elect to take additional research credits (CHM 499) only if the work extends for more than 2 semesters. Successful completion of research courses requires the submission of a typewritten thesis and the presentation of a seminar. *3-6 sem. hrs.*

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\*General education course. See Chapter V.



## CLASSICS (CLA)

Courses in classics, taught in English, are offered by the Department of Languages. See LNG. See also HMS.

### COURSES OF INSTRUCTION

CLA 203. CLASSICAL MYTHOLOGY: An introduction to the principal cycles of Greek and Roman mythology, with emphasis on the influence of classical mythology upon the literature and art of the Western world. No prerequisite. *2 sem. hrs.*

CLA 205. INTRODUCTION TO GREEK ARCHAEOLOGY: Survey of Greek archaeology from the Neolithic to the Classical Age, including consideration of the theory and technique of archaeological investigation. Emphasis on the cultures of the Minoan Bronze Age, the Mycenaean Bronze Age, and the Classical Age. *3 sem. hrs.*

CLA 350. CLASSICAL LITERATURE IN TRANSLATION: Course to acquaint students not majoring or minoring in classical languages with Latin and Greek authors and literary movements. Conducted in English. Repeatable when subtitle and content change. *3 sem. hrs.*



## CLINICAL LABORATORY SCIENCES (CLS)

The Clinical Laboratory Science programs at the University of Dayton include Medical Technology (MET), Cytotechnology (CTT), and Nuclear Medicine Technology (NMT). These health-related programs share a similar 3 + 1 curricular structure. The first three (preclinical) years of each program are spent at the University in a sequence of courses that provide a liberal arts education with an emphasis in the life sciences. The fourth (clinical) year is a 12-to-13-month period of instruction carried out at an affiliated hospital school of medical technology, cytotechnology, or nuclear medicine technology. The clinical year instruction provides the technical training requisite for the particular health professional area.

The first three full terms of the preclinical curricula are identical for the MET, CTT, and NMT programs and are very similar to the curricula for biology and premedical/predental majors. This common curriculum provides students with the time and flexibility to examine all three health-related majors as well as those in biology and premedicine before committing themselves to specific educational pathways in the second term of the sophomore year. Essentially, students who are interested in medical technology, cytotechnology, or nuclear medicine technology are undeclared Clinical Laboratory Science students until the middle of the sophomore year.

The common curriculum for clinical laboratory science programs is listed below. The remaining terms of the specific preclinical and clinical programs are described elsewhere in this chapter under MET, CTT, and NMT.

### CLINICAL LABORATORY SCIENCE PROGRAMS (CTT, MET, NMT)<sup>1</sup>

| Dept.          | No.        | Course                                      | 1st Term <sup>2</sup> | 2nd Term |
|----------------|------------|---|-----------------------|----------|
| Freshman Year  |            |   |                       |          |
| BIO            | 100        | Freshman Seminar                            | 1-0-0                 |          |
| BIO            | 151-152    | Concepts of Biology                         | 3-0-3                 | 3-3-4    |
| CHM            | 123-124    | General Chemistry <sup>3</sup>              | 3-3-4                 | 3-3-4    |
| MTH            | 112-207    | Calculus, Statistics <sup>4</sup>           | 3-0-3                 | 3-0-3    |
| ENG            | 101-102    | College Composition I and II                | 3-0-3                 | 3-0-3    |
| SPE            | 101        | Fundamentals of Effective Speaking          |                       | 3-0-3    |
| —              | —          | General education requirement <sup>5</sup>  | 3-0-3                 |          |
|                |            |   | 16                    | 17       |
| Sophomore Year |            |   |                       |          |
| CHM            | 313        | Organic Chemistry                           | 3-3-4                 |          |
| PHY            | 201        | General Physics                             | 3-2-4                 |          |
| HST            | 101 or 102 | History of Western Civilization             | 3-0-3                 |          |
| —              | —          | General education requirements <sup>5</sup> | 6-0-6                 |          |
|                |            |   | 17                    |          |

<sup>1</sup>Consult General Requirements for All Bachelor of Science programs and Chapter V for General Education Requirements.

<sup>2</sup>For example, 3-0-3 means 3 hrs. class, 0 hrs. lab., 3 sem. hrs. of credit.

<sup>3</sup>Begin in CHM 115 if background is insufficient for CHM 123.

<sup>4</sup>If background is not suitable for calculus, then substitute MTH 101, precalculus, for MTH 112.

<sup>5</sup>Some general education courses are specified in the program (e.g., BIO 152); others are to be chosen from the listing of approved courses. See Chapter V.

## COMMUNICATION (COM)

The course requirements for communication majors are 36 semester hours distributed as follows:

For General Major in Communication (COM):

1. SPE 101, COM 120, and 30 semester hours in COM, SPE, and JRN courses.
2. At least 24 semester hours must be 300-400 level courses.

For Concentrated Major in Communication:

*Broadcasting (RTV):*

1. SPE 101, COM 120, SPE 206, SPE 316, SPE 329, SPE 412.
2. One of the following: SPE 410, SPE 416, SPE 420.
3. Six semester hours of COM courses; 6 semester hours of JRN courses.
4. Three semester hours of any COM, JRN, or SPE course.

*Communication Management (CMT):*

1. SPE 101, COM 313, SPE 312, COM 308, COM 309, COM 310, COM 330.
2. Fifteen semester hours of any COM, JRN, or SPE courses.

*Journalism (JRN):*

1. SPE 101, COM 120, JRN 206, JRN 301, JRN 400, COM 440.
2. One JRN elective.
3. Six semester hours of COM courses; 6 semester hours of SPE courses.
4. Three semester hours of any COM, JRN, or SPE course.

*Public Relations (PUB):*

1. SPE 101, COM 120, COM 301, COM 402, COM 455, JRN 206.
2. Six semester hours of JRN courses; 6 semester hours of SPE courses.
3. Six semester hours of any COM, JRN, or SPE courses.

Teacher certification through the E-11 program is an option for communication majors. Consult department chairperson for details.

Minors in communication must have SPE 101 and 12 semester hours of upper-level courses selected through consultation with the department chairperson.

A minor in political journalism is available for political science majors. The political journalism minor consists of COM 120, JRN 206, and any three of the following five courses: JRN 301, JRN 303, SPE 301, COM 314, COM 440.

The Department of Communication encourages co-curricular activities: Speech and Debate, Flyer News, WDCR radio, WVUD radio, Public Relations Student Society of America, Society of Professional Journalists (Sigma Delta Chi), Alpha Epsilon Rho, Advertising Club, and Women in Communication, Inc.

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**PROGRAM—A3: BACHELOR OF ARTS WITH A MAJOR IN COMMUNICATION<sup>1</sup>**


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|  | <i>Semester Hours</i> |
|--|-----------------------|
| Major program .....  | 36                    |
| English 101 and 102 .....  | 6                     |
| Natural science .....  | 7                     |
| Mathematics .....  | 3                     |
| Philosophy and/or religious studies .....  | 12                    |
| Two units of 12 sem. hrs. each selected from anthropology, economics, political science, psychology, sociology, management, criminal justice, education, marketing, military science, home economics, social work, and ASI. (At least 6 sem. hrs. in each unit must be 300-400 level.) ..... | 24                    |
| Anthropology, economics, political science, psychology, sociology if none of these is chosen as one of the 12-sem. hr. units above .....   | 6                     |
| Two units of 9 sem. hrs. each selected from English, languages, history, philosophy, religious studies, performing and visual arts. (At least 6 sem. hrs. must be 300-400 level in any of the following four units: English, history, philosophy, religious studies.) .....                  | 18                    |
| General education courses and academic electives to total at least .....   | 120                   |

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<sup>1</sup>See also Distribution Table for Bachelor of Arts programs and Chapter V for General Education Requirements.

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## FACULTY

Donald B. Morlan, *Chairperson*

*Professors:* Morlan, Rang, Wolff

*Associate Professors:* Blatt, Harwood

*Assistant Professors:* Lain, Pease, D. Robinson, Skill, Weatherly, Williams

*Instructors:* Bedard, Butler, A. Robinson, Wallace

## COURSES OF INSTRUCTION

COM 120. INTRODUCTION TO MASS COMMUNICATION MEDIA: The nature and purpose of mass communications: newspapers, television and radio, public relations, advertising, occupational opportunities, organizational structure of modern newspaper, and news on television and radio. 3 sem. hrs.

COM 230. FUNDAMENTALS OF LISTENING: Study of fundamental theories and related techniques applied during comprehensive, discriminate, empathic and appreciative listening; emphasis on listening competently and responsibly. 3 sem. hrs.

COM 301. PUBLICITY AND PUBLIC RELATIONS: Introduction to public relations. Familiarization with the public relations environment and process. Emphasis on the practitioner's role as agent for change and adaptation. 3 sem. hrs.

COM 303. FREE-LANCE WRITING: Steps of free-lance publication, from market analysis to query letters to writing and rewriting. Mostly nonfiction, magazine markets, some newspaper and nonfiction book markets. 3 sem. hrs.

**COM 304. ADVERTISING:** Nature and functions of advertising; preparation of layouts, writing of copy; selection and evaluation of media. Coordination of advertising with other marketing efforts. Social implications of advertising. (See MKT 421.)

*3 sem. hrs.*

**COM 305. PROPAGANDA ANALYSIS:** Use and abuse of propaganda. Editorial persuasion. Propaganda devices and techniques. An application of the principles of Aristotelian logic to the field of mass communication.

*3 sem. hrs.*

**COM 308. INTERPERSONAL COMMUNICATION:** Study of the student's own communication behavior through face-to-face spontaneous interaction with others.

*3 sem. hrs.*

**COM 309. COMMUNICATION AND CONFLICT RESOLUTION:** Examination of the functions of communication in several types of conflict such as marital conflict, racial conflict, and role conflict, and the methods and strategies of communication to reduce these conflicts.

*3 sem. hrs.*

**COM 310. COMMUNICATION IN ORGANIZATIONS:** Analysis of message initiation, diffusion, and reception in organizations; study of various methodological approaches for the purpose of conducting a communication audit within an organization.

*3 sem. hrs.*

**COM 313. SMALL GROUP COMMUNICATION:** Guiding principles used by participants and leaders in preparing and conducting small group conferences and discussions; policy-making conferences staged.

*3 sem. hrs.*

**COM 314. POLITICAL CAMPAIGN COMMUNICATION:** Analysis of the nature and functions of selected communication variables within political election campaigns.

*3 sem. hrs.*

**COM 325. NONVERBAL COMMUNICATION:** Survey of theory and research, and experiential learning in nonverbal communication. Examination of the influence of environmental factors, physical behavior, and vocal cues on human communication.

*3 sem. hrs.*

**COM 330. INTERVIEWING FOR COMMUNICATION AND BUSINESS:** Analysis of communication in structured dyadic interaction. Emphasis on the following types of interviews: information-gathering, employment, appraisal, and persuasive. Application through role playing and feedback systems.

*3 sem. hrs.*

**COM 391. INDEPENDENT STUDY 1:** Supervised study involving directed readings, individual research (library, field, or experimental), or projects in the specialized areas of communication. May be repeated once. Prerequisite: Permission of department chairperson.

*3 sem. hrs.*

**COM 397. COMMUNICATION PRACTICUM:** Contracted participation in an approved communication organization. One sem. hr. per term to a maximum of 6. (Only 3 sem. hrs. may be applied to communication major.) Grade option 2 only.

*1-6 sem. hrs.*

**COM 398. COMMUNICATION INTERNSHIP:** Communication work experience in an approved organization. Application approval: For summer, Dec. 15; for fall, Mar. 1; for spring, Oct. 15. Prerequisites: 24 sem. hrs. and 3.0 average in the major; 75 total sem. hrs. and 2.75 cum. average; permission of department chairperson.

*3 or 6 sem. hrs.*

**COM 402. PRACTICAL METHODS FOR PUBLIC RELATIONS:** Procedures and methods of putting the public relations process into effect. Emphasis on specific writing skills and problem-solving techniques. Prerequisite: COM 301.

*3 sem. hrs.*

**COM 404. SPECIAL TOPICS IN COMMUNICATION:** Concentrated study in specific areas of speech communication. May be repeated once with change of topic.

*3-6 sem. hrs.*

**COM 410. FAMILY COMMUNICATION:** Study of the family from a communication perspective, considering the communication processes within the family and the extent to which communication affects and is affected by the family.

*3 sem. hrs.*

**\*COM 430. DEVELOPMENT OF MASS MEDIA:** 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.

*3 sem. hrs.*

**COM 440. THE LAW AND NEWS MEDIA:** 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.

*3 sem. hrs.*

**COM 455. PUBLIC RELATIONS WORKSHOP:** Application of policy objectives to public relations program development. Students plan and carry out a public relations program for an established organization, working out solutions to communication and public relations problems. Prerequisite: JRN 206 or COM 402.

*3 sem. hrs.*

**COM 491. PUBLIC RELATIONS INTERNSHIP:** Practical public relations participation in an approved organization. Application approval: For summer, Dec. 15; for fall, Mar. 1; for spring, Oct. 15. Prerequisites: 24 sem. hrs. and 3.0 average in the major; 75 total sem. hrs. and 2.75 cum. average; permission of department chairperson.

*3 or 6 sem. hrs.*

*\*General education course. See Chapter V.*

## COMPUTER SCIENCE (CPS)

The Computer Science Department offers programs leading to the Bachelor of Science in three areas of study. The student may select the major Computer Science, Program S3; Systems Analysis, Program S3A; or Computer Science-Physics, Program S3P.

A minor in computer science includes CPS 150-151, 250, 350, and three other courses numbered 320 or above, selected in consultation with the department chairperson.

A minor in systems analysis includes CPS 150-151, 242, 310, 312, and two courses numbered 320 or above, selected in consultation with the department chairperson.

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### PROGRAM-S3: BACHELOR OF SCIENCE WITH A MAJOR IN COMPUTER SCIENCE (CPS)<sup>1</sup>

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This program emphasizes computer science concepts with particular attention to computer software and its application to science and engineering.

#### *Semester Hours*

|  |     |
|--|-----|
| Computer science—basic programming, CPS 150-151, 242, 250; 30 additional sem. hrs. of CPS, 24 of which must be in courses numbered 310 or above, including CPS 346, 350, 353 ..... | 45  |
| Mathematics—basic calculus, MTH 118-119; discrete mathematics; 6 sem. hrs. beyond calculus; linear algebra, MTH 302; normally statistics ...                                       | 17  |
| Natural science—including PHY 206-207. One physics laboratory is recommended .....   | 12  |
| Communication skills .....   | 3-9 |
| Humanities .....   | 9   |
| Social and behavioral sciences .....   | 6   |
| Philosophy and/or religious studies .....  | 12  |
| General education courses and academic electives <sup>2</sup> to total at least .....  | 120 |

<sup>1</sup>See General Requirements for All Bachelor of Science Programs and Chapter V for General Education Requirements.

<sup>2</sup>A concentration or a minor in a specific discipline is recommended.

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### PROGRAM-S3A: BACHELOR OF SCIENCE WITH A MAJOR IN SYSTEMS ANALYSIS (SYA)<sup>1</sup>

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This program emphasizes computer science concepts with particular attention to computer software and its application to commerce and the related areas of systems science.

#### *Semester Hours*

|   |    |
|---|----|
| Computer science—basic programming, CPS 150-151, 242, 250; 24 additional sem. hrs. of CPS in courses numbered 310 and above, including CPS 310, 312, 346, 350 ..... | 40 |
| Mathematics—basic calculus, linear algebra, statistics (discrete mathematics recommended); for example, MTH 112-113, 302, 367 .....                                 | 12 |
| Natural science .....   | 8  |
| Business—A minor in ACC, ECO, FIN, MGT, or MKT; or the following block of courses: ACC 207-208, ECO 203-204, MGT 305, MKT 305 .....                                 | 18 |

|   |     |
|---|-----|
| Communication skills .....  | 3-9 |
| Humanities .....  | 9   |
| Social and behavioral sciences .....                                    | 6   |
| Philosophy and/or religious studies .....                               | 12  |
| General education courses and academic electives to total at least..... | 120 |

<sup>1</sup>See General Requirements for All Bachelor of Science Programs and Chapter V for General Education Requirements.

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### PROGRAM—S3: BACHELOR OF SCIENCE WITH A MAJOR IN COMPUTER SCIENCE-PHYSICS (CSP)<sup>1</sup>

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This program emphasizes computer science concepts with particular attention to computer software and its application to physics.

|   | <i>Semester Hours</i> |
|---|-----------------------|
| Computer science—basic programming, CPS 150-151, 242, 250; 30 additional sem. hrs. of CPS, 24 of which must be in courses numbered 310 or above, including CPS 346, 350, and 353. Additional numerical analysis courses are recommended ..... | 46                    |
| Mathematics—basic calculus, MTH 118-119, 218; differential equations, MTH 219; linear algebra, MTH 302. Additional statistics recommended.....  | 18                    |
| Physics—general physics, PHY 206-207-208, with PHY 210L-211L; basic electronics, PHY 214; 5 upper-level courses, including PHY 314 .....  | 24-27                 |
| Communication skills .....  | 3-9                   |
| Humanities .....  | 9                     |
| Social and behavioral sciences .....  | 6                     |
| Philosophy and/or religious studies .....   | 12                    |
| General education courses and academic electives to total at least.....   | 120                   |

<sup>1</sup>See General Requirements for All Bachelor of Science Programs and Chapter V for General Education Requirements.

For each of the programs—S3, S3A, S3P—the department recommends that a student repeat any course in the major for which a grade below C (under grading option 1) has been earned.

### FACULTY

Lawrence A. Jehn, *Chairperson*

*Professors:* Jehn, Winslow

*Associate Professors:* Jarrett, Kester, Lang, Neuendorf, Schoen

*Assistant Professor:* Gowda

*Instructors:* Shah, Stoehr

*Lecturer:* Maruyama

*Adjunct Associate Professor:* Lokai

*Adjunct Assistant Professors:* Jansen, Keim

### COURSES OF INSTRUCTION

CPS 107. COMPUTERS AND SOCIETY: Nontechnical introductory survey of the history and organization of digital computers; the diverse application of computers in government, business, education, and the arts; and the psychological and sociological impact of the computer age. Not open to CPS, CSP, SYA majors. 3 sem. hrs.



**CPS 132. COMPUTER PROGRAMMING FOR ENGINEERING AND SCIENCE:** Fundamentals of computer programming including algorithms, program structure, library routines, debugging, and program verification. Calculus-based computer solutions of problems from science and engineering using FORTRAN. Prerequisite: MTH 118. *3 sem. hrs.*

**CPS 144. INTRODUCTION TO COMPUTER PROGRAMMING:** Fundamentals of computer programming including algorithms, program structure, library routines, debugging, and program verification. Computer solutions of problems from social sciences using a suitable compiler language such as FORTRAN, PL/I, or Pascal. *1-3 sem. hrs.*

**CPS 145. COBOL PROGRAMMING:** Basic programming theory and practice using the COBOL language for business-oriented problems. Corequisite: CPS 245 or 250. *1-3 sem. hrs.*

**CPS 146. (LIST PROCESSING) PROGRAMMING:** Basic programming theory and practice using a language suitable to list-processing applications such as LISP or SNOBOL. *3 sem. hrs.*

**CPS 150. ALGORITHMS AND PROGRAMMING I:** Algorithms, programs, and computers. Algorithm development, basic programming and programming structure. Debugging and program verification. Data representation. Introduction to computer system architecture. Computer solutions to numeric and non-numeric problems using a compiler language. *4 sem. hrs.*

**CPS 151. ALGORITHMS AND PROGRAMMING II:** Continuation of CPS 150. Emphasis on program design, development and style, string processing, data structure, segmentation, linkage, subroutines, and re-entrant routines, using a compiler language. Prerequisite: CPS 150. *4 sem. hrs.*

**CPS 242. INTRODUCTION TO FILE PROCESSING:** The file processing environment, file I/O, sequential access, random access, basic data structures, and overview of database management systems using a suitable compiler language such as COBOL. Prerequisite: CPS 150. Corequisite: CPS 151. *3 sem. hrs.*

**CPS 245. ASSEMBLER PROGRAMMING:** Machine and assembler language programming; macros; input-output techniques. Prerequisite: CPS 144. *3-4 sem. hrs.*

**CPS 248. INTERMEDIATE PROGRAMMING:** Advanced topics and programming techniques in FORTRAN, PL/I, and Assembler. Prerequisite: CPS 144. *3 sem. hrs.*

**CPS 250. ALGORITHMS AND PROGRAMMING III:** Continuation of CPS 151. Advanced programming topics and techniques using compiler languages and assembler language. Emphasis on program structure for large programs. Computer solutions to numeric and non-numeric problems. Prerequisite: CPS 151. *4 sem. hrs.*

**CPS 304. COBOL PROGRAMMING:** Basic programming theory and practice using the COBOL language for business-oriented problems. Not open to CPS, CSP, SYA majors. *3 sem. hrs.*

**CPS 310. SYSTEMS ANALYSIS:** Basic system analysis tools; identifying requirements, planning and measuring effectiveness of computer information systems; system life cycle studies. Prerequisite: CPS 242. *3 sem. hrs.*

CPS 312. SYSTEMS DESIGN: State-of-the-art concepts and techniques involved in designing systems, including documentation, telecommunications, security, software packages, economics, productivity, design methodologies, and maintenance. Prerequisite: CPS 310. 3 sem. hrs.

CPS 315. THE COMPUTING WORLD: Analysis of the tools and techniques of computers and of their impact on society. A framework for making professional decisions in the context of their social impact. Prerequisites: CPS 151, junior standing. 3 sem. hrs.

CPS 341. DISCRETE STRUCTURES: Set algebra including mappings and relations; algebraic structures including semi-groups and groups; elements of theory of directed and undirected graphs; Boolean algebra and propositional logic. Prerequisite: CPS 151. 3 sem. hrs.

CPS 342. DATA STRUCTURES: Basic concepts of data; linear lists, strings, arrays, and orthogonal lists; representation of trees and graphs; multilinked structures; symbol tables and searching techniques; sorting techniques. Prerequisite: CPS 248 or 250. 3 sem. hrs.

CPS 343. COMPARATIVE LANGUAGES: Programming language constructs, organization, specification, and analysis. Prerequisite: CPS 342 or 350. 3 sem. hrs.

CPS 346. OPERATING SYSTEM: Semaphores, conditions, monitors, and kernels. Concurrent programming, interrupts, memory, and process management. Design and implementation of a simple operating system using concurrent languages. Prerequisites: CPS 245 or 250, 342 or 350. 3 sem. hrs.

CPS 350. DATA STRUCTURES AND ALGORITHMS: Basic concepts of data; list, strings, arrays, trees and graphs, abstract data types, multilinked structures; symbol tables; searching and sorting. Use of relations, functions, and graphs in data management. Random access and representation of data structures on storage devices. Prerequisite: CPS 250. 4 sem. hrs.

CPS 353. NUMERICAL METHODS I: Study of the algorithms of numerical mathematics with emphasis on interpolation, the solution of nonlinear equations, and linear systems of equations including matrix methods; analysis of errors associated with the algorithms. Prerequisites: FORTRAN, MTH 302. 3 sem. hrs.

CPS 354. NUMERICAL METHODS II: Study of the algorithms of numerical mathematics with emphasis on functional approximation, numerical differentiation and integration, numerical solution of ordinary differential equations and boundary value problems; analysis of errors associated with the algorithms. Prerequisite: CPS 353. 3 sem. hrs.

CPS 387. COMPUTER SYSTEM DESIGN I: Design of combinatorial and sequential logic circuits using current integrated circuit devices. Discussion of encoders, decoders, registers, counters, etc. as applied to design and use of arithmetic, logic, and storage units. Laboratory experiments with these devices. Prerequisites: CPS 250, PHY 207. 3 sem. hrs.

CPS 388. COMPUTER SYSTEM DESIGN II: Detailed analysis of a specific micro-computer programmed in machine, assembler, and a higher-level language. Discussion of interfacing with devices such as displays, terminals, and other computers. Experiments with such interfacing in the laboratory. Prerequisite: CPS 387. 3 sem. hrs.

CPS 411. MANAGEMENT INFORMATION SYSTEMS: The management information systems environment. The theory, technology, development of information systems. Emphasis on integration of information systems for decision support and other management information requirements. Prerequisite: CPS 310. 3 sem. hrs.

**CPS 418. SOFTWARE ARCHITECTURE:** A thorough examination of modern software methodologies, of the managerial and technological skills essential to the design and construction of quality software, and of the productivity and human factors in software development. Prerequisite: CPS 312. *3 sem. hrs.*

**CPS 424. DISCRETE EVENT SIMULATION TECHNIQUES:** Design and use of simulation models; study and use of special-purpose simulation languages such as GPSS and GASP IV, SIMSCRIPT II.5. Applications. Prerequisite: MTH 367, CPS 151, or permission. *3 sem. hrs.*

**CPS 430. DATA BASE MANAGEMENT SYSTEMS:** Physical and logical organization of data files; hierarchical, network, and relational data base models; the data definition language and the data manipulation language of a commercial data base management system such as IDMS; query languages. Prerequisites: CPS 242, 350. *3 sem. hrs.*

**CPS 444. SYSTEMS PROGRAMMING I:** Analysis of compilers and their construction; programming techniques discussed in the current literature; advanced computer applications in mathematical and nonnumeric areas. Prerequisites: CPS 346, 350. *3 sem. hrs.*

**CPS 445. SYSTEMS PROGRAMMING II:** A continuation of CPS 444, with emphasis on the application of the topics discussed. Prerequisite: CPS 444. *3 sem. hrs.*

**CPS 446. OPERATION SYSTEM PRINCIPLES** Design and implementation of a multi-user operating system, including concurrent processes, usage of monitors and kernels, process and device scheduling, virtual memory with paging, process synchronization and communication, input and output spooler, file systems, reliability and protection, interrupts, distributed system concepts. Prerequisites: CPS 346, 350. *3 sem. hrs.*

**CPS 455. NUMERICAL ANALYSIS I:** Error analysis, mathematical development of functional approximation including interpolation, quadrature, numerical differentiation, solution of ordinary differential equations. Prerequisites: FORTRAN, MTH 302, 319. Recommend CPS 353. *3 sem. hrs.*

**CPS 456. NUMERICAL ANALYSIS II:** Mathematical development of the method of least squares, minimax approximation, solution of partial differential equations, applications. Prerequisite: CPS 455. *3 sem. hrs.*

**CPS 460. COMPUTER GRAPHICS:** Introduction to graphics devices and software graphic primitives (points, lines, characters), two-dimensional transformations, clipping, survey of display devices and methods. Graphic input devices, representation of curves and surfaces in space. Prerequisites: CPS 342 or 350; MTH 219, 302. *3 sem. hrs.*

**CPS 470. DATA COMMUNICATION:** Principles of telecommunications hardware and software. Analysis of communication protocol layers with respect to performance, error handling, and control functions. Review of troubleshooting techniques currently in use. Prerequisites: CPS 346, 350. *3 sem. hrs.*

**CPS 472. COMPUTER NETWORKING:** Concepts and goals of computer networks (local area and long-haul). Network protocols, analysis, design management. OSI layers, gateways. Network topologies and case studies. Prerequisites: CPS 470, MTH 367. *3 sem. hrs.*

**CPS 480. ARTIFICIAL INTELLIGENCE:** Basic concepts and techniques of intelligent systems. Emphasis on representations, strategies, expert system, logic systems, perception, applications, natural languages. Prerequisite: CPS 342 or 350. 3 sem. hrs.

**CPS 482. AUTOMATA THEORY:** Finite automata, sequential machines, survey of formal languages, introduction to computability, recursive functions, and Turing machines. Prerequisite: CPS 341. 3 sem. hrs.

**CPS 496. COOPERATIVE EDUCATION:** Computer science work experience in an approved organization. Prerequisite: 12 sem. hrs. of upper-level CPS courses with GPA of 3.0; total 90 sem. hrs. and 2.75 GPA. Permission of department advisor. Not open to students with CPS 497 credit. 3 sem. hrs.

**CPS 497. INTERNSHIP:** Computer science work experience in an approved organization. Prerequisite: 12 sem. hrs. of upper-level CPS courses with GPA of 3.0; total 90 sem. hrs. and 2.75 GPA. Permission of department advisor. Not open to students with CPS 496 credit. 3 sem. hrs.

**CPS 498. PROBLEMS IN (NAMED AREA):** Individual readings and research in a specialized area. (See CPS 499.) By arrangement. May be taken more than once for additional credit. Prerequisite: Permission of the department. 1-4 sem. hrs.

**CPS 499. (SPECIAL TOPICS):** Lectures or laboratory work in such areas as artificial intelligence, computer architecture, information retrieval, microprogramming, multiprogramming techniques, numerical analysis, time-sharing topics, graphics, data communications, parallel processing. By arrangement. May be taken more than once. Prerequisite: Permission of the department. 1-4 sem. hrs.



## CRIMINAL JUSTICE (CRJ)

The University of Dayton's criminal justice faculty believe that the effective functioning of a criminal justice system is essential to an orderly society. Therefore, they are committed to providing their students with a critical theory of criminal justice as well as motivating them to perform within the criminal justice system at the highest level. They are dedicated to helping each student acquire the maximum knowledge and skills that student is capable of.

Program S4, leading to the Bachelor of Science with a Major in Criminal Justice, offers three tracks of study. The student is to select one of the following tracks:

1. *General (CRJ)*: This track prepares students for graduate or professional studies or, with appropriate minors, for specialized careers in criminal justice.
2. *Law Enforcement (CRL)*: This track prepares students for careers in law enforcement at the local, state, or national levels.
3. *Corrections (CRC)*: This track prepares students for line-entry careers in the correctional field—probation and parole counseling, community programs, and other rehabilitative services.

The College of Arts and Sciences will classify students according to their previous academic experience. Students who enter the University of Dayton as freshmen, or as transfers without associate degrees, will be classified under *Option A: Total Program*. Students who transfer here with acceptable associate degrees in specific fields similar or closely related to criminal justice will be classified under *Option B: Transfer Program*.

All students transferring into the curriculum must be in good academic standing and meet entry requirements.

The minor in criminal justice requires 15 semester hours, to include CRJ 205, Introduction to Criminal Justice, or CRJ 210, Introduction to Corrections, or CRJ 220, Police Organization and Management, and 12 other upper-divisional semester hours in criminal justice subjects. Any student pursuing this minor is encouraged to consult a full-time criminal justice faculty member for guidance.

The criminal justice major may elect a minor by applying the general electives to a specific discipline that is of professional interest. It is necessary that the student obtain the formal approval of the academic advisor, consult the chairperson of the department in which the minor is taken, and register the minor with the respective school or college. Students should note that because of the limited number of elective hours available in the transfer option, they will be required to take a few additional hours beyond those required for the baccalaureate degree in criminal justice if they choose to have minors.

Proficiency examinations for limited CRJ credit are available only to majors who are in-service personnel, i.e., law-enforcement officers or probation and parole officials. Under Option A, students are limited to only 6 semester hours of proficiency examination credit, and under Option B, only 3 semester hours. Such students should make their formal appeals to the director's office at the beginning of each term in order that it can be determined whether scheduling a proficiency examination during that term is warranted.

It is the sole responsibility of students to inform themselves of whatever changes occur in the curriculum and to observe all the regulations, procedures, and requirements of the University and the criminal justice program.

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

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**OPTION A: TOTAL PROGRAM<sup>1</sup>**

|   | <i>Semester Hours</i> |
|---|-----------------------|
| <i>Criminal Justice</i> .....   | 30-33                 |
| All criminal justice majors are required to complete CRJ 205, Introduction to Criminal Justice, and CRJ 320, Research in Criminal Justice.  |                       |
| <i>Social and Behavioral Science</i> .....  | 24-27                 |
| Course work must include POL 201, The American Political System; POL 301, The American Judicial Process; PSY 101, Introduction to Psychology; PSY 341, Social Psychology, or SOC 341, Self and Society; and SOC 327, Criminology.   |                       |
| <i>Humanities</i> .....   | 27                    |
| Course work must include ENG 272, Expository Writing, or ENG 316, Advanced Composition, or ENG 474, Argumentation; HST 102, History of Western Civilization Since 1789; PHL 310, Social Philosophy, or PHL 312, Ethics; and PHL 314, Philosophy of Law.   |                       |
| <i>Natural Sciences</i> .....   | 8                     |
| <i>Communication Skills</i> .....   | 3-9                   |
| <i>Quantitative Studies</i> .....   | 9                     |
| Course work must include ACC 301, Financial Reporting and Administration; CPS 144, Introduction to Computer Programming, or CPS 304, COBOL Programming; and MTH 207, Statistical Methods for the Behavioral Sciences. CPS 107, Computers and Society, may be taken with the advisor's written permission. |                       |
| <i>General education courses and electives to bring total to at least</i> .....   | 120                   |

<sup>1</sup>Consult General Requirements for All Bachelor of Science Programs and Chapter V for General Education Requirements. Some general education courses are specified in the program (e.g., PHL 314); others are to be chosen from the listing of approved courses. Courses taken as part of the general education requirement may also fulfill the breadth requirement. Check with advisor.

**CRIMINAL JUSTICE AREAS FOR OPTION A: TOTAL PROGRAM**

Each criminal justice major is to select one of the following areas of study and formally register the chosen area with the Criminal Justice Program and the College of Arts and Sciences through the assigned academic advisor and the assistant to the dean.

**1. General (CRJ)**

Students are required to take CRJ 210, Introduction to Corrections; CRJ 220, Police Organization and Management; CRJ 305, Criminal Law; and 18 semester hours of criminal justice electives. The following courses are also required:

HST 355 American Urban History or  
HST 376 Social and Cultural History of the United States or  
HST 460 U.S. Legal and Constitutional History I

POL 306 Public Policy Analysis  
 POL 413 Politics of Bureaucracy and Regulation or  
 SOC 336 Organizations in Modern Society  
 PSY 363 Abnormal Psychology  
 SOC 328 Racial and Ethnic Minorities

## 2. Law Enforcement (CRL)

Students are required to take CRJ 220, Police Organization and Management; CRJ 305, Criminal Law; CRJ 310, Law of Evidence; CRJ 315, Criminal Procedure; and 12 semester hours of criminal justice electives. The following courses are also required:

ENG 370 Report Writing  
 HST 460 U.S. Legal and Constitutional History I  
 POL 413 Politics of Bureaucracy and Regulation or  
 SOC 328 Racial and Ethnic Minorities or  
 SOC 336 Organizations in Modern Society  
 POL 450 Civil Liberties  
 PSY 363 Abnormal Psychology  
 SOC 323 Juvenile Delinquency

## 3. Corrections (CRC)

Students are required to take CRJ 210, Introduction to Corrections; CRJ 323, Management and Treatment of Offenders; CRJ 410, Victimology; and 15 semester hours of criminal justice electives. The following courses are also required:

ENG 370 Report Writing  
 HST 460 U.S. Legal and Constitutional History I  
 POL 305 Introduction to Public Administration or  
 POL 306 Public Policy Analysis or  
 SOC 328 Racial and Ethnic Minorities  
 PSY 431 Interviewing and Counseling  
 SOC 323 Juvenile Delinquency

## OPTION B: TRANSFER PROGRAM

To be admitted as a major in the S4 program under Option B, a transfer student must have received an accredited associate degree in corrections, law enforcement, police administration, police science, or a similar field of criminal justice and must have a 2.5 cumulative grade-point average on a 4.0 grading system. The transfer program offers three areas of study, of which the student is to choose one and formally register the selection with the Admissions Office, the Criminal Justice Program, and the College of Arts and Sciences through the admission counselor, the assigned academic advisor, and the assistant to the dean. The areas are (1) the criminal justice generalist area, (2) the law-enforcement area, and (3) the corrections area. For criminal justice majors who have completed the basic requirements for an accredited two-year criminal justice degree, 66 semester hours beyond the associate degree is suggested.

*Prerequisites:* The following are required for all criminal justice transfer majors in addition to the baccalaureate degree requirements if they were not included in the candidate's associate degree program.

|                           |                     | <i>Semester Hours</i> |
|---------------------------|---------------------|-----------------------|
| Accounting .....          | (ACC 301) .....     | 3                     |
| American government ..... | (POL 201) .....     | 3                     |
| Criminology .....         | (SOC 327) .....     | 3                     |
| English .....             | (ENG 101-102) ..... | 6                     |

|  |                 |   |
|--|-----------------|---|
| History of Western Civilization .....                          | (HST 102) ..... | 3 |
| Introductory Psychology .....                                  | (PSY 101) ..... | 3 |
| Natural science electives with laboratories <sup>1</sup> ..... |                 | 8 |
| Statistics <sup>2</sup> .....                                  | (MTH 207) ..... | 3 |
| Introduction to Criminal Justice .....                         | (CRJ 205) ..... | 3 |
| Research in Criminal Justice .....                             | (CRJ 320) ..... | 3 |

<sup>1</sup>Natural sciences are biology, chemistry, geology, and physics.

<sup>2</sup>Prerequisite for MTH 207 as well as CRJ 320 is two years of high school algebra. Students who have not had two years of high school algebra should first take MTH 107. All students are required to complete MTH 207 and CRJ 320.

Transfer students must complete the following courses as part of the course of study for criminal justice majors here at the University of Dayton.

Any course that is specifically required of the criminal justice candidate by the University of Dayton for the baccalaureate degree and was taken at the institution conferring the student's associate degree, should not be duplicated. Such a course is to be waived by the student's academic advisor upon the formal request of the student with the final approval of the College of Arts and Sciences and replaced with another course within the same division.

#### *Semester Hours*

*Social and Behavioral Sciences* ..... 15-18  
Course work must include POL 301, The American Judicial Process; PSY 341, Social Psychology, or SOC 341, Self and Society.

*Humanities* ..... 21-24  
Course work must include ENG 272, Expository Writing, or ENG 316, Advanced Composition, or ENG 474, Argumentation; PHL 310, Social Philosophy, or PHL 312, Ethics; and PHL 314, Philosophy of Law.

*Communication Skills* ..... 3

*Quantitative Studies* ..... 3  
Course work must include CPS 144, Introduction to Computer Programming, or CPS 304, COBOL Programming. CPS 107, Computers and Society, may be taken with the advisor's written permission.

*Area requirements and general education courses to bring total to at least* ..... 66

<sup>1</sup>Consult General Requirements for All Bachelor of Science Programs and Chapter V for General Education Requirements. Some general education courses are specified in the program (e.g., PHL 314); others are to be chosen from the listing of approved courses. Courses taken as part of the general education requirement may also fulfill the breadth requirement. Check with advisor.

### **CRIMINAL JUSTICE AREAS FOR OPTION B: TRANSFER PROGRAM**

#### **1.General (CRJ)<sup>1</sup>**

Transfer students are required to take CRJ 220, Police Organization and Management; CRJ 305, Criminal Law; and 12 semester hours of criminal justice electives. The following courses are also required:

HST 355 American Urban History or

HST 376 Social and Cultural History or

HST 460 U.S. Legal and Constitutional History I

POL 306 Public Policy Analysis



POL 413 Politics of Bureaucracy and Regulation or  
 SOC 336 Organizations in Modern Society  
 PSY 363 Abnormal Psychology  
 SOC 328 Racial and Ethnic Minorities

## 2. Law Enforcement (CRL)<sup>2</sup>

Transfer students are required to take CRJ 310, Law of Evidence; CRJ 315, Criminal Procedure; and 9 semester hours of criminal justice electives. The following courses are also required:

ENG 370 Report Writing  
 HST 460 U.S. Legal and Constitutional History I  
 POL 413 Politics of Bureaucracy and Regulation or  
 SOC 328 Racial and Ethnic Minorities or  
 SOC 336 Organizations in Modern Society  
 POL 450 Civil Liberties  
 PSY 363 Abnormal Psychology  
 SOC 323 Juvenile Delinquency

## 3. Corrections (CRC)<sup>1</sup>

Transfer students are required to take CRJ 323, Management and Treatment of Offenders; CRJ 410, Victimology; and 9 semester hours of criminal justice electives. The following courses are also required:

ENG 370 Report Writing  
 HST 460 U.S. Legal and Constitutional History I  
 POL 305 Introduction to Public Administration or  
 POL 306 Public Policy Analysis or  
 SOC 328 Racial and Ethnic Minorities  
 PSY 431 Interviewing and Counseling  
 SOC 323 Juvenile Delinquency

<sup>1</sup>CRJ 210, Introduction to Corrections, is specifically required as a prerequisite for students concentrating in the criminal justice generalist area and the corrections area in addition to the 18 semester hours in criminal justice for the generalist area if it was not included in the associate degree program.

<sup>2</sup>CRJ 220, Police Organization and Management, and CRJ 305, Criminal Law, are specifically required as prerequisites for students concentrating in the law enforcement area in addition to the 15 semester hours in criminal justice if they were not included in the associate degree program.

## FACULTY

James A. Adamitis, *Director*

*Associate Professor:* Adamitis

*Assistant Professors:* Ingram, Johnson

*Adjunct Instructors:* Apolito, Dam, Frapwell, Koerner, Lehman

## COURSES OF INSTRUCTION

CRJ 205. INTRODUCTION TO CRIMINAL JUSTICE: Introduction to the field of criminal justice, stressing the theoretical foundations, origin, nature, methods, and limitations of criminal justice as a college curriculum. *3 sem. hrs.*

CRJ 210. INTRODUCTION TO CORRECTIONS: 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. *3 sem. hrs.*

**CRJ 220. POLICE ORGANIZATION AND MANAGEMENT:** Principles and mechanisms for effective law enforcement management and responsive municipal police service; various police department structures, program development projects, promotional processes, and managerial techniques. Recommended for students interested in the urban police function and its administration. *3 sem. hrs.*

**CRJ 305. CRIMINAL LAW:** Principles of criminal liability, preparation of case materials, court procedures, and case disposition. *3 sem. hrs.*

**CRJ 310. LAW OF EVIDENCE:** Comprehensive study of the rules of evidence, evaluation of evidence and proof (testimonial and physical), and function of evidence within the criminal justice system. Prerequisite: A course in criminal law. *3 sem. hrs.*

**CRJ 315. CRIMINAL PROCEDURE:** Fundamentals of criminal procedure: arrest, search, and seizure; interrogation, Constitutional limitations upon state and federal rules of criminal procedure. Prerequisite: A course in criminal law. *3 sem. hrs.*

**CRJ 320. RESEARCH IN CRIMINAL JUSTICE:** Review of the nature, language, and processes of inquiry involving experiments, studies, surveys, and investigations. The instrumentation, types, and structures of content analysis, questionnaires, interviews, and structured observation, including analytic techniques, data processing resources, and preparation of research reports. Required for all CRJ majors. Prerequisite: MTH 207. *3 sem. hrs.*

**CRJ 323. MANAGEMENT AND TREATMENT OF OFFENDERS:** Theory and practice of conducting and writing social investigations for agencies within the administration of justice, as well as managing and treating criminal offenders in community settings. Prerequisite: A course in corrections. *3 sem. hrs.*

**CRJ 325. COMMUNITY AND PUBLIC RELATIONS:** Contemporary problems pertaining to criminal justice community relations: training programs, image development, and policies for releasing information to the mass media. *3 sem. hrs.*

**CRJ 327. CORPORATE SECURITY MANAGEMENT:** Comprehensive managerial approach to developing adequate security systems; emphasis on personnel identification and theft-control procedures including intra-security surveys for deterring espionage, sabotage and subversive line/staff activities. *3 sem. hrs.*

**CRJ 330. ORGANIZED CRIME:** Social, psychological, and legal factors characterizing criminal careers; regional, political, and financial factors influencing organized crime. *3 sem. hrs.*

**CRJ 333. FOUNDATIONS OF CRIMINAL HOMICIDE:** Theories and concepts pertinent to the various classes of homicide and the effects certain heinous crimes have had on the regulatory aspects of the legal system. Emphasis on distinguishing characteristics historically pertaining to culpable, justifiable, and excusable homicide. *3 sem. hrs.*

**CRJ 336. COMPARATIVE CRIMINAL JUSTICE SYSTEMS:** Survey of cross-cultural uniformities and diversities in law-enforcement agencies, correctional systems, and the courts in selected countries. Prerequisite: An introductory course in criminal justice. *3 sem. hrs.*

**CRJ 400. CORRECTIONAL LAW:** Analysis and historical overview of the law of criminal correction. Emphasis on the current legal rights of inmates of penal institutions, parolees, probationers, and those persons upon whom sentence has not yet been imposed. *3 sem. hrs.*

**CRJ 401. POLITICAL VIOLENCE:** Interdisciplinary course offered in cooperation with the Department of Political Science. Theoretical approaches to understanding violent change in political institutions, the continuum between violence and non-violence in revolution, revolt, campus dissent, and political assassination. Emphasis on the roles of criminal justice and government agencies in meeting political dissent. (Same as POL 452.) *3 sem. hrs.*

**CRJ 405. LABOR RELATIONS IN JUSTICE ADMINISTRATION:** The role of law in collective bargaining; the activities of labor organizations; the impact certain unions have had on the administration of justice and law enforcement. *3 sem. hrs.*

**CRJ 407. CONSUMER LAW:** Analysis of crimes against the consumer; legal systems, consumer structures, and agencies used to establish, advance, and litigate consumers' rights and protections. *3 sem. hrs.*

**CRJ 410. VICTIMOLOGY.** The victimal justice process as an integral part of the criminal justice system; analysis of the penal couple and victimal receptivity with emphasis on victim-offender relationships, rape, and victim compensation. *3 sem. hrs.*

**CRJ 416. DRUG ABUSE:** Physical and behavioral variables contributing to drug abuse and narcotic addiction; assessment of several rehabilitation programs and medical treatment centers; emphasis on law and drug abuse cases. *3 sem. hrs.*

**CRJ 440. INDEPENDENT STUDY:** Directed study and research on selected topics of significant academic publications in law enforcement and criminal justice. Prerequisites: Permission of instructor; an introductory CRJ course. *3 sem. hrs.*

**CRJ 447. CONTEMPORARY ISSUES IN JUSTICE ADMINISTRATION:** Seminar to identify and discuss the contemporary issues in justice administration. Topics to be assigned by instructor and presented for class discussion by students. *3 sem. hrs.*

**CRJ 495. INTERNSHIP IN CRIMINAL JUSTICE I:** Supervised experience solely in a civilian capacity in a criminal justice or law-enforcement agency. Open to pre-service criminal justice majors only; in-service students do not qualify. Students who enroll for internship credit are not given a stipend, nor are they permitted to register for CRJ 498 or 499. Credit granted only under grade option 2. Prerequisites: Junior status, 2.5 cumulative grade-point average, and permission of the director of criminal justice. *3 sem. hrs.*

**CRJ 496. INTERNSHIP IN CRIMINAL JUSTICE II:** Continuation of CRJ 495. *3 sem. hrs.*

**CRJ 498. COOPERATIVE EDUCATION IN CRIMINAL JUSTICE I:** Structured educational work experience for full-time pre-service criminal justice majors only. Career development and financial assistance for those who qualify and are placed through the University of Dayton's Office of Cooperative Education. Students who enroll for cooperative education credit are not permitted to register for CRJ 495 or 496. Credit granted only under grade option 2. Prerequisites: Sophomore status, 2.5 cumulative grade-point average, and permission from the director of cooperative education and the director of criminal justice. *3 sem. hrs.*

**CRJ 499. COOPERATIVE EDUCATION IN CRIMINAL JUSTICE II:** Continuation of CRJ 498. *3 sem. hrs.*

## CYTOTECHNOLOGY (CTT)

The program leading to a Bachelor of Science with a Major in Cytotechnology consists of three years of instruction at the University of Dayton followed by a 12-month clinical curriculum at a hospital school of cytotechnology. Completion of a clinical program qualifies the students to take the national certifying examination administered by the Board of Registry of the American Society of Clinical Pathologists.

CTT majors, along with MET and NMT majors, are undeclared Clinical Laboratory Science students for their first three full terms. All three majors follow an identical program until the second term of the sophomore year. The common curriculum is described elsewhere in this chapter under the heading of Clinical Laboratory Sciences.

### PRECLINICAL YEARS

|   | <i>Semester Hours</i> |
|---|-----------------------|
| Biology core courses .....                            | 19                    |
| Supporting science courses (CHM, CPS, MTH, PHY) ..... | 33                    |
| Science elective .....                                | 3                     |
| Communication skills (ENG, SPE) .....                 | 12                    |
| Philosophy and/or religious studies .....             | 12                    |
| Humanities .....                                      | 9                     |
| Social-behavioral science .....                       | 6                     |
| Management .....                                      | 3                     |
| Total .....   | 97                    |

#### *Major Concentration*

*Biology Core:* Five courses—BIO 151, 152, 310, 403, 412, all with laboratories (except 412L).

*Supporting Science:* Two mathematics courses—MTH 112, 207. (Substitute MTH 101, precalculus, if background is not suitable for MTH 112.) One computer science course—CPS 144 or 150. Four chemistry courses—CHM 123, 124, 313, 314, all with laboratories. (CHM 115 must precede CHM 123 if chemistry background is inadequate.) Two physics courses—PHY 201, 202, with laboratories.

The curriculum is planned to meet the requirements of the University, the hospitals, and the professional accrediting agencies. The 97 preclinical semester hours must be completed before entering a clinical program at one of the affiliated hospitals.

### CLINICAL YEAR

Students apply for the clinical program during their third year. Acceptances are competitive and are based on formal application materials, academic grades, faculty recommendations, and interview performance. The clinical program lasts 12 months, beginning in August and ending the following July. The clinical year curriculum involves formal lectures, seminars, laboratories, and preceptorship experiences. Upon successful completion of the clinical year, students are granted

the Bachelor of Science with a Major in Cytotechnology at the summer commencement.

Tuition and fees for the clinical year are established by the hospital. The University will charge the Basic University Fee for terms I and II. Students will pay their hospital tuition and fees through the University. Information on clinical year tuition and fees, class size, grading policies, dress codes, etc. is presented in the hospital program brochure.

**PROGRAM—S9B: BACHELOR OF SCIENCE WITH A MAJOR IN  
CYTOTECHNOLOGY (CTT)<sup>1</sup>**

| <i>Dept.</i>  | <i>No.</i> | <i>Course</i>                               | <i>1st Term<sup>2</sup></i> | <i>2nd Term</i> |
|---|------------|---|-----------------------------|-----------------|
| See Clinical Laboratory Sciences (CLS) for first three terms of curriculum. |            |   |                             |                 |
| Sophomore Year  |            |   |                             |                 |
| BIO   | 201L       | Biology Laboratory Investigations           |                             | 0-3-1           |
| BIO   | 310        | Histology and Microtechnique                |                             | 3-3-4           |
| CHM   | 314        | Organic Chemistry                           |                             | 3-3-4           |
| PHY   | 202        | General Physics                             |                             | 3-2-4           |
| HST   | —          | History elective <sup>3</sup>               |                             | 3-0-3           |
|   |            |   |                             | 16              |
| Junior Year   |            |   |                             |                 |
| BIO   | 403        | Physiology                                  | 3-3-4                       |                 |
| BIO   | 412        | General Genetics                            | 3-0-3                       |                 |
| PHL   | 315        | Medical Ethics                              | 3-0-3                       |                 |
| ENG   | —          | English elective <sup>4</sup>               | 3-0-3                       |                 |
| —   | —          | General education requirements <sup>5</sup> | 3-0-3                       | 6-0-6           |
| MGT   | 305        | Management and Organization                 |                             | 3-0-3           |
| CPS   | —          | Computer science elective <sup>6</sup>      |                             | 3-0-3           |
| —   | —          | Science elective                            |                             | 3-0-3           |
|   |            |   |                             | 16              |
|   |            |   |                             | 15              |

<sup>1</sup>Consult General Requirements for All Bachelor of Science Programs and Chapter V for General Education Requirements.

<sup>2</sup>For example, 3-0-3 means 3 class hrs., 0 lab. hrs., 3 sem. hrs. of credit.

<sup>3</sup>Select HST 340 or 341.

<sup>4</sup>Select from ENG 203, 204, 205, 272, 316, 370, 372, 378.

<sup>5</sup>Some general education courses are specified in the program (e.g., PHL 315); others are to be chosen from the listing of approved courses. See Chapter V.

<sup>6</sup>Select CPS 144 or 150.

**Senior Year**

|   | <i>Semester Hours</i> |
|---|-----------------------|
| CTT 430 Introduction to Clinical Cytology ..... | 2                     |
| CTT 431 Reproductive Cytology I .....           | 5                     |
| CTT 432 Reproductive Cytology II .....          | 5                     |
| CTT 433 Reproductive Cytology III .....         | 4                     |
| CTT 434 Respiratory Cytology I .....            | 4                     |
| CTT 435 Respiratory Cytology II .....           | 4                     |
| CTT 436 Effusion Cytology .....                 | 2                     |
| CTT 437 Gastrointestinal Cytology .....         | 2                     |

|         |                                  |    |
|---------|----------------------------------|----|
| CTT 438 | Urinary Cytology .....           | 2  |
| CTT 439 | Breast Cytology .....            | 2  |
| CTT 440 | Oral Cytology .....              | 1  |
| CTT 441 | Aspiration Cytology .....        | 1  |
| CTT 442 | Laboratory Management .....      | 1  |
| CTT 443 | Cytopreparatory Techniques ..... | 1  |
|         | Total .....                      | 36 |

## FACULTY

Charles J. Chantell, *University Program Director*

## COURSES OF INSTRUCTION

The courses taken during the first three years at the University of Dayton, listed under Program S9B, are described under the individual departments. The senior year is conducted at affiliated hospitals.

**CTT 430. INTRODUCTION TO CLINICAL CYTOLOGY:** Introduction to clinical laboratory function including use and maintenance of the clinical microscope and

ancillary equipment, preparation of solutions, principles of staining and screening, quality control, and laboratory safety. 2 sem. hrs.

**CTT 431. REPRODUCTIVE CYTOLOGY I:** Anatomy, histology, and cytology of the reproductive tract including hormonal cytology in normal and abnormal cells. 5 sem. hrs.

**CTT 432. REPRODUCTIVE CYTOLOGY II:** Study of inflammatory processes, carcinomas of the uterine cervix, and adenocarcinomas of the reproductive tract. 5 sem. hrs.

**CTT 433. REPRODUCTIVE CYTOLOGY III:** Study of malignant lesions of the reproductive tract, cytogenetics, and the cellular effects of radiation. 4 sem. hrs.

**CTT 434. RESPIRATORY CYTOLOGY I:** Anatomy, histology, and cytology of the normal respiratory tract. 4 sem. hrs.

**CTT 435. RESPIRATORY CYTOLOGY II:** Study of benign disorders of the respiratory tract and lung cancer. 4 sem. hrs.

**CTT 436. EFFUSION CYTOLOGY:** Anatomy and histology of the body cavities and the cytology of effusions, cerebrospinal fluid, and primary tumors. 2 sem. hrs.

**CTT 437. GASTROINTESTINAL CYTOLOGY:** Anatomy, histology, and cytology of the normal and the abnormal gastrointestinal tract. 2 sem. hrs.

**CTT 438. URINARY CYTOLOGY:** Anatomy, histology, and cytology of the normal and the abnormal urinary tract. 2 sem. hrs.

CTT 439. BREAST CYTOLOGY: Anatomy, histology, and cytology of the normal and the abnormal breast. *2 sem. hrs.*

CTT 440. ORAL CYTOLOGY: Anatomy, histology, and cytology of the normal and the abnormal oral cavity, larynx, nasopharynx, and paranasal sinuses. *1 sem. hr.*

CTT 441. ASPIRATION CYTOLOGY: Aspiration techniques and cytology of aspirates. *1 sem. hr.*

CTT 442. LABORATORY MANAGEMENT: Familiarization with cytology laboratory procedures including specimen handling, data collection, storage and retrieval, purchasing, and supply inventories. *1 sem. hr.*

CTT 443. CYTOPREPARATORY TECHNIQUES: Detailed study of various methods of obtaining, preparing, processing, and staining cytologic materials. *1 sem. hr.*



ECONOMICS (ECO)

In cooperation with the Department of Economics and Finance in the School of Business Administration, the College of Arts and Sciences offers the degree of Bachelor of Arts with a Major in Economics.

The College recognizes the importance of close cooperation between students and their economics advisors in selecting courses. Flexibility in the program is particularly important, for many areas of study can augment the course work in the major field. For example:

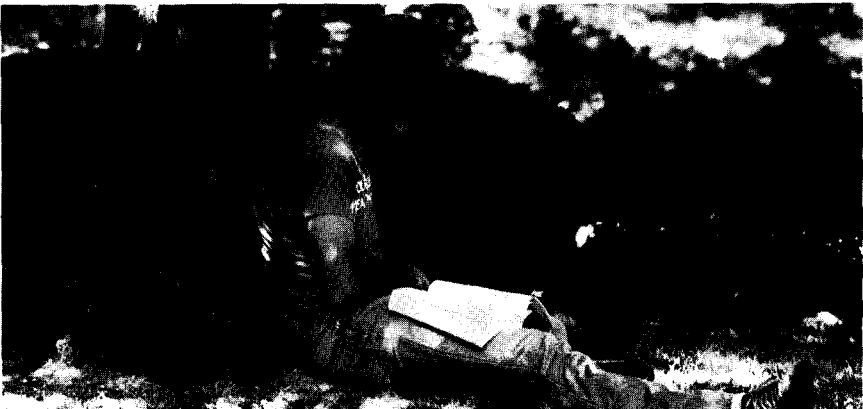
- a. An interest in the quantitative aspect of economics can be supported by courses in mathematics and computer science.
- b. An interest in international economic problems can be combined with proficiency in one or more foreign languages.
- c. An interest in socio-economic problems will naturally lead to coursework in other social sciences.

For course descriptions, see ECO, Chapter VII.

PROGRAM—A4: BACHELOR OF ARTS WITH A MAJOR IN ECONOMICS (ECS)<sup>1</sup>

|  | <i>Semester Hours</i> |
|--|-----------------------|
| Economics .....  | 30                    |
| ECO 203, 204, 346, 347, and 18 sem. hrs. of upper-division electives.    |                       |
| Mathematics .....  | 3-6                   |
| MTH 207 or MTH 112-113   |                       |
| Natural science .....  | 7                     |
| Social and behavioral science .....                                      | 12                    |
| Humanities .....   | 18                    |
| Philosophy and/or religious studies .....                                | 12                    |
| Communication skills .....   | 3-9                   |
| General education courses and academic electives to total at least ..... | 120                   |

<sup>1</sup>See also Distribution Table for Bachelor of Arts programs and Chapter V for General Education Requirements.





ENGLISH (ENG)

The University requirement in English composition is satisfied by the completion of English 101 and English 102. Students whose verbal scores on the SAT or ACT are sufficiently high to warrant placement in English 114 upon admission or whose acceptance into the University Honors Program places them in English 198 satisfy the University requirement with those one-semester courses, each the equivalent of English 102 as a prerequisite for 200- and 300-level English courses. Students who are placed in English 114 or English 198 do not receive credit for English 101 but are free to take elective course work in place of the waived first semester of freshman composition. Students whose verbal scores on the SAT or ACT do not meet placement criteria for English 101 must enroll in a developmental writing course. Students for whom English is a second language must take a placement test administered by the Department of English. Particulars about the freshman program and testing procedures can be obtained from the chairperson or the director of composition.

Students majoring in English must complete at least 36 semester hours of English courses, including freshman composition, at least one 200-level literature course, and at least 24 semester hours at the 300-400 level. Of the 24 semester hours of upper-level courses, English majors must take at least 3 semester hours in each of the following categories:

- 1. Literary periods—ENG 407, 410, 414, 433, 438, 444, 448, 451, 453, 455, 482<sup>1</sup>, or the equivalent
- 2. Shakespeare—ENG 362 or an equivalent seminar
- 3. Major authors—ENG 405, 431, or a seminar on a single author
- 4. Literary genres—ENG 317, 319, 320, 324, 329, 330, or an approved substitute
- 5. Writing—ENG 308, 310, 312, 316, 370, 372, 376, 378, or 474

<sup>1</sup>ENG 482 may satisfy the requirement of a course in a literary genre instead.

PROGRAM—A5: BACHELOR OF ARTS WITH A MAJOR IN ENGLISH (ENG)<sup>1</sup>

|  | <i>Semester Hours</i> |
|--|-----------------------|
| English .....  | 36                    |
| Speech 101 .....   | 3                     |
| Natural science .....  | 7                     |
| Mathematics .....  | 3                     |
| Social and behavioral science .....                                      | 12                    |
| Humanities .....   | 18                    |
| Philosophy and/or religious studies .....                                | 12                    |
| General education courses and academic electives to total at least ..... | 120                   |

<sup>1</sup>See also Distribution Table for Bachelor of Arts programs and Chapter V for General Education Requirements.

Information about specific courses that serve the needs of students electing English as a preprofessional program (particularly pre-law), as a teaching concentration, as a pregraduate program, as a writing concentration, etc. can be obtained from the department office and from the student's advisor. Majors should consult the department chairperson for advisor assignment.

English minors must take 12 semester hours of upper-divisional (300-400) courses in addition to the composition requirement.

The department sponsors the University of Dayton English Association, an undergraduate student organization, and *Orpheus*, the literary magazine of the University.

## FACULTY

R. Alan Kimbrough, *Chairperson*

Joyce R. Durham, *Director of Composition*

*Professors:* August, Bedard, Cochran, K. Marre, Martin, Patrouch

*Associate Professors:* Arons, Cameron, Farrelly, Henninger, Kimbrough, Labadie, Macklin, L. Marre, Means, Palumbo, Pici, Ruff, Stockum

*Assistant Professor:* Durham

## COURSES OF INSTRUCTION

ENG 101. COLLEGE COMPOSITION I: Analysis of the processes of reading and writing aimed at the development and refinement of critical thinking skills, critical reading skills, and critical writing skills. Required departmental examination.

3 sem. hrs.

ENG 102. COLLEGE COMPOSITION II: Study of appropriate rhetorical structures and styles for analytic, synthetic, and argumentative essays. Practice in developing critical reading and writing skills with an emphasis on writing from sources. Prerequisite: ENG 101.

3 sem. hrs.

ENG 114. FRESHMAN WRITING SEMINAR: A one-semester composition course for first-semester freshmen who show high proficiency. Open by permission only.

3 sem. hrs.

ENG 198. FRESHMAN HONORS SEMINAR: Study and seminar discussion of selected literary masterworks and appropriate criticism thereof, with equal emphasis on composition. Open by permission only to freshmen in the University Honors Program.

3 sem. hrs.

\*ENG 203. MAJOR BRITISH WRITERS: Study of four or five writers representative of the principal periods in English literature. Prerequisite: ENG 102 or equivalent.

3 sem. hrs.

\*ENG 204. MAJOR AMERICAN WRITERS: Study of four or five writers representative of the principal periods in American literature. Prerequisite: ENG 102 or equivalent.

3 sem. hrs.

\*ENG 205. MAJOR WORLD WRITERS: Study (in translation) of four or five writers representative of the principal periods in world (chiefly Western) literature, exclusive of English and American literature. Prerequisite: ENG 102 or equivalent.

3 sem. hrs.

ENG 210. POETRY: Study of representative examples of a major literary genre. Prerequisite: ENG 102 or equivalent.

3 sem. hrs.

ENG 212. DRAMA: Study of representative examples of a major literary genre. Prerequisite: ENG 102 or equivalent.

3 sem. hrs.

ENG 214. FICTION: Study of representative examples of a major literary genre. Prerequisite: ENG 102 or equivalent.

3 sem. hrs.

- ENG 230. TOPICS IN LITERATURE: Exploration of varying approaches to the study of literature. Can be repeated under special circumstances. Prerequisite: ENG 102 or equivalent. 1-6 sem. hrs.
- ENG 242. SOPHOMORE HONORS: Seminar in which selected works from the literature of Western civilization are studied. By invitation only. 3 sem. hrs.
- ENG 272. EXPOSITORY WRITING: Further practice in writing expository themes and documented papers. A continuation of ENG 102 for students desiring more experience in writing. Prerequisite: ENG 102 or equivalent. 3 sem. hrs.
- ENG 282. INTRODUCTION TO WRITING POETRY: A beginning course in analyzing and writing poetry. Prerequisite: ENG 102 or equivalent. 3 sem. hrs.
- ENG 284. INTRODUCTION TO WRITING FICTION: A beginning course in analyzing and writing short fiction. Prerequisite: ENG 102 or equivalent. 3 sem. hrs.
- ENG 286. INTRODUCTION TO WRITING DRAMA: A beginning course in analyzing and writing short plays. Prerequisite: ENG 102 or equivalent. 3 sem. hrs.
- \*ENG 301. SURVEY OF EARLY ENGLISH LITERATURE: Survey of English literature from the Medieval period to the end of the eighteenth century. Prerequisite: ENG 102 or equivalent. 3 sem. hrs.
- \*ENG 302. SURVEY OF LATER ENGLISH LITERATURE: Survey of English literature from the beginning of the Romantic period to the present. Prerequisite: ENG 102 or equivalent. 3 sem. hrs.
- \*ENG 305. SURVEY OF AMERICAN LITERATURE: Survey of American literature from the Colonial period to the present. Prerequisite: ENG 102 or equivalent. 3 sem. hrs.
- \*ENG 306. SURVEY OF CONTINENTAL LITERATURE: Survey of continental European literature from Homer to the present. Prerequisite: ENG 102 or equivalent. Not open to students who have taken ENG 322. 3 sem. hrs.
- ENG 308. ADVANCED WRITING OF POETRY: Intensive practice in the writing of poems. Prerequisite: ENG 282 or permission. 3 sem. hrs.
- ENG 310. ADVANCED WRITING OF FICTION: Intensive practice in the writing of fiction. Prerequisite: ENG 284 or permission. 3 sem. hrs.
- ENG 312. ADVANCED WRITING OF DRAMA: Intensive practice in the writing of plays. Prerequisite: ENG 286 or permission. 3 sem. hrs.
- ENG 316. ADVANCED COMPOSITION: Intensive practice in the writing of essays and the study of rhetoric. Prerequisite: ENG 102 or equivalent. 3 sem. hrs.
- ENG 317. CONTEMPORARY POETRY: Study of selected poems by recent writers. Prerequisite: ENG 102 or equivalent. 3 sem. hrs.
- ENG 319. CONTEMPORARY FICTION: Study of selected novels and short fiction by recent writers. Prerequisite: ENG 102 or equivalent. 3 sem. hrs.
- ENG 320. CONTEMPORARY DRAMA: Study of selected plays to illustrate major tendencies of modern drama. Prerequisite: ENG 102 or equivalent. 3 sem. hrs.

ENG 322. MASTERPIECES OF WORLD LITERATURE: Intensive study of major literary works representative of various cultures. Works are studied in translation, although an English language work or two may be included for appropriate comparison. Prerequisite: ENG 102 or equivalent. 3 sem. hrs.

ENG 324. THE NOVEL: A consideration of selected novels to illustrate various fictional modes. Prerequisite: ENG 102 or equivalent. 3 sem. hrs.

ENG 325. SCIENCE FICTION: Survey of science fiction with detailed analysis of selected novels and short fiction. Prerequisite: ENG 102 or equivalent. 3 sem. hrs.

ENG 327. STUDIES IN POPULAR FICTION: Analysis of selected artifacts of popular culture with reference to serious literature. May be repeated as topics change. Prerequisite: ENG 102 or equivalent. 3 sem. hrs.

ENG 329. SHORT STORY: Study of the techniques employed in the writing of the short story. Analysis of various models of the short story. Not open normally to students who have had ENG 214. Prerequisite: ENG 102 or equivalent. 3 sem. hrs.

ENG 330. DEVELOPMENT OF DRAMA: Study of the historical development of the drama from its beginnings to the nineteenth century. Analysis of plays from each significant period. Prerequisite: ENG 102 or equivalent. 3 sem. hrs.

ENG 331. STUDIES IN FILM: Analysis of selected films to show developments in film technique or criticism. May be repeated as topics change. Prerequisite: ENG 102 or equivalent. 3 sem. hrs.

ENG 333. IMAGES OF WOMEN IN LITERATURE: Examination of significant literary works that portray traditional images of women. Prerequisite: ENG 102 or equivalent. 3 sem. hrs.

ENG 335. MODERN BLACK LITERATURE: Study of selected twentieth-century black writers. Prerequisite: ENG 102 or equivalent. 3 sem. hrs.

ENG 337. STUDIES IN FOLKLORE: Selected studies in American and/or world folklore. May be repeated as topics change. Prerequisite: ENG 102 or equivalent. 3 sem. hrs.

ENG 339. AMERICAN INDIAN LITERATURE: Survey of American Indian oral narrative and literature. Prerequisite: ENG 102 or equivalent. 3 sem. hrs.

ENG 348. MODERN IRISH LITERATURE: A consideration principally of the Irish literary revival of the late nineteenth and early twentieth centuries with appropriate background material. Prerequisite: ENG 102 or equivalent. 3 sem. hrs.

\*ENG 350. EUROPEAN LITERATURE OF ANTIQUITY: Study of significant works from the Old Testament and Greek, Roman, English, Irish, and/or Scandinavian writers. Prerequisite: ENG 102 or equivalent. 3 sem. hrs.

\*ENG 351. EUROPEAN LITERATURE OF THE MIDDLE AGES: Study of selected literary masterpieces of Western civilization in the Middle Ages. Prerequisite: ENG 102 or equivalent. 3 sem. hrs.

\*ENG 353. LITERATURE OF THE RENAISSANCE: Study of selected literary masterpieces from England and the Continent that illustrate the culture and ideas of the Renaissance. Prerequisite: ENG 102 or equivalent. 3 sem. hrs.

\*ENG 354. LITERATURE OF THE ENLIGHTENMENT: Study of selected English and European literature from the Age of Reason. Prerequisite: ENG 102 or equivalent.

3 sem. hrs.

\*ENG 355. LITERATURE OF THE ROMANTIC AGE: Study of the Romantic Revolution as illustrated in representative writings of English and European authors. Prerequisite: ENG 102 or equivalent.

3 sem. hrs.

\*ENG 356. EUROPEAN LITERATURE OF THE NINETEENTH CENTURY: Study of representative masterpieces from the literature of England and the Continent during the nineteenth century. Prerequisite: ENG 102 or equivalent.

3 sem. hrs.

\*ENG 357. EUROPEAN LITERATURE OF THE EARLY TWENTIETH CENTURY: Study of significant English and European literature that illustrates the ideas and culture of the early modern period. Prerequisite: ENG 102 or equivalent.

3 sem. hrs.

\*ENG 358. CONTEMPORARY LITERATURE OF EUROPE: Study of selected Western European literature that illustrates the ideas and culture of the present age. Prerequisite: ENG 102 or equivalent.

3 sem. hrs.

\*ENG 362. SHAKESPEARE: Study of selected plays and poems of Shakespeare. Prerequisite: ENG 102 or equivalent.

3 sem. hrs.

ENG 362L. SHAKESPEARE PERFORMANCE LABORATORY: Study of Shakespearean performances through films, video tapes, and recordings. Three hours a week. Students in 362L must have already taken or be registered for ENG 362 or an equivalent Shakespeare course.

1 sem. hrs.

ENG 368. THEME AND IDEA IN LITERATURE: Selected texts illustrating a universal theme or a consistent idea to serve as a base for developing critical and analytical insights and writing skills. Offered in seminar format. Prerequisite: ENG 102 or equivalent.

2 sem. hrs.

ENG 370. REPORT WRITING: Analysis of and practice in both basic and complex written reports, including the long formal report. Prerequisite: ENG 102 or equivalent.

3 sem. hrs.

ENG 372. APPLIED WRITTEN COMMUNICATIONS: Analysis of and practice in written communications appropriate to business and industrial organizations, including forms of correspondence and a job-application project but excluding formal reports. Prerequisite: ENG 102 or equivalent.

3 sem. hrs.

ENG 376. TOPICS IN WRITING: Analysis of and practice in specific forms of writing. May be repeated as forms change. Prerequisite: ENG 102 or equivalent.

1-3 sem. hrs.

ENG 378. PROFESSIONAL AND TECHNICAL WRITING: Practice in developing writing skills needed in business, government, and industry. Prerequisite: ENG 102 or equivalent.

3 sem. hrs.

ENG 380. STUDIES IN LITERATURE: Study of special topics or themes in literature. May be repeated as topics change. Prerequisite: ENG 102 or equivalent.

1-6 sem. hrs.

ENG 384. DIRECTED READINGS: A program of readings and reports in literature and the humanities. May be repeated with permission. Prerequisite: ENG 102 or equivalent. 3 sem. hrs.

ENG 395. JUNIOR HONORS TUTORIAL: Independent directed study on special topics for selected students. May be repeated as topic or instructor changes. Permission required. 3 sem. hrs.

ENG 405. CHAUCER: Study of Chaucer's life, world, language, and literary achievement, concentrating on *The Canterbury Tales* (in Middle English). Prerequisite: A 200- or 300-level English course. 3 sem. hrs.

ENG 407. MEDIEVAL ENGLISH LITERATURE: Study of the dominant types in the literature of England from the beginning to 1500. Prerequisite: A 200- or 300-level English course. 3 sem. hrs.

ENG 410. EARLY RENAISSANCE LITERATURE: Survey of the literature of the sixteenth century from Thomas More to Sidney and Spenser. Prerequisite: A 200- or 300-level English course. 3 sem. hrs.

ENG 414. LATER RENAISSANCE LITERATURE: Survey of the literature of the early seventeenth century from Bacon, Jonson, and Donne to Marvell, exclusive of Milton. Prerequisite: A 200- or 300-level English course. 3 sem. hrs.

ENG 431. MILTON: Study of the major and minor poems and of selected prose of Milton. Prerequisite: A 200- or 300-level English course. 3 sem. hrs.

ENG 433. STUDIES IN NEO-CLASSICAL LITERATURE: Study of English literature from Dryden to Johnson. May be repeated as topics change. Prerequisite: A 200- or 300-level English course. 3 sem. hrs.

ENG 438. ENGLISH ROMANTICISM: Study of the major poets and critics of the Romantic Age. Prerequisite: A 200- or 300-level English course. 3 sem. hrs.

ENG 444. STUDIES IN NINETEENTH-CENTURY ENGLISH LITERATURE: Study of English literature in the nineteenth century. May be repeated as topics change. Prerequisite: A 200- or 300-level English course. 3 sem. hrs.

ENG 448. TWENTIETH-CENTURY BRITISH LITERATURE: Study of significant developments in modern British literature. Prerequisite: A 200- or 300-level English course. 3 sem. hrs.

ENG 451. AMERICAN ROMANTICISM: Study of significant developments in American literature of the mid-nineteenth century. Prerequisite: A 200- or 300-level English course. 3 sem. hrs.

ENG 453. AMERICAN REALISM AND NATURALISM: Study of representative writers from the post-Civil War period in American literature. Prerequisite: A 200- or 300-level English course. 3 sem. hrs.

ENG 455. TWENTIETH-CENTURY AMERICAN LITERATURE: Study of significant developments in American literature of the twentieth century. Prerequisite: A 200- or 300-level English course. 3 sem. hrs.

ENG 468. **INTRODUCTION TO LINGUISTICS:** Introduction to the basic concepts and procedures of general linguistics, including language description, history, variation, theory, and acquisition. Prerequisite: A 200- or 300-level English course.

*3 sem. hrs.*

ENG 470. **HISTORY OF ENGLISH:** Study of stages in the development of the English language and of influences shaping its development from the beginning to the present. Prerequisite: A 200- or 300-level English course.

*3 sem. hrs.*

ENG 472. **THE STRUCTURE OF ENGLISH:** Study of the grammatical structure of modern English from traditional and modern linguistic points of view. Prerequisite: A 200- or 300-level English course.

*3 sem. hrs.*

ENG 474. **ARGUMENTATION:** Studies and practice in the patterns of argumentative writing. Recommended for the pre-professional student. Prerequisite: ENG 272, 316, 370, or permission of instructor.

*3 sem. hrs.*

ENG 480. **INDEPENDENT STUDY:** Individual investigations of special topics under faculty direction. May be repeated under special circumstances. Prerequisites: Permission and at least fifteen semester hours of English.

*1-6 sem. hrs.*

ENG 482. **MODERN POETRY:** Concentrated, advanced study in the development of modern poetry, both English and American. Prerequisite: A 200- or 300-level English course.

*3 sem. hrs.*

ENG 485. **INTERNSHIP IN WRITING:** Application of writing skills to specific projects of an approved organization. Practical and professional experience offered to juniors and seniors (particularly English majors and minors) as a supplement to the writing curriculum. Prerequisite: Permission of supervising instructor. May be repeated up to six semester hours.

*1-6 sem. hrs.*

ENG 490. **SEMINAR:** Concentration on one literary figure, genre, or period for research and analysis. May be repeated as topics change. Consult departmental booklet for specific prerequisites for each section. Permission required.

*3 sem. hrs.*

ENG 495. **SENIOR HONORS TUTORIAL:** Independent directed study on special topics for selected students. May be repeated as topic or instructor changes. Permission required.

*3 sem. hrs.*

\*General education course. See Chapter V.

## FAMILY DEVELOPMENT (FAD)

The interdisciplinary minor in family development increases understanding of the meaning and dynamics of marriage and parenthood in contemporary society. It examines the family as a major institution affecting society and surveys the individual, social, and economic problems found within families. This background contributes to preparation for careers in areas such as social work, education, communication, home economics, and religious work.

The minor in family development is earned by taking 16 semester hours of coursework, at least 12 of which must be at the 300-400 level and all of which must be outside one's major discipline. These must be distributed as follows:

*Semester Hours*

|   |   |
|---|---|
| Basic theory course in family development (Choose one.) | 3 |
| HEC 318 Family Living                                   |   |
| SOC 331 Marriage and the Family                         |   |
| The child (Choose one.)                                 | 3 |
| HEC 325 Child Development                               |   |
| PSY 251 Human Growth and Development                    |   |
| PSY 351 Child Psychology                                |   |
| Marriage and family (Choose one.)                       | 3 |
| COM 410 Family Communication                            |   |
| PHL 318 Family Ethics                                   |   |
| REL 365 Christian Marriage                              |   |
| ASI 448 Seminar in Family Development (required)        | 1 |
| Electives (Choose two.)                                 | 6 |
| BIO 390 Physiology of Sex and Fertility Regulation      |   |
| EDT 360 Children's Literature                           |   |
| HEC 306 Family Management                               |   |
| HEC 329 Child Development Practicum                     |   |
| PSY 355 Psychology of Exceptional Children              |   |
| PSY 452 Cognitive Development in Children               |   |
| PSY 457 Television and Its Effects on Children          |   |
| PSY 462 Human Sexual Behavior                           |   |
| REL 362 Christian Family Values and Television          |   |
| REL 466 Theology of Sexuality                           |   |
| SWK 339 Child Abuse                                     |   |
| SWK 422 Parenting: Social Welfare Role                  |   |
| SWK 443 Death, Dying, and Suicide                       |   |
| SOC 322 Sex Roles and Society                           |   |
| SOC 323 Juvenile Delinquency                            |   |
| SOC 335 Social Implications of Aging                    |   |

No more than 6 semester hours from any one department may be applied to the minor in family development. Courses taken for this minor may be applied to other minors and to breadth and general education requirements. Appropriate courses may be substituted with permission from the office of the dean of the College of Arts and Sciences and the director of the Center for the Study of Family Development. Students wishing to be recorded as minoring in family development should notify their chairpersons, their deans, and the director of the Center for the Study of Family Development.

### FAMILY DEVELOPMENT COMMITTEE

Patricia Voydanoff, *Director, Center for the Study of Family Development*  
 Allik (Psychology), DeLuca (Home Economics), Herbenick (Philosophy), L. Majka (Sociology), T. Martin (Religious Studies), Moore (Social Work), Wong (College of Arts and Sciences)



## FINE ARTS (ART)

The Fine Arts Division of the Performing and Visual Arts Department offers five degree programs:

**Bachelor of Arts with a Major in Fine Arts (A6)**

**Bachelor of Arts with a Major in Interior Design (A6A)**

**Bachelor of Fine Arts with a Major in Studio Art (A7)**

**Bachelor of Fine Arts with a Major in Commercial Design (A7A)**

**Bachelor of Fine Arts with Teacher Certification (A7B)**

Each applicant to a program of the Fine Arts Division is required to submit a portfolio of acceptable quality for specific program placement. Specific information on portfolio entrance requirements and submission dates for both entering and transfer students should be requested from the Fine Arts Division office, Rike Center. Applicants without portfolios will be admitted on a probationary basis and placed in a one- to two-semester introductory program.

A faculty review of each degree candidate is conducted during the second year of the candidate's program. All senior Bachelor of Fine Arts program candidates must present portfolios for faculty evaluation before graduation.

Fees are noted in course descriptions if required. These are variable. Information on current fees is obtainable in the Fine Arts Division office.

A minor in fine arts is a 21-semester-hour program requiring the following:

1. Permission of the head of the Fine Arts Division, who assigns an advisor.
2. ART 104 Introductory Drawing ..... 3 sem. hrs.  
 ART 112 Principles of Design ..... 3 sem. hrs.  
 ART 181 Art Appreciation ..... 3 sem. hrs.
3. Twelve additional semester hours in any combination selected from the Fine Arts Division offerings. These may not include commercial design courses.

A minor in commercial design is a 24- or 25-semester hour program with the following requirements:

1. Permission of the head of the Fine Arts Division, who assigns an advisor.
2. ART 103-104 Introductory Drawing ..... 5 sem. hrs.  
 ART 111-112 Principles of Design ..... 5 sem. hrs.  
 ART 216 Design and Color ..... 3 sem. hrs.  
 ART 345 Typography ..... 3 sem. hrs.  
 ART 349 Production for Commercial Artists ..... 3 sem. hrs.  
 ART 411-412 Commercial Design I and II ..... 6 sem. hrs.
3. The following courses must be taken in this sequence: 111, 103, 112, 216, 345, 411, 415. ART 104 may be taken at the same time as 112. ART 349 may be taken at the same time as 411. Students who have had two to four years of high school or other formal art training may test out of ART 111 and 103 by submitting portfolios as for entering majors. On testing out, the student must replace ART 111 and 103 with ART 415, Advanced Commercial Design, later in the program.

**PROGRAM—A6: BACHELOR OF ARTS WITH A MAJOR IN  
FINE ARTS (ART)<sup>1</sup>**

| <i>Dept.</i>  | <i>No.</i> | <i>Course</i>                              | <i>Semester Hours</i> |                 |
|---|------------|--|-----------------------|-----------------|
| <b>Freshman Year</b>  |            |  | <b>1st Term</b>       | <b>2nd Term</b> |
| ART   | 100        | Freshman Seminar                           | 0                     |                 |
| ART   | 104        | Introductory Drawing                       | 3                     |                 |
| ART   | 112        | Principles of Design                       | 3                     |                 |
| ART   | 183-184    | Visual Fundamentals I and II               | 3                     | 3               |
| ART   | 216        | Design and Color                           |                       | 3               |
| ENG   | 101-102    | College Composition I and II               | 3                     | 3               |
| SPE   | 101        | Fundamentals of Effective Speaking         |                       | 3               |
| —   | —          | General education and breadth requirements | 3                     | 3               |
|   |            |  | 15                    | 15              |
| <b>Sophomore Year</b>   |            |  |                       |                 |
| ART   | 207        | Figure Drawing                             | 3                     |                 |
| ART   | 226        | Introductory Painting                      | 3                     |                 |
| ART   | —          | Art history elective                       |                       | 3               |
| PHO   | 101        | Basic Photography                          |                       | 3               |
| —   | —          | General education and breadth requirements | 9                     | 9               |
|   |            |  | 15                    | 15              |
| <b>Junior Year</b>  |            |  |                       |                 |
| ART   | 231        | Sculpture                                  |                       | 3               |
| ART   | 253        | Printmaking I                              | 3                     |                 |
| ART   | 362 or 364 | Copper Enameling or Jewelry Construction   | 3                     |                 |
| ART   | —          | Art elective                               |                       | 3               |
| —   | —          | General education and breadth requirements | 10                    | 9               |
|   |            |  | 16                    | 15              |
| <b>Senior Year</b>  |            |  |                       |                 |
| ART   | 240        | Introductory Ceramics                      | 3                     |                 |
| ART   | —          | Art elective                               |                       | 2               |
| MTH   | —          | Mathematics requirement                    |                       | 3               |
| —   | —          | General education and breadth requirements | 12                    | 9               |
|   |            |  | 15                    | 14              |
|   |            |  | <i>Semester Hours</i> |                 |
| Communication skills .....  |            |  |                       | 3-9             |
| Major Program—Required courses .....  |            |  | 36                    |                 |
| Art history elective .....  |            |  | 3                     |                 |
| ART electives .....   |            |  | 5                     |                 |
| <b>Total in ART .....</b>   |            |  |                       | <b>44</b>       |
| Breadth requirements—Natural science .....  |            |  | 7                     |                 |
| Mathematics .....   |            |  | 3                     |                 |
| Social and behavioral science .....   |            |  | 12                    |                 |
| Humanities .....  |            |  | 18                    |                 |
| Philosophy and/or religious studies ..  |            |  | 12                    |                 |
| <b>Total breadth requirement .....</b>  |            |  |                       | <b>52</b>       |
| <b>General education<sup>2</sup> and academic electives to total at least .....</b> |            |  |                       | <b>120</b>      |

<sup>1</sup>See also Distribution Table for Bachelor of Arts programs and Chapter V for General Education Requirements.

<sup>2</sup>Courses taken as part of the general education requirement may also fulfill the breadth requirement. Check with program advisor.

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**PROGRAM—A6A: BACHELOR OF ARTS WITH A MAJOR IN INTERIOR DESIGN (IDE)<sup>1</sup>**


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| Dept.          | No.      | Course                                     | Semester Hours |          |
|----------------|----------|--|----------------|----------|
| Freshman Year  |          |  | 1st Term       | 2nd Term |
| ART            | 100      | Freshman Seminar                           | 0              |          |
| ART            | 104      | Introductory Drawing                       | 3              |          |
| ART            | 112      | Principles of Design                       | 3              |          |
| ART            | 183-184  | Visual Fundamentals I and II               | 3              | 3        |
| ART            | 216      | Design and Color                           |                | 3        |
| ENG            | 101-102  | College Composition I and II               | 3              | 3        |
| SPE            | 101      | Fundamentals of Effective Speaking         |                | 3        |
| —              | —        | General education and breadth requirements | 3              | 3        |
|                |          |  | 15             | 15       |
| Sophomore Year |          |  |                |          |
| ART            | 231      | Sculpture                                  |                | 3        |
| ART            | 297      | Marker Rendering                           | 2              |          |
| ART            | 311      | Design III                                 | 2              |          |
| HEC            | 214      | Textiles                                   | 3              |          |
| PHO            | 101      | Basic Photography                          |                | 3        |
| —              | —        | General education and breadth requirements | 9              | 9        |
|                |          |  | 16             | 15       |
| Junior Year    |          |  |                |          |
| ART            | 307      | Drawing for Commercial Artists             |                | 2        |
| HEC            | 320      | Family Housing                             | 2              |          |
| HEC            | 330, 340 | Interior Design I and II                   | 3              | 3        |
| —              | —        | General education and breadth requirements | 10             | 9        |
|                |          |  | 15             | 14       |
| Senior Year    |          |  |                |          |
| HEC            | 350      | Interior Design III                        | 3              |          |
| HEC            | 430      | Issues in Interior Design                  |                | 2        |
| MTH            | —        | Mathematics requirement                    | 3              |          |
| —              | —        | General education and breadth requirements | 9              | 13       |
|                |          |  | 15             | 15       |

*Semester Hours*

|   |     |
|---|-----|
| Communication skills .....  | 3-9 |
| Major Program—ART courses .....   | 24  |
| PHO course .....  | 3   |
| HEC courses .....   | 16  |
| Total major program .....   | 43  |
| Breadth requirements—Natural science .....                                    | 7   |
| Mathematics .....   | 3   |
| Social and behavioral science .....   | 12  |
| Humanities .....  | 18  |
| Philosophy and/or religious studies ..  | 12  |
| Total breadth requirement .....   | 52  |
| General education <sup>2</sup> and academic electives to total at least ..... | 120 |

<sup>1</sup>See also Distribution Table for Bachelor of Arts programs and Chapter V for General Education Requirements.

<sup>2</sup>Courses taken as part of the general education requirement may also fulfill the breadth requirement. Check with program advisor.

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**PROGRAM—A7: BACHELOR OF FINE ARTS WITH A MAJOR  
IN STUDIO ART (STA)**


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| <i>Dept.</i>                                     | <i>No.</i> | <i>Course</i>                              | <i>Semester Hours</i> |                 |
|--|------------|--|-----------------------|-----------------|
| <b>Freshman Year</b>                             |            |  | <b>1st Term</b>       | <b>2nd Term</b> |
| ART  | 100        | Freshman Seminar                           | 0                     |                 |
| ART  | 104        | Introductory Drawing                       | 3                     |                 |
| ART  | 112        | Principles of Design                       | 3                     |                 |
| ART  | 183-184    | Visual Fundamentals I and II               | 3                     | 3               |
| ART  | 206        | Anatomical Drawing                         |                       | 3               |
| ART  | 216        | Design and Color                           |                       | 3               |
| ART  | 226        | Introductory Painting                      |                       | 3               |
| ENG  | 101-102    | College Composition I and II               | 3                     | 3               |
| PHO  | 101        | Basic Photography                          |                       | 3               |
| SPE  | 101        | Fundamentals of Effective Speaking         | 3                     |                 |
|  |            |  | <u>15</u>             | <u>18</u>       |
| <b>Sophomore Year</b>                            |            |  |                       |                 |
| ART  | 207        | Figure Drawing                             | 3                     |                 |
| ART  | 227        | Introductory Painting                      | 3                     |                 |
| ART  | 231        | Sculpture                                  |                       | 3               |
| ART  | 253        | Printmaking I                              | 3                     |                 |
| ART  | —          | Studio electives                           |                       | 6               |
| —  | —          | General education and breadth requirements | 6                     | 6               |
|  |            |  | <u>15</u>             | <u>15</u>       |
| <b>Junior Year</b>                               |            |  |                       |                 |
| ART  | 232        | Sculpture                                  | 3                     |                 |
| ART  | 316        | Life Studies                               |                       | 1               |
| ART  | —          | Studio electives                           | 6                     | 6               |
| MKT  | —          | Approved marketing courses                 | 3                     | 3               |
| MTH  | —          | Mathematics                                | 3                     |                 |
| —  | —          | General education and breadth requirements | 3                     | 6               |
|  |            |  | <u>18</u>             | <u>16</u>       |
| <b>Senior Year</b>                               |            |  |                       |                 |
| ART  | 495-496    | Graduation Portfolio                       | 1                     | 1               |
| ART  | —          | Art history                                | 3                     |                 |
| ART  | —          | Art electives                              | 6                     | 6               |
| —  | —          | General education and breadth requirements | 6                     | 9               |
|  |            |  | <u>16</u>             | <u>16</u>       |
|  |            |  | <i>Semester Hours</i> |                 |
| Communication skills .....                       |            |  | 3-9                   |                 |
| Philosophy and/or religious studies .....        |            |  | 12                    |                 |
| Breadth requirement <sup>1</sup> .....           |            |  | 12                    |                 |
| Major Program—Required courses .....             |            |  | 45                    |                 |
| ART electives .....                              |            |  | 30                    |                 |
| Total in ART .....                               |            |  |                       | 75              |
| General education requirement <sup>2</sup> ..... |            |  |                       | 30              |
| Total for the degree .....                       |            |  |                       | 129             |

<sup>1</sup>Breadth requirement: 6 sem. hrs. selected from psychology, sociology, anthropology, political science, mathematics, natural sciences, economics, marketing, management, social work; 6 sem. hrs. selected from American studies, communication, English, history, languages, philosophy, religious studies, or performing and visual

arts (excluding fine arts and photography). For specific courses consult head of the Fine Arts Division.

<sup>2</sup>See Chapter V, General Education Requirements. Courses taken as part of the general education requirement may also fulfill the breadth requirement. Check with program advisor.

### PROGRAM—A7A: BACHELOR OF FINE ARTS WITH A MAJOR IN COMMERCIAL DESIGN (CDE)

| <i>Dept.</i>          | <i>No.</i> | <i>Course</i>                              | <i>Semester Hours</i> |                 |
|-----------------------|------------|--|-----------------------|-----------------|
| <b>Freshman Year</b>  |            |  | <b>1st Term</b>       | <b>2nd Term</b> |
| ART                   | 100        | Freshman Seminar                           | 0                     |                 |
| ART                   | 104        | Introductory Drawing                       | 3                     |                 |
| ART                   | 112        | Principles of Design                       | 3                     |                 |
| ART                   | 183-184    | Visual Fundamentals I and II               | 3                     | 3               |
| ART                   | 206        | Anatomical Drawing                         |                       | 3               |
| ART                   | 216        | Design and Color                           |                       | 3               |
| ART                   | 285        | Technical Graphics                         |                       | 2               |
| PHO                   | 101        | Basic Photography                          |                       | 3               |
| ENG                   | 101-102    | College Composition I and II               | 3                     | 3               |
| SPE                   | 101        | Fundamentals of Effective Speaking         | 3                     |                 |
|                       |            |  | 15                    | 17              |
| <b>Sophomore Year</b> |            |  |                       |                 |
| ART                   | 207        | Figure Drawing                             | 3                     |                 |
| ART                   | 226        | Introductory Painting                      | 3                     |                 |
| ART                   | 253-254    | Printmaking I and II                       | 3                     | 3               |
| ART                   | 297        | Marker Rendering                           |                       | 2               |
| ART                   | 298        | Studio Skills                              |                       | 3               |
| ART                   | 311-312    | Design III and IV                          | 2                     | 3               |
| ART                   | 345        | Typography                                 |                       | 3               |
| PHO                   | 201        | Intermediate Photography                   | 3                     |                 |
| —                     | —          | General education and breadth requirements | 3                     | 3               |
|                       |            |  | 17                    | 17              |
| <b>Junior Year</b>    |            |  |                       |                 |
| ART                   | 307        | Drawing for Commercial Artists             | 2                     |                 |
| ART                   | 316        | Life Studies                               |                       | 1               |
| ART                   | 318        | Three-Dimensional Design, Commercial       |                       | 3               |
| ART                   | 344        | Designing with Type and Symbols            | 3                     |                 |
| ART                   | 349        | Production for the Commercial Artist       | 3                     |                 |
| ART                   | 411        | Commercial Design I                        |                       | 3               |
| ART                   | —          | Art elective                               | 3                     |                 |
| —                     | —          | General education and breadth requirements | 6                     | 10              |
|                       |            |  | 17                    | 17              |
| <b>Senior Year</b>    |            |  |                       |                 |
| ART                   | 412        | Commercial Design II                       | 3                     |                 |
| ART                   | 415        | Advanced Commercial Design                 |                       | 3               |
| ART                   | 498-499    | Graduation Portfolio                       | 1                     | 1               |
| ART                   | —          | Art electives                              | 3                     | 3               |
| MTH                   | —          | Mathematics                                | 3                     |                 |
| —                     | —          | General education and breadth requirements | 6                     | 9               |
|                       |            |  | 16                    | 16              |

#### *Design Illustration*

For a concentration in design illustration, commercial design majors may replace ART 345, 318, 344, 411, 412, 415 with the following course sequence:

ART 227      Introductory Painting II ..... 3 sem. hrs.

|             |                                    |             |
|-------------|------------------------------------|-------------|
| ART 317     | Airbrush .....                     | 3 sem. hrs. |
| ART 325     | Figure Painting .....              | 3 sem. hrs. |
| ART 397-398 | Design Illustration I and II ..... | 6 sem. hrs. |
| ART 303     | Advanced Drawing .....             | 3 sem. hrs. |

*Semester Hours*

|  |     |
|--|-----|
| Communication skills .....                       | 3-9 |
| Philosophy and/or religious studies .....        | 12  |
| Breadth requirement <sup>1</sup> .....           | 24  |
| Major Program—Required courses .....             | 74  |
| ART electives .....                              | 9   |
| Total in ART .....                               | 83  |
| General education requirement <sup>2</sup> ..... | 30  |
| Total for the degree .....                       | 132 |

<sup>1</sup>Breadth Requirement: Two units of 6 sem. hrs. each selected from economics, management, marketing, mathematics, political science, psychology, natural sciences, social work, sociology, anthropology. Two units of 6 sem. hrs. each selected from American studies, communication, English, history, languages, philosophy, religious studies, or performing and visual arts (excluding fine arts and photography). At least 6 sem. hrs. must be taken outside the Performing and Visual Arts Department.

<sup>2</sup>See Chapter V, General Education Requirements. Courses taken as part of the general education requirement may also fulfill the breadth requirement. Check with program advisor.

### PROGRAM—A7B: BACHELOR OF FINE ARTS WITH TEACHER CERTIFICATION (E-11) (FAE)

Note: Students seeking certification in the B.F.A. program must apply in the sophomore year with 40 semester hours completed and with a 2.9 cumulative point average. See also EDT.

| Dept.          | No.     | Course                                   | <i>Semester Hours</i> |          |
|----------------|---------|--|-----------------------|----------|
| Freshman Year  |         |  | 1st Term              | 2nd Term |
| ART            | 100     | Freshman Seminar                         | 0                     |          |
| ART            | 104     | Introductory Drawing                     | 3                     |          |
| ART            | 112     | Principles of Design                     | 3                     |          |
| ART            | 183-184 | Visual Fundamentals I and II             | 3                     | 3        |
| ART            | 206     | Anatomical Drawing                       |                       | 3        |
| ART            | 216     | Design and Color                         |                       | 3        |
| ENG            | 101-102 | College Composition I and II             | 3                     | 3        |
| SPE            | 101     | Fundamentals of Effective Speaking       | 3                     |          |
| —              | —       | General education or breadth requirement |                       | 3        |
|                |         |  | 15                    | 15       |
| Sophomore Year |         |  |                       |          |
| ART            | 207     | Figure Drawing                           | 3                     |          |
| ART            | 226     | Introductory Painting                    | 3                     |          |
| ART            | 231     | Sculpture                                | 3                     |          |
| ART            | 240     | Introductory Ceramics                    | 3                     |          |
| ART            | 254     | Printmaking II                           |                       | 3        |
| ART            | —       | Art elective                             |                       | 2        |
| PHO            | 101     | Basic Photography                        |                       | 3        |
| EDT            | 207     | Child and Adolescent in Education        | 3                     |          |
| EDT            | 208     | Teaching and Learning                    |                       | 3        |
| EDT            | 318     | Human Relations in Education             | 2                     |          |
| MTH            | —       | Mathematics requirement                  |                       | 3        |
| PHL            | 320     | Philosophy of Art                        |                       | 3        |
|                |         |  | 17                    | 17       |

## Junior Year

|     |     |  |           |           |
|-----|-----|--|-----------|-----------|
| ART | 362 | Copper Enameling or                        |           |           |
| ART | 366 | Jewelry Casting or                         |           |           |
| ART | 364 | Jewelry Construction                       |           | 3         |
| ART | 292 | Lettering and Calligraphy or               |           |           |
| ART | 344 | Designing with Type and Symbols            | 3         |           |
| ART | 341 | Weaving                                    |           | 2         |
| ART | —   | Art history elective                       | 3         |           |
| ART | —   | Art electives                              | 2         | 2         |
| EDT | 351 | Secondary School, Self, and Society        | 3         |           |
| —   | —   | General education and breadth requirements | 6         | 10        |
|     |     |  | <u>17</u> | <u>17</u> |

## Senior Year

|     |         |  |           |           |
|-----|---------|--|-----------|-----------|
| ART | 483     | Creative Art Teaching                    | 4         |           |
| ART | 495-496 | Graduation Portfolio                     | 1         | 1         |
| ART | —       | Art electives                            | 6         |           |
| EDT | 419     | Philosophy of Education                  |           | 3         |
| EDT | 421     | Student Teaching                         |           | 12        |
| EDT | 469     | Reading in the Content Areas             | 2         |           |
| —   | —       | General education or breadth requirement | 3         |           |
|     |         |  | <u>16</u> | <u>16</u> |

## Semester hours

|   |     |
|---|-----|
| Communication skills  | 3-9 |
| Philosophy and/or religious studies   | 12  |
| Major Program—Field experiences are arranged by the University in the following courses: EDT 208, EDT 318, EDT 351, EDT 469, ART 483. Required art courses, except ART 496, must be taken before placement in student teaching. |     |
| Required art and photography courses  | 53  |
| Art electives   | 12  |
| Total in ART  | 65  |
| Education requirements  | 25  |
| Breadth requirement <sup>1</sup>  | 24  |
| General education requirement <sup>2</sup>  | 30  |
| Total for the degree  | 131 |

<sup>1</sup>Breadth Requirement: Two units of 6 sem. hrs. each selected from psychology, sociology, anthropology, political science, mathematics, natural sciences, economics, marketing, management, education, home economics. Two units of 6 sem. hrs. each selected from languages, English, history, communication, philosophy, religious studies. (If English, philosophy, religious studies, or communication is chosen, then the requirement excludes the semester hours already required in general education.)

<sup>2</sup>See Chapter V, General Education Requirements. Courses taken as part of the general education requirement may also fulfill the breadth requirement. Check with program advisor.

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

Second-year candidates for B.F.A. participate in a faculty review.

All education courses are to be taken in sequence except EDT 318, 455, and 419.

Philosophy of Education, EDT 419, is accepted as part of the philosophy and/or religious studies requirement in general education.

National Teachers Examination is required of all students.

Students seeking a B.F.A. with teacher certification are encouraged to attend summer school between the junior and senior years.

## FACULTY

Patrick S. Gilvary, *Chairperson, Department of Performing and Visual Arts*

Louis Weber, *Head of Fine Arts Division*

*Associate Professors:* Plogman, Weber

*Assistant Professors:* Barrish, Fiehler, Hitt, Myers, Richardson, Zahner

*Part-time Instructors:* Brown, Cope, Jones, Mushovic, Norcia, Rudegear, Tuss

## COURSES OF INSTRUCTION

ART 101-102. **FUNDAMENTALS AND MATERIALS OF ART:** Course to acquaint beginners with the principles and concepts of art and with the various kinds of materials and techniques used in artistic expression. Open to all students. Prerequisite for ART 102 is ART 101 or permission. Studio fee. *2 sem. hrs. each*

ART 103. **INTRODUCTORY DRAWING:** Introduction of basic visual concepts, various drawing media, and approaches to experimental technique. Emphasis on perspective, perceptual awareness, and expressive freedom. Open to all students. *2 sem. hrs.*

ART 104. **INTRODUCTORY DRAWING:** Introduction of basic visual concepts, various drawing media, and approaches to experimental technique. Emphasis on perspective, perceptual awareness, and expressive freedom. Includes an introduction to figure drawing. Art majors only. Model fee. *3 sem. hrs.*

ART 111. **PRINCIPLES OF DESIGN:** Study of the underlying elements and principles of design as they are applied to surface pattern. Color theories and their use in creative design. Open to all students. *2 sem. hrs.*

ART 112. **PRINCIPLES OF DESIGN:** Study of the underlying elements and principles of design as they are applied to surface pattern. Color theories and their use in creative design. *3 sem. hrs.*

\*ART 181. **ART APPRECIATION:** Course to develop a greater capacity to enjoy as well as understand contemporary art expression. Emphasis on understanding the creative process and investigating the artist's point of view and relationship to audience. Open to all students except art majors. One 3-hour session each week. *3 sem. hrs.*

\*ART 183. **VISUAL FUNDAMENTALS I:** Introductory course to present concepts in the visual arts through an integration of fundamentals in art theory, practice, and history. Not open to students who have taken ART 181. *3 sem. hrs.*

\*ART 184. **VISUAL FUNDAMENTALS II:** Continuation of ART 183 with emphasis on the historical evolution of styles and their relationship to twentieth-century art. Not open to students who have taken ART 181. *3 sem. hrs.*

ART 206. **ANATOMICAL DRAWING:** Studies from the nude model, skeleton, anatomy diagrams, and drawings of the masters. Emphasis on skeletal-muscular structure, external contour, and "norms" for proportion. Prerequisite: ART 104. Model fee. *3 sem. hrs.*

ART 207. **FIGURE DRAWING:** The integration of previous studies of visual concepts, anatomy, and expressive freedom into a personally distinctive figure-drawing approach. Prerequisites: ART 104, 206, and/or permission of instructor. Model fee. *3 sem. hrs.*



**ART 216. DESIGN AND COLOR:** The study of color based principally on Albers' theory of color and its use in expressing and integrating various designs. Prerequisite: ART 112 or permission of instructor. *3 sem. hrs.*

**ART 226-227. INTRODUCTORY PAINTING:** Painting in oil, acrylics, and watercolor: still life, landscape, figure, and abstraction; emphasis on composition and techniques; use of imaginative subject matter. Prerequisite for ART 227 is ART 226 or permission. *3 sem. hrs. each*

**ART 228-229. WATERCOLOR:** Basic principles and techniques of transparent watercolors. Emphasis on composition, value, and color sketching as preparatory steps in painting. In the second course, varying expressions and interpretations of subject material are encouraged. Prerequisites: ART 103 or 104, 111 or 112, 226-227. Model fee. *3 sem. hrs. each*

**ART 231-232. SCULPTURE:** Consideration of forms as a means of developing an understanding of mass, shape, and control of medium. Use of wide range of materials with emphasis on the integration of their characteristics with the expression. Prerequisite for ART 232 is ART 231 or permission. Studio fee. *3 sem. hrs. each*

**ART 240. INTRODUCTORY CERAMICS, HAND BUILDING:** Introduction to basic methods of working in clay by way of coil and slab. Emphasis on originality and proper methods. Studio fee. *3 sem. hrs.*

**ART 241. INTERMEDIATE CERAMICS, WHEEL THROWING:** Introduction to basic methods of working clay by way of the wheel. Emphasis on originality and proper methods. Prerequisite: ART 240. Studio fee. *3 sem. hrs.*

**ART 253. PRINTMAKING I:** Introduction and practice in two basic printmaking techniques, the relief and the intaglio print. Studio fee. *3 sem. hrs.*

**ART 254. PRINTMAKING II:** Introduction to the basic principles of lithography and silkscreen printing. Studio fee. *3 sem. hrs.*

**ART 273. SURVEY OF ART I:** Survey of Western art and significant historical and cultural influences from prehistory through the medieval and Gothic periods. Open to all University students. *3 sem. hrs.*

**ART 274. SURVEY OF ART II:** Continuation of ART 273, beginning with the Renaissance and continuing through the Baroque and Rococo periods. Open to all University students. *3 sem. hrs.*

**ART 275. SURVEY OF ART III:** Survey of art history from transformations in late 18th-century art through 20th-century contemporary art. Open to all University students. *3 sem. hrs.*

**ART 281. CREATIVE FIBER DESIGN:** Investigation of soft sculpture, macrame, stitchery, and textile printing. Experiences with fiber media and processes oriented around perception and awareness of fiber properties. Studio fee. *2 sem. hrs.*

**ART 285. TECHNICAL GRAPHICS:** Introduction to technical drawing for the graphic communication student. Familiarization with technical drawing instruments and their use. Techniques studied include preparation of orthographic views, perspective drawing, various types of general business graphics. Studio fee. *2 sem. hrs.*

ART 292. **CALLIGRAPHY:** Principles of lettering; study of vertical and slant script styles. Applications in finished pieces of work. 3 sem. hrs.

ART 297. **MARKER RENDERING:** Drill and practice in the marker medium. Emphasis on technique and control. Prerequisite: ART 104. 2 sem. hrs.

ART 298. **STUDIO SKILLS:** Development of various fundamental art skills required by the commercial art studio, advertising agency, and printer. The tools and terminology of the trade. Emphasis on preparing camera-ready art—keylines and paste-ups (mechanicals). Prerequisite: ART 216. Studio fee. 3 sem. hrs.

ART 303. **ADVANCED DRAWING:** Observational and expressive drawing. Use of accumulated knowledge from previous drawing experiences to develop individual creativity and original style. Prerequisites: ART 206-207 or permission. Model fee. 3 sem. hrs.

ART 307. **DRAWING FOR COMMERCIAL ARTISTS:** Emphasis on the aspects of drawing needed by commercial artists: one-, two-, and three-point perspective, spatial drawing, and the "ideal" human figure. Prerequisite: ART 104. Studio fee. 2 sem. hrs.

ART 311. **DESIGN III:** A continuing exploration of color including Itten and Munsell, color psychology, color perception in the visual arts. Prerequisite: ART 216. Studio fee. 2 sem. hrs.

ART 312. **DESIGN IV:** Perception and illusion in the visual arts, with studies of modern graphics in both historical and stylistic contexts. Prerequisite: ART 216. Studio fee. 3 sem. hrs.

ART 316. **LIFE STUDIES:** Studies in drawing from the live model, both nude and clothed, for practice and refinement of technique. Variety of media permitted. Prerequisites: ART 104, junior or senior status. Repeatable up to 4 sem. hrs. Model fee. 1 sem. hr.

ART 317. **AIRBRUSH TECHNIQUE:** Fundamental course in the principles of airbrush in illustration. Prerequisites: ART 112, 226, 216. Studio fee. 3 sem. hrs.

ART 318. **THREE-DIMENSIONAL DESIGN COMMERCIAL:** Investigation of materials, processes, and three-dimensional aesthetic principles of advantage to the commercial designer. Prerequisites: ART 112, 216. Studio fee. 3 sem. hrs.

ART 319. **STUDIO:** A faculty-supervised time block that allows students to pursue work in a variety of media as designated in the course composite by area (painting, drawing, etc.) and instructor. Prerequisites: 6 sem. hrs. of course work in the area selected or permission of the instructor. Repeatable up to 18 sem. hrs. Studio fee. 3 sem. hrs.

ART 325. **FIGURE PAINTING:** Fundamentals and practice of painting from the model. Both representational and abstract approaches; stress on technical quality and personal expression. Prerequisites: ART 103 or 104, or permission of instructor. Model fee. 3 sem. hrs.

ART 341. **WEAVING:** Exploration of fabrics with emphasis on the functional aspects of handweaving, including use of the loom. Fiber construction, basketry, stitchery, hooking, batik, and macrame. Prerequisites: ART 111 or 112. Studio fee. 2 sem. hrs.

**ART 343. RAKU:** A 400-year-old Japanese ceramic technique adapted for the contemporary potter. Study includes kiln building, glaze formulation, handbuilding techniques. Studio fee. *3 sem. hrs.*

**ART 344. DESIGNING WITH TYPE AND SYMBOLS:** The visual as opposed to the technical aspects of type: letterforms as creative design tools in pattern and texture, esthetical and psychological effects. Prerequisite: ART 216. Studio fee. *3 sem. hrs.*

**ART 345. TYPOGRAPHY:** Introduction to typography for those entering the commercial design field. Type styles, type measurements, preparing copy for printing. Studio fee. *3 sem. hrs.*

**ART 349. PRODUCTION FOR THE COMMERCIAL ARTIST:** Survey of the graphic arts field: its equipment, its processes, and the preparation of art for reproduction purposes—process photography, photomechanical procedures, color separation, and printing methods and machines. Hard line art and advanced problems in camera-ready art. Prerequisites: ART 298, 345. Studio fee. *3 sem. hrs.*

**ART 355-356. SILK SCREEN-SERIGRAPHY:** Basic principles and techniques of the silk screen process; all operations of screen printing including stencil and resist techniques, selecting and preparing the color material, printing and displaying the finished print. Prerequisite: ART 254. Studio fee. *3 sem. hrs. each*

**ART 357. LITHOGRAPHY:** Investigation of lithographic printing techniques, stone lithography, metal plate lithography, multi-color prints, mastery of color registration methods, and use of various lithographic drawing materials and techniques. Prerequisite: ART 254 or permission of the instructor. Studio fee. *3 sem. hrs.*

**ART 358. INTAGLIO PRINTING:** Advanced work in intaglio printmaking including etching, drypoint, aquatint, color printing, and the use of photographic images. Prerequisite: ART 253. Studio fee. *3 sem. hrs.*

**ART 362. COPPER ENAMELING:** Basic principles and techniques of enameling on copper, in stencil, graffiti, wet-pack painting, cloisonne, and champleve. Design and execution of original pieces in each of these processes. Prerequisite: ART 112. Studio fee. *3 sem. hrs.*

**ART 364. JEWELRY CONSTRUCTION:** Basic principles of construction with special emphasis on soldering techniques, use of tools, and the design of the piece of work. Prerequisite: ART 112. Studio fee. *3 sem. hrs.*

**ART 366. JEWELRY CASTING:** The complete jewelry-casting process: designing of original pieces, making the wax models, spruing, investing, burning out, casting, and finishing. Emphasis at the beginning of the course on learning the process and correct procedures; later emphasis on the aesthetic and sculptural nature of the piece of work. Studio fee. *3 sem. hrs.*

**ART 367. STAINED GLASS:** Introduction into the techniques of cutting glass, use of tools, copper foil, and leaded came. Emphasis in the first half of the course on technical skills and good design in building small windows. In the latter half of the course more advanced work in three-dimension object building. Studio fee. *3 sem. hrs.*

**ART 376. AMERICAN PAINTING:** Survey of major American artists from the colonial period to World War II, with emphasis on problems of function and patronage. Open to all University students. *3 sem. hrs.*

**ART 377. WOMEN ARTISTS: AN HISTORICAL SURVEY:** Historical survey of women artists from the Middle Ages to the present with particular emphasis on current revisionist literature and exhibitions. Open to all University students. *3 sem. hrs.*

**ART 397-398. DESIGN ILLUSTRATION I and II:** Applications, methods, problems in various illustrative styles, media, materials, and techniques for effective visual communication, representation, or interpretation of concepts, products, or narratives for magazines, books, newspapers, and advertising. Prerequisites: ART 216, 227. ART 397 is a prerequisite for ART 398. Studio fee. *3 sem. hrs. each*

**ART 411-412. COMMERCIAL DESIGN I and II:** Applications, methods, and problems in layout design for magazine advertisements, retail advertising, and collateral materials. Emphasis on creating concepts for effective visual communication and attention-arresting techniques; professional methods and materials. Prerequisite: ART 349. ART 411 is a prerequisite for ART 412. Studio fee. *3 sem. hrs. each*

**ART 415. ADVANCED COMMERCIAL DESIGN:** The art of identification: creation, psychology, and perception of trade-marks, the anatomy of annual reports, and a survey of company identification and corporate image programs. Design of letterheads, envelopes, charts, graphs, and annual reports. Prerequisite: ART 412. Studio fee. *3 sem. hrs.*

**ART 472. ART IN THE TWENTIETH CENTURY:** The development of 20th-century art, covering the early cubist movement, abstract expressionism, and various aspects of other major movements to the present. Open to all University students. *3 sem. hrs.*

**ART 473. ART IN THE NINETEENTH CENTURY:** Study of major artists and movements in European art, beginning with the late 18th century and continuing through the Impressionist and Post-Impressionist movements in the 19th century. Open to all University students. *3 sem. hrs.*

**ART 474. CONTEMPORARY TRENDS IN THE VISUAL ARTS:** Seminar for senior fine arts majors only, treating only post-1950s trends in painting, sculpture, architecture, new methods and materials in graphics, and theories in current art criticism. Prerequisite: ART 472. *3 sem. hrs.*

**ART 483. CREATIVE ART TEACHING IN ELEMENTARY AND SECONDARY SCHOOLS:** The philosophy of art education, creative teaching, use and care of tools and equipment, class management, art therapy, curriculum planning, art media; actual teaching experience in children's classes. Art education majors only. Studio fee. *4 sem. hrs.*

**ART 483W. ELEMENTARY SCHOOL ART:** Workshop to give the regular elementary classroom teacher new and practical ideas on the employment of art materials and techniques in relation to seasonal interests of pupils and to holiday observances. Studio fee. *3 sem. hrs.*

**ART 490. SPECIAL PROBLEMS:** A course reserved for art students devoted to advanced individual work in the following designated art fields: airbrush, drawing, enameling, graphics, art history, jewelry, lettering and calligraphy, ceramics, design, painting, lithography, sculpture, general fine arts. Approval based on academic standing and instructor-division head permission. Repeatable up to 15 semester hours. Studio fee. *1-5 sem. hrs.*

**ART 495-496. GRADUATION PORTFOLIO:** Required of all B.F.A. candidates except those in commercial design. The course deals with criteria, schedule, selection of work, presentation, and exhibition in constructing a portfolio. Approval of the portfolio is required for graduation. Grade option 2. *1 sem. hr. each*

**ART 498-499. GRADUATION PORTFOLIO IN COMMERCIAL DESIGN:** The portfolio is a requirement for a B.F.A. in commercial design. Evaluation and preparation of a portfolio of professional-quality work; resume writing, job interview techniques. Approval of the portfolio is required for graduation. Grade option 2. *1 sem. hr. each*

\*General education course. See Chapter V.

## GENERAL STUDIES (GEN)

The Bachelor of General Studies program is designed for those students who do not wish to pursue a traditional degree program with a departmental major. It permits great latitude in utilizing University resources for acquiring an education that serves individual needs. Since only the basic University requirements must be met, there are no specific requirements. Students may plan their programs to the best advantage of their particular educational objectives.

### BACHELOR OF GENERAL STUDIES PROGRAM (GEN)

Admission requirements for the Bachelor of General Studies are the same as those for any other degree now offered in the College of Arts and Sciences.

Candidacy for the Bachelor of General Studies may be declared in the freshman 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 programs into which they wish to transfer.

The first-year student is required to seek approval of course elections under the direction of the appropriate official of the College of Arts and Sciences. Thereafter, the student will be required to plan an academic program satisfying requirements for graduation in consultation with the program director, Sister Ellen Murphy. The usual policy on prerequisites remains in effect in this program.

The candidate must complete 120 semester hours with an overall grade point average of 2.0 or better, including

1. University requirements (see Chapter V),
2. a minimum of 54 semester hours of courses at the 300-400 level with a grade point average of 2.0 or better, and
3. not more than 30 semester hours of work from any one academic discipline.



## GEOLOGY (GEO)

The following program, leading to the Bachelor of Science with a Major in Geology, is designed to present students with the basic courses in the geological sciences and to enable them to construct specific curricula to suit their particular interests in areas of advanced study.

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PROGRAM-S5: BACHELOR OF SCIENCE WITH A MAJOR IN  
GEOLOGY (GEO)<sup>1</sup>

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|   | <i>Semester Hours</i> |
|---|-----------------------|
| Geology .....   | 38                    |
| Mathematics 118-119 <sup>2</sup> .....  | 8                     |
| Chemistry 123-124 .....   | 8                     |
| Physics 206-207 <sup>3</sup> .....  | 6                     |
| Science electives <sup>4</sup> .....  | 16                    |
| Philosophy and/or religious studies .....                                     | 12                    |
| Communication skills (ENG 101-102, SPE 101) .....                             | 3-9                   |
| Social and behavioral sciences .....  | 6                     |
| Humanities .....  | 9                     |
| General education requirements and academic electives to total at least ..... | 120                   |

<sup>1</sup>See General Requirements for All Bachelor of Science Programs and Chapter V for General Education Requirements.

<sup>2</sup>May substitute MTH 112-113 with permission of department.

<sup>3</sup>May substitute PHY 201-202 with permission of department.

<sup>4</sup>Choose from courses in chemistry, mathematics, physics, biology, geology, computer science, or (with chairperson's approval) engineering.

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Any student wishing to pursue a Bachelor of Arts with a Major in Geology should consult with the chairperson of the department.

A student wishing to choose geology as an area of minor concentration must take 12 semester hours in 300-400 level courses, and any prerequisites.

## FACULTY

Charles J. Ritter, *Chairperson*  
*Distinguished Service Professor*: Springer  
*Professor*: Ritter  
*Assistant Professor*: Lohmeyer

## COURSES OF INSTRUCTION

GEO 103. PRINCIPLES OF GEOGRAPHY: Analysis of the physical factors of the earth's environment: weather, climate, land forms, oceans. 3 sem. hrs.

GEO 104. INTRODUCTORY GEOLOGY FIELD COURSE: Fundamental earth science topics with emphasis on direct field experience. One week on campus, 3 weeks in the Rocky Mountains near Denver, Colorado, and one week of travel. For all non-geology and non-biology majors. Corequisites: BIO 104; GEO 104L or BIO 104L. Third term each year. 3 sem. hrs.

GEO 104L. INTRODUCTORY GEOLOGY FIELD LABORATORY: Course to accompany GEO 104. Third term each year. 1 sem. hr.

\*GEO 109. GENERAL GEOLOGY: Introduction to the earth as a planet, its composition, structure, and evolutionary development; a brief consideration of the life of the past. For the nonscience major. May be taken without laboratory. *3 sem. hrs.*

GEO 109L. GENERAL GEOLOGY LABORATORY: Course to accompany GEO 109. Two hours per week. *1 sem. hr.*

\*GEO 115. PHYSICAL GEOLOGY: 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 nonmajors. *3 sem. hrs.*

GEO 115L. PHYSICAL GEOLOGY LABORATORY: Course to accompany GEO 115. Two hours per week. *1 sem. hr.*

GEO 116. HISTORICAL GEOLOGY: A comprehensive study of earth history as interpreted from the rocks of the crust. Prerequisite: GEO 115. *3 sem. hrs.*

GEO 116L. HISTORICAL GEOLOGY LABORATORY: Course to accompany GEO 116. Two hours per week. *1 sem. hr.*

GEO 201. MINERALOGY: Introduction to the study of minerals, their chemical and physical properties, associations and occurrences. First term, each year. *3 sem. hrs.*

GEO 201L. MINERALOGY LABORATORY: Course to accompany GEO 201. Three hours per week. First term, each year. *1 sem. hr.*

GEO 204. OPTICAL MINERALOGY: Mineral determination through the use of the petrographic microscope employing crushed grains and thin sections. Prerequisite: GEO 201. Second term, each year. *2 sem. hrs.*

GEO 204L. OPTICAL MINERALOGY LABORATORY: Course to accompany GEO 204. Four hours per week. Second term, each year. *2 sem. hrs.*

GEO 208. ENVIRONMENTAL GEOLOGY: Study of the relationship of geologic factors to the problems of water supply, pollution, erosion, land use, and earth resources. Laboratory optional. Third term, each year. *3 sem. hrs.*

GEO 208L. ENVIRONMENTAL GEOLOGY LABORATORY: Third term, each year. *1 sem. hr.*

GEO 218. ENGINEERING GEOLOGY: A comprehensive study of geologic principles applicable to civil engineering practices. Second term, each year. *3 sem. hrs.*

GEO 301. STRUCTURAL GEOLOGY: The origin and development of structural features of the earth's crust; folding, faulting, volcanism, mountain building, and metamorphism. Prerequisites: GEO 115, 116, 201, 204. First term, alternate years. *3 sem. hrs.*

GEO 301L. STRUCTURAL GEOLOGY LABORATORY: Course to accompany GEO 301. Two hours per week. First term, alternate years. *1 sem. hr.*

GEO 302. GLACIAL GEOLOGY: The origin of mountain and continental glaciers; their depositional features and erosive activity; history of glaciation in geologic past with special emphasis on North American Quaternary ice advances. Prerequisites: GEO 115, 116. Second term, alternate years. *3 sem. hrs.*

**GEO 302L. GLACIAL GEOLOGY LABORATORY:** Course to accompany GEO 302. Two hours per week. Second term, alternate years. *1 sem. hr.*

**GEO 303. FIELD GEOLOGY:** Six weeks' summer study of structural and age-relationship problems in areas containing abundant crystalline and sedimentary exposures. Prerequisites: GEO 115, 116, 301. Summer. *6 sem. hrs.*

**GEO 307. GEOMORPHOLOGY:** Detailed study of landforms and the erosional processes that develop them. Prerequisites: GEO 115, 116, 301. Second term, alternate years. *3 sem. hrs.*

**GEO 307L. GEOMORPHOLOGY LABORATORY:** Course to accompany GEO 307. Two hours per week. Second term, alternate years. *1 sem. hr.*

**GEO 310. STRATIGRAPHY:** The interpretation of specific lithotypes and the synthesis of the stratigraphic record. Prerequisites: GEO 116, 301. Second term, alternate years. *3 sem. hrs.*

**GEO 310L. STRATIGRAPHY LABORATORY:** Course to accompany GEO 310. Two hours per week. Second term, alternate years. *1 sem. hr.*

**GEO 401. PALEONTOLOGY:** A study of animal life of the geologic past as shown by the fossil record. First term, alternate years. *3 sem. hrs.*

**GEO 401L. PALEONTOLOGY LABORATORY:** Course to accompany GEO 401. Two hours per week. First term, alternate years. *1 sem. hr.*

**GEO 403. SEDIMENTATION:** Detailed study of sediments: their sources, environments of deposition, and methods of consolidation; sedimentary rock classifications and analyses. Prerequisites: GEO 201, 204, 301. First term, alternate years. *3 sem. hrs.*

**GEO 403L. SEDIMENTATION LABORATORY:** Course to accompany GEO 403. Two hours per week. First term, alternate years. *1 sem. hr.*

**GEO 404. PROBLEMS IN GEOLOGY:** A consideration of special problems involving advanced work in the laboratory and library; arranged to meet the needs of individual students. *3 sem. hrs.*

**GEO 411. IGNEOUS PETROLOGY:** Study of the formation of igneous rocks. Prerequisites: GEO 201, 204, 309. First term, alternate years. *3 sem. hrs.*

**GEO 411L. IGNEOUS PETROLOGY LABORATORY:** Course to accompany GEO 411. Two hours per week. First term, alternate years. *1 sem. hr.*

**GEO 412. INTRODUCTORY GEOCHEMISTRY:** Investigation of the chemical nature and development of the earth, its interior, crust, and surface materials. Quantitative chemical and physical chemical studies of formation rock types, ore deposition, and geochronology. Second term, alternate years. *3 sem. hrs.*

**GEO 412L. INTRODUCTORY GEOCHEMISTRY LABORATORY:** Course to accompany GEO 412. Three hours per week. Second term, alternate years. *1 sem. hr.*

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\*General education course. See Chapter V.



## HISTORY (HST)

The course requirements for history majors are 36 semester hours, distributed as follows:

1. HST 101-102 (6 semester hours);
2. HST 251-252 (6 semester hours);
3. HST 301 (3 semester hours);
4. One HST seminar (3 semester hours)—choose from HST 490, 491, or 492;
5. Six additional courses (18 semester hours), chosen from the HST 300-400 sequences. The department firmly recommends that the student attempt to distribute these fairly equally between American and non-American history.

In addition, each major must take *one* of the following options:

1. Six semester hours in quantification skills (that is, a CPS course and a statistics course such as MTH 207); or
2. Six to eight semester hours of a foreign language.

Each student should also take at least five courses outside the major (15 semester hours) within a selected "area of concentration." (See areas below.)

The course requirements for history minors are 18 semester hours: HST 102, either HST 251 or HST 252, two upper-level courses from the American history field, and two upper-level courses from the non-American history field.

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

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### PROGRAM—A8: BACHELOR OF ARTS WITH A MAJOR IN HISTORY (HST)<sup>1</sup>

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|   | <i>Semester Hours</i> |
|---|-----------------------|
| History .....   | 36                    |
| Natural science .....   | 7                     |
| Mathematics .....   | 3                     |
| Social and behavioral science .....   | 12                    |
| Humanities .....  | 18                    |
| Philosophy and/or religious studies .....   | 12                    |
| Communication skills .....  | 3-9                   |
| Quantification skills or foreign language <sup>2</sup> .....                          | 6-8                   |
| General education courses <sup>2</sup> and academic electives to total at least ..... | 120                   |

<sup>1</sup>See also Distribution Table for Bachelor of Arts programs and Chapter V for General Education Requirements.

<sup>2</sup>Where appropriate, this credit may be applied to other requirements. Consult with advisor.

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### Minors and Areas of Concentration

To further career goals, to develop critical skills, to integrate courses in various disciplines, and to get a sound liberal education, each history major should elect one of the six multi-disciplinary areas of concentration outlined below. Each student is also encouraged to develop a minor. The departmental chair-person counsels all freshman majors. Other majors are assigned to faculty members whose counseling specialties correspond to the students' interests and career goals.

## 1. General area

Designed especially for the student who wants to double-major or to minor in such areas as journalism or business or who is not yet sure of career goals: Students should take ENG 272 (Expository Writing) and ENG 316 (Advanced Composition). In addition, each student, in consultation with an advisor, should take a block of at least 12 semester hours in an outside area.

## 2. Pre-Graduate Study in History

Ph.D. programs generally require the candidate to have a reading knowledge of French and German. Therefore, language study is necessary. Another language may sometimes be substituted. Students should consult graduate catalogues for specific requirements. To achieve writing proficiency, students should take ENG 272 (Expository Writing). ENG 316 (Advanced Composition) is also recommended. To further speaking abilities, students should take SPE 311 (Advanced Speaking Techniques). Additional speech courses are recommended. In addition, quantification skills and study in the social sciences are very useful for graduate work. Students interested in graduate study must maintain a high grade point average. They should consult with faculty members to determine the areas where there may be openings for careers in the near future.

## 3. Pre-Law

Students should take the following courses as part of their 36 required semester hours in history:

|             |  |
|-------------|--|
| HST 322     | History of England                             |
| HST 424     | English Constitutional and Legal History       |
| HST 460-461 | U.S. Legal and Constitutional History I and II |

In addition, students should select at least five courses (15 semester hours) from among the following:

|             |  |
|-------------|--|
| ACC 207-208 | Principles of Accounting, or                   |
| ACC 301     | Financial Reporting and Administration         |
| COM 440     | Law and News Media                             |
| CRJ 305     | Criminal Law                                   |
| CRJ 315     | Criminal Procedure                             |
| CRJ 336     | Comparative Criminal Justice Systems           |
| ECO 203     | Principles of Microeconomics                   |
| ECO 204     | Principles of Macroeconomics                   |
| ECO 442     | Money and Banking (Prerequisites: ECO 203-204) |
| ENG 272     | Expository Writing                             |
| ENG 316     | Advanced Composition                           |
| FIN 301     | Business Finance                               |
| PHL 201     | Practical Logic                                |
| PHL 314     | Philosophy of Law                              |
| POL 201     | The American Political System                  |
| POL 301     | The American Judicial Process                  |
| POL 411     | Constitutional Law                             |
| POL 495     | Internship in Law                              |
| SOC 326     | Law and Society                                |
| SOC 327     | Criminology                                    |
| SPE 312     | Persuasion                                     |

## 4. International Affairs

The following history courses are especially applicable:

|         |   |
|---------|---|
| HST 348 | United States and Third World Crises    |
| HST 375 | Diplomatic History of the United States |
| HST 470 | History of the Cold War                 |

Courses in Europe and the Third World are highly recommended. Students are also urged to take a sufficient number of courses to achieve fluency in at least one modern foreign language.

In addition, students should select at least five courses (15 semester hours) from among the following:

|             |                                       |
|-------------|---------------------------------------|
| ANT 351     | Cultures of the Caribbean             |
| ANT 352     | Cultures of Latin America             |
| COM 305     | Propaganda Analysis                   |
| COM 309     | Communication and Conflict Resolution |
| CRJ 336     | Comparative Criminal Justice Systems  |
| ECO 450     | Comparative Economic Systems          |
| ECO 461     | International Economics               |
| ENG 272     | Expository Writing                    |
| ENG 316     | Advanced Composition                  |
| FIN 450     | International Business Finance        |
| POL 202     | Introduction to Comparative Politics  |
| POL 214     | Principles of International Relations |
| POL 320-326 | Comparative Politics (any course)     |
| POL 409     | Soviet Foreign Policy                 |
| POL 410     | Comparative Foreign Policy            |
| REL 201-202 | Religions of the World I and II       |
| SOC 337     | Political Sociology                   |
| SOC 350     | National and World Population Trends  |

## 5. Historical Administration, Preservation, and Archival Management

Students should take the following courses as part of their 36 required semester hours in history:

|         |   |
|---------|---|
| HST 391 | American Architectural History and Preservation |
| HST 495 | Internship                                      |

In addition, students must take at least five of the following:

|             |  |
|-------------|--|
| ACC 207-208 | Principles of Accounting, or           |
| ACC 301     | Financial Reporting and Administration |
| ENG 272     | Expository Writing                     |
| MGT 102     | American Business Environment          |
| MGT 305     | Principles of Management               |
| MGT 308     | Small Business Management              |
| MGT 314     | Personnel Management                   |
| MKT 421     | Advertising                            |
| MKT 310     | Salesmanship                           |
| POL 303     | State and Local Government             |
| POL 305     | Introduction to Public Administration  |
| POL 360     | Urban Politics                         |
| POL 413     | The American Bureaucracy               |

### 6. E-11 Program

Those planning careers in secondary education should consult the Department of History for the requirements for certification. Specific courses in education, the social sciences, the sciences, and the humanities are required in addition to student teaching.

## FACULTY

Roberta S. Alexander, *Chairperson*

*Professors:* Beauregard, Donatelli, Eid, Maras, Mathias, Rhee, Steiner

*Associate Professors:* Alexander, King, Palermo, Taylor, Vines

*Assistant Professors:* Bannan, Heitmann, May, Schweikart

*Lecturer:* Vieson

*Adjunct Instructors:* Bell, Bennett, Gannon, O'Neil

## COURSES OF INSTRUCTION

\*HST 101. HISTORY OF WESTERN CIVILIZATION FROM ITS CLASSICAL ROOTS TO THE FRENCH REVOLUTION: Survey of Western civilization beginning with classical civilization and concluding with the Enlightenment. The impact of social forces, institutions, and values on the development of societies. 3 sem. hrs.

\*HST 102. HISTORY OF WESTERN CIVILIZATION SINCE 1789: Survey of European civilization from the French Revolution to the present. The impact of social forces and changing values on the lives of individual people. 3 sem. hrs.

\*HST 251. AMERICAN HISTORY TO 1865: Survey of the development of the American nation from colonial times to 1865; political trends, economic and social foundations of American institutions. 3 sem. hrs.

\*HST 252. AMERICAN HISTORY SINCE 1865: Survey of the development of the nation after the Civil War, stressing social, economic, and political problems. 3 sem. hrs.

HST 301. RESEARCH SEMINAR: History methods, philosophy, and introductory historiography, the last based on the professor's field of specialization. Required for junior history majors. 3 sem. hrs.

HST 306. INTELLECTUAL AND CULTURAL HISTORY OF MODERN EUROPE: Close analysis of people, ideas, and principal cultural developments from the Renaissance into the 20th century. 3 sem. hrs.

HST 313. THE REVOLUTIONARY ERA, 1798-1918: Historical analysis of European nations and peoples emphasizing war and revolutions of the period as well as ideological, scientific, and technological developments. 3 sem. hrs.

\*HST 314. TWENTIETH-CENTURY EUROPE: Study of the two World Wars, the Russian Revolution, Depression, Cold War, Detente, and social and intellectual reactions to contemporary economic and political developments. 3 sem. hrs.

\*HST 322. HISTORY OF ENGLAND: Major forces and trends in the history of England from early medieval times to the present, including their influence on social history and literature. 3 sem. hrs.

HST 325. HISTORY OF RUSSIA: Development of the Russian state from earliest times to the present, including Kievan society, rise of Muscovy, Imperial Russia, and the Soviet Union. 3 sem. hrs.

HST 328. HISTORY OF EASTERN EUROPE: Survey of the history of the nations lying between Germany and the Soviet Union, the Baltic and Aegean Seas, stressing medieval and early modern background as a foundation of contemporary history.

3 sem. hrs.

HST 330. HISTORY OF THE FAR EAST: Brief review of the early historical development of the Far East; study of China and Japan in the 19th and 20th centuries, emphasizing political, religious, cultural, and economic growth.

3 sem. hrs.

HST 335. HISTORY OF AFRICA: Survey of Africa from early times to the present, focusing on political grandeur, commercial ingenuity, intellectual ferment, and religious revolutions.

3 sem. hrs.

\*HST 340. HISTORY OF SCIENCE: Survey of the development of science from its origins in the ancient world to the present.

3 sem. hrs.

\*HST 341. HISTORICAL PERSPECTIVES ON SCIENCE, TECHNOLOGY, AND SOCIETY: Historical examination of the interaction of science, technology, and society from the Middle Ages to the present.

3 sem. hrs.

HST 345. IRELAND AND AMERICA: Study of the cultural-historical background of both Scotch-Irish and Celtic Irish immigrants to America and how that influenced their varying reactions to the dominant Anglo-Saxon Protestantism of America.

3 sem. hrs.

HST 348. UNITED STATES AND THIRD WORLD CRISES—HISTORICAL PERSPECTIVES: Analysis of the history of U.S. policies and responses toward major crises in Africa, Asia, Latin America, and the Middle East.

3 sem. hrs.

HST 351. AMERICAN FEMINISM: Historical study of the changing roles of women in American society and the struggle for social, political, economic, legal, and educational rights from the 17th century to the present.

3 sem. hrs.

\*HST 355. AMERICAN URBAN HISTORY: Historical analysis of community life in American society: the nature and development of small towns, cities, and suburbs; communal experience, social organizations, and political culture.

3 sem. hrs.

HST 357. LATIN AMERICA IN THE TWENTIETH CENTURY: Intensive examination of revolution and reaction in today's Latin America and the implications for those who formulate U.S. foreign policy.

3 sem. hrs.

HST 360. HISTORY OF MENTAL HEALTH CARE IN AMERICA: History of the treatment of the mentally ill in America from colonial times to the present.

3 sem. hrs.

HST 365. AMERICAN FILMS AS HISTORY: Study of the development of American values, myths, institutions, and perspectives through the use of films as a primary source.

3 sem. hrs.

\*HST 370. ECONOMIC HISTORY OF THE UNITED STATES: Survey of the economic theories and institutions peculiar to the United States with special reference to their influence on social and political development.

3 sem. hrs.

HST 375. DIPLOMATIC HISTORY OF THE UNITED STATES: Foundations of American foreign policy; the diplomacy of continental expansion through the 19th century; emphasis on diplomatic problems since 1898.

3 sem. hrs.

\*HST 376. SOCIAL AND CULTURAL HISTORY OF THE UNITED STATES: Social and cultural development of the American people: growth of national spirit, impact of expansion, conflict over slavery, and problems of industrialization and urbanization. *3 sem. hrs.*

HST 380. HISTORY OF THE AMERICAN INDIAN: Historical and descriptive survey of the native peoples of North America. *3 sem. hrs.*

HST 390. THE WESTWARD MOVEMENT: A history of the expansion of settlement in the U.S. since 1783: explorations, Indian relations, land policy, transportation, types of frontier settlements, and western influence on American ideals and institutions. *3 sem. hrs.*

HST 391. AMERICAN ARCHITECTURAL HISTORY AND PRESERVATION: A career-oriented course offering a theoretical background in historical preservation and techniques used in identification, research, and recording of historic landmarks worthy of preservation as part of the community heritage. *3 sem. hrs.*

HST 398. HISTORY OF BLACKS IN THE UNITED STATES, 1526-1900: Study of the saga of black people in the U.S. from 1526 until 1900. *3 sem. hrs.*

HST 399. HISTORY OF BLACKS IN THE UNITED STATES SINCE 1900: Study of the saga of black people in the U.S. from 1900 to the present. *3 sem. hrs.*

HST 402. MAIN CURRENTS IN ANCIENT HISTORY: Aspects of the civilizations of the ancient Near East, Greece, and Rome, emphasizing the Hebrew world view and value system, Greek democracy, Roman political and social institutions. *3 sem. hrs.*

\*HST 405. MEDIEVAL EUROPE: European history from the 4th to the 15th century, including birth of Middle Ages; development of Christianity; Byzantine, Islamic, and Carolingian Empires; feudalism; Crusades; rise of universities; birth of national cultures. *3 sem. hrs.*

HST 407. RENAISSANCE AND REFORMATION: 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. *3 sem. hrs.*

HST 411. ERA OF ABSOLUTISM, ENLIGHTENMENT: From the later Reformation to the era of the French Revolution: intellectual and cultural development; political, economic, and social trends of the Old Regime. *3 sem. hrs.*

HST 412. FRENCH REVOLUTION AND NAPOLEONIC ERA: Ideological, economic, social, and political background of the Revolution; analysis of the revolutionary governments; the resulting international wars; the rise and fall of Napoleon. *3 sem. hrs.*

HST 415. SOVIET UNION SINCE 1917: Detailed survey and analysis of the historical development of the U.S.S.R. from the Revolution of 1917 to the present. *3 sem. hrs.*

**HST 416. EUROPEAN MILITARY HISTORY:** Survey of warfare on the European continent from classical Greece through World War II emphasizing military institutions, organization, weapons, and campaigns and the role of the military in society.  
*3 sem. hrs.*

**HST 417. AMERICAN MILITARY HISTORY:** Survey of American military affairs, including military, naval, and air campaigns, from early settlement to the present.  
*3 sem. hrs.*

**HST 419. MODERN FRANCE:** French history from the Bourbon Restoration to the present. Emphasis on political, socio-economic, and cultural factors.  
*3 sem. hrs.*

**HST 420. MODERN ITALY:** Italian history from the settlement imposed by the Congress of Vienna in 1815 to the present. Emphasis on socio-economic, political, and cultural factors.  
*3 sem. hrs.*

**HST 421. MODERN GERMANY:** Analysis of the development of the German state from 1843 through the period of unification, Second Empire, Weimar Republic, Third Reich, the post-World War II Germanies, to the present.  
*3 sem. hrs.*

**HST 423. HISTORY OF LONDON:** Study of the evolution of London from a small Roman town to the world's first industrial metropolis. Particular attention to social and environmental conditions and the life of the people.  
*3 sem. hrs.*

**\*HST 424. ENGLISH CONSTITUTIONAL AND LEGAL HISTORY:** Study of the origins and development of common law and parliamentary government in England from the Saxons to the present.  
*3 sem. hrs.*

**HST 426. TUDOR-STUART ENGLAND:** Study of England from 1485 to 1714: Development of the national state, royal absolutism, and the Reformation; evolution of the constitutional question; diplomacy; social, economic, and cultural aspects of the period.  
*3 sem. hrs.*

**HST 428. MODERN ENGLAND—1815 TO PRESENT:** Development of England as an industrialized nation and as an empire; results of industrialization, urbanization, and loss of empire due to two world wars.  
*3 sem. hrs.*

**HST 438. THE MIDDLE EAST, NINETEENTH AND TWENTIETH CENTURIES:** Survey of the Ottoman Empire, Iran, Egypt, and the modern states of the Middle East, emphasizing the development of nationalism and the area's role in international politics.  
*3 sem. hrs.*

**HST 440. MODERN CHINA AND JAPAN:** Study of the economic, political, social, and cultural developments of modern China and Japan from the 18th century to the present.  
*3 sem. hrs.*

**HST 445. KOREAN AND VIETNAM WARS:** Study of the two most important wars fought by the U.S. after World War II, in the context of America's changing global role.  
*3 sem. hrs.*

**HST 450. THE FOUNDING OF AMERICA:** Foundations of American nationality and democratic growth under the British colonial system, with special attention to the economic, political, social, and cultural life of the era.  
*3 sem. hrs.*

**HST 454. THE AGE OF JEFFERSON AND JACKSON:** The range of historical, cultural, social, and political trends traditionally associated with the presidencies of Jefferson and Jackson; the period from the 1790's to the 1850's. *3 sem. hrs.*

**HST 455. THE AMERICAN SOUTH, 1607 TO PRESENT:** Study of the role of the South in American History. *3 sem. hrs.*

**HST 456. CIVIL WAR AND RECONSTRUCTION:** Remote and immediate causes of the Civil War; problems of North and South during the war; consequences of the war; efforts to create a new Union, 1865 to 1877; problems caused by those efforts. *3 sem. hrs.*

**\*HST 460. U.S. LEGAL AND CONSTITUTIONAL HISTORY I:** From colonial beginnings through Reconstruction. The first semester of a year's sequence that analyzes the major developments in American legal and constitutional thought and institutions. Emphasis on the relationship between law and lawyers and America's economic, social, and political development. *3 sem. hrs.*

**HST 461. U.S. LEGAL AND CONSTITUTIONAL HISTORY II:** From the Gilded Age to the present. Continuation of HST 460. Prerequisite: HST 460. *3 sem. hrs.*

**\*HST 465. HISTORY OF AMERICAN BUSINESS:** Historical study of the evolution of modern capitalism from the colonial period to the present. *3 sem. hrs.*

**\*HST 466. HISTORY OF SCIENCE, TECHNOLOGY, AND THE MODERN CORPORATION:** Historical study of the emergence of 20th-century science-based industry. *3 sem. hrs.*

**HST 470. HISTORY OF THE COLD WAR:** A study of the origins and evolution of the Cold War from 1917 to the present. *3 sem. hrs.*

**HST 472. THE SOUTHERN APPALACHIAN REGION:** Study and appraisal of the internal and external historical forces that have shaped Appalachia. *3 sem. hrs.*

**HST 473. THE AGE OF EXCESS AND REFORM—UNITED STATES, 1877-1920:** Development of the U.S. as an urban-industrial nation and world power; efforts to maintain traditional political, social, and economic forms and values amidst rapid change. *3 sem. hrs.*

**HST 476. BETWEEN THE WARS:** Intensive study of chief facets of United States history from 1919 to 1941, including Normalcy, the Depression, the evolving New Deal, and the approach of World War II. *3 sem. hrs.*

**HST 477. CONTEMPORARY AMERICAN HISTORY:** The immediate background of contemporary political, social, and economic problems: impact of World War II on the U.S., Cold War, New Frontier, Johnson Administration, and beyond. *3 sem. hrs.*

**HST 482. THE HISTORY OF MEXICO:** Mexican History since 1820. Origins of the revolution of 1910 and its developments to the present; Mexico's struggle for democracy; diplomatic and cultural relations between Mexico and the U.S. *3 sem. hrs.*



**HST 484. CARIBBEAN SINCE 1801:** 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. *3 sem. hrs.*

**HST 490. STRATEGIES OF HISTORIANS:** A seminar which investigates the various intellectual processes by which historians have approached particular questions. A wide sampling of the works of representative historians is supplemented by analysis of their methodologies and philosophies of history. Prerequisite: HST major or completion of 12 sem. hrs. of history; permission. *3 sem. hrs.*

**HST 491. SENIOR SEMINAR:** A reading seminar concentrating on one historical topic for detailed analysis. May be repeated as topics change. Check department for prerequisites. Permission of chairperson required. *3 sem. hrs.*

**HST 492. HISTORY HONORS SEMINAR:** A reading seminar concentrating on one historical topic for detailed analysis. May be repeated as topics change. Check department for prerequisites. Permission of chairperson required. *3 sem. hrs.*

**HST 495. INTERNSHIP:** Practical approach to history through field study and work with historical societies and architectural preservation boards. *3 sem. hrs.*

**HST 496. INDEPENDENT STUDY:** The study of a special topic to be mutually selected by the student and a history professor. Prerequisite: Permission of chairperson. May be repeated once. *1-6 sem. hrs.*

**HST 497. HONORS TUTORIAL:** The study of a special topic to be selected by the instructor. Applicants will be admitted on the basis of academic record. May be repeated once. *1-6 sem. hrs.*

**HST 499. TOPICS IN HISTORY:** Specific subtitles and descriptions to be announced in the composite and posted in the History Department office. *1-6 sem. hrs.*

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\*General education course. See Chapter V.



## HOME ECONOMICS (HEC)

Home economics is the study of interrelationships within the family and between the family and individuals and the environment. It is concerned with achieving, maintaining, and enhancing family and individual well-being in daily life. Thus it is a diversified field of applied knowledge and service integrating many disciplines.

The Bachelor of Science with a Major in Home Economics is currently awarded in two areas: Home Economics (General) and Home Economics (Food and Nutrition).

## HOME ECONOMICS (GENERAL)

Students following the General Home Economics Program have four options for concentration. Each student will follow the basic curriculum, which provides an overview of the discipline, and choose one of the following: I. Clothing, Textiles, and Fashion Merchandising; II. Consumer Science; III. Family and Child Development; IV. Interior Design.

| <i>Program Summary</i>   | <i>Semester Hours</i> |
|--|-----------------------|
| Home economics .....   | 39                    |
| BIO 101-102 or CHM 123-124 .....   | 8                     |
| MTH 207 .....  | 3                     |
| Mathematics or computer science .....                                    | 3                     |
| Social and behavioral sciences .....                                     | 6                     |
| Philosophy and/or religious studies .....                                | 12                    |
| Humanities .....   | 9                     |
| ENG 101-102, ENG elective .....  | 9                     |
| SPE 101 .....  | 3                     |
| General education courses and academic electives to total at least ..... | 120                   |

| <i>Basic Curriculum</i>                           | <i>Semester Hours</i> |
|---|-----------------------|
| HEC 103 Introduction to Home Economics .....      | 1                     |
| HEC 105 Related Art .....                         | 3                     |
| HEC 303 Nutrition and Health or                   |                       |
| HEC 437-437L Meal Management and Laboratory ..... | 3                     |
| HEC 306 Family Management or                      |                       |
| HEC 321 The Consumer and Society .....            | 3                     |
| HEC 318 Family Living .....                       | 3                     |
| HEC 320 Family Housing .....                      | 2                     |
| HEC 323 Demonstration Techniques .....            | 2                     |
| HEC 325 Child Development .....                   | 3                     |
| HEC 360 Clothing Selection and Consumption .....  | 3                     |
|   | <b>23</b>             |

The student will select one of the following options of 16 semester hours to bring the total to 39 semester hours.

| I. <i>Clothing, Textiles, and Fashion Merchandising</i> <sup>1</sup> |   | Semester Hours |
|--|---|----------------|
| HEC 101-101L   | Introductory Clothing and Laboratory .....          | 3              |
| HEC 214  | Textiles .....                                      | 3              |
| HEC 311-311L   | Advanced Clothing and Laboratory <sup>2</sup> ..... | 3              |
| HEC 362  | Textiles and Apparel Industries .....               | 3              |
| HEC 404  | Fashion Merchandising .....                         | 3              |
| HEC 436  | Independent Study or                                |                |
| HEC 470  | Home Economics Laboratory Internship .....          | 1              |
|  |   | <u>16</u>      |

<sup>1</sup>The student will seek a minor in marketing.

<sup>2</sup>The student may substitute HEC 341, Social Issues in Consumerism.

| II. <i>Consumer Science</i> <sup>1</sup> |   | Semester Hours |
|--|---|----------------|
| HEC 309                                  | Household Equipment .....                         | 3              |
| HEC 331                                  | Money Management .....                            | 3              |
| HEC 341                                  | Social Issues in Consumerism .....                | 3              |
| HEC 436                                  | Independent Study and/or                          |                |
| HEC 470                                  | Home Economics Laboratory Internship .....        | 4              |
| HEC 437-437L                             | Meal Management and Laboratory <sup>2</sup> ..... | 3              |
|  |   | <u>16</u>      |

<sup>1</sup>The student will elect support courses in economics, political science, criminal justice, and marketing and will take HEC 321, The Consumer and Society, in the basic curriculum.

<sup>2</sup>The student will take HEC 303, Nutrition and Health, in the basic curriculum.

| III. <i>Family and Child Development</i> <sup>1</sup> |  | Semester Hours |
|---|--|----------------|
| HEC 329   | Child Development Practicum .....              | 3              |
| HEC 341   | Social Issues in Consumerism .....             | 3              |
| HEC 403   | Community Nutrition .....                      | 2              |
| HEC 406   | Family Management Practicum <sup>2</sup> ..... | 3              |
| HEC 429   | Management of Pre-School Programs .....        | 2              |
| HEC 436   | Independent Study and/or                       |                |
| HEC 470   | Home Economics Laboratory Internship .....     | 3              |
|   |  | <u>16</u>      |

<sup>1</sup>The student will elect support courses in anthropology, education, psychology, social work, and sociology.

<sup>2</sup>The student will take the prerequisite, HEC 306, Family Management, in the basic curriculum.

| IV. <i>Interior Design</i> <sup>1</sup> |  | Semester Hours |
|---|--|----------------|
| HEC 214                                 | Textiles .....                             | 3              |
| HEC 330,340,350                         | Interior Design I, II, III .....           | 9              |
| HEC 430                                 | Issues in Interior Design .....            | 2              |
| HEC 470                                 | Home Economics Laboratory Internship ..... | 2              |
|   |  | <u>16</u>      |

<sup>1</sup>The student will take the following support courses in fine arts:

|             |   |           |
|-------------|---|-----------|
| ART 104     | Introductory Drawing .....              | 3         |
| ART 183-184 | Visual Fundamentals I, II .....         | 6         |
| ART 216     | Color and Design .....                  | 3         |
| ART 307     | Drawing for the Commercial Artist ..... | 2         |
| ART 311     | Design III .....                        | 2         |
|             |   | <u>16</u> |

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**PROGRAM—S6: BACHELOR OF SCIENCE WITH A MAJOR IN  
HOME ECONOMICS (GENERAL) (HEG)<sup>1</sup>**


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| <i>Dept.</i>          | <i>No.</i> | <i>Course</i>                               | <i>1st Term<sup>2</sup></i> | <i>2nd Term</i> |
|-----------------------|------------|---|-----------------------------|-----------------|
| <b>Freshman Year</b>  |            |   |                             |                 |
| HEC                   | 100        | Freshman Orientation Seminar                | 1-0-0                       |                 |
| HEC                   | 103        | Introduction to Home Economics              |                             | 1-0-1           |
| HEC                   | 105        | Related Art                                 | 3-0-3                       |                 |
| BIO                   | 101-102    | General Biology <sup>3</sup>                | 3-3-4 <sup>2</sup>          | 3-3-4           |
| ENG                   | 101-102    | College Composition I and II                | 3-0-3                       | 3-0-3           |
| SPE                   | 101        | Fundamentals of Effective Speaking          |                             | 3-0-3           |
| —                     | —          | General education and breadth requirements  | 6-0-6                       | 6-0-6           |
|                       |            |   | 16                          | 17              |
| <b>Sophomore Year</b> |            |   |                             |                 |
| HEC                   | 214        | Textiles                                    |                             | 3-0-3           |
| HEC                   | 325        | Child Development                           | 3-0-3                       |                 |
| HEC                   | 360        | Clothing Selection and Consumption          | 3-0-3                       |                 |
| HEC                   | —          | Home Economics Option courses               | 3-0-3                       | 3-0-3           |
| MTH                   | 207        | Statistical Methods for Behavioral Sciences | 3-0-3                       |                 |
| ENG                   | —          | English elective                            |                             | 3-0-3           |
| —                     | —          | General education and breadth requirements  | 3-0-3                       | 6-0-6           |
|                       |            |   | 15                          | 15              |
| <b>Junior Year</b>    |            |   |                             |                 |
| HEC                   | 303        | Nutrition and Health or                     |                             |                 |
| HEC                   | 437        | Meal Management                             | 3-0-3                       |                 |
| HEC                   | 306        | Family Management or                        |                             |                 |
| HEC                   | 321        | Consumer and Society                        | 3-0-3                       |                 |
| HEC                   | 309        | Household Equipment                         |                             | 3-0-3           |
| HEC                   | 318        | Family Living                               |                             | 3-0-3           |
| HEC                   | 320        | Family Housing                              |                             | 2-0-2           |
| HEC                   | —          | Home Economics Option courses               | 6-0-6                       | 3-0-3           |
| —                     | —          | General education and breadth requirements  | 3-0-3                       | 6-0-6           |
|                       |            |   | 15                          | 17              |
| <b>Senior Year</b>    |            |   |                             |                 |
| HEC                   | 323        | Demonstration Techniques                    |                             | 2-0-2           |
| HEC                   | —          | Home Economics Option courses               | 3-0-3                       | 1-0-1           |
| —                     | —          | Mathematics or computer science             |                             | 3-0-3           |
| —                     | —          | Breadth requirements and electives          | 12-0-12                     | 6-0-6           |
|                       |            |   | 15                          | 12              |

<sup>1</sup>Consult General Requirements for All Bachelor of Science Programs and Chapter V for General Education Requirements. Some general education courses are specified in the program (e.g., BIO 101-102); others are to be chosen from the listing of approved courses. Check with advisor.

<sup>2</sup>For example, 3-0-3 means 3 class hrs., 0 lab. hrs., 3 sem. hrs. of credit.

<sup>3</sup>May substitute CHM 123-124.

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## HOME ECONOMICS (FOOD AND NUTRITION)

The Bachelor of Science with a Major in Home Economics (Food and Nutrition) allows for the following three areas of concentration:

Program S7: Bachelor of Science with a Major in Home Economics (Food and Nutrition—ADA Plan IV) (HEA)

Program S7A: Bachelor of Science with a Major in Home Economics (Food and Nutrition—Food Systems) (HEF)

Program S7B: Bachelor of Science with a Major in Home Economics (Food and Nutrition—Nutrition) (HEN)

## HOME ECONOMICS (FOOD AND NUTRITION—ADA PLAN IV)

Program S7: Plan IV of the American Dietetic Association (ADA) prepares the student to function as a professional in some phase of nutritional care. Plan IV meets the standards of the ADA to enter a fifth year of study in a dietetic internship program.

| <i>Program Summary</i>   | <i>Semester Hours</i> |
|--|-----------------------|
| Home economics .....   | 39                    |
| Anthropology 150 or Sociology 204 .....                                  | 3                     |
| Biology 101, 102, 411L .....   | 10                    |
| Chemistry 123, 124, 313, 314, 420 .....                                  | 19                    |
| Physical and Health Education 305, 306 .....                             | 6                     |
| Psychology 101 or Sociology 101 .....                                    | 3                     |
| Philosophy and/or religious studies .....                                | 12                    |
| English 101, 102, 370 or 272 or 372 .....                                | 9                     |
| Speech 101 .....   | 3                     |
| Accounting 301 .....   | 3                     |
| Management 305, 314 .....  | 6                     |
| Economics 203 .....  | 3                     |
| Mathematics 207 .....  | 3                     |
| Mathematics or computer science .....                                    | 3                     |
| Humanities .....   | 12                    |
| General education courses and academic electives to total at least ..... | 120                   |

**PROGRAM—S7: BACHELOR OF SCIENCE WITH A MAJOR IN  
HOME ECONOMICS (FOOD AND NUTRITION—  
ADA PLAN IV) (HEA)<sup>1</sup>**

| <i>Dept.</i>  | <i>No.</i> | <i>Course</i>                      | <i>1st Term<sup>2</sup></i> | <i>2nd Term</i> |
|---------------|------------|------------------------------------|-----------------------------|-----------------|
| Freshman Year |            |                                    |                             |                 |
| HEC           | 100        | Freshman Orientation Seminar       | 1-0-0 <sup>2</sup>          |                 |
| HEC           | 200        | Introductory Foods                 |                             | 2-4-4           |
| HEC           | 202        | Introduction to Hospital Dietetics |                             | 1-0-1           |
| CHM           | 123-124    | General Chemistry                  | 3-3-4                       | 3-3-4           |
| ENG           | 101-102    | College Composition I and II       | 3-0-3                       | 3-0-3           |
| PSY           | 101        | General Psychology <sup>3</sup>    |                             | 3-0-3           |

|                |         |  |       |       |
|----------------|---------|--|-------|-------|
| ANT            | 150     | Cultural Anthropology <sup>3</sup>                 | 3-0-3 |       |
| SPE            | 101     | Fundamentals of Effective Speaking                 | 3-0-3 |       |
| —              | —       | General education or breadth requirement           | 3-0-3 |       |
|                |         |  | 16    | 15    |
| Sophomore Year |         |  |       |       |
| BIO            | 101-102 | General Biology                                    | 3-3-4 | 3-3-4 |
| CHM            | 313-314 | Organic Chemistry                                  | 3-3-4 | 3-3-4 |
| ENG            | 370     | Report Writing <sup>4</sup>                        |       | 3-0-3 |
| HEC            | 303     | Nutrition and Health                               | 3-0-3 |       |
| HEC            | 325     | Child Development                                  | 3-0-3 |       |
| ECO            | 203     | Principles of Microeconomics                       |       | 3-0-3 |
| MTH            | 207     | Statistical Methods for Behavioral Sciences        | 3-0-3 |       |
| —              | —       | General education or breadth requirement           |       | 3-0-3 |
|                |         |  | 17    | 17    |
| Junior Year    |         |  |       |       |
| CHM            | 420     | Biochemistry                                       |       | 3-0-3 |
| EDD            | 305-306 | Anatomy and Physiology <sup>5</sup>                | 3-0-3 | 3-0-3 |
| HEC            | —       | Foods elective                                     | 3-0-3 |       |
| HEC            | 304     | Quantity Foods Production                          | 3-0-3 |       |
| HEC            | 308     | Institutional Buying                               |       | 3-0-3 |
| HEC            | 323     | Demonstration Techniques                           |       | 2-0-2 |
| MGT            | 305     | Management and Organization                        |       | 3-0-3 |
| —              | —       | Mathematics or computer science                    | 3-0-3 |       |
| —              | —       | General education and breadth requirements         | 5-0-5 | 3-0-3 |
|                |         |  | 17    | 17    |
| Senior Year    |         |  |       |       |
| HEC            | 318     | Family Living                                      |       | 3-0-3 |
| HEC            | 357     | Food Microbiology                                  | 3-0-3 |       |
| HEC            | 401     | Advanced Nutrition                                 |       | 3-0-3 |
| HEC            | 402     | Diet Therapy                                       | 3-0-3 |       |
| HEC            | 405     | Teaching of Home Economics in Schools <sup>6</sup> | 3-0-3 |       |
| HEC            | 407     | Food Service Systems Management                    | 3-0-3 |       |
| ACC            | 301     | Financial Reporting and Administration             | 3-0-3 |       |
| BIO            | 411L    | General Microbiology Laboratory                    | 0-4-2 |       |
| MGT            | 314     | Personnel Management                               |       | 3-0-3 |
| —              | —       | General education and breadth requirements         |       | 6-0-6 |
|                |         |  | 17    | 15    |

<sup>1</sup>Consult General Requirements for All Bachelor of Science Programs and Chapter V for General Education Requirements. Some general education courses are specified in the program (e.g., BIO 101-102); others are to be chosen from the listing of approved courses. Check with advisor.

<sup>2</sup>For example, 3-0-3 means 3 class hrs., 0 lab. hrs., 3 sem. hrs. of credit.

<sup>3</sup>May substitute SOC 101 for PSY 101; may substitute SOC 204 for ANT 150.

<sup>4</sup>May substitute ENG 272 or 372.

<sup>5</sup>May substitute BIO 403 with permission.

<sup>6</sup>May substitute EDT 208.

## HOME ECONOMICS (FOOD AND NUTRITION—FOOD SYSTEMS)

Program S7A: The Food Systems area of the Food and Nutrition major prepares the student for a career in a commercial aspect of food management.

| <i>Program Summary</i>   | <i>Semester Hours</i> |
|--|-----------------------|
| Home economics .....   | 33                    |
| Biology 101, 102, 411L .....   | 10                    |
| Chemistry 123, 124 .....   | 8                     |
| English 101-102; 370 or 372 .....  | 9                     |
| Philosophy and/or religious studies .....                                | 12                    |
| Psychology 101 or Sociology 101 or 204 .....                             | 3                     |
| Speech 101 .....   | 3                     |
| Economics 203, 204 .....   | 6                     |
| Mathematics 112, 113, 207 .....  | 9                     |
| Management 305, elective .....   | 6                     |
| Accounting 207, 208 .....  | 6                     |
| Finance 301 .....  | 3                     |
| Marketing 305 .....  | 3                     |
| General education courses and academic electives to total at least ..... | 120                   |

**PROGRAM—S7A: BACHELOR OF SCIENCE WITH A MAJOR IN  
HOME ECONOMICS (FOOD AND NUTRITION—  
FOOD SYSTEMS) (HEF)<sup>1</sup>**

| <i>Dept.</i>   | <i>No.</i> | <i>Course</i>                               | <i>1st Term<sup>2</sup></i> | <i>2nd Term</i> |
|----------------|------------|---|-----------------------------|-----------------|
| Freshman Year  |            |   |                             |                 |
| HEC            | 100        | Freshman Orientation Seminar                | 1-0-0 <sup>2</sup>          |                 |
| HEC            | 200        | Introductory Foods                          |                             | 2-4-4           |
| ENG            | 101-102    | College Composition I and II                | 3-0-3                       | 3-0-3           |
| SPE            | 101        | Fundamentals of Effective Speaking          |                             | 3-0-3           |
| CHM            | 123-124    | General Chemistry                           | 3-3-4                       | 3-3-4           |
| PSY            | 101        | General Psychology <sup>3</sup>             | 3-0-3                       |                 |
| MTH            | 112-113    | Introductory Calculus I and II              | 3-0-3                       | 3-0-3           |
| —              | —          | General education or breadth requirement    | 3-0-3                       |                 |
|                |            |   | 16                          | 17              |
| Sophomore Year |            |   |                             |                 |
| HEC            | 303        | Nutrition and Health                        |                             | 3-0-3           |
| HEC            | 325        | Child Development                           | 3-0-3                       |                 |
| ECO            | 203-204    | Microeconomics and Macroeconomics           | 3-0-3                       | 3-0-3           |
| BIO            | 101-102    | General Biology                             | 3-3-4                       | 3-3-4           |
| ENG            | 370        | Report Writing <sup>4</sup>                 | 3-0-3                       |                 |
| MTH            | 207        | Statistical Methods for Behavioral Sciences |                             | 3-0-3           |
| —              | —          | General education and breadth requirements  | 3-0-3                       | 3-0-3           |
|                |            |   | 16                          | 16              |

| Junior Year |         |  |       |
|-------------|---------|--|-------|
| HEC         | 304     | Quantity Food Production                   | 3-0-3 |
| HEC         | 308     | Institutional Buying                       | 3-0-3 |
| HEC         | 318     | Family Living                              | 3-0-3 |
| HEC         | 321     | The Consumer and Society                   | 3-0-3 |
| ACC         | 207-208 | Principles of Accounting                   | 3-0-3 |
| MGT         | 305     | Principles of Management and Organization  | 3-0-3 |
| MKT         | 305     | Principles of Marketing                    | 3-0-3 |
| —           | —       | General education and breadth requirements | 3-0-3 |
|             |         |  | 15    |
| Senior Year |         |  |       |
| HEC         | 323     | Demonstration Techniques                   | 2-0-2 |
| HEC         | 327     | Experimental Foods                         | 2-3-3 |
| HEC         | 357     | Food Microbiology                          | 3-0-3 |
| HEC         | 407     | Food Service Systems Management            | 3-0-3 |
| BIO         | 411L    | General Microbiology Laboratory            | 0-4-2 |
| FIN         | 301     | Business Finance                           | 3-0-3 |
| MGT         | —       | Management elective                        | 3-0-3 |
| —           | —       | General education and breadth requirements | 3-0-3 |
| —           | —       | Electives                                  | 9-0-9 |
|             |         |  | 17    |

<sup>1</sup>Consult General Requirements for All Bachelor of Science Programs and Chapter V for General Education Requirements. Some general education courses are specified in the program (e.g., BIO 101-102); others are to be chosen from the listing of approved courses. Check with advisor.

<sup>2</sup>For example 3-0-3 means 3 class hrs., 0 lab. hrs., 3 sem. hrs. of credit.

<sup>3</sup>May take SOC 101 or 204.

<sup>4</sup>May substitute ENG 372.

## HOME ECONOMICS (FOOD AND NUTRITION—NUTRITION)

Program S7B: A student who selects the nutrition area of the Food and Nutrition major may function as a nutritionist or may elect to continue the study of nutrition in graduate work and research.

| <i>Program Summary</i>   | <i>Semester Hours</i> |
|--|-----------------------|
| Home economics .....   | 36                    |
| Chemistry 123, 124, 313, 314, 420 .....                                  | 19                    |
| Biology 101, 102, 411L .....   | 8                     |
| English 111, 112, 370 or 372 .....                                       | 10                    |
| Physical and Health Education 305, 306 .....                             | 6                     |
| Mathematics 207 .....  | 3                     |
| Mathematics or computer science .....                                    | 3                     |
| Psychology 101 or Sociology 101 or 204 .....                             | 3                     |
| Speech 101 .....   | 3                     |
| Philosophy and/or religious studies .....                                | 12                    |
| General education courses and academic electives to total at least ..... | 120                   |



**PROGRAM—S7B: BACHELOR OF SCIENCE WITH A MAJOR IN  
HOME ECONOMICS (FOOD AND NUTRITION—  
NUTRITION) (HEN)<sup>1</sup>**

| Dept.                 | No.     | Course                                     | 1st Term <sup>2</sup> | 2nd Term |
|-----------------------|---------|--|-----------------------|----------|
| <b>Freshman Year</b>  |         |  |                       |          |
| HEC                   | 100     | Freshman Orientation Seminar               | 1-0-0 <sup>2</sup>    |          |
| HEC                   | 200     | Introductory Foods                         | 2-4-4                 |          |
| ENG                   | 101-102 | College Composition I and II               | 3-0-3                 | 3-0-3    |
| CHM                   | 123-124 | General Chemistry                          | 3-3-4                 | 3-3-4    |
| SPE                   | 101     | Fundamentals of Effective Speaking         |                       | 3-0-3    |
| PSY                   | 101     | General Psychology <sup>3</sup>            |                       | 3-0-3    |
| —                     | —       | General education and breadth requirements | 6-0-6                 | 3-0-3    |
|                       |         |  | 17                    | 16       |
| <b>Sophomore Year</b> |         |  |                       |          |
| HEC                   | 325     | Child Development                          | 3-0-3                 |          |
| BIO                   | 101-102 | General Biology                            | 3-3-4                 | 3-3-4    |
| CHM                   | 313-314 | Organic Chemistry                          | 3-3-4                 | 3-3-4    |
| ENG                   | 370     | Report Writing <sup>4</sup>                |                       | 3-0-3    |
| EDD                   | 305-306 | Anatomy and Physiology <sup>5</sup>        | 3-0-3                 | 3-0-3    |
| MTH                   | 207     | Statistical Methods for Behavioral Science |                       | 3-0-3    |
| —                     | —       | General education or breadth requirement   | 3-0-3                 |          |
|                       |         |  | 17                    | 17       |
| <b>Junior Year</b>    |         |  |                       |          |
| HEC                   | 303     | Nutrition and Health                       | 3-0-3                 |          |
| HEC                   | 318     | Family Living                              |                       | 3-0-3    |
| HEC                   | 323     | Demonstration Techniques                   |                       | 2-0-2    |
| HEC                   | 327     | Experimental Foods                         | 2-3-3                 |          |
| HEC                   | 401     | Advanced Nutrition                         |                       | 3-0-3    |
| HEC                   | 410     | Nutritional Biochemistry with Laboratory   | 1-3-2                 |          |
| CHM                   | 420     | Biochemistry                               |                       | 3-0-3    |
| —                     | —       | General education and breadth requirements | 9-0-9                 | 6-0-6    |
|                       |         |  | 17                    | 17       |
| <b>Senior Year</b>    |         |  |                       |          |
| HEC                   | 357     | Food Microbiology                          | 3-0-3                 |          |
| HEC                   | 403     | Community Nutrition                        |                       | 3-0-3    |
| HEC                   | 436     | Special Problems in Nutrition              | 3-0-3                 |          |
| HEC                   | 451     | Advanced Nutritional Biochemistry          |                       | 3-0-3    |
| HEC                   | 460     | Seminar in Food and Nutrition              | 1-0-1                 |          |
| BIO                   | 411L    | General Microbiology Laboratory            | 0-4-2                 |          |
| —                     | —       | Mathematics or computer science            | 3-0-3                 |          |
| —                     | —       | Electives                                  | 3-0-3                 | 9-0-9    |
|                       |         |  | 15                    | 15       |

<sup>1</sup>Consult General Requirements for All Bachelor of Science Programs and Chapter V for General Education Requirements. Some general education courses are specified in the program (e.g., BIO 101-102); others are to be chosen from the listing of approved courses. Check with advisor.

<sup>2</sup>For example 3-0-3 means 3 class hrs., 0 lab. hrs., 3 sem. hrs. of credit.

<sup>3</sup>May take SOC 101 or 204.

<sup>4</sup>May substitute ENG 272 or 372.

<sup>5</sup>May substitute BIO 403 with permission.

## FACULTY

Julia A. Palmert, *Chairperson*

*Professor Emerita:* Schroeder

*Associate Professor:* Lefler

*Assistant Professors:* De Luca, Palmert

*Part-time Instructors:* Butler, Eppley, Freeman, Herald, Jefferis, Jeffries, Margulis, Metzger, Moss

## COURSES OF INSTRUCTION

HEC 101. **INTRODUCTORY CLOTHING:** Study of clothing selection and construction of a basic garment using a commercial pattern with emphasis on fitting, dress-making techniques, and finishing procedures. Corequisite: HEC 101L. 2 sem. hrs.

HEC. 101L. **INTRODUCTORY CLOTHING LABORATORY:** Course to accompany HEC 101 lecture. One 3-hour period each week. Corequisite: HEC 101. 1 sem. hr.

HEC 103. **INTRODUCTION TO HOME ECONOMICS:** Study of the role and scope of home economics with emphasis on professional development. 1 sem. hr

HEC 105. **RELATED ART:** Study of the elements and principles of design and their application in the selecting and arranging of materials. 3 sem. hrs.

HEC 111. **BASIC CLOTHING CONSTRUCTION:** For nonmajors only. Introduction to the sections of the commercial pattern and guide sheet, the operation of the sewing machine, and basic techniques of clothing construction with a minimal emphasis on alterations. Corequisite: HEC 111L. 2 sem. hrs.

HEC 111L. **BASIC CLOTHING CONSTRUCTION LABORATORY:** Course to accompany HEC 111 lecture. One 3-hour period each week. Corequisite: HEC 111. 1 sem. hr.

HEC 200. **INTRODUCTORY FOODS:** Application of scientific principles to food preparation and evaluation. Corequisite: HEC 200L. 2 sem. hrs.

HEC 200L. **INTRODUCTORY FOODS LABORATORY:** Course to accompany HEC 200 lecture. Two 2-hour periods per week. Corequisite: HEC 200. 2 sem. hrs.

HEC 202. **INTRODUCTION TO HOSPITAL DIETETICS:** To acquaint the student interested in a career in dietetics with the profession of dietetics and the role and responsibilities of the dietitian. Primary emphasis on dietetics as practiced in hospitals. 1 sem. hr.

HEC 203. **ELEMENTARY NUTRITION:** Course for the nonmajor interested in food and nutrition. Emphasis on basic nutrition as it applies to the individual. Contemporary issues pertaining to nutrition. 2 sem. hrs.

HEC 214. **TEXTILES:** Study of the natural, thermoplastic, and nonthermoplastic fibers, including yarns, structures, and finishing of fabrics for their use and care. 3 sem. hrs.

HEC 300. **CULTURAL ASPECTS OF FOOD:** Study of the effect of culture and food resources on food patterns and food preparation; historical evolution of food; U.S. regional food habits. Corequisite: HEC 300L. 2 sem. hrs.

HEC 300L. CULTURAL ASPECTS OF FOOD LABORATORY: Course to accompany HEC 300 lecture. One 3-hour period each week. Corequisite: HEC 300. 1 sem. hr.

HEC 303. NUTRITION AND HEALTH: Fundamental principles of normal nutrition as they relate to human needs—physical, biological, and socio-cultural. Emphasis on selection and utilization of foods during the life cycle. 3 sem. hrs.

HEC 304. QUANTITY FOOD PRODUCTION: Basic steps of quantity food service systems. Coordinated working experience. Prerequisite: HEC 200. 3 sem. hrs.

HEC 306. FAMILY MANAGEMENT: A systems approach to the study of home management and the use of resources (time, energy, money, and material goods) to promote the development of home and family life from the consumer standpoint. 3 sem. hrs.

HEC 308. INSTITUTIONAL BUYING: Application of principles for determining needs and procuring and storing foods in quantity. Institutional equipment selection, maintenance, and layout. 3 sem. hrs.

HEC 309. HOUSEHOLD EQUIPMENT: Study of the principles of selection, construction, operation, and care of household equipment and its relation to the well being of the family. Prerequisite: HEC 200 or equivalent. 3 sem. hrs.

HEC 311. ADVANCED CLOTHING: The application of the personal basic-fitting garment to a commercial dress pattern and tailored pant pattern for the construction of an underlined garment and tailored pants. Prerequisite: HEC 101. Corequisite: HEC 311L. 2 sem. hrs.

HEC 311L. ADVANCED CLOTHING LABORATORY: Course to accompany HEC 311 lecture. One 3-hour period each week. Corequisite: HEC 311. 1 sem. hr.

\*HEC 318. FAMILY LIVING: Developmental tasks, socio-economic and cultural influences on family interaction at each stage of the life cycle. Open to the University. 3 sem. hrs.

HEC 320. FAMILY HOUSING: Topics include housing constraints, needs, alternatives, environment, finance, and government involvement in housing. Open to the University. 2-3 sem. hrs.

\*HEC 321. THE CONSUMER AND SOCIETY: The economic interrelationship of the political, business, and household systems from the consumer point of view. How to gain and use knowledge to improve economic welfare of the consumer. Open to the University. 3 sem. hrs.

HEC 323. DEMONSTRATION TECHNIQUES: Study of the principles and techniques of lecture-demonstrations. Emphasis on student lecture-demonstrations. 2 sem. hrs.

HEC 325. CHILD DEVELOPMENT: Developmental study of stages and principles from infancy through adolescence. Observation and work in nursery school arranged. Open to the University. 3 sem. hrs.

HEC 327. EXPERIMENTAL FOODS: 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. Corequisite: HEC 327L. 2 sem. hrs.

HEC 327L. EXPERIMENTAL FOODS LABORATORY: Course to accompany HEC 327 lecture. One 3-hour laboratory period each week. Corequisite: HEC 327. 1 sem. hr.

HEC 329. CHILD DEVELOPMENT PRACTICUM: Supervised experience in working with preschool children and their parents. Case study and nursery school participation arranged. Two hours of lecture and 3 hours of work experience each week. Prerequisite: HEC 325. *3 sem. hrs.*

HEC 330. INTERIOR DESIGN I: Fundamentals of selection and arrangement of furnishings in the home, considering the principles of design, individual family needs, and available resources. No prerequisite. *3 sem. hrs.*

HEC 331. MONEY MANAGEMENT: Study of the management of financial resources and allocation of income to various consumption activities. Open to the University. *3 sem. hrs.*

HEC 340. INTERIOR DESIGN II: History of art, architecture, and interiors from the new wave to modern times; influences reflected in America from past cultures. No prerequisite. *3 sem. hrs.*

\*HEC 341. SOCIAL ISSUES IN CONSUMERISM: Various issues related to the social aspects of consumerism analyzed within the context of business, government, and consumers, emphasizing the interrelationships among the three sectors. Open to the University. *3 sem hrs.*

HEC 350. INTERIOR DESIGN III: Practical application of interior design principles and the business of being an interior designer. Prerequisites: HEC 330, 340; ART 307. *3 sem. hrs.*

HEC 357. FOOD MICROBIOLOGY: Study of microorganisms that are related to food-borne illnesses, food preservation, and food sanitation. Prerequisites: BIO 101-102. Corequisite: BIO 411L. *3 sem. hrs.*

HEC 360. CLOTHING SELECTION AND CONSUMPTION: Study of clothing with emphasis on social, psychological, and economic relationships. Open to the University. *3 sem. hrs.*

HEC 362. TEXTILE AND APPAREL INDUSTRIES: Study of domestic and international textile and apparel industries from a historical perspective; cultural and economic influences; current issues. *3 sem. hrs.*

HEC 401. ADVANCED NUTRITION: Extension of the student's knowledge of the science of nutrition, stressing the metabolism of food constituents and recent advances in the field of nutrition. Prerequisites: HEC 303, CHM 420. *3 sem. hrs.*

HEC 402. DIET THERAPY: Study of diet modification for the effective prevention and treatment of disease; health care delivery, medical technology, review of organ systems (normal and pathologic), diet counseling, menu planning, research. Prerequisite: Biochemistry, HEC 303, or permission of instructor. *3 sem. hrs.*

HEC 403. COMMUNITY NUTRITION: Study of public health nutrition programs and their services to the community. An opportunity to explore alternate methods of health care delivery and preventive measures. *2 sem. hrs.*

HEC 404. FASHION MERCHANDISING: Study of the movement of fashion, the promotion of fashion; advertising and display, trends in retail fashion distribution. *3 sem. hrs.*

HEC 405. TEACHING OF HOME ECONOMICS IN SCHOOLS: Study of vocational home economics philosophy and organizational structure. Instructional planning and developing media, methods, and materials for consumer homemaking. Students seeking vocational certification take 4-sem.-hr. version of this course. *3-4 sem. hrs.*

HEC 406. FAMILY MANAGEMENT PRACTICUM: Integration of managerial concepts with activities related to students' own lives to foster the attitude that these concepts are useful in individual and family living. 3 sem. hrs.

HEC 407. FOOD SERVICE SYSTEMS MANAGEMENT: Principles related to feeding people in institutions; personnel management, organization, administration, and cost control. 3 sem. hrs.

HEC 410. NUTRITIONAL BIOCHEMISTRY: Biochemical and clinical methods for the study of nutrition; evaluation and interpretation of the data in relation to various nutritional states. Prerequisite: CHM 420. Corequisite: HEC 410L. 1 sem. hr.

HEC 410L. NUTRITIONAL BIOCHEMISTRY LABORATORY: Course to accompany HEC 410 lecture. One 3-hour period each week. Corequisite: HEC 410. 1 sem. hr.

HEC 415. TAILORING: Tailoring techniques as applied to the construction of coats and suits. Two lecture periods each week. Prerequisites: HEC 101, 105, 311. Corequisite: HEC 415L. 2 sem. hrs.

HEC 415L. TAILORING LABORATORY: Course to accompany HEC 415 lecture. Three laboratory hours each week. Corequisite: HEC 415. 1 sem. hr.

HEC 429. MANAGEMENT OF PRE-SCHOOL PROGRAMS: Thorough examination of philosophies and program models with implication for planning, administering, and evaluating pre-school programs. 2 sem. hrs.

HEC 430. ISSUES IN INTERIOR DESIGN: Investigation of the elements of housing and interiors from economic, functional, and aesthetic points of view. Topics may vary from term to term. 1-3 sem. hrs.

HEC 436. INDEPENDENT STUDY: A course to allow students to concentrate on special interests. Original investigation, independent conferences, and reports are required. Approval of department chairperson and instructor. 1-6 sem. hrs.

HEC 437. MEAL MANAGEMENT: Development of the ability to plan, prepare, and serve palatable, nutritious and attractive meals at various economic levels. Corequisite: HEC 437L. Open to the University. 2 sem. hrs.

HEC 437L. MEAL MANAGEMENT LABORATORY: Course to accompany HEC 437 lecture. One 2-hour period each week. Corequisite: HEC 437. 1 sem. hr.

HEC 451. ADVANCED NUTRITIONAL BIOCHEMISTRY: Comprehensive study of the role of nutrients in the control of body metabolism. Prerequisites: CHM 420, HEC 401. 3 sem. hrs.

HEC 455. PHARMACOLOGY—NUTRITION IMPLICATIONS: Study of the effect of drug therapy on the patient's body processes and nutritional status, including indications, dosage, cautions, side effects, monitoring, and drug-food interactions. 3 sem. hrs.

HEC 460. SEMINAR IN FOOD AND NUTRITION: Survey, discussion, and oral presentation of selected topics from current food and nutrition literature. May be taken twice. 1 sem. hr.

HEC 470 HOME ECONOMICS LABORATORY INTERNSHIP: Practical field experience in the student's major area of interest. Prerequisite: permission of department chairperson. Grade option 2. 1-6 sem. hrs.

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\*General education course. See Chapter V.

## HUMANITIES STUDIES (HMS)

No major or minor concentration is available. See also Classics (CLA).

### INTERDEPARTMENTAL COMMITTEE

Gordon A. Neufang (Languages), *Committee Chairperson*

K. Marre (English), Conard (Languages), Gilvary (Performing and Visual Arts), Zembaty (Philosophy), Vines (History), Martin (Religious Studies)

### COURSES OF INSTRUCTION

**HMS 201. THE GREEK EXPERIENCE:** The development of Greek ideas and ideals in the literature, art, and archaeology of ancient Greece. Readings (in English translation) in Homer, the lyric poets, Aeschylus, Sophocles, Euripides, Aristophanes, Herodotus, Thucydides, and Plato. *3 sem. hrs.*

**HMS 202. OUR ROMAN HERITAGE:** Study of Roman contributions to the modern world as evidenced in the literature, art, and archaeology of ancient Rome. Readings (in English translation) in Plautus, Lucretius, Catullus, Cicero, Vergil, Horace, Livy, Ovid, and Seneca. *3 sem. hrs.*

**HMS 301. CIVILIZATION:** Interdisciplinary course using Sir Kenneth Clark's Civilization film series as the basis for exploring Western thought and culture from the early Middle Ages to the present; readings pertinent to Western civilization. Team-taught. *3 sem. hrs.*

**HMS 395. CONTEMPORARY INTELLECTUAL TRENDS, EUROPE:** Multi-disciplinary course in art, film, literature, music, and philosophy, concentrating on the post-World War II period and contemporary European intellectual trends. *6 sem. hrs.*



## INTERDISCIPLINARY STUDIES (ASI)

The College of Arts and Sciences constantly strives to present significant, innovative learning experiences to its students. Courses and programs or activities that are interdisciplinary or multidisciplinary and therefore not offered through the traditional department structure are possible through authorization by the Academic Affairs Committee of the College.

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

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

### COURSES OF INSTRUCTION

**ASI 198. HONORS SOCIAL SCIENCE SEMINAR:** Interdisciplinary study of a contemporary topic that has been the focus of considerable investigation by at least two social science disciplines. Required of and restricted to freshmen enrolled in the University Honors Program. Prerequisite: Permission of program director. *3 sem. hrs.*

**ASI 201. PERSONAL VALUE DEVELOPMENT:** Exploration of the conceptual framework of value development. Application of concepts in such personal decision making as educational and career planning, developing satisfying personal relationships, and using time productively. *2 sem. hrs.*

**ASI 210M. TO BE THE CHURCH:** A course with the pastoral orientation of recognizing and identifying the faith-stance of a Catholic Christian in the modern world. *1 sem. hr.*

**ASI 214. DRAMATIC KINESICS IN A FOREIGN LANGUAGE:** Corrective work in foreign language sound and gesticulatory patterns accomplished by enacting scenes from a play in the language. May be repeated in one language in successive stages of difficulty up to 3 sem. hrs. Registration may be retroactive. Prerequisites: Basic instruction in the language; permission of instructor. *1 sem. hr.*

**ASI 228. FOCUS ON WOMEN:** Interdisciplinary seminar on the changing roles and status of women. Requirement for women's studies minors. May be repeated since topics change yearly. *1 sem. hr.*

**ASI 299. HONORS SCIENCE SEMINAR:** Examination of the nature of scientific thought, research, and experimentation in one or more of the physical and biological sciences; the relationship between society and scientific inquiry. Required of and restricted to sophomores in the University Honors Program. Prerequisite: Permission of program director. *3 sem. hrs.*

**ASI 305. APPALACHIAN STUDIES:** Appalachian history and its influence on the present; problems of recent events; influence of local government and federal programs on the people; economic problems of underprivileged people and the future of industrial development; ecology of the region; literature, art, and music; psychology of social change and community development in the underdeveloped regions; health and mental health; problems of the Appalachian migrant. *3 sem. hrs.*

ASI 398. SPECIAL TOPICS IN INTERNATIONAL DEVELOPMENT: Study of political, philosophical, historical, and economic questions associated with developing countries. Topics determined by an interdisciplinary team. Required for the minor in international development. Second term. *3 sem. hrs.*

ASI 448. SEMINAR IN FAMILY DEVELOPMENT: Interdisciplinary examination of issues relating to family relationships, changes in family life, and the social context of family life. Required of family development minors. Prerequisite: 12 sem. hrs. completed in the minor. (Replaces ASI 399.) *1 sem. hr.*

ASI 498-499. HONORS THESIS: Selection, design, investigation, and completion of an independent, original research thesis under the guidance of a faculty research director. Restricted to students in the University Honors Program with permission of the director of the program. *6 sem. hrs.*





## INTERNATIONAL STUDIES (INS)

International studies is a multidisciplinary major designed to meet the needs of students interested in acquiring a broadly based international perspective for eventual careers in government service, international business, foreign area studies, international law, secondary school teaching, and self-enrichment. The curriculum includes a core of required courses, an intensive regional concentration (Western Europe, Eastern Europe, or Latin America), a foreign language requirement, and additional hours of course work drawn from the multidisciplinary elective pool.

Majors are strongly encouraged to participate in the Interdepartmental Summer Study Abroad Program or the Department of Languages' Summer Program or other accredited study abroad programs.

A minor is available only in International Development Studies.

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### PROGRAM—A9: BACHELOR OF ARTS WITH A MAJOR IN INTERNATIONAL STUDIES (INS)<sup>1</sup>

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|  | <i>Semester Hours</i> |
|--|-----------------------|
| Requirements for the major .....                                 | 66                    |
| Humanities .....   | 18                    |
| Natural science .....  | 7                     |
| Mathematics .....  | 3                     |
| Philosophy and/or religious studies .....                        | 12                    |
| Communication skills (ENG 101, 102, SPE 101) .....               | 3-9                   |
| Social and behavioral science .....                              | 12                    |
| General education and academic electives to total at least ..... | 120                   |

<sup>1</sup>See also Distribution Table for Bachelor of Arts Programs and Chapter V for General Education Requirements.

With the approval of the advisor, a major in international studies may utilize courses in the International Studies Program to satisfy some of the University requirements.

The major in international studies consists of a minimum of 66 semester hours of coursework distributed as follows:

#### *Required courses (27 semester hours)*

ECO 203, 204, 450

ENG 272

GEO 103

HST 102

POL 202, 410, 455

#### *Regional concentration (21 semester hours)*

Each major must select one of the following three area concentrations. This area must correspond with the foreign language chosen.

Western Europe: HST 314, 419, 421, 428; HMS 395; POL 320

USSR-Eastern Europe: HST 314, 328, 415; HMS 395; POL 321, 409

Latin America: ANT 352; ECO 460; HST 357, 482; POL 323, 457; SPN 316

*Electives (12 semester hours)*

The remaining 12 semester hours are to be chosen from the other two concentrations or from the following elective pool:

ANT 150, 315, 351, 406  
 ART 472, 473  
 BAI 301  
 ECO 461  
 ENG 306, 356, 357, 358  
 FIN 450  
 HST 101, 110, 306, 313, 322, 330, 335, 348, 412, 416, 420, 423, 424, 432, 436, 437, 438, 440, 482, 484  
 INS 495  
 MGT 430  
 MKT 440  
 PHL 317, 320, 323, 350, 351, 352, 353, 358, 359, 360  
 POL 214, 322, 325, 335, 406, 408, 437  
 REL 146, 201, 202, 374, 406, 463  
 SOC 350

Any upper-level foreign language course (French, German, Italian, Spanish, Russian)

With permission, other courses including special topics courses and independent study

*Language (6-20 semester hours)*

A student majoring in international studies must complete at least 6 semester hours of upper-level foreign language instruction in one of the following languages: French, German, Italian, Russian, or Spanish. Foreign language literature in translation courses do not fulfill this requirement. Also, these 6 semester hours may not duplicate upper-level foreign language courses taken to fulfill the requirement of 12 semester hours drawn from the elective pool.

*Minor in International Development Studies (IND)*

For students interested in the problems of development in Third World countries, a minor in international development is available. It is intended to give students the cultural, historical, and political sensitivity required for working effectively in the interest of developing countries. The minor in international development consists of 15 semester hours of course work in anthropology, history, political science, and international development. Students are encouraged to participate in an immersion experience in a Third World country.

## UNDERGRADUATE CURRICULUM POLICY COMMITTEE

Margaret P. Karns, *Director, Center for International Studies*

Aaron (Strategies for Responsible Development), Bregenzer (Anthropology), Chiodo (Languages), Hadley (Economics and Finance), Johnson (Philosophy), Lapitan (Political Science), Lohmeyer (Geology), Patrouch (English), Vines (History)

## COURSE OF INSTRUCTION

INS 495. INTERNATIONAL STUDIES INTERNSHIP: Practical, supervised experience with Dayton Council on World Affairs or other approved organization dealing with international affairs. Prerequisite: Permission of director. 3 sem. hrs.

## JOURNALISM (JRN)

Journalism is an area of concentration in the Department of Communication. See also requirements and courses of instruction under COM and SPE.

Students concentrating in journalism must take SPE 101, COM 120, and 30 semester hours in JRN, SPE, and COM.

A minor in political journalism is available for political science majors. The political journalism minor consists of COM 120, JRN 206, and any three of the following five courses: COM 314, COM 440, JRN 301, JRN 303, SPE 301.

### COURSES OF INSTRUCTION

**JRN 206. NEWSWRITING:** Writing for the news media, concentrating on determining news values, developing newsgathering and newswriting techniques, and improving writing skills. Prerequisites: COM 120, typing skills. Studio fee. *3 sem. hrs.*

**JRN 301. PUBLIC AFFAIRS REPORTING:** Advanced reporting and newswriting. Analysis and structure of stories on all government areas. Information-gathering techniques and specialized reporting. Prerequisites: COM 120, JRN 206. *3 sem. hrs.*

**JRN 303. INTERPRETATIVE AND FEATURE WRITING:** Writing non-news materials: features, personality stories, columns, reviews, consumer information. New journalism. Contents and organization of feature sections. *3 sem. hrs.*

**JRN 400. EDITING AND COPYREADING:** Newspaper copy editing, with emphasis on language usage, editing symbols, newspaper style, headline and caption writing. Extensive work on computerized editing system. Prerequisites: JRN 206, typing skills. Studio fee. *3 sem. hrs.*

**JRN 404. NEWSPAPER MANAGEMENT PROBLEMS:** Noneditorial operations—problems of business, circulation, advertising, and printing departments as they affect operations of the news department. Special emphasis on small dailies and weeklies. *3 sem. hrs.*

**JRN 410. PUBLICATION DESIGN:** Layout and design of newspapers, newsletters, brochures, and magazines. Type selection, copy preparation, cost appraisal, printing methods. Studio fee. *3 sem. hrs.*

**JRN 420. SPECIAL TOPICS IN JOURNALISM:** Concentrated study in specialized areas of journalism. May be repeated with change of topic. *3-6 sem. hrs.*

## LANGUAGES (LNG)

The Department of Languages offers instruction in modern languages (French, German, Italian, Russian, and Spanish) and in classical languages (Greek and Latin). The department also offers courses in classics, taught in English. (See CLA. See also HMS.)

Modern languages are increasingly attractive in double majors because the combination of foreign languages with social work, business, or other specialized training enhances one's opportunities of employment. The major requirements in the second fields are determined by the respective departments.

Greek and Latin provide significant background for students interested in anthropology, English, modern foreign languages, history, music, philosophy, and theology. The major in classical languages provides a widely recognized and respected humanistic education, and it develops analytical skills and linguistic mastery important for students intending further study in law, theology, education, journalism, and business.

Every major in and prospective teacher of modern languages is urged to spend at least a summer traveling and studying in a country in which the citizens speak the language the student is studying. The Department of Languages conducts one-month summer programs abroad, usually in Paris, Madrid, and Marburg (see courses FRN 470 and SPN 470), and the College of Arts and Sciences conducts a three-month Interdepartmental Summer Studies Abroad program. (See Chapter X.)

Advanced placement based on high school study or study in foreign countries is regularly awarded. In general, one year of high school language study is equal to one term of study at the University; four years of high school language study normally prepares one for upper-level (300-400) language courses. Since language skills tend to be forgotten when unused, a student who resumes language study after a considerable lapse may wish to enter a lower level than that indicated above. The Department provides upon request guidance in selecting the correct course level. Furthermore, the Department recommends that students continue the languages begun in high school in order to achieve a useful level of skill.

A language major may arrange courses, with the approval of the departmental chairperson, in one of these three forms of concentration:

1. Major in a single language, requiring 24 semester hours in upper-level (300-400) courses;
2. Composite major, requiring a minimum of 20 semester hours in each of two languages (any level);
3. Composite major in classical languages (Greek and Latin), which differs from the preceding composite major by viewing classical antiquity as a whole and by giving attention to cultural and literary interconnections in the Graeco-Roman world. It requires the following:
  - a. minimum of 24 semester hours of courses in Greek or Latin at the 300-400 level;
  - b. minimum of 12 semester hours of courses in the other classical language at any level.

Students with a composite major arrangement should begin their second language no later than the fourth term.

A minor in a single language requires 12 semester hours at the 300-400 level.

NOTE: The Department of Languages advises all students that, since learning a foreign language involves the progressive accumulation of skills and knowledge—especially in elementary, intermediate, and advanced communication skills courses (conversation, composition, etc.)—regular participation in class is vital to success in foreign language courses.

PROGRAM—A10: BACHELOR OF ARTS WITH A MAJOR IN  
LANGUAGES (LNG)<sup>1</sup>

|  | <i>Semester Hours</i> |
|--|-----------------------|
| Languages .....  | 24-40                 |
| Communication skills .....   | 3-9                   |
| Humanities <sup>2</sup> .....  | 18                    |
| Philosophy and/or religious studies .....                                | 12                    |
| Natural science .....  | 7                     |
| Mathematics .....  | 3                     |
| Social and behavioral science .....                                      | 12                    |
| General education courses and academic electives to total at least ..... | 120                   |

<sup>1</sup>See also Distribution Table for Bachelor of Arts programs and Chapter V for General Education Requirements.

<sup>2</sup>It is recommended that students take any courses, such as the history of a particular country or period, that 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 departmental chairperson. In general, however, any additional language should be taken for at least two terms.

FACULTY

Robert C. Conard, *Chairperson*  
Professors: Conard, Lazarus, McKenzie  
Associate Professors: Neufang, Romaguera  
Assistant Professors: Castello-Lamas, Chiodo, Galeano, Greely, Lowry

NOTE: For additional language courses, see ASI 214.

FRENCH (FRN)

COURSES OF INSTRUCTION

FRN 300 or 301 or equivalent is a prerequisite for all other upper-level courses conducted in French. Most 300-400 level courses in French are offered on a two-year rotating cycle. For advanced placement see under LNG.

FRN 103-104. ELEMENTARY FRENCH I, II: Basic elements of the French language with emphasis on audio-oral skills. Language laboratory required. No prerequisite for FRN 103. *4 sem. hrs. each*

FRN 199. FRENCH LANGUAGE TABLE: Weekly informal practice in conversation. Faculty supervised. All speakers of French welcome as guests. Repeatable up to 3 sem. hrs. Does not count toward major or minor. Grade option 2 only. Credit granted (S) solely on basis of attendance; maximum 2 absences permitted. Prerequisite: FRN 103 or equivalent proficiency. *1 sem. hr.*

FRN 201-202. INTERMEDIATE FRENCH I, II: Intensive development of French grammar, selected readings in French literature or culture, practice in spoken and written language skills. Language laboratory required. *3 sem. hrs. each*

FRN 300-301. FRENCH CONVERSATION: Intensive drill to develop communication skills: vocabulary development, pattern drills, and use of idioms in discussions centered on French life and culture. May be taken in either sequence. One term required for majors and minors. FRN 300 or 301 or equivalent is a prerequisite for all other upper-level courses conducted in French. *3 sem. hrs.*

FRN 302-303. FRENCH COMPOSITION I, II: Practice in composition on topics dealing with French life and culture. Systematic vocabulary enrichment, refinement of grammar, and assimilation of stylistic patterns. Emphasis on correct writing, creativity, and initiation into the concept of style in French prose. May be taken in either sequence. *3 sem. hrs. each*

FRN 305. EXPLICATION DE TEXTES: Introduction to method of analyzing literary texts, both prose and poetry. Elements of French versification. Recommended for all French majors and prospective teachers. *3 sem. hrs.*

FRN 306. FRENCH PHONETICS AND DICTION: 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. *3 sem. hrs.*

FRN 307. FRENCH CULTURE AND CIVILIZATION: Introduction to the history of French civilization with emphasis on the arts and life in each major cultural period. Recommended for all French majors and minors. *3 sem. hrs.*

FRN 310. INTRODUCTION TO COMMERCIAL FRENCH: Introduction to French business and the French position in international trade. Basic vocabulary of the office and the world of trade, introduction to formal correspondence and transactions. *3 sem. hrs.*

FRN 313-314. SURVEY OF FRENCH LITERATURE I, II: Major texts, trends, authors from the Middle Ages to the present, showing influences and continuity. Lectures, discussions, oral and written reports. Recommended for all French majors and prospective teachers. *3 sem. hrs. each*

FRN 350. FRENCH LITERATURE IN TRANSLATION: Course to acquaint non-majors and nonminors with major French writers and literary movements. Conducted in English. Repeatable when subtitle and content change. *3 sem. hrs.*

FRN 405. FRENCH LITERATURE: Lectures and discussions in French in specialized areas such as medieval French literature, French Renaissance, French classicism, the Enlightenment, 20th-century French poetry, French drama, and the French novel. Repeatable when subtitle and content change. *3 sem. hrs.*

FRN 410. ADVANCED COMMERCIAL FRENCH: Intensive study of business in France. Emphasis on specialized vocabulary, style, and syntax in commercial correspondence and accurate translation of current documents related to business and publicity. Prerequisites: FRN 302, 303, and 310 or equivalent. *3 sem. hrs.*

FRN 470. STUDY ABROAD: Intensive study in a foreign country whose everyday language is French, treating the culture and civilization of the country. Conducted in French. Available only during the summer session. Repeatable when subtitle and content change. *3 sem. hrs.*

FRN 491. INDEPENDENT STUDY: Independent research project under the guidance of an instructor. Admission to project and number of semester hours require approval of the chairperson. *1-3 sem. hrs.*

## GERMAN (GER)

## COURSES OF INSTRUCTION

GER 103, 104, 201, and 202 or their equivalent are prerequisite for all upper-level German courses. For advanced placement see under LNG.

GER 100-101. GUTEN TAG I, II: Beginning conversational German based on a 26-film motion picture series. Basic vocabulary and expressions through dialogues and drills in the language of everyday situations. Grammar instruction minimal; no reading taught. GER 100-101 is not a substitute for GER 103-104 and does not permit one to enter GER 201. *2 sem. hrs. each*

GER 103-104. ELEMENTARY GERMAN I, II: Basic elements of German language with emphasis on pronunciation, speaking, reading, and grammar. Language laboratory required. No prerequisite for GER 103. *4 sem. hrs. each*

GER 199. GERMAN LANGUAGE TABLE: Weekly informal practice in conversation. Faculty supervised. All speakers of German welcome as guests. Repeatable up to 3 sem. hrs. Does not count toward major or minor. Grade option 2 only. Credit granted (S) solely on basis of attendance; maximum 2 absences permitted. Prerequisite: GER 103 or equivalent proficiency. *1 sem. hr.*

GER 201. INTERMEDIATE GERMAN I: Systematic grammar review. Increased use of the language in written exercises and classroom discussions based on readings. Prerequisite: GER 104 or equivalent. *3 sem. hrs.*

GER 202. INTERMEDIATE GERMAN II: Continuation of GER 201. Exposure to the development of German civilization and culture. Reading, conversation, and composition. Prerequisite: GER 201 or equivalent. *3 sem. hrs.*

GER 304-305. SPOKEN GERMAN: Intensive drill to develop communication skills: vocabulary development, pattern drills, and use of idioms in discussions and oral reports centered on German daily life and culture. May be taken in either sequence. One term required for majors and minors. *3 sem. hrs. each*

GER 306. GERMAN COMPOSITION I: Practice in writing German based on description of events in everyday German life and including personal and business letters. Short weekly written assignments build vocabulary and control of idioms. *3 sem. hrs.*

GER 307. GERMAN COMPOSITION II: Continuing practice in German composition including vocabulary building and introduction to the concept of style. Prerequisite: GER 306 or permission of instructor. *3 sem. hrs.*

GER 310. GERMAN CULTURE AND CIVILIZATION: Introduction to German culture and civilization with emphasis on the arts, intellectual developments, and life in various periods of German history. Conducted in German. Recommended for all majors and minors. *3 sem. hrs.*

GER 313. SURVEY OF GERMAN LITERATURE I: German literature and its development from 750 A.D. to the end of the 17th century. Study of exemplary works and literary movements. *3 sem. hrs.*

GER 314. SURVEY OF GERMAN LITERATURE II: German literature from the 18th century to the present. Study of exemplary literary works and movements. *3 sem. hrs.*

GER 350. GERMAN LITERATURE IN TRANSLATION: Course to acquaint non-majors and nonminors with major German writers and literary movements. Conducted in English. Repeatable when subtitle and content change. *3 sem. hrs.*

GER 440. GERMAN LITERATURE: Lectures and discussions in German in such specialized areas as Medieval lyric, Romanticism, 20th-century novel, modern drama, and individual authors. Repeatable when subtitle and content change. *3 sem. hrs.*

GER 491. INDEPENDENT STUDY: Independent research project under the guidance of an instructor. Admission to project and number of sem. hrs. require approval of chairperson. *1-3 sem. hrs.*

## GREEK (GRK)

## COURSES OF INSTRUCTION

GRK 103-104. ELEMENTARY GREEK I, II: Development of a foundation for reading classical Greek. No prerequisite for GRK 103. *4 sem. hrs. each*

GRK 201. INTERMEDIATE GREEK: Readings from Plato, Homer, and Euripides selected both for their literary merit and for their value in improving reading skills. Prerequisite: GRK 104. *3 sem. hrs.*

GRK 350. GREEK LITERATURE: Advanced readings in a particular author or genre (epic, drama, history, philosophy). Repeatable when subtitle and content change. *3 sem. hrs.*

## ITALIAN (ITA)

## COURSES OF INSTRUCTION

ITA 103, 104, 201, and 202 or their equivalent are prerequisite for all upper-level Italian courses. For advanced placement see under LNG.

ITA 103-104. ELEMENTARY ITALIAN: Introduction to listening, speaking, reading, and writing in Italian. Dictations, pronunciation drills, grammar exercises, structured and unstructured conversations, and reading and writing exercises. The class is conducted primarily in Italian. *4 sem. hrs. each*

ITA 199. ITALIAN LANGUAGE TABLE: Weekly informal practice in conversation. Faculty supervised. All speakers of Italian welcome as guests. Repeatable up to 3 sem. hrs. Does not count toward minor. Grade option 2 only. Credit granted (5) solely on basis of attendance; maximum 2 absences permitted. Prerequisite: ITA 103 or equivalent proficiency. *1 sem. hr.*

ITA 201-202. INTERMEDIATE ITALIAN: Development of listening, speaking, reading, and writing skills. Conversation practice, oral reports, reading assignments, composition assignments, and grammar exercises. The class is conducted in Italian. *3 sem. hrs. each*

ITA 301-302. SURVEY OF ITALIAN LITERATURE: Italian literature from its beginnings in the 13th century to the present. Principal writers and literary trends; the techniques of literary analysis. Lectures, discussions, readings, and papers are in Italian. *3 sem. hrs. each*

ITA 307-308. COMMUNICATING IN ITALIAN: Developing the ability to speak and write in Italian at an advanced level. Building vocabulary, learning correct idiomatic usage, increasing fluency, and improving syntax and style. The class is conducted in Italian. *3 sem. hrs. each*

ITA 315-316. ITALIAN CULTURE AND CIVILIZATION I, II: Survey of the major historical and cultural events in Italy from the Middle Ages to the present. All readings, lectures, discussions, reports, and tests are in Italian. *3 sem. hrs. each*

ITA 491. INDEPENDENT STUDY: Independent research project under the guidance of an instructor. Admission to project and number of sem. hrs. require approval of chairperson. *1-3 sem. hrs.*



## LATIN (LAT)

## COURSES OF INSTRUCTION

LAT 103-104. ELEMENTARY LATIN I, II: Development of a foundation for reading classical Latin. No prerequisite for LAT 103. *4 sem. hrs. each*

LAT 201-202. INTERMEDIATE LATIN I, II: Systematic review of grammar, exercises in vocabulary development, readings from Caesar, Cicero, Vergil, or Ovid. Prerequisite: LAT 104. *3 sem. hrs. each*

LAT 301. LATIN COMPOSITION AND SYNTAX: Practice in writing Latin, for enrichment of vocabulary, refinement of grammar, and control of major Latin prose styles. *3 sem. hrs.*

LAT 350. LATIN LITERATURE: Advanced readings in a particular author or genre (epic, drama, history, philosophy). Repeatable when subtitle and content change. *3 sem. hrs.*

LAT 491. INDEPENDENT STUDY: Independent research project under the guidance of an instructor. Admission to project and number of semester hours require approval of chairperson. *1-3 sem. hrs.*

## RUSSIAN (RUS)

## COURSES OF INSTRUCTION

For advanced placement see under LNG.

RUS 103-104. ELEMENTARY RUSSIAN I, II: Familiarization of 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. No prerequisite for RUS 103. *4 sem. hrs. each*

RUS 199. RUSSIAN LANGUAGE TABLE: Weekly informal practice in conversation. Faculty supervised. All speakers of Russian welcome as guests. Repeatable up to 3 sem. hrs. Does not count toward major or minor. Grade option 2 only. Credit granted (S) solely on basis of attendance; maximum 2 absences permitted. Prerequisite: RUS 103 or equivalent proficiency. *1 sem. hr.*

RUS 201-202. INTERMEDIATE RUSSIAN I, II: Review of the essentials of grammar, intensive conversation and comprehension exercises, reading of graded modern and contemporary prose and poetry. Prerequisite: RUS 104 or equivalent. *3 sem. hrs. each*

RUS 301-302. SPOKEN RUSSIAN: Vocabulary development, pattern drills, and the use of idioms in discussion and oral reports centered on Russian life and culture. May be taken in either sequence. Prerequisite: RUS 202 or equivalent. *3 sem. hrs. each*

RUS 304. RUSSIAN COMPOSITION: Practice in composition on topics dealing with Russian life and culture; personal and business letters. Short weekly assignments to build vocabulary and control of idioms. Prerequisite: RUS 202. *3 sem. hrs.*

RUS 307. SURVEY OF RUSSIAN LITERATURE: Russian literature and its development during the 19th and 20th centuries. Study of exemplary works and literary movements. Prerequisite: RUS 202. *3 sem. hrs.*

RUS 491. INDEPENDENT STUDY: Independent study under the guidance of an instructor. Admission to course and number of sem. hrs. require approval of chairperson. Repeatable when content changes. Maximum total 6 sem. hrs. *1-6 sem. hrs.*

## SPANISH (SPN)

## COURSES OF INSTRUCTION

SPN 103, 104, 201, and 202 or their equivalent are prerequisites for SPN 305 or 306. SPN 305 or 306 or equivalent is a prerequisite for all other upper-level courses conducted in Spanish. For advanced placement see under LNG.

SPN 103-104. **ELEMENTARY SPANISH I, II:** Development of a foundation for understanding, speaking, reading, and writing Spanish. Language laboratory required. No prerequisite for SPN 103. *4 sem. hrs. each*

SPN 199. **SPANISH LANGUAGE TABLE:** Weekly informal practice in conversation. Faculty supervised. All speakers of Spanish welcome as guests. Repeatable up to 3 sem. hrs. Grade option 2 only. Does not count toward major or minor. Credit granted (S) solely on basis of attendance; maximum 2 absences permitted. Prerequisite: SPN 103 or equivalent proficiency. *1 sem. hr.*

SPN 201-202. **INTERMEDIATE SPANISH I, II:** Intensive development of the basic principles of Spanish through writing and conversation, stressing fluency. Language laboratory required. *3 sem. hrs. each*

SPN 301-302. **SPANISH LITERATURE I, II:** Survey of Spanish literature. Recommended for majors and prospective teachers. *3 sem. hrs. each*

SPN 305-306. **SPOKEN SPANISH:** 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 305 or 306 or equivalent is a prerequisite for all other upper-level courses conducted in Spanish. *3 sem. hrs. each*

SPN 307-308. **SPANISH COMPOSITION:** Private and commercial correspondence as basis for developing a facility to write clearly in Spanish. May be taken in either sequence. Recommended for majors and prospective teachers. *3 sem. hrs. each*

SPN 313. **EXPLICACION DE TEXTOS:** Introduction to the methods of analyzing literary texts by observing and analyzing Spanish prose and poetry. Elements of Spanish versification. Recommended for Spanish majors and prospective teachers. Conducted in Spanish. *3 sem. hrs.*

SPN 315. **SPANISH CIVILIZATION AND CULTURE:** Readings and discussions on the historical, social, political, and cultural phenomena of Spain. Conducted in Spanish. *3 sem. hrs.*

SPN 316. **IBERO-AMERICAN CIVILIZATION AND CULTURE:** Readings and discussions on the historical, social, political, and cultural phenomena of Ibero-America. Conducted in Spanish. *3 sem. hrs.*

SPN 350. **HISPANIC LITERATURE IN TRANSLATION:** Course to acquaint non-majors and nonminors with major Spanish and Spanish-American writers and literary movements. Conducted in English. Repeatable when subtitle and content change. *3 sem. hrs.*

SPN 407-408. SPANISH LITERATURE OF THE 20TH CENTURY I, II: 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.

*3 sem. hrs. each*

SPN 420. SPANISH-AMERICAN LITERATURE: Lectures and discussions in Spanish in such specialized areas as Spanish-American colonial literature, contemporary Spanish-American novel, Spanish-American poetry, Spanish-American prose. Repeatable when subtitle and content change.

*3 sem. hrs.*

SPN 440. SPANISH LITERATURE: Lectures and discussions in Spanish in such specialized areas as Medieval Spanish literature, Spanish drama of the Golden Age, Cervantes, 19th-century Spanish novel, contemporary Spanish drama. Repeatable when subtitle and content change.

*3 sem. hrs.*

SPN 470. STUDY ABROAD: Intensive study in a foreign country whose everyday language is Spanish, treating the culture and civilization of the country. Conducted in Spanish. Available only during the summer session. Repeatable when subtitle and content change.

*3 sem. hrs.*

SPN 491. INDEPENDENT STUDY: Independent research project under the guidance of an instructor. Admission to project and number of semester hours require approval of chairperson.

*1-3 sem. hrs.*



## MATHEMATICS (MTH)

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PROGRAM—A11: BACHELOR OF ARTS WITH A MAJOR IN  
MATHEMATICS (MTA)

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**A. MAJOR FIELD**—Qualified students elect MTH 118 upon entering; those with weaker backgrounds elect MTH 101. Upon completion of MTH 118, MTH 119, and MTH 218 (or demonstration of proficiency) a student will, with the approval of the department, elect 9 upper-level courses including MTH 302, MTH 319, MTH 361, and MTH 430. Students with strong mathematical ability are encouraged to satisfy these requirements in the departmental honors program. In the senior year, mathematics majors in the honors program will be expected to enroll in one graduate course. Honors students are invited to inquire about the five-year master's degree program.

**B. ADDITIONAL REQUIREMENTS<sup>1</sup>**

1. Science—7 sem. hrs. of course work, 4 of which must be in an approved natural science with an accompanying laboratory. Majors are strongly advised to learn computer programming.
2. Social and behavioral science—12 sem. hrs.
3. Humanities—18 sem. hrs.
4. Philosophy and/or religious studies—12 sem. hrs.
5. Demonstration of proficiency or successful completion of ENG 101, ENG 102, and SPE 101.
6. General education courses—30 sem. hrs. These courses may be counted for other requirements where applicable.
7. Additional courses to satisfy graduation requirements for all Bachelor of Arts programs.

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<sup>1</sup>See also Distribution Table for Bachelor of Arts programs and Chapter V for General Education Requirements.

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PROGRAM—S8: BACHELOR OF SCIENCE WITH A MAJOR IN  
MATHEMATICS (MTH)

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**A. MAJOR FIELD**—Qualified students elect MTH 118 upon entering; those with weaker backgrounds elect MTH 101. Upon completion of MTH 118, MTH 119, and MTH 218 (or demonstration of proficiency) a student will, with the approval of the department, elect 9 upper-level courses including MTH 302, MTH 319, MTH 361, and MTH 430. Students with strong mathematical ability are encouraged to satisfy these requirements in the departmental honors program. In the senior year, mathematics majors in the honors program will be expected to enroll in one graduate course. Honors students are invited to inquire about the five-year master's program.

**B. MINOR FIELD**—The requirement for the minor normally consists of 12 semester hours of 300-400 level courses. The chosen field may require prerequisite knowledge that could extend the total number of semester hours beyond

12. The choice of a minor and the supporting course work must be approved by the student's advisor.

### C. ADDITIONAL REQUIREMENTS<sup>1</sup>

1. Science—minimum of 16 sem. hrs., including at least 1 sem. hr. of laboratory. This requirement is fulfilled by electing the sequence of basic courses in two approved natural sciences (physics, chemistry, biology, geology).

2. Social and behavioral science—6 sem. hrs.

3. Humanities—9 sem. hrs.

4. Philosophy and/or religious studies—12 sem. hrs.

5. Communication skills—All students are required to complete successfully or demonstrate proficiency in ENG 101, ENG 102, and SPE 101. In addition, all majors are required to take an approved computer science course. Those looking forward to research are strongly advised to elect a foreign language.

6. General education courses—30 sem. hrs. These courses may be counted for other requirements where applicable.

7. Additional courses to satisfy graduation requirements for all Bachelor of Science programs.

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<sup>1</sup>Consult General Requirements for All Bachelor of Science Programs and Chapter V for General Education Requirements.

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More detailed information will be provided by the department upon request. All majors are encouraged to cooperate closely with their departmental advisors in planning their course work. Honors students may wish to follow a five-year program leading to a master's degree in mathematics.

### FACULTY

John W. McCloskey, *Chairperson*

*Distinguished Service Professor*: Schraut

*Professors*: McCloskey, Peterson, Rice, Stander, Steinlage

*Associate Professors*: Back, Eloë, Gantner, Gorton, Mushenheim, Shaughnessy

*Assistant Professors*: Friel, Higgins, Islam, Kauflin, Mashburn

*Instructor*: Saintignon

### COURSES OF INSTRUCTION

MTH 101. PRECALCULUS MATHEMATICS: A review of topics from algebra and trigonometry including polynomials, functions and graphs, exponential and logarithmic functions, trigonometric functions and identities. 4 sem. hrs.

MTH 103. MATHEMATICS AND ITS CULTURAL ASPECTS: Introduction to basic concepts of algebra, geometry, probability and statistics. Also, depending on the needs and interests of the class, such topics as logic, set theory, abstract mathematical systems, and intuitive topology. Prerequisite: One year of high school mathematics. 3 sem. hrs.

**MTH 107. FUNDAMENTALS OF MATHEMATICS:** Sets, functions and graphs, exponents, polynomials and algebraic equations, systems of equations. Prerequisite: One year of high school algebra. *3 sem. hrs.*

**MTH 110. QUANTITATIVE ANALYSIS FOR BUSINESS I:** Topics from mathematics used in business, including systems of equations, inequalities, matrix algebra, linear programming, logarithms. Prerequisite: MTH 107 or sufficient college preparatory mathematics. *3 sem. hrs.*

**MTH 111. QUANTITATIVE ANALYSIS FOR BUSINESS II:** Continuation of MTH 110. Compound interest and annuities, fundamental concepts and applications of differential and integral calculus. Prerequisite: MTH 110 or sufficient college preparatory mathematics. *3 sem. hrs.*

**MTH 112. INTRODUCTORY CALCULUS I:** Basic coordinate geometry, differentiation of algebraic functions with applications to geometry. Indefinite and definite integrals with applications to the life and physical sciences. Prerequisite: MTH 101 or equivalent. Intended for students in the life and social sciences. *3 sem. hrs.*

**MTH 113. INTRODUCTORY CALCULUS II:** Differentiation and integration of exponential and logarithmic functions with applications to life sciences and to solution of applied differential equations with variables separable. Differentiation and integration of trigonometric functions with applications. Use of tables of integrals. Introduction to vector calculus, partial derivatives, and multiple integrals. Prerequisite: MTH 112. *3 sem. hrs.*

**MTH 118. ANALYTIC GEOMETRY AND CALCULUS I:** Introduction to the differential and integral calculus; differentiation and integration of algebraic and transcendental functions with applications to science and engineering. Prerequisite: MTH 101 or equivalent. *2-4 sem. hrs.*

**MTH 119. ANALYTIC GEOMETRY AND CALCULUS II:** Continuation of MTH 118. Conic sections, techniques of integration with applications to science and engineering, infinite series, indeterminate forms, Taylor's theorem. Prerequisite: MTH 118. *2-4 sem. hrs.*

**MTH 204. MATHEMATICAL CONCEPTS I:** Concepts necessary for an understanding of the structure of arithmetic and its algorithms. Prerequisites: One year of high school algebra and one year of high school geometry. *3 sem. hrs.*

**MTH 205. MATHEMATICAL CONCEPTS II:** Recommended for students in elementary education who seek a strong background in the mathematical concepts discussed in grades 4-8. Topics include the metric system, probability and statistics, the use of calculators, and elementary geometry. *3 sem. hrs.*

**MTH 207. STATISTICAL METHODS FOR THE BEHAVIORAL SCIENCES:** Measures of central tendency and variability, frequency distributions, probability, the binomial distribution, normal distribution, inferences from sample means, curve fitting, correlation and regression. Prerequisite: Two years of high school algebra. *3 sem. hrs.*

**MTH 215. BASIC STATISTICS FOR THE BIOMEDICAL SCIENCES:** Probability, the binomial distribution, normal distribution, confidence intervals, tests of hypotheses, proportions, Chi-square test, F-distribution, regression and correlation. Prerequisite: MTH 113 or consent of instructor. *3 sem. hrs.*

**MTH 218. ANALYTIC GEOMETRY AND CALCULUS III:** Continuation of MTH 119. Multi-variable calculus, solid analytic geometry, partial differentiation, multiple integrals. Prerequisite: MTH 119. *4 sem. hrs.*

**MTH 219. APPLIED DIFFERENTIAL EQUATIONS:** First order equations, linear equations with constant coefficients, systems of equations, the Laplace transform, power series solutions, numerical methods, applications. Prerequisite: MTH 218. Credit will not be given for both MTH 219 and MTH 319. Mathematics majors are expected to take MTH 319. *3 sem. hrs.*

**MTH 302. LINEAR ALGEBRA AND MATRICES:** Fundamental concepts of vector spaces, determinants, linear transformations, matrices, inner product spaces and eigenvectors. Prerequisite: MTH 218. Offered each term. *3 sem. hrs.*

**MTH 302H. HONORS LINEAR ALGEBRA AND MATRICES:** Same material as MTH 302, with additional topics for enrichment covered in one extra hour per week. Prerequisites: MTH 218 and permission of the instructor. Second term each year. *4 sem. hrs.*

**MTH 319. ORDINARY DIFFERENTIAL EQUATIONS AND LINEAR SYSTEMS:** First order equations, theory of linear equations and existence, uniqueness of solutions of initial value problems, systems of first order equations, Laplace transforms, and power series methods. Prerequisite: MTH 302. Credit will not be given for both MTH 219 and MTH 319. Mathematics majors take MTH 319. First term each year. *3 sem. hrs.*

**MTH 342. SET THEORY:** Elementary set theory including relations, functions, indexed families, denumerable and nondenumerable sets, cardinal and ordinal arithmetic, Zorn's Lemma, the well-ordering principle and transfinite induction. Prerequisite: MTH 218 or permission of instructor. Second term, alternate years. *3 sem. hrs.*

**MTH 361. INTRODUCTION TO ABSTRACT ALGEBRA:** Fundamental concepts of groups, rings, integral domains and fields. Prerequisite: MTH 218. First and second terms each year. *3 sem. hrs.*

**MTH 361H. HONORS ABSTRACT ALGEBRA:** Same material as MTH 361, with additional topics for enrichment covered in one extra hour per week. Prerequisites: MTH 218 and permission of the instructor. First term each year. *4 sem. hrs.*

**MTH 367. STATISTICAL METHODS I:** Probability distributions including 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 113 or 218. Mathematics majors enroll in MTH 411 instead of MTH 367. *3 sem. hrs.*

**MTH 368. STATISTICAL METHODS II:** Distribution-free methods including rank tests, sign tests, and Kolmogorov-Smirnov test. Method of least squares, correlation, linear regression, analysis of variance. Design of experiments. Prerequisite: MTH 367. Mathematics majors enroll in MTH 412 instead of MTH 368. *3 sem. hrs.*

**MTH 370. INTRODUCTION TO HIGHER GEOMETRY:** Projective, affine, and hyperbolic geometries using synthetic and/or analytic techniques. Prerequisite: MTH 218 or permission of instructor. Second term, alternate years. *3 sem. hrs.*

**MTH 376. NUMBER THEORY:** Topics include Diophantine equations, Chinese Remainder theorem, Mobius inversion formula, quadratic residues and the Law of Quadratic Reciprocity, Gaussian integers, and integral quaternions. Prerequisite: MTH 218. First term, alternate years. *3 sem. hrs.*

**MTH 395. DEVELOPMENT OF MATHEMATICAL IDEAS:** The evolution of mathematical ideas and techniques from ancient times to the present with emphasis on the Greek era. Famous men and famous problems. Chronological outline of mathematics in each of its branches along with applications. Prerequisite: MTH 112 or MTH 118 or permission of instructor. First term, alternate years. *3 sem. hrs.*

**MTH 403. BOUNDARY VALUE PROBLEMS:** Introduction to the Sturm Liouville problem. Fourier trigonometric series, Fourier integrals, Bessel functions, and Legendre polynomials. The heat equation, wave equation, and Laplace's equation with applications. Solutions by the product method. Prerequisite: MTH 219 or 319. First term each year. *3 sem. hrs.*

**MTH 404. APPLIED COMPLEX VARIABLES:** Functions of a complex variable, conformal mapping, integration in the complex plane. Laurent series and residue theory. Prerequisite: MTH 219 or 319. Mathematics majors enroll in MTH 431 instead of MTH 404. Second term each year. *3 sem. hrs.*

**MTH 411. PROBABILITY AND STATISTICS I:** Mathematical probability, combinatorial methods, random variables, Bayes theorem, moments, Chebyshev's inequality, binomial, Poisson, and normal probability laws, moment-generating functions, limit theorems. Prerequisite: MTH 218. Second term each year. *3 sem. hrs.*

**MTH 412. PROBABILITY AND STATISTICS II:** Distribution theory, central limit theorem, random sampling, estimation of parameters including maximum likelihood, confidence intervals, the Neyman-Pearson lemma, tests of hypotheses, likelihood ratio tests, sampling from a normal population. Prerequisite: MTH 411. First term each year. *3 sem. hrs.*

**MTH 413. PROBABILITY AND STATISTICS III:** Statistical decision theory, partitioning of sums and squares, analysis of variance, regression on several independent variables, multiple regression approach to analysis of variance, design of experiments. Prerequisite: MTH 412. Second term each year. *3 sem. hrs.*

**MTH 430. REAL ANALYSIS:** Fundamental concepts of analysis: metric completeness, uniform continuity and uniform convergence; power series and interchange of limits. Prerequisite: MTH 302. First term each year. *3 sem. hrs.*

**MTH 430H. HONORS REAL ANALYSIS:** Same material as MTH 430, with additional topics for enrichment covered in one extra hour per week. Prerequisites: MTH 302 and permission of the instructor. First term each year. *4 sem. hrs.*

**MTH 431. COMPLEX ANALYSIS:** Introduction to complex analysis: analytic functions and the Cauchy integral theory; Laurent series and the calculus of residues. Optional topics may include applications of the residue theory. Prerequisite: MTH 302. Second term each year. *3 sem. hrs.*

**MTH 431H. HONORS COMPLEX ANALYSIS:** Same material as MTH 431, with additional topics for enrichment covered in one extra hour per week. Prerequisites: MTH 302 and permission of the instructor. Second term each year. *4 sem. hrs.*

**MTH 440. INTRODUCTION TO MATHEMATICAL MODELING:** Introduction to the use of mathematical techniques and results in constructing and modifying models designed to solve problems encountered in everyday life. Computer simulation and limitations thereon, dimensional analysis, scaling, and approximations at various levels. Prerequisites: MTH 219 (or 319), MTH 302, and permission of the instructor. Second term each year. *3 sem. hrs.*



**MTH 441. MATHEMATICS CLINIC:** Student teams will be responsible for the development or modification and testing of a mathematical model designed for a particular purpose. Faculty guidance. Prerequisites: MTH 440 and permission of the chairperson. *3 sem. hrs.*

**MTH 445H. (SPECIAL TOPICS IN NAMED AREA):** Lectures in specialized areas such as abstract algebra, applied mathematics, complex variables, differential forms, functional analysis, Galois theory, game theory, general topology, normed linear spaces, probability theory, real variables, topological groups. May be taken more than once for additional credit. Prerequisite: Permission of the chairperson. *1-3 sem. hrs.*

**MTH 463. APPLIED LINEAR ALGEBRA:** Topics include linear programming and its applications, game theory, Markov chains or linear codes and their error-correcting capabilities. Prerequisite: MTH 302. First term each year. *3 sem. hrs.*

**MTH 466. APPLIED MODERN ALGEBRA:** Introduction to various algebraic concepts that are applicable to computer science and related areas. Topics may include Boolean algebra and logic circuits, algebraic structures and finite state machines, groups and group codes, combinatorics and graph theory. Prerequisite: MTH 302. Second term each year. *3 sem. hrs.*

**MTH 471. TOPOLOGY:** Introduction to topological spaces and continuous functions including a study of separation and countability axioms and elementary properties of metric spaces, connected spaces, and compact spaces. Prerequisite: MTH 302 or permission of instructor. *3 sem. hrs.*

**MTH 490. READING IN (NAMED AREA):** Individual study in specialized areas carried out under the supervision of a staff member. May be taken more than once for additional credit. Prerequisite: Permission of the chairperson. *1-3 sem. hrs.*



MEDICAL TECHNOLOGY (MET)

The program leading to a Bachelor of Science with a Major in Medical Technology consists of three years of preclinical instruction at the University of Dayton with a twelve- or thirteen-month clinical course offered by Dayton area schools of medical technology. The hospital programs are accredited by the Committee on Allied Health Education and Accreditation of the American Medical Association through the National Accrediting Agency for Clinical Laboratory Sciences. Completion of the clinical program qualifies the students to take a national examination in order to become certified medical technologists.

MET majors, along with CTT and NMT majors, are undeclared Clinical Laboratory Science students for their first three full terms. All three majors follow an identical program until the second term of the sophomore year. The common curriculum is described elsewhere in this chapter under the heading of Clinical Laboratory Sciences.

PRECLINICAL YEARS

|   | <i>Semester Hours</i> |
|---|-----------------------|
| Biology core courses .....                            | 21                    |
| Supporting science courses (CHM, CPS, MTH, PHY) ..... | 35                    |
| Communication skills (ENG, SPE) .....                 | 12                    |
| Philosophy and/or religious studies .....             | 12                    |
| Humanities .....                                      | 9                     |
| Social-behavioral science .....                       | 6                     |
| Management .....                                      | 3                     |
| Total .....   | 98                    |

*Major Concentration*

*Biology Core:* Five courses—BIO 151, 152, 411, 425, 466, all with laboratories.

*Supporting Sciences:* Two mathematics courses—MTH 112, 207. (Substitute MTH 101, precalculus, if background is not suitable for MTH 112.) One computer science course—CPS 144 or 150. Five chemistry courses—CHM 123, 124, 201, 313, 314, all with laboratories. (CHM 115 must precede CHM 123 if chemistry background is inadequate.) Two physics courses—PHY 201, 204, with laboratories.

The curriculum is planned to meet the requirements of the University, the hospitals, and the NAACLS. The 98 preclinical semester hours must be completed before entering a clinical program at one of the affiliated hospitals.

CLINICAL YEAR

Acceptance into a clinical program is competitive. Students make formal applications to one or more of the affiliated schools of medical technology in the fall term of the junior year. Acceptance is based on preclinical grades, recommendation letters, motivation, and interview performance.

The course of clinical instruction covers a period of fifty-two to fifty-six consecutive weeks. The curriculum involves formal lectures, seminars, teaching laboratories, and preceptorship rotations through the various departments of the clinical laboratory. Upon completion of the clinical year, students are granted the Bachelor of Science with a Major in Medical Technology at the University's Summer Commencement exercises.

Tuition and fees for the clinical years are established by each hospital. The University will charge the Basic University Fee for Terms I and II. Students will pay their hospital tuition and fees through the University. Information on clinical year tuition and fees, class size, grading policies, dress codes, etc., is presented in the respective hospital program brochures.

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PROGRAM—S9: BACHELOR OF SCIENCE WITH A MAJOR IN  
MEDICAL TECHNOLOGY (MET)<sup>1</sup>

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| <i>Dept.</i> | <i>No.</i> | <i>Course</i> | <i>1st Term</i> <sup>2</sup> | <i>2nd Term</i> |
|--------------|------------|---------------|------------------------------|-----------------|
|--------------|------------|---------------|------------------------------|-----------------|

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See Clinical Laboratory Sciences (CLS) for first three terms of curriculum.

Sophomore Year

|     |      |  |  |          |
|-----|------|--|--|----------|
| BIO | 201L | Biology Laboratory Investigations          |  | 0-3-1    |
| BIO | 425  | Parasitology                               |  | 3-3-4    |
| PHY | 204  | Introduction to Medical Electronics        |  | 1-2-2    |
| CHM | 314  | Organic Chemistry                          |  | 3-3-4    |
| HST | —    | History elective <sup>3</sup>              |  | 3-0-3    |
| —   | —    | General education requirement <sup>4</sup> |  | 3-0-3    |
|     |      |  |  | <hr/> 17 |

Junior Year

|     |     |  |          |          |
|-----|-----|--|----------|----------|
| BIO | 411 | General Microbiology                   | 3-4-5    |          |
| BIO | 466 | Pathogenic Bacteriology and Immunology |          | 3-3-4    |
| CHM | 201 | Quantitative Analysis                  | 2-2-4    |          |
| PHL | 315 | Medical Ethics                         | 3-0-3    |          |
| ENG | —   | English elective <sup>5</sup>          | 3-0-3    |          |
| CPS | —   | Computer science elective <sup>6</sup> |          | 3-0-3    |
| MGT | 305 | Management and Organization            |          | 3-0-3    |
| —   | —   | General education requirements         |          | 6-0-6    |
|     |     |  | <hr/> 15 | <hr/> 16 |

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<sup>1</sup>Consult General Requirements for All Bachelor of Science Programs and Chapter V for General Education Requirements.

<sup>2</sup>For example, 3-0-3 means 3 hrs. class, 0 hrs. lab., 3 sem. hrs. credit.

<sup>3</sup>Select HST 340 or 341.

<sup>4</sup>Some general education courses are specified in the program (e.g., PHL 315); others are to be chosen from the listing of approved courses. See Chapter V.

<sup>5</sup>Select from ENG 203, 204, 205, 272, 316, 370, 372, 378.

<sup>6</sup>Select CPS 144 or 150.

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## Senior Year

|  | <i>Semester Hours</i> |
|--|-----------------------|
| MET 431 Introduction to Clinical Laboratory Science..... | 3                     |
| MET 431L Advanced Clinical Laboratory .....              | 2                     |
| MET 432 Clinical Chemistry .....                         | 4                     |
| MET 432L Clinical Chemistry Laboratory .....             | 4                     |
| MET 433 Microbiology .....                               | 4                     |
| MET 433L Microbiology Laboratory .....                   | 3                     |
| MET 434 Hematology .....                                 | 3                     |
| MET 434L Hematology Laboratory .....                     | 3                     |
| MET 435 Immunology .....                                 | 1                     |
| MET 435L Immunology Laboratory .....                     | 2                     |
| MET 437 Immunohematology .....                           | 1                     |
| MET 437L Immunohematology Laboratory .....               | 2                     |
| MET 438 Clinical Pathology .....                         | 2                     |
| MET 439 Clinical Pathology Seminar .....                 | 1                     |
| MET 440 Body Fluids Analysis .....                       | 3                     |
| Total .....  | 38                    |

## FACULTY

Charles J. Chantell, *University Program Director*

*Clinical Professors:* Abramson, Bylsma, Van der Hoeven

*Clinical Assistant Professors:* Columbus, Gilleland, Martin

## COURSES OF INSTRUCTION

The courses taken during the first three years at the University of Dayton, listed under Program S-9, are described under the individual departments. The senior year is conducted at St. Elizabeth Medical Center, Good Samaritan Hospital, or Kettering Medical Center, all in the Dayton area.

MET 431. INTRODUCTION TO CLINICAL LABORATORY SCIENCE: Study of advanced methodology and instrumentation, which may include computer applications, data management, research data collection, and statistical analysis. 3 sem. hrs.

MET 431L. ADVANCED CLINICAL LABORATORY: Laboratory manipulations to accompany MET 431. 2 sem. hrs.

MET 432. CLINICAL CHEMISTRY: Study of human physiological chemistry with application of analytical techniques to the examination of body fluids and tissues. 4 sem. hrs.

MET 432L. CLINICAL CHEMISTRY LABORATORY: Laboratory manipulations to accompany MET 432. 4 sem. hrs.

MET 433. MICROBIOLOGY: Study of microorganisms found in human infection, their isolation/identification and prophylaxis. Included are bacteria, fungi, parasites, and viruses. 4 sem. hrs.

MET 433L. MICROBIOLOGY LABORATORY: Laboratory manipulations to accompany MET 433. 3 sem. hrs.

MET 434. HEMATOLOGY: Instruction in the morphology of the blood and blood-forming tissues. 3 sem. hrs.

MET 434L. HEMATOLOGY LABORATORY: Laboratory manipulations to accompany MET 434. 3 sem. hrs.

**MET 435. IMMUNOLOGY:** Study of the immune system, in particular antigen-antibody reaction in vitro. *1 sem. hr.*

**MET 435L. IMMUNOLOGY LABORATORY:** Laboratory manipulations to accompany MET 435. *2 sem. hrs.*

**MET 437. IMMUNOHEMATOLOGY:** Study of the principles of blood banking, transplantation immunity, and autoimmunity. *1 sem. hr.*

**MET 437L. IMMUNOHEMATOLOGY LABORATORY:** Laboratory manipulations to accompany MET 437. *2 sem. hrs.*

**MET 438. CLINICAL PATHOLOGY:** Lecture stressing the correlation of physiological changes in diseased states and laboratory procedures. *2 sem. hrs.*

**MET 439. CLINICAL PATHOLOGY SEMINAR:** Current developments and special topics. *1 sem. hr.*

**MET 440. BODY FLUIDS ANALYSIS:** The study of body fluids. Pathophysiology of the formation and nature of all the body fluids; techniques of examination for diagnostic information. *3 sem. hrs.*



## MEDICAL TECHNOLOGY 2 + 2 (KMT)

The University of Dayton and the Kettering Medical Center School of Medical Technology (KMC SMT) have jointly established a 2+2 ladder curriculum in medical technology. This program permits someone with an associate degree from an accredited college and certification as a Medical Laboratory Technician (MLT) to earn a baccalaureate degree in Medical Technology (MT) without duplication of previous work. For this program, students spend their junior year at the University of Dayton taking general education and science requirements. They spend their senior year at Kettering Medical Center School of Medical Technology taking advanced topics in clinical laboratory science. The overall structure of the 2+2 (MLT-MT) program is as follows.

### MLT COMPONENT

Students spend their first two years enrolled in an MLT program at an accredited college. During this time, they follow the curriculum prescribed for the associate degree, and following graduation they are eligible to take national certifying examinations, such as those given by the Board of Registry of the American Society of Clinical Pathologists (ASCP) and the National Certifying Agency for Clinical Laboratory Sciences (NCA).

Kettering College of Medical Arts is directly affiliated with the University of Dayton for the 2+2 program. Specific admissions criteria, application material, and curricular information for the MLT program at Kettering College can be obtained from the Registrar, Kettering College of Medical Arts, 3737 Southern Boulevard, Kettering, Ohio 45429.

### MT COMPONENT

The student who has both an associate degree and certification as a laboratory technician—MLT (ASCP), CLT (NCA), or equivalent—should apply for this program from January to April by first completing the application process at Kettering Medical Center. This includes (1) a written application with recommendations and a statement of interest, (2) a personal interview, and (3) equivalency examinations designed to test knowledge of clinical theory and laboratory techniques at the technician level. Acceptance into the program is contingent on the following:

1. Positive recommendation and interview
2. Satisfactory grade-point average
3. Successful completion of the equivalency examinations
4. Space available in the class (A maximum of 10 seniors can be accommodated.)

After the student receives notification of acceptance into the clinical (fourth) year of the program from Kettering Medical Center, the student must apply to the University of Dayton for permission to enter with upper division status. Written verification of acceptance into the clinical year is a prerequisite for acceptance by UD.

For completion of the baccalaureate degree within two years following admission, the University requires the transfer of at least 64 semester-hour credits from the first two years, distributed as follows:

|  | <i>Semester Hours</i> |
|--|-----------------------|
| Biology (introductory and electives) .....   | 15                    |
| Microbiology (general and advanced) .....  | 9                     |
| Chemistry (general, organic, quantitative, and biochemistry, or equivalents) ..... | 16                    |
| Mathematics (equivalent to MTH 101 or 112) .....                                   | 3                     |
| English (equivalent to ENG 101 and 102) .....                                      | 6                     |
| Philosophy and/or religious studies .....  | 6                     |
| Social-behavioral sciences .....   | 6                     |
| Humanities electives .....   | 3                     |
| Total .....  | 64                    |

Deficiencies in these prerequisites must be made up before matriculation in the senior year. During the junior year at the University of Dayton, the student must complete all of the required courses (34 semester hours) in Program S9A and achieve a GPA that is acceptable to both the University and the KMC SMT in order to enter the senior year.

Tuition and fees charged in the junior year are those of the University. Tuition and fees in the senior year are established by the KMC SMT and paid through the University. The University will charge the Basic University Fee for Terms I and II plus graduation fees during the senior year.

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**PROGRAM—S9A: BACHELOR OF SCIENCE WITH A MAJOR IN  
MEDICAL TECHNOLOGY 2 + 2 (KMT)<sup>1</sup>**

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| <i>Dept.</i>       | <i>No.</i> | <i>Course</i>                       | <i>1st Term<sup>2</sup></i> | <i>2nd Term</i> |
|--------------------|------------|-------------------------------------|-----------------------------|-----------------|
| <b>Junior Year</b> |            |                                     |                             |                 |
| MGT                | 305        | Management and Organization         | 3-0-3                       |                 |
| MTH                | 207        | Statistical Methods                 |                             | 3-0-3           |
| PHL                | 315        | Medical Ethics                      | 3-0-3                       |                 |
| —                  | —          | Science electives <sup>3</sup>      | 6-0-6                       | 6-0-6           |
| —                  | —          | Philosophy and/or religious studies | 3-0-3                       | 3-0-3           |
| —                  | —          | Humanities elective                 |                             | 3-0-3           |
| —                  | —          | General electives <sup>4</sup>      | 2-0-2                       | 2-0-2           |
|                    |            |                                     | 17                          | 17              |

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<sup>1</sup>Consult General Requirements for All Bachelor of Science Programs and Chapter V for General Education Requirements.

<sup>2</sup>For example, 3-0-3 means 3 hrs. class, 0 hrs. lab., 3 sem. hrs. credit.

<sup>3</sup>Students contemplating graduate education in the sciences should consider taking Organic Chemistry (CHM 313-314) and General Physics (PHY 201-202). If the latter track is not followed then electives may be chosen from Physiology (BIO 403), Endocrinology (BIO 417), Cell Biology (BIO 440), Pathophysiology (BIO 464), Biochemistry (BIO 420), CPS courses, Introduction to Medical Electronic Instrumentation (PHY 204), or, with the advisor's permission, other science courses.

<sup>4</sup>Can be laboratories to accompany science electives.

**Senior Year<sup>1</sup>**

|                                   | <i>Semester Hours</i> |
|-----------------------------------|-----------------------|
| KMT 411 Hematology II .....       | 5                     |
| KMT 412 Coagulation II .....      | 2                     |
| KMT 413 Immunohematology II ..... | 2                     |

|         |                                       |   |
|---------|---------------------------------------|---|
| KMT 414 | Immunology II .....                   | 2 |
| KMT 415 | Microbiology II .....                 | 3 |
| KMT 416 | Parasitology II .....                 | 2 |
| KMT 417 | Chemistry II .....                    | 6 |
| KMT 418 | Mycology .....                        | 2 |
| KMT 419 | Instrument Check Systems .....        | 2 |
| KMT 420 | Research Design and Methodology ..... | 4 |
| KMT 421 | Education .....                       | 2 |
| KMT 422 | Education Practicum .....             | 1 |
| KMT 423 | Laboratory Administration .....       | 1 |
| KMT 424 | Administration Practicum .....        | 1 |
| KMT 425 | Applied Clinical Procedures .....     | 4 |

<sup>1</sup>All courses conducted at the Kettering School of Medical Technology.

## FACULTY

Charles J. Chantell, *University Program Director*

*Clinical Professor: Bylesma*

*Clinical Assistant Professor: Columbus*

## COURSES OF INSTRUCTION

The courses taken during the third year at the University of Dayton, listed under Program-S9A, are described under the individual departments. The fourth year is performed at the Kettering School of Medical Technology.

KMT 411. HEMATOLOGY II: Study of disease correlation and nonroutine hematological examinations including bone marrows and identification of abnormal cellular elements. 5 sem. hrs.

KMT 412. COAGULATION II: Study of the clinical correlation and less frequently performed special laboratory tests of hemostasis. 2 sem. hrs.

KMT 413. IMMUNOHEMATOLOGY II: Study of special problem-solving techniques in immunohematology associated with the identification of atypical or unusual antibodies. 2 sem. hrs.

KMT 414. IMMUNOLOGY II: Study of the theory of humoral and cellular immune response including less commonly used immunological laboratory tests and clinical correlation for those tests. 2 sem. hrs.

KMT 415. MICROBIOLOGY II: Study of the nonroutine procedures in microbiology including mycobacteria, viruses, and identification of unusual microorganisms. 3 sem. hrs.

KMT 416. PARASITOLOGY II: The life cycles, modes of transmission, and laboratory identification of pathogenic parasites. 2 sem. hrs.

KMT 417. CHEMISTRY II: Theory and principles of a wide variety of quantitative techniques with evaluation of procedures and results. Includes basic metabolic processes and common disease conditions that correlate with the analytical chemical tests studied. 6 sem. hrs.



**KMT 418. MYCOLOGY:** Culture and identification of fungi, including saprophytes and those causing superficial and deep mycoses. *2 sem. hrs.*

**KMT 419. INSTRUMENT CHECK SYSTEMS:** Performance check systems for instrumentation and equipment in the laboratory, including maintenance procedures and trouble-shooting. *2 sem. hrs.*

**KMT 420. RESEARCH DESIGN AND METHODOLOGY:** Discussion and practice of the principles and techniques of medical laboratory research; consideration of experimental design, literature review, quality control, statistical analysis of data, and evaluative techniques in method comparison. A paper suitable for publication in a professional journal is required. *4 sem. hrs.*

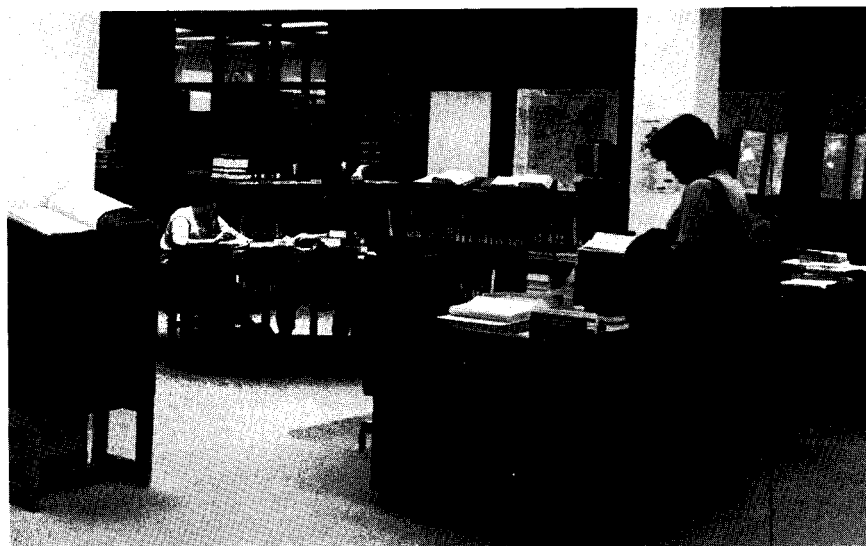
**KMT 421. EDUCATION:** Theory and practice of task-oriented instruction including planning, presenting, and evaluating learning experiences. *2 sem. hrs.*

**KMT 422. EDUCATION PRACTICUM:** Supervised teaching experience in a medical technology educational program. Personalized work-study opportunity to relate educational theory to practice. *1 sem. hr.*

**KMT 423. LABORATORY ADMINISTRATION:** Basic considerations of laboratory management, personnel management, and supervision. *1 sem. hr.*

**KMT 424. ADMINISTRATION PRACTICUM:** Supervised administrative experience in a hospital laboratory. Personalized work-study concentrating on work flow, recording and reporting systems, personnel work, time assignments, and other relationships with hospital staff. *1 sem. hr.*

**KMT 425. APPLIED CLINICAL PROCEDURES:** Supervised work experience in a hospital clinical laboratory with rotation through all sections. *4 sem. hrs.*



## MILITARY SCIENCE (MIL) ARMY 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 Corps is to develop selected college-educated men and women for positions of responsibility as officers in the active Army, the Army Reserve, and the Army National Guard.

The Military Science Program is designed to develop a high degree of personal honor, self-reliance, and leadership and to provide the means of becoming better informed on matters of national defense. The program provides men and women who are working toward the baccalaureate degree the opportunity to become officers in the United States Army.

The four-year program is divided into a basic course (normally freshman and sophomore years) and an advanced course (normally junior and senior years), and it is offered to all students for academic credit.

The basic course emphasizes practical leadership techniques and management concepts that apply equally in both military organizations and private industry. While in this phase of the program, students have no military obligation and are simply taking ROTC courses, like any other college courses, for credit. Students who receive credit for the basic course and demonstrate a potential for becoming effective officers may continue to pursue a commission by enrolling in the advanced course.

The advanced course is designed to prepare students to be Army lieutenants by including practical work in tactics, training, management, leadership techniques, and the exercise of command. Advanced course students are paid \$100 per month during the school year. During the summer between the junior and senior years, cadets attend a six-week ROTC Advanced Camp, which allows them to apply the leadership and technical training learned in the classroom. While at camp, students are paid half a second lieutenant's salary or about \$600.

The ROTC program is also available to students with three or two years remaining on campus, including graduate students. Special programs, such as Basic Camp, have been established to allow second-semester sophomores and juniors or seniors who will be going on to graduate school to participate in the military science program.

There is also a special program whereby veterans and JROTC students can receive advanced placement credit in Army ROTC. Veterans and students with high school JROTC training, with the approval of the chairperson of the Department of Military Science, may receive placement credit for part or all of the basic course. Each case will be judged individually so that the best interests of both the student and the military may be served.

Army ROTC scholarships are available to students. These scholarships cover three- and two-year periods and provide for tuition, books, fees, special equipment, and \$100 a month for up to ten months of each school year. Scholarships, which are highly competitive, are awarded to those who demonstrate outstanding academic and leadership ability.

## FACULTY

Lt. Col. James C. Pack, U.S. Army, *Chairperson*

*Professor:* Pack

*Assistant Professors:* Cerone, Dorr, Gillis

*Instructor:* Ingram

COURSES OF INSTRUCTION<sup>1</sup>

MIL 099 (UD). LEADERSHIP SKILL COURSES: Rappelling, Marksmanship (pistol and rifle), and Physical Training. Subjects determined by student interest and instructor availability. Emphasis on practical experience in each skill. *No credit*

MIL 100 (UD). LEADERSHIP LABORATORY: Practical training in military courtesy, drill and ceremony, military skills, map reading, marksmanship, and tactics. Required for all contract students. *1 sem. hr.*

MIL 101 (UD). LEADERSHIP I: ROTC programs and opportunities; branches and specialties in the military, rappelling and organization of the Army. *1 sem. hr.*

MIL 102 (UD). LEADERSHIP II: Fundamentals and principles of leadership, characteristics of a group, traits of a leader; rifle marksmanship. *1 sem. hr.*

MIL 105 (UD). U.S. MILITARY TODAY: Roles, missions, organizational structure, tactical employment, equipment, and future trends of the armed services. Incorporates the background experience of resident instructors and presentations by visiting service representatives. *1 sem. hr.*

MIL 106 (UD). U.S. MILITARY IN CURRENT WORLD AFFAIRS: Seminar on the contemporary role of the military, the role of military power, the relationship of natural resources to national power. *1 sem. hr.*

MIL 121 (SCC). Same as MIL 101 (UD). *0.7 sem. hr.*

MIL 122-123 (SCC). Combination of these two courses completes all requirements of MIL 102 (UD). *0.7 sem. hr. each*

MIL 201 (UD). MAP READING AND TACTICS: Study of leadership in the military, basic military tactics, tactical management, and map reading skills. Optional field trips. *2 sem. hrs.*

MIL 202 (UD). FIRST AID AND LEADERSHIP: Leadership considerations for unit physical fitness and health; basic first aid procedures and an introduction to CPR. Optional field trips. *2 sem. hrs.*

MIL 221 (SCC). Same as MIL 201 (UD). *1.4 sem. hrs.*

MIL 222-223 (SCC). Combination of these two courses completes all requirements of MIL 202 (UD). *1.4 sem. hrs. each*

MIL 301 (UD). LEADERSHIP IN TACTICS AND EVALUATION TECHNIQUES: Study of military weapons systems, land navigation, and small unit tactics. Weekend training exercises and monthly physical fitness tests. *2 sem. hrs.*

MIL 302 (UD). COMMUNICATIONS AND PROFESSIONAL KNOWLEDGE: The leader's role in directing and coordinating tactical missions. Employment of weapons systems, communications techniques, troop leading, and roles of various branches of the Army. Field trips. *2 sem. hrs.*

<sup>1</sup>Students should check with their deans for any restrictions on applying MIL courses to their degree programs.

MIL 303 (UD). LEADERSHIP INTERNSHIP I: Application of the leadership principles and techniques taught in MIL 301 and 302. Prerequisites: MIL 301, 302, or approval of department chairperson. *4 sem. hrs.*

MIL 304 (UD). LEADERSHIP INTERNSHIP II: Application of the leadership principles and techniques taught in MIL 301 and 302. Prerequisites: MIL 301, 302, 303, or approval of department chairperson. *2 sem. hrs.*

MIL 321 (SCC). Analysis of geography as it pertains to military functions, study of military weapons systems and tactical communications equipment. Weekend training exercise and monthly physical fitness tests. *1.4 sem. hrs.*

MIL 322 (SCC). Same as MIL 302 (UD). *1.4 sem. hrs.*

MIL 323 (SCC). Leadership responsibilities during special tactical situations and basic analysis of Soviet armed forces. Completes MS III requirement. *1.4 sem. hrs.*

MIL 401 (UD). LEADERSHIP MANAGEMENT AND STAFF: Study of military staff functions, military correspondence, effective and ineffective leadership, uses of the principles of war, attitudes toward the military. *2 sem. hrs.*

MIL 402 (UD). APPLIED LEADERSHIP AND MANAGEMENT: Leadership and management studies in professionalism, ethics, and military justice. Obligations and responsibilities of an officer, including chain of command and officer-enlisted relationships. *2 sem. hrs.*

MIL 421 (SCC). Same as MIL 401 (UD). *1.4 sem. hrs.*

MIL 422 (SCC). Study of military correspondence and its techniques. *1.4 sem. hrs.*

MIL 423 (SCC). Essentially the same as MIL 402 (UD). Completes MS IV requirements at SCC. *1.4 sem. hrs.*



MUSIC (MUS)

The Music Division, part of the University's Performing and Visual Arts Department, is a member of the National Association of Schools of Music, which accredits its degree programs and curricula. In addition, the music education degree program is approved by the State of Ohio and the music therapy degree program by the National Association for Music Therapy. At the University of Dayton, music students have the opportunity to enrich their cultural backgrounds through exposure to the other divisions of the Performing and Visual Arts Department (Fine Arts, Theatre, Photography) or to develop their own interdisciplinary programs.

The Music Division has numerous performing ensembles open to all students by audition: The University Choir, chamber vocal ensembles, Chamber Orchestra, Wind Ensemble, Concert Band, Marching Band and Pep Band, Jazz Lab Bands, and chamber instrumental ensembles.

The Music Division offers five degree programs:

A12: Bachelor of Arts with a Major in Music (MUS)

A13: Bachelor of Music with a Major in Music Theory (MTY)  
or Composition (MUC)

A13A: Bachelor of Music with a Major in Performance (MUP)

A13B: Bachelor of Music with a Major in Music Therapy (MUT)

A13C: Bachelor of Music with a Major in Music Education (MUE)

All prospective music students must be admitted to the University of Dayton by the Office of Admissions. In addition, all prospective students must (1) furnish the Music Division with letters of recommendation from their high school music teachers and/or performance teachers, and (2) successfully complete the performance audition, either in person or via tape recording. Specific information regarding audition requirements and dates is available from the Music Division office.

The Music Division offers the degree programs outlined below. Detailed descriptions of the contents of all of these programs are available from the Music Division office.

The Music Division offers a minor in music; specific information is available from the Music Division office. Many courses, including performance courses and music appreciation and fundamentals courses, are open to all University students, and can be used as humanities electives in various degree programs.

PROGRAM—A12: BACHELOR OF ARTS WITH A MAJOR IN MUSIC (MUS)<sup>1</sup>

| Dept. | No.     | Course                                     | Semester Hours |          |
|-------|---------|--|----------------|----------|
|       |         |  | 1st Term       | 2nd Term |
|       |         | Freshman Year <sup>2</sup>                 |                |          |
| MUS   | 111-112 | Theory of Music I                          | 3              | 3        |
| MUS   | 113-114 | Aural Skills I                             | 1              | 1        |
| MUS   | 296-297 | Class Piano <sup>3</sup>                   | 1              | 1        |
| MUS   | 390     | Ensemble                                   | 1              | 1        |
| MUS   | 399     | Performance                                | 2              | 2        |
| ENG   | 101-102 | College Composition I and II               | 3              | 3        |
| SPE   | 101     | Fundamentals of Effective Speaking         | 3              |          |
| —     | —       | General education and breadth requirements |                | 5        |
|       |         |  | 14             | 16       |

| Sophomore Year <sup>2</sup> |            |  |    |    |
|-----------------------------|------------|--|----|----|
| MUS                         | 211-212    | Theory of Music II                           | 3  | 3  |
| MUS                         | 213,215    | Aural Skills II                              | 1  | 1  |
| MUS                         | 301-302    | History of Music                             | 3  | 3  |
| MUS                         | 390        | Ensemble                                     | 1  | 1  |
| MUS                         | 399        | Performance                                  | 2  | 2  |
| HST                         | 101 or 102 | History of Western Civilization              | 3  |    |
| MTH                         | —          | Mathematics requirement                      |    | 3  |
| —                           | —          | General education and breadth requirements   | 3  | 3  |
|                             |            |  | 16 | 16 |
| Junior Year <sup>2</sup>    |            |  |    |    |
| MUS                         | —          | Music history or theory elective             | 2  |    |
| —                           | —          | General education and breadth requirements   | 13 | 15 |
|                             |            |  | 15 | 15 |
| Senior Year <sup>2</sup>    |            |  |    |    |
| MUS                         | —          | Music electives                              | 2  | 2  |
| —                           | —          | General education requirements and electives | 12 | 12 |
|                             |            |  | 14 | 14 |

## Music requirements:

## Semester Hours

|   |    |     |
|---|----|-----|
| Theory of music   | 16 |     |
| History and literature of music   | 6  |     |
| Electives in music history or theory                                    | 2  |     |
| Performance studies (including class piano, if needed)                  | 10 |     |
| Ensemble  | 4  |     |
| Music electives   | 4  | 42  |
| Communication skills  |    | 3-9 |
| Breadth requirements  |    |     |
| Natural science   | 7  |     |
| Mathematics   | 3  |     |
| Social and behavioral science   | 12 |     |
| Humanities  | 18 |     |
| Philosophy and/or religious studies                                     | 12 | 52  |
| General education <sup>4</sup> and academic electives to total at least |    | 120 |

<sup>1</sup>See also Distribution Table for Bachelor of Arts programs and Chapter V for General Education Requirements.

<sup>2</sup>Music majors must register for MUS 400 Recital Attendance (no credit) each semester.

<sup>3</sup>Class piano (MUS 296ff) may be suggested for students with no piano background.

<sup>4</sup>See Chapter V. Courses taken as part of the general education requirement may also fulfill the breadth requirement. Check with program advisor.

PROGRAM—A13: BACHELOR OF MUSIC WITH A MAJOR IN MUSIC THEORY (MTY) OR COMPOSITION (MUC)

| Dept.                      | No.     | Course                                     | Semester Hours |          |
|----------------------------|---------|--|----------------|----------|
| Freshman Year <sup>1</sup> |         |  | 1st Term       | 2nd Term |
| MUS                        | 111-112 | Theory of Music I                          | 3              | 3        |
| MUS                        | 113-114 | Aural Skills I                             | 1              | 1        |
| MUS                        | 390     | Ensemble                                   | 1              | 1        |
| MUS                        | 399     | Performance <sup>2</sup>                   | 2              | 2        |
| ENG                        | 101-102 | College Composition I and II               | 3              | 3        |
| SPE                        | 101     | Fundamentals of Effective Speaking         | 3              |          |
| —                          | —       | General education and breadth requirements | 4              | 7        |
|                            |         |  | 17             | 17       |

| Sophomore Year <sup>1</sup>                |            |  |           |           |
|--|------------|--|-----------|-----------|
| MUS  | 211-212    | Theory of Music II                         | 3         | 3         |
| MUS  | 213, 215   | Aural Skills II                            | 1         | 1         |
| MUS  | 301-302    | History of Music                           | 3         | 3         |
| MUS  | 390        | Ensemble                                   | 1         | 1         |
| MUS  | 399        | Performance <sup>2</sup>                   | 2         | 2         |
| MUS  | —          | Music electives                            | 1         | 1         |
| —  | —          | General education and breadth requirements | 6         | 6         |
|  |            |  | <u>17</u> | <u>17</u> |
| Junior Year <sup>1</sup>                   |            |  |           |           |
| MUS  | 320        | Basic Conducting                           | 2         |           |
| MUS  | 330 or 351 | Advanced Conducting                        |           | 2         |
| MUS  | 390        | Ensemble                                   | 1         | 1         |
| MUS  | 399        | Performance <sup>2</sup>                   | 2         | 2         |
| MUS  | —          | Music theory or composition electives      | 4         | 3         |
| HST  | 101 or 102 | History of Western Civilization            |           | 3         |
| MTH  | —          | Mathematics                                | 3         |           |
| —  | —          | General education and breadth requirements | 5         | 6         |
|  |            |  | <u>17</u> | <u>17</u> |
| Senior Year <sup>1</sup>                   |            |  |           |           |
| MUS  | 390        | Ensemble                                   | 1         | 1         |
| MUS  | —          | Music theory or composition electives      | 3         | 6         |
| MUS  | —          | Music history elective                     | 3         |           |
| MUS  | —          | Music electives                            | 10        | 10        |
|  |            |  | <u>17</u> | <u>17</u> |
| Semester Hours                             |            |  |           |           |
| Communication skills                       |            |  |           | 3-9       |
| Philosophy and/or religious studies        |            |  |           | 12        |
| Breadth requirement <sup>3</sup>           |            |  |           | 12        |
| Music requirements:                        |            |  |           |           |
| Theory of music and/or composition         |            | 32   |           |           |
| History and literature                     |            | 9  |           |           |
| Conducting                                 |            | 4  |           |           |
| Performance                                |            | 12   |           |           |
| Ensemble                                   |            | 8  |           |           |
| Music electives                            |            | 22   |           | 87        |
| General education requirement <sup>4</sup> |            |  |           | 30        |
| Total for the degree                       |            |  |           | 136       |

Each major in this degree program will either submit a research paper or present a recital of original compositions in the senior year. If a paper is written, its subject will be chosen by the student with the advice and approval of a faculty committee. The paper must be approved by a faculty committee.

<sup>1</sup>Music majors must register for MUS 400 Recital Attendance (no credit) each semester.

<sup>2</sup>Class piano (MUS 296ff) may be suggested for students with no piano background.

<sup>3</sup>Breadth requirement: 6 sem. hrs. selected from languages, English, history, communication, performing and visual arts (other than music), philosophy, and religious studies; 6 sem. hrs. selected from psychology, sociology, anthropology, economics, political science, marketing, management, education, mathematics, and the natural sciences. The total breadth requirement is 12 sem. hrs.

<sup>4</sup>See Chapter V. Courses taken as part of the general education requirement may also fulfill the breadth requirement. Check with program advisor.

**PROGRAM—A13A: BACHELOR OF MUSIC WITH A MAJOR  
IN PERFORMANCE (MUP)**

| <i>Dept.</i>  | <i>No.</i> | <i>Course</i>                              | <i>Semester Hours</i> |                 |
|---|------------|--|-----------------------|-----------------|
| <b>Freshman Year<sup>1</sup></b>                      |            |  | <b>1st Term</b>       | <b>2nd Term</b> |
| MUS   | 111-112    | Theory of Music I                          | 3                     | 3               |
| MUS   | 113-114    | Aural Skills I                             | 1                     | 1               |
| MUS   | 390        | Ensemble                                   | 1                     | 1               |
| MUS   | 399 or 499 | Performance <sup>2</sup>                   | 2                     | 4               |
| ENG   | 101-102    | College Composition I and II               | 3                     | 3               |
| SPE   | 101        | Fundamentals of Effective Speaking         | 3                     |                 |
| HST   | 101 or 102 | History of Western Civilization            | 3                     |                 |
| —   | —          | General education and breadth requirements |                       | 5               |
|   |            |  | 16                    | 17              |
| <b>Sophomore Year<sup>1</sup></b>                     |            |  |                       |                 |
| MUS   | 211-212    | Theory of Music II                         | 3                     | 3               |
| MUS   | 213, 215   | Aural Skills II                            | 1                     | 1               |
| MUS   | 301-302    | History of Music                           | 3                     | 3               |
| MUS   | 390        | Ensemble                                   | 1                     | 1               |
| MUS   | 399 or 499 | Performance <sup>2</sup>                   | 4                     | 4               |
| —   | —          | General education and breadth requirements | 5                     | 5               |
|   |            |  | 17                    | 17              |
| <b>Junior Year<sup>1</sup></b>                        |            |  |                       |                 |
| MUS   | 320        | Basic Conducting                           | 2                     |                 |
| MUS   | 390        | Ensemble                                   | 1                     | 1               |
| MUS   | 399 or 499 | Performance <sup>2</sup>                   | 4                     | 4               |
| MUS   | —          | Music elective                             |                       | 2               |
| MTH   | —          | Mathematics                                |                       | 3               |
| —   | —          | General education and breadth requirements | 10                    | 7               |
|   |            |  | 17                    | 17              |
| <b>Senior Year<sup>1</sup></b>                        |            |  |                       |                 |
| MUS   | 390        | Ensemble                                   | 1                     | 1               |
| MUS   | 399 or 499 | Performance <sup>2</sup>                   | 6                     | 6               |
| MUS   | —          | Music electives                            | 3                     | 11              |
| —   | —          | General education and breadth requirements | 7                     |                 |
|   |            |  | 17                    | 18              |
|   |            |  | <i>Semester Hours</i> |                 |
| Communication skills .....                            |            |  | 3-9                   |                 |
| Philosophy and/or religious studies .....             |            |  | 12                    |                 |
| Breadth requirement <sup>3</sup> .....                |            |  | 15                    |                 |
| Music requirements:                                   |            |  |                       |                 |
| Theory of music .....                                 |            |  | 16                    |                 |
| History and literature .....                          |            |  | 9                     |                 |
| Conducting .....                                      |            |  | 2                     |                 |
| Performance studies in major instrument or voice .... |            |  | 24-32                 |                 |
| Performance studies in minor instrument .....         |            |  | 4-12                  |                 |
| Ensemble .....  |            |  | 8                     |                 |
| Music electives .....                                 |            |  | 16                    | 87              |
| General education requirement <sup>4</sup> .....      |            |  | 30                    |                 |
| Total for the degree .....                            |            |  | 136                   |                 |

In order to enter the program leading to the Bachelor of Music with a Major in Performance, the student must be an acceptable performer in repertoire equivalent to that in the Ohio Music Education Association contest lists.

For a piano major, the student's entrance audition should demonstrate the ability to play major and minor scales in parallel motion and major and minor triads in arpeg-



giated form. The student should have studied (1) 2-part and 3-part Inventions, or Preludes and Fugues, by J.S. Bach; (2) sonatas by Haydn, Mozart, and Beethoven; (3) short compositions and at least one major work of composers from the Romantic period.

Each student will demonstrate proficiency as a performer by the presentation of a junior half-recital and a senior recital.

<sup>1</sup>Music majors must register for MUS 400 Recital.

<sup>2</sup>If piano is not the major instrument, it will be the minor instrument. The organ major may choose a non-keyboard minor with the consent of the advisor.

<sup>3</sup>Breadth requirement: 6-9 sem. hrs. selected from languages, English, history, communication, performing and visual arts (other than music), philosophy, and religious studies; 6-9 sem. hrs. selected from psychology, sociology, anthropology, economics, political science, marketing, management, education, mathematics, and the natural sciences. The total breadth requirement is 15 sem. hrs.

<sup>4</sup>See Chapter V. Courses taken as part of the general education requirement may also fulfill the breadth requirement. Check with program advisor.

### PROGRAM—A13B: BACHELOR OF MUSIC WITH A MAJOR IN MUSIC THERAPY (MUT)

| Dept.                       | No.      | Course                                   | Semester Hours |          |
|-----------------------------|----------|--|----------------|----------|
| Freshman Year <sup>1</sup>  |          |  | 1st Term       | 2nd Term |
| MUS                         | 111-112  | Theory of Music I                        | 3              | 3        |
| MUS                         | 113-114  | Aural Skills I                           | 1              | 1        |
| MUS                         | 296-297  | Class Piano                              | 1              | 1        |
| MUS                         | 324      | Beginning Guitar                         |                | 1        |
| MUS                         | 390      | Ensemble                                 | 1              |          |
| MUS                         | 399      | Performance                              | 2              | 2        |
| ENG                         | 101-102  | College Composition I and II             | 3              | 3        |
| SPE                         | 101      | Fundamentals of Effective Speaking       |                | 3        |
| PSY                         | 101      | Introductory Psychology                  | 3              |          |
| PSY                         | 363      | Abnormal Psychology                      |                | 3        |
| —                           | —        | General education or breadth requirement | 3              |          |
|                             |          |  | 17             | 17       |
| Sophomore Year <sup>1</sup> |          |  |                |          |
| MUS                         | 211-212  | Theory of Music II                       | 3              | 3        |
| MUS                         | 213, 215 | Aural Skills II                          | 1              | 1        |
| MUS                         | 285-286  | Introduction to Music Therapy            | 2              | 2        |
| MUS                         | 287      | Practicum in Music Therapy               |                | 1        |
| MUS                         | 298-299  | Class Piano                              | 1              | 1        |
| MUS                         | 301-302  | History of Music                         | 3              | 3        |
| MUS                         | 354      | Advanced Guitar                          |                | 1        |
| MUS                         | 399      | Performance                              | 2              | 2        |
| MUS                         | 487      | Recreational Music                       | 2              |          |
| MTH                         | —        | Mathematics                              | 3              |          |
| —                           | —        | General education or breadth requirement |                | 3        |
|                             |          |  | 17             | 17       |
| Junior Year <sup>1</sup>    |          |  |                |          |
| MUS                         | 235      | Voice Class                              | 1              |          |
| MUS                         | 280      | Music and Movement for the Handicapped   | 1              |          |
| MUS                         | 288      | Practicum in Music Therapy               |                | 1        |
| MUS                         | 326      | Woodwind Instruments                     | 1              |          |
| MUS                         | 328      | Percussion Class                         |                | 1        |
| MUS                         | 390      | Ensemble                                 | 1              | 1        |
| MUS                         | 399      | Performance                              | 2              |          |

|     |            |  |           |           |
|-----|------------|--|-----------|-----------|
| MUS | 485-486    | Psychological Foundations of Music         | 2         | 2         |
| MUS | —          | Music elective                             |           | 2         |
| EDP | 245        | Modern Dance                               | 2         |           |
| EDD | 305        | Human Anatomy                              |           | 3         |
| PSY | 355        | Psychology of the Exceptional Child        |           | 3         |
| HST | 101 or 102 | History of Western Civilization            | 3         |           |
| —   | —          | General education and breadth requirements | 3         | 3         |
|     |            |  | <u>16</u> | <u>16</u> |

Senior Year<sup>1</sup>

|     |            |  |           |           |
|-----|------------|--|-----------|-----------|
| MUS | 320        | Basic Conducting                           | 2         |           |
| MUS | 325 or 317 | String or Organ Class                      |           | 1         |
| MUS | 327        | Brass Instruments                          | 1         |           |
| MUS | 334        | Fundamentals of Orchestration              |           | 2         |
| MUS | 385        | Music Therapy Principles                   | 3         |           |
| MUS | 386        | Music Therapy Methods and Materials        |           | 3         |
| MUS | 387-388    | Practicum in Music Therapy                 | 1         | 1         |
| MUS | 390        | Ensemble                                   | 1         | 1         |
| MUS | —          | Music electives                            | 2         |           |
| PSY | —          | Psychology elective                        | 3         |           |
| —   | —          | General education and breadth requirements | 3         | 9         |
|     |            |  | <u>16</u> | <u>17</u> |

## After Senior Year

|     |     |                                       |   |  |
|-----|-----|---------------------------------------|---|--|
| MUS | 489 | Music Therapy Internship <sup>3</sup> | 2 |  |
|-----|-----|---------------------------------------|---|--|

## Music requirements:

## Semester Hours

|  |    |     |
|--|----|-----|
| Theory of music and aural skills   | 16 |     |
| History and literature of music  | 6  |     |
| Conducting and orchestration   | 4  |     |
| Performance studies (including study on the student's principal instrument or voice, as well as in specified instrumental methods and on accompanying instruments of piano and guitar) | 21 |     |
| Music therapy  | 19 |     |
| Recreational music   | 2  |     |
| Music and dance electives  | 6  |     |
| Ensemble   | 6  |     |
| Music therapy internship <sup>2</sup>  | 2  | 82  |
| Other music therapy requirements:  |    |     |
| Psychology   | 12 |     |
| Sociology  | 3  |     |
| Science  | 6  | 21  |
| Communication skills   |    | 3-9 |
| Philosophy and/or religious studies  |    | 12  |
| Breadth requirement <sup>3</sup>   |    | 9   |
| General education requirement <sup>4</sup>   |    | 30  |
| Total for the degree   |    | 135 |

The music therapy candidate will present not less than one-half recital by the senior year.

<sup>1</sup>Music majors must register for MUS 400, Recital Attendance (no credit) each semester. Note also that a minimum of 6 sem. hrs. in ensemble is required for graduation, with credit given for satisfactory ensemble participation even if the student is not registered for it.

<sup>2</sup>This internship of six months is taken after student completes all other course requirements. In order to be recommended for an internship, the student must have an overall grade point average of at least 2.00 and a grade point average of at least 2.50 in music, music therapy, and psychology coursework. Upon successful completion of the internship requirement, the student will receive the Bachelor of Music with a

Major in Music Therapy. The graduate is then eligible to take a national certification examination to become a Music Therapist—Board Certified. A student has the option to graduate before the internship and receive the Bachelor of Music with a Major in Music.

<sup>3</sup>Breadth requirement: Nine sem. hrs. in humanities, selected from languages, communication, English, history, performing and visual arts, philosophy, and religious studies. See other music therapy requirements for science breadth.

<sup>4</sup>See Chapter V. Courses taken as part of the general education requirement may also fulfill the breadth requirement. Check with program advisor.

**PROGRAM—A13C: BACHELOR OF MUSIC WITH A MAJOR IN  
MUSIC EDUCATION<sup>1</sup> VOCAL EMPHASIS (MUE)**

| <i>Dept.</i>                      | <i>No.</i> | <i>Course</i>                              | <i>Semester Hours</i> |                 |
|-----------------------------------|------------|--|-----------------------|-----------------|
| <b>Freshman Year<sup>2</sup></b>  |            |  | <b>1st Term</b>       | <b>2nd Term</b> |
| MUS                               | 111-112    | Theory of Music I                          | 3                     | 3               |
| MUS                               | 113-114    | Aural Skills I                             | 1                     | 1               |
| MUS                               | 390        | Ensemble                                   | 1                     | 1               |
| MUS                               | 399        | Performance <sup>3</sup>                   | 2                     | 2               |
| ENG                               | 101-102    | College Composition I and II               | 3                     | 3               |
| SPE                               | 101        | Fundamentals of Effective Speaking         | 3                     |                 |
| MTH                               | —          | Mathematics requirement                    | 3                     |                 |
| —                                 | —          | General education and breadth requirements |                       | 7               |
|                                   |            |  | 16                    | 17              |
| <b>Sophomore Year<sup>2</sup></b> |            |  |                       |                 |
| MUS                               | 211-212    | Theory of Music II                         | 3                     | 3               |
| MUS                               | 213, 215   | Aural Skills II                            | 1                     | 1               |
| MUS                               | 301-302    | History of Music                           | 3                     | 3               |
| MUS                               | 324        | Beginning Guitar <sup>4</sup>              | 1                     |                 |
| MUS                               | 354        | Advanced Guitar                            |                       | 1               |
| MUS                               | 390        | Ensemble                                   | 1                     | 1               |
| MUS                               | 399        | Performance <sup>3</sup>                   | 2                     | 2               |
| EDT                               | 207        | Child and Adolescent in Education          | 3                     |                 |
| EDT                               | 208        | Teaching and Learning                      |                       | 3               |
| —                                 | —          | General education and breadth requirements | 3                     | 3               |
|                                   |            |  | 17                    | 17              |
| <b>Junior Year<sup>2</sup></b>    |            |  |                       |                 |
| MUS                               | 320        | Basic Conducting                           | 2                     |                 |
| MUS                               | 325        | String Class                               |                       | 1               |
| MUS                               | 331        | Vocal Music in High School                 | 2                     |                 |
| MUS                               | 333        | Organization of School Music Program       |                       | 2               |
| MUS                               | 334        | Fundamentals of Orchestration              | 2                     |                 |
| MUS                               | 390        | Ensemble                                   | 1                     | 1               |
| MUS                               | 399        | Performance                                | 2                     | 2               |
| MUS                               | —          | Instrument class <sup>5</sup>              |                       | 1               |
| EDT                               | 318        | Human Relations in Education               | 2                     |                 |
| EDT                               | 351        | Secondary School, Self, and Society        |                       | 3               |
| HST                               | 101 or 102 | History of Western Civilization            | 3                     |                 |
| —                                 | —          | General education and breadth requirements | 3                     | 8               |
|                                   |            |  | 17                    | 18              |
| <b>Senior Year<sup>2</sup></b>    |            |  |                       |                 |
| MUS                               | 235        | Voice Class                                | 1                     |                 |
| MUS                               | 335        | Music in the Elementary Grades             | 2                     |                 |
| MUS                               | 351        | Choral Conducting                          | 2                     |                 |
| MUS                               | 390        | Ensemble                                   | 1                     |                 |
| MUS                               | 399        | Performance                                | 2                     |                 |

|  |     |                                      |           |                       |
|--|-----|--------------------------------------|-----------|-----------------------|
| MUS  | —   | Instrument class <sup>5</sup>        | 1         |                       |
| MUS  | —   | Music elective                       | 3         |                       |
| EDT  | 419 | Philosophy of Education <sup>6</sup> |           | 3                     |
| EDT  | 422 | Student Teaching                     |           | 12                    |
| EDT  | 469 | Reading in the Content Areas         | 2         |                       |
| —  | —   | Elective                             | 3         |                       |
|  |     |                                      | <u>17</u> | <u>15</u>             |
|  |     |                                      |           | <i>Semester Hours</i> |
| Communication skills .....                       |     |                                      |           | 3-9                   |
| Philosophy and/or religious studies .....        |     |                                      |           | 12                    |
| Education courses .....                          |     |                                      |           | 24                    |
| Other breadth requirements .....                 |     |                                      |           | 17                    |
| Music requirements:                              |     |                                      |           |                       |
| Theory of music .....                            |     |                                      | 16        |                       |
| History and literature .....                     |     |                                      | 6         |                       |
| Conducting .....                                 |     |                                      | 4         |                       |
| Class piano .....                                |     |                                      | 4         |                       |
| Performance .....                                |     |                                      | 14        |                       |
| Ensemble .....                                   |     |                                      | 7         |                       |
| Music education .....                            |     |                                      | 13-14     |                       |
| Music electives to total .....                   |     |                                      |           | 69                    |
| General education requirement <sup>7</sup> ..... |     |                                      |           | 30                    |
| Total for the degree .....                       |     |                                      |           | 134                   |

Each music education student will demonstrate proficiency as a performer in a half-recital in the senior year. Each candidate must complete 300 hours of observation and/or practicum experience to receive certification by the State of Ohio.

<sup>1</sup>The State of Ohio grants certification, upon completion of this degree, to teach vocal and instrumental music from kindergarten through senior high school. The present curriculum is outlined for students with a vocal emphasis; the curriculum for students with an instrumental emphasis varies only slightly.

<sup>2</sup>Music majors must register for MUS 400 Recital Attendance (no credit) each semester.

<sup>3</sup>Voice majors will take a minimum of 14 sem. hrs. in vocal performance, and demonstrate piano proficiency equal to four terms of class piano (MUS 296-299). Piano and organ majors will take a minimum of 14 sem. hrs. in piano or organ; and one term of MUS 235 Voice Class. Organ majors must additionally demonstrate piano proficiency equal to four terms of class piano. All students must demonstrate satisfactory accompanying skills before student teaching.

<sup>4</sup>Qualified students may be able to waive MUS 324 and immediately take MUS 354.

<sup>5</sup>Music Education students with a vocal emphasis are required to take two courses chosen from MUS 326, MUS 327, and MUS 328.

<sup>6</sup>EDT 419 applies to the general education requirement of 12 sem. hrs. in philosophy and/or religious studies, and at the same time to education requirements.

<sup>7</sup>See Chapter V. Courses taken as part of the general education requirement may also fulfill the breadth requirement. Check with program advisor.

## FACULTY

Patrick S. Gilvary, *Chairperson, Department of Performing and Visual Arts*

Richard Benedum, *Head of Music Division*

*Professor:* Tagg

*Associate Professors:* Benedum, Magnuson, Sandness, Zech

*Assistant Professors:* Baxter, Chenoweth, Ciepluch, Jarvis, Minton, Szász

*Part-time Instructors:* Dill, Evoskevich, George, Gilley, Hotopp, Howard, Katz, Magg, Mangan, McCutcheon, Pagnard, Pepitone, Rodgers, Twehues, Vandevander, Varella, Winteregg, Zimmerman

## COURSES OF INSTRUCTION

**MUS 101. FUNDAMENTALS OF MUSIC:** For the student with no previous experience with theory of music. Notation of music, key and time signatures, fundamental harmonic progression, and introduction to the piano keyboard. Elementary ear training and dictation. Open to all University students. *2 sem. hrs.*

**MUS 103. MUSIC APPRECIATION:** Study of the masterpieces of music with special reference to the listener. Open to all University students. *2 sem. hrs.*

**MUS 104. LITERATURE FOR THE ELEMENTARY CLASSROOM:** Study of music literature and its direct application to elementary classroom use. *2 sem. hrs.*

**MUS 111-112. THEORY OF MUSIC I:** Basic vocabulary and grammar of music: fundamentals (intervals, scales, modes, keys, triads), counterpoint studies, basic diatonic harmonic motions. Prerequisite: Placement examination. *3 sem. hrs. each*

**MUS 113-114. AURAL SKILLS I:** Basic technique of dictation, sight singing, and rhythmic reading. Prerequisite: Placement examination. *1 sem. hr. each*

**MUS 211-212. THEORY OF MUSIC II:** SATB partwriting, Schenkerian analysis, chromatic procedures, decline of Common Practice Period, basic twentieth-century compositional styles. Prerequisite: MUS 112. *3 sem. hrs. each*

**MUS 213, 215. AURAL SKILLS II:** Advanced dictation, sight singing, and rhythmic reading. Prerequisite: MUS 114. *1 sem. hr. each*

**MUS 235. VOICE CLASS:** Principles of good singing; development of the voice; vocal literature. Minimum of 4 students required. Music majors only, with permission of instructor. *1 sem. hr.*

**MUS 236. VOICE CLASS:** Principles of good singing; development of the voice; vocal literature. Minimum of 4 students required. Open to all students. *2 sem. hrs.*

**MUS 280. MUSIC AND MOVEMENT FOR THE HANDICAPPED:** Training in the use of music and movement for handicapped children under the supervision of AIM (Adventures in Movement) for the Handicapped, Inc. Includes observations in the field. Prerequisite: Sophomore standing in music or related fields. *1 sem. hr.*

**MUS 285. INTRODUCTION TO MUSIC THERAPY I:** History and development of music therapy; survey of theoretical bases and current trends for the use of music in therapy; disability areas using music therapy. Prerequisites: PSY 101, 363. *2 sem. hrs.*

**MUS 286. INTRODUCTION TO MUSIC THERAPY II:** Continuation of MUS 285; orientation to the profession of music therapy through lectures, readings, audiovisual materials, and field trips; emphasis on specific disability areas using music therapy. Prerequisite: MUS 285. *2 sem. hrs.*

**MUS 287. PRACTICUM IN MUSIC THERAPY I:** Pre-internship field experiences with adult mentally ill clients. Corequisite: MUS 286. *1 sem. hr.*

**MUS 288. PRACTICUM IN MUSIC THERAPY II:** Pre-internship field experiences with handicapped children and/or adults. Prerequisite: MUS 280. *1 sem. hr.*

**MUS 296. CLASS PIANO I:** Open to all University students. Fee. *1 sem. hr.*

**MUS 297. CLASS PIANO II:** Fee. *1 sem. hr.*

MUS 298. CLASS PIANO III: Fee. 1 sem. hr.

MUS 299. CLASS PIANO IV: May be repeated up to 4 sem. hrs. Fee. 1 sem. hr.

\*MUS 301-302. MUSIC HISTORY AND LITERATURE I AND II: A survey of Western music history and literature from the Middle Ages to the present. Important composers, masterworks of music literature, compositional styles. 3 sem. hrs. each

MUS 304. HISTORY OF AMERICAN MUSIC: Survey of the American musical heritage emphasizing Anglo- and Afro-American folk traditions, early religious music, country music, pioneers in piano, band and concert music, and contemporary popular music. Open to all University students. 3 sem. hrs.

MUS 306. HISTORY OF AMERICAN JAZZ: Survey of the literature and performance practices from 1890 to the present. Includes blues, Dixieland, ragtime, boogie-woogie, swing, bop, cool, funky, and current techniques. Open to all University students. 3 sem. hrs.

MUS 307. DEVELOPMENT OF AMERICAN POPULAR SONG: Survey of American popular music from the days of the colonies, the war years, the ballad opera, minstrel, vaudeville, operetta, early film music, through Tin Pan Alley to Broadway with European influences. 3 sem. hrs.

MUS 310. ADVANCED AURAL SKILLS: Advanced training in dictation, solfege, and aural analysis. Prerequisite: MUS 215 or permission of instructor. 2 sem. hrs.

MUS 311. EIGHTEENTH-CENTURY COUNTERPOINT: Study of the contrapuntal technique of the 18th century, particularly in the instrumental works of J.S. Bach. Original compositions in forms of the invention and the fugue. Prerequisite: MUS 211. 2 sem. hrs.

MUS 315. THE OPERA: Survey of the development of the opera from its 17th-century beginnings to the present. 2 sem. hrs.

MUS 317. ORGAN CLASS: Introduction to the organ, including basic performance techniques, registration, beginning literature, and hymn playing. Prerequisite: Permission of instructor, demonstrable keyboard technique. Fee. 1 sem. hr.

MUS 319. INTRODUCTION TO HARPSICHORD: Beginning class lessons in harpsichord performance, including basic technique, stylistic considerations, and simple maintenance and tuning of the instrument. Prerequisite: Permission of instructor. Fee. 1 sem. hr.

MUS 320. BASIC CONDUCTING: Fundamentals of baton technique; laboratory experience in conducting choral and instrumental work of the 19th and 20th centuries; cueing, score reading, terminology. Discussion of rehearsal procedures, materials, and special problems. Thorough study of instrumentation. 2 sem. hrs.

MUS 324. BEGINNING GUITAR: Introduction to playing the guitar; emphasis on chord playing and accompaniment; application of the guitar to classroom music teaching if appropriate. Prerequisite: MUS 101 or equivalent. Fee. 1 sem. hr.

MUS 325. STRINGED INSTRUMENTS I: Class instruction in violin, viola, cello, bass. Teaching stringed instruments in schools. Open to any qualified University students. Prerequisites: Ability to read music, permission of instructor. Fee. 1 sem. hr.

**MUS 326, 336. WOODWIND INSTRUMENTS LABORATORY I-II:** Introduction to the fundamentals and teaching of woodwinds with emphasis on performance. Demonstrations of class teaching techniques and introduction to method books. Prerequisite: Junior standing in music. Fee. *1 sem. hr. each*

**MUS 327, 337. BRASS INSTRUMENTS LABORATORY I-II:** Introduction to the fundamentals and teaching of brass instruments with emphasis on performance. Demonstrations of class teaching techniques and introduction to method books. Prerequisite: Junior standing in music. Fee. *1 sem. hr. each*

**MUS 328. PERCUSSION INSTRUMENTS LABORATORY:** Introduction to the fundamentals and teaching of percussion instruments. Demonstrations of class teaching techniques and introduction to method books. Prerequisite: Junior standing in music. Fee. *1 sem. hr.*

**MUS 329. STRINGED INSTRUMENTS II:** Continuation of MUS 325 to further skills in teaching and performance. Concentration on cello/bass. Prerequisites: MUS 325 or equivalent, permission of the instructor. Fee. *1 sem. hr.*

**MUS 330. ADVANCED INSTRUMENTAL CONDUCTING:** Advanced work in the preparation of scores for the wind ensemble. Discussion of wind rehearsal techniques and the development of programming procedures. Rehearsal techniques; attendance at wind ensemble rehearsals and actual rehearsing of the ensemble. Prerequisites: MUS 320, permission. Required for instrumental music education majors. *2 sem. hrs.*

**MUS 331. VOCAL MUSIC IN THE HIGH SCHOOL:** Methods and materials for large and small ensembles. Prerequisite: Junior standing in music education. *2 sem. hrs.*

**MUS 333. ORGANIZATION OF THE SCHOOL INSTRUMENTAL MUSIC PROGRAM:** Organization and teaching of instrumental music in the schools; survey of equipment and necessary materials. Prerequisite: Junior standing in music. *2 sem. hrs.*

**MUS 334. FUNDAMENTALS OF ORCHESTRATION:** Instrumentation studies of the four main orchestral families: woodwinds, brass, percussion, strings. Some work in combining families. Prerequisite: MUS 212 or permission. Required of music majors. *2 sem. hrs.*

**MUS 335. MUSIC IN THE ELEMENTARY GRADES:** The music education program in elementary grades; materials and presentation; problems and responsibilities of the music teacher. Prerequisite: Sophomore standing in music education. *2 sem. hrs.*

**MUS 341. BAROQUE MUSIC:** Literature and performing practices from 1600 to 1750; the relationship of music to social and cultural movements. Open to all University students. *2 sem. hrs.*

**MUS 342. CLASSIC AND ROMANTIC MUSIC:** Literature and performing practices from 1750 to 1900; the relationship of music to social and cultural movements. Open to all University students. *3 sem. hrs.*

**MUS 343. MEDIEVAL AND RENAISSANCE MUSIC:** The development of music from circa 400 to 1600, including plainchant, early polyphony, Ars Nova, and Renaissance music; the relationship of music to other arts and to its historical context. Open to all University students. *2 sem. hrs.*

**MUS 344. TWENTIETH-CENTURY MUSIC:** A study of 20th-century music, its styles, and its cultural contexts, including post-romantic, impressionistic, neo-classic, and avant-garde. Open to all University students. *2 sem. hrs.*

**MUS 351. CHORAL CONDUCTING:** Development of choral conducting skills. Practical experience with choral ensembles; attendance at University Choir required. Required for music education vocal emphasis majors. Prerequisites: MUS 320, junior standing in music. *2 sem. hrs.*

MUS 354. ADVANCED GUITAR: Note-reading in first position; advanced chord work and introduction to chord solo playing. Prerequisite: MUS 324 or equivalent. Fee.  
1 sem. hr.

MUS 360. SPECIAL TOPICS IN MUSIC: Studies in specialized areas of music. May be repeated as topics change, up to six semester hours. Prerequisite: Permission of instructor.  
1-3 sem. hrs.

MUS 361. PIANO PEDAGOGY I: Systematic preparation for the development of piano technique and tone; survey and study of graded teaching material of grades I and II. Prerequisite: Four terms of piano study or the equivalent.  
2 sem. hrs.

MUS 362. PIANO PEDAGOGY II: Continuation of MUS 361 through the material of grades III and IV. Prerequisite: MUS 361 or five terms of piano study or equivalent.  
2 sem. hrs.

MUS 365. SCORE READING: Training in reading music at the piano from open score. Drill in transposition and reading of various clefs, leading to the realization of full vocal and orchestral scores. Prerequisite: Permission.  
2 sem. hrs.

MUS 371. PIANO LITERATURE I: Comprehensive survey of literature for the piano from the early keyboard music to the romantic period. Required of piano majors. Prerequisite: Permission of instructor.  
2 sem. hrs.

MUS 372. PIANO LITERATURE II: Continuation of comprehensive survey of literature of keyboard music from the romantic period to the present day. Required of piano majors. Prerequisite: Permission of instructor.  
2 sem. hrs.

MUS 385. MUSIC THERAPY PRINCIPLES: Principles and processes underlying the applications of music in therapy, including writing goals and objectives and treatment plans. Applications of the teaching-learning process, group dynamics, and evaluation and assessment in music therapy.  
3 sem. hrs.

MUS 386. MUSIC THERAPY METHODS AND MATERIALS: Applications of various methods and approaches in psychotherapy, child development, and related fields to the practice of music therapy. Review of the clinical and research literature pertaining to techniques and materials of music therapy.  
3 sem. hrs.

MUS 387. PRACTICUM IN MUSIC THERAPY III: Pre-internship field experiences with handicapped children and/or adults. Corequisite: MUS 385.  
1 sem. hr.

MUS 388. PRACTICUM IN MUSIC THERAPY IV: Pre-internship field experiences with handicapped children and/or adults. Corequisite: MUS 386.  
1 sem. hr.

MUS 390. MUSIC ENSEMBLES: Open to all University students by audition. Required participation by music majors as specified in various degree programs.

MUS 390. UNIVERSITY CHOIR: Mixed chorus literature and music for men's chorus and women's chorus. Presents campus and community concerts .  
1 sem. hr.

MUS 390. VOCAL ENSEMBLE:  
1/2 sem. hr.

MUS 390. STRING ENSEMBLE:  
1/2 sem. hr.

MUS 390. PIANO ENSEMBLE:  
1/2 sem. hr.

MUS 390. MARCHING BAND: Plays at all home and some away football games. Its sound finds roots in jazz and rock. All freshman students may participate in any band unit including block, majorettes, and Flyerettes.  
1 sem. hr.

MUS 390. PEP BAND:  
1/2 sem. hr.

MUS 390. CONCERT BAND: Offers varied opportunities in musical performances. Presents regular concerts during fall and winter terms.  
1 sem. hr.



MUS 390. WIND ENSEMBLE: Select band that performs finest in wind literature. Presents regular concerts during fall and winter terms. *1 sem. hr.*

MUS 390. UNIVERSITY STRINGS: *1 sem. hr.*

MUS 390. CHAMBER ORCHESTRA: *1 sem. hr.*

MUS 390. BRASS CHOIR: Select ensemble of 24 brass and percussion players. Music from Renaissance to present. *1/2 sem. hr.*

MUS 390. JAZZ LAB BAND: Jazz and rock fields. Open by audition to any student registered in band program. *1/2 sem. hr.*

MUS 390. SMALL BRASS ENSEMBLE: *1/2 sem. hr.*

MUS 390. PERCUSSION ENSEMBLE: *1/2 sem. hr.*

MUS 390. WOODWIND ENSEMBLE: *1/2 sem. hr.*

MUS 390. CLARINET CHOIR: *1/2 sem. hr.*

MUS 390. GUITAR ENSEMBLE: *1/2 sem. hr.*

MUS 390. CELLO ENSEMBLE: *1/2 sem. hr.*

MUS 399. PERFORMANCE STUDIES: Private instruction (one half-hour lesson per week) in piano, voice, organ, violin, viola, cello, bass, flute, oboe, clarinet, bassoon, saxophone, trumpet-cornet, French horn, trombone, baritone, tuba, percussion, harp, classical and pick-style guitar, jazz piano improvisation. Prerequisite: Permission of instructor. Fee. *2 sem. hrs.*

MUS 400. RECITAL: All music majors are required to attend professional and student concerts and recitals, to develop critical listening experience and knowledge of repertoire. *No credit*

MUS 411-412. COMPOSITION: Beginning explorations of original composition which utilize equally the concepts of pitch, temporal elements, timbres, and dynamics. Prerequisite: MUS 215 or permission of instructor. *2 sem. hrs. each*

MUS 413. STYLE AND DESIGN—ANALYSIS: Exploration of appropriate analytical techniques as applied to Western music from the Renaissance to the present. Prerequisites: MUS 212 and 215 or permission of instructor. *2 sem. hrs.*

MUS 414. STYLE AND DESIGN—SYNTHESIS: Exploration and application of various musical styles as demonstrated by original compositions patterned after selected historic models. Prerequisite: MUS 413 or permission of instructor. *2 sem. hrs.*

MUS 417. SIXTEENTH-CENTURY COUNTERPOINT: 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. *2 sem. hrs.*

MUS 420. ADVANCED ORCHESTRATION: Continuation of MUS 334. Intensive instrumentation studies and detailed analysis of orchestral work. Prerequisite: MUS 334 or permission. *2 sem. hrs.*

MUS 429. MARCHING BAND TECHNIQUES: Materials and methods of organization and instruction. Prerequisite: Participation in the marching band. *2 sem. hrs.*

MUS 433-434. RESEARCH IN MUSIC THEORY: Practical experience in analysis for music theory or composition majors. Music theory majors enroll in this course while preparing their senior research papers. Prerequisites: Senior standing in music, permission of instructor. *2 sem. hrs. each*

**MUS 441-442. LABORATORY IN COMPOSITION:** Advanced work in musical composition; writing multi-movement forms of both vocal and instrumental music. Prerequisites: MUS 411, 412, permission of the instructor. *2 sem. hrs. each*

**MUS 451. CHAMBER MUSIC AND SYMPHONY:** Formal and harmonic analysis of chamber music. Formal analysis of symphonies of classic, romantic, and contemporary composers. Prerequisites: MUS 211-212. *2 sem. hrs.*

**MUS 460. SPECIAL STUDIES IN MUSIC.** Studies in specialized areas of music, including music therapy and music education. May be repeated as topics change, up to nine semester hours. Prerequisite: Senior standing in music or permission of instructor. *1-6 sem. hrs.*

**MUS 485. PSYCHOLOGICAL FOUNDATIONS OF MUSIC I:** Study of the psychosocio-physiological processes involved in responses to music and sound. Acoustical properties of music and physiology of sound perception. Nature of music ability and its measurement. Prerequisites: PSY 101, junior standing in music. *2 sem. hrs.*

**MUS 486. PSYCHOLOGICAL FOUNDATIONS OF MUSIC II:** Introduction to research methods; review of literature on experimental studies. Research project. Prerequisite: MUS 485. *2 sem. hrs.*

**MUS 487. RECREATIONAL MUSIC:** Functional use of nonsymphonic instruments, rhythm band instruments, musical games, and community singing, for both children and adults. *2 sem. hrs.*

**MUS 489. MUSIC THERAPY INTERNSHIP:** Minimum of 6 months' supervised clinical training through resident internship in an NAMT-approved program. This precedes the granting of the degree. Prerequisites: Senior standing in music therapy; permission. *2 sem. hrs.*

**MUS 499. PERFORMANCE STUDIES:** Private instruction (1-hr. lessons weekly) in the same subjects as MUS 399. Prerequisite: Permission of instructor. *4 sem. hrs.*

**MUS 590. SPECIAL STUDIES IN MUSIC.** Studies in specialized areas of music. Prerequisite: Permission of instructor. *1-4 sem. hrs.*

\*General education course. See Chapter V.

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**MUSIC FEES:** The following fees include practice privileges. This fee schedule is subject to change by the Music Division.

|   | <i>Fee per term</i> |
|---|---------------------|
| Small group instruction in various instruments (MUS 296-299, 317, 319, 325-327, 329, 336-337) ..... | \$ 25.00            |
| MUS 399 Performance Studies: One 30-minute lesson weekly .....                                      | \$ 70.00            |
| MUS 499 Performance Studies: One 60-minute lesson weekly .....                                      | \$125.00            |

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## NUCLEAR MEDICINE TECHNOLOGY (NMT)

The program leading to a Bachelor of Science with a Major in Nuclear Medicine Technology consists of three years of preclinical instruction at the University of Dayton and a twelve-month clinical year in the School of Nuclear Medicine Technology at Miami Valley Hospital. The school at Miami Valley Hospital is accredited by the Committee on Allied Health Education and Accreditation (CAHEA). Graduates of the clinical program are eligible to take a national certification examination from the American Registry of Radiologic Technologists (ARRT), the Board of Registry of the American Society of Clinical Pathologists (ASCP), or the Nuclear Medicine Technology Certification Board (NMTCB).

NMT majors, along with CTT and MET majors, are undeclared Clinical Laboratory Science students for their first three full terms. All three majors follow an identical program until the second term of the sophomore year. The common curriculum is described elsewhere in this chapter under CLS.

### PRECLINICAL YEARS

|  | <i>Semester Hours</i> |
|--|-----------------------|
| Biology core courses .....                           | 17                    |
| Supporting science courses (CHM, CPS, MTH, PHY)..... | 37                    |
| Science elective .....                               | 3                     |
| Communication skills (ENG, SPE).....                 | 12                    |
| Philosophy and/or religious studies.....             | 12                    |
| Humanities .....                                     | 9                     |
| Social-behavioral science .....                      | 6                     |
| Management .....                                     | 3                     |
| Total .....  | 99                    |

#### *Major Concentration*

*Biology Core:* Four courses—BIO 151, 152, 309, 403, all with laboratories.

*Supporting Science:* Two mathematics courses — MTH 112, 207. (Substitute MTH 101, precalculus, if background is not suitable for MTH 112.) One computer science course—CPS 144 or 150. Five chemistry courses—CHM 123, 124, 201, 313, 314, all with laboratories. (CHM 115 must precede CHM 123 if chemistry background is inadequate.) Two physics courses—PHY 201, 202, with laboratories.

The curriculum is planned to meet the requirements of the University, the hospital, and the professional accrediting agencies. The student must complete the 99 preclinical semester hours before entering the clinical program at the affiliate hospital.

### CLINICAL YEAR

Students formally apply for the clinical program at the hospital affiliate during their third year. Acceptances are competitive and are based on formal application materials, academic grades, faculty recommendations, and interview performance. The clinical program lasts 12 months, beginning in September and ending the following August. The clinical year curriculum involves formal lectures, seminars, laboratories, and preceptorship experiences. Upon successful completion of the clinical year, students are granted the Bachelor of Science with

a Major in Nuclear Medicine Technology at the University's December commencement exercises.

Tuition and fees for the clinical year are established by the hospital. The University will charge the Basic University Fee for Terms I and II. Students will pay their hospital tuition and fees through the University. Information regarding clinical year tuition and fees, class size, grading policies, dress codes, etc., is presented in the hospital program brochure.

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PROGRAM—59C: BACHELOR OF SCIENCE WITH A MAJOR IN  
NUCLEAR MEDICINE TECHNOLOGY (NMT)<sup>1</sup>

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| Dept. | No. | Course | 1st Term <sup>2</sup> | 2nd Term |
|-------|-----|--------|-----------------------|----------|
|-------|-----|--------|-----------------------|----------|

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See Clinical Laboratory Sciences (CLS) for first three terms of curriculum.

Sophomore Year

|     |            |                                   |  |       |
|-----|------------|-----------------------------------|--|-------|
| BIO | 201L       | Biology Laboratory Investigations |  | 0-3-1 |
| BIO | —          | Science elective                  |  | 3-0-3 |
| CHM | 314        | Organic Chemistry                 |  | 3-3-4 |
| PHY | 202        | General Physics                   |  | 3-2-4 |
| HST | 340 or 341 | History elective                  |  | 3-0-3 |
|     |            |                                   |  | <hr/> |
|     |            |                                   |  | 15    |

Junior Year

|     |            |   |       |       |
|-----|------------|---|-------|-------|
| BIO | 403        | Physiology                                  | 3-3-4 |       |
| CHM | 201        | Quantitative Analysis                       | 2-4-4 |       |
| PHL | 315        | Medical Ethics                              | 3-0-3 |       |
| ENG | —          | English elective <sup>3</sup>               | 3-0-3 |       |
| —   | —          | General education requirements <sup>4</sup> | 3-0-3 | 6-0-6 |
| BIO | 309        | Comparative Vertebrate Anatomy              |       | 3-6-5 |
| CPS | 144 or 150 | Computer science elective                   |       | 3-0-3 |
| MGT | 305        | Management and Organization                 |       | 3-0-3 |
|     |            |   |       | <hr/> |
|     |            |   |       | 17    |
|     |            |   |       | <hr/> |
|     |            |   |       | 17    |

<sup>1</sup>Consult General Requirements for All Bachelor of Science Programs and Chapter V for General Education Requirements.

<sup>2</sup>For example, 3-0-3 means 3 class hrs., 0 lab. hrs., 3 sem. hrs. of credit.

<sup>3</sup>Select from ENG 203, 204, 205, 272, 316, 370, 372, 378.

<sup>4</sup>Some general education courses are specified in the program (e.g., PHL 315); others are to be chosen from the listing of approved courses. See Chapter V.

Senior Year

Semester Hours

|                 |      |   |       |
|-----------------|------|---|-------|
| NMT             | 430  | Introduction to Nuclear Medicine Technology Science . . . . | 1     |
| NMT             | 431  | Nuclear Scintigraphy . . . . .                              | 3     |
| NMT             | 431L | Clinical Nuclear Scintigraphy Laboratory . . . . .          | 6     |
| NMT             | 432  | Radiation Physics . . . . .                                 | 5     |
| NMT             | 433  | Nuclear Medical Instrumentation . . . . .                   | 5     |
| NMT             | 434  | Radiation Biology and Radiation Protection . . . . .        | 2     |
| NMT             | 435  | Radioisotopes in Radioassay . . . . .                       | 2     |
| NMT             | 435L | Radioassay Laboratory . . . . .                             | 5     |
| NMT             | 436  | Radiopharmaceuticals . . . . .                              | 2     |
| NMT             | 436L | Radiopharmaceutical Laboratory . . . . .                    | 1     |
| NMT             | 437  | Clinical Nuclear Medicine . . . . .                         | 6     |
| Total . . . . . |      |   | <hr/> |
|                 |      |   | 38    |

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## FACULTY

Charles J. Chantell, *University Program Director*

*Clinical Professor: Quinones*

*Clinical Assistant Professor: Kreitzer*

## COURSES OF INSTRUCTION

The courses taken during the first three years at the University of Dayton, listed under Program S9C, are described under the individual departments. The senior year is conducted at affiliated hospitals.

NMT 430. INTRODUCTION TO NUCLEAR MEDICINE TECHNOLOGY SCIENCE: Description of department sections and their functions; basic understanding of proper handling of isotopes; methods for keeping radiation exposure to a minimum.  
1 sem. hr.

NMT 431. NUCLEAR SCINTIGRAPHY: Study of technological concerns involved with organ imaging, including anatomy and physiology, medical terminology, film processing, imaging techniques, patient transportation and handling, computer analysis of static and dynamic studies.  
3 sem. hrs.

NMT 431L. CLINICAL NUCLEAR SCINTIGRAPHY LABORATORY: Practical applications related to NMT 431.  
6 sem. hrs.

NMT 432. RADIATION PHYSICS: Atomic and nuclear structure, radioactive growth and decay, energetics of basic spontaneous decay process and of nuclear reactions, interaction of nuclear radiation with matter, fission phenomenon, nuclear data tables and charts.  
5 sem. hrs.

NMT 433. NUCLEAR MEDICAL INSTRUMENTATION: Basic radiation detectors and laboratory counting systems; instrumentation specific to imaging.  
5 sem. hrs.

NMT 434. RADIATION BIOLOGY AND RADIATION PROTECTION: Biological effects of ionizing radiation considered at the cellular and macroscopic levels. Basic units of radiation dose correlated with units of activity. Radiation protection, emergency procedures, and waste disposal problems.  
2 sem. hrs.

NMT 435. RADIOISOTOPES IN RADIOASSAY: Principles of radioassay with emphasis on technical aspects, trouble shooting, and clinical applications. Data reduction and quality control guidelines. Proper handling and disposal of toxic chemicals, biohazardous wastes, and radionuclides.  
2 sem. hrs.

NMT 435L. RADIOASSAY LABORATORY: Practical applications related to NMT 435.  
5 sem. hrs.

NMT 436. RADIOPHARMACEUTICALS: Properties of radioactive tracers and methodology including the chemical and biological basis for choice as radiopharmaceuticals. Production and preparation of radiopharmaceuticals. Dose calculations using the MIRD method.  
2 sem. hrs.

NMT 436L. RADIOPHARMACEUTICAL LABORATORY: Practical applications related to NMT 436.  
1 sem. hr.

NMT 437. CLINICAL NUCLEAR MEDICINE: Normal organ physiology, anatomy, pathology, physiologic fate of the administered radiopharmaceutical, current radiopharmaceuticals of choice, accepted patient dosage levels, procedure methodology, necessity for and choice of test, preparation medications, normal and abnormal test values, and contraindications for radiopharmaceutical administration and route of administration.  
6 sem. hrs.

## PERFORMING AND VISUAL ARTS (PVA)

At the University of Dayton, "performing and visual arts" is an umbrella term for music, theatre, fine arts, and photography. The Department of Performing and Visual Arts has four corresponding divisions, operating autonomously and offering major programs in fine arts, commercial design, interior design, art education, music performance, music theory or composition, music therapy, music education, photography, and theatre. The department also offers a variety of possibilities to students interested in intra-departmental studies.

The Performing and Visual Arts Department holds with a policy of performance and production in all its divisions. Requirements in portfolios, gallery showings, auditions, recitals, large and small ensembles, concerts, and major and experimental productions assure the student of professional as well as academic challenge.

See, elsewhere in this chapter, Fine Arts (ART), Music (MUS), Photography (PHO), and Theatre (THR).



## PHILOSOPHY (PHL)

The objective of the philosophy major program is to provide students with the opportunity to understand contemporary philosophy in view of the history of philosophy.

Students major in philosophy for a variety of reasons. Some enroll in philosophy as a pre-professional program leading to careers in law, education, social service, health care, commerce, public service, and the religious life. Some major in philosophy in preparation for advanced graduate study leading to teaching, research, or service. Still others major in philosophy to assure a broad liberal education in view of their personal interest in philosophical studies.

Philosophy majors are encouraged to develop a second major or several concentration areas in view of their educational and career objectives. Early counseling and the flexibility of the B.A. degree permit structural options in a variety of areas for philosophy majors.

Students majoring in other disciplines are encouraged to double-major in philosophy or develop concentrations in philosophy germane to their academic programs.

*Major Requirements:* All philosophy majors are required to take 33 semester hours in philosophy, distributed as follows:

PHL 103 (Introduction to Philosophy)

PHL 201 (Practical Logic) or PHL 302 (Symbolic Logic)

PHL 431 (Plato and Aristotle) and PHL 432 (Descartes and Hume)

PHL 461 (Contemporary Epistemology) or PHL 462 (Contemporary Ethics)  
or PHL 463 (Contemporary Metaphysics)

One additional 400-level course (This may be a directed readings course.)

15 additional semester hours at the 300-400 level

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PROGRAM—A14: BACHELOR OF ARTS WITH A MAJOR IN  
PHILOSOPHY (PHL)<sup>1</sup>

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|   | <i>Semester Hours</i> |
|---|-----------------------|
| Philosophy .....  | 33                    |
| Natural science .....   | 7                     |
| Mathematics .....   | 3                     |
| Social and behavioral science .....                               | 12                    |
| Humanities .....  | 18                    |
| Religious studies .....   | 9                     |
| Foreign language or quantitative skill courses <sup>2</sup> ..... | 6-8                   |
| Communication skills .....  | 3-9                   |
| General education courses and electives to total at least .....   | 120                   |

<sup>1</sup>See also Distribution Table for Bachelor of Arts programs and Chapter V for General Education Requirements.

<sup>2</sup>Either 6-8 sem. hrs. in a foreign language or 6 sem. hrs. in quantitative skills courses (e.g., computer science, statistics, or mathematics) beyond the basic skills mathematics requirement. Where appropriate, this credit may apply to other requirements.

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*Minor Requirements:* Beyond PHL 103, the philosophy minor consists of 15 semester hours of coursework, at least 12 of which must be at the 300-400 level. Of these, at least one course must be at the 400 level in addition to any 490 (directed readings) course that might be taken.

## FACULTY

Lawrence P. Ulrich, *Chairperson*

*Distinguished Service Professor:* Baker

*Professors:* Herbenick, Kunkel, Monasterio, Nersoyan, Tibbetts, Ulrich

*Associate Professors:* Johnson, Payne, Quinn, Richards, Vallicella, Zembaty

*Assistant Professors:* Benson, Young

## COURSES OF INSTRUCTION

Philosophy course offerings are classified as follows:

### I. *Basic Course*

- \*PHL 103 Introduction to Philosophy (This course is a prerequisite for all other philosophy courses except PHL 201.)

### II. *Human Nature, Values, and Ethics*

- \*PHL 304 Philosophy of Human Nature  
\*PHL 307 Philosophy and Women  
\*PHL 310 Social Philosophy  
\*PHL 311 Philosophy of Religion  
\*PHL 312 Ethics  
\*PHL 313 Business Ethics  
\*PHL 314 Philosophy of Law  
\*PHL 315 Medical Ethics  
\*PHL 316 Engineering Ethics  
\*PHL 317 Ethics and Nuclear War  
\*PHL 318 Family Ethics  
\*PHL 320 Philosophy of Art  
\*PHL 323 Philosophy of Literature  
\*PHL 331 Science, Objectivity, and Values

### III. *Logic, Scientific Method, and Knowledge*

- \*PHL 201 Practical Logic  
PHL 302 Symbolic Logic  
\*PHL 306 Philosophy of Knowledge  
\*PHL 308 Metaphysics  
\*PHL 330 Philosophy of Science

### IV. *Great Ideas in Western Philosophy*

- \*PHL 350 Classic Greek Philosophy  
\*PHL 351 Classic Islamic, Christian, Jewish Philosophy  
\*PHL 352 Modern Philosophy  
\*PHL 353 Contemporary Philosophy



*V. Current Philosophic World-Views*

- PHL 355 Eastern Philosophy  
 \*PHL 356 Christian Philosophy  
 \*PHL 358 Marxist Philosophy  
 \*PHL 359 Phenomenology  
 \*PHL 360 Existentialism  
 \*PHL 361 American Philosophy  
 PHL 362 Philosophy of Language

*VI. Special Philosophy Courses*

- PHL 340 Special Problems in Philosophy  
 PHL 390 Summer Nonresidence Course

*VII. Advanced Philosophy Courses*

- PHL 431 Plato and Aristotle  
 PHL 432 Descartes and Hume  
 PHL 440 Advanced Problems in Philosophy  
 PHL 451 Seminar in Individual Philosophers  
 PHL 461 Philosophical Seminar—Contemporary Epistemology  
 PHL 462 Philosophical Seminar—Contemporary Ethics  
 PHL 463 Philosophical Seminar—Contemporary Metaphysics  
 PHL 490 Directed Readings

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\*PHL 103. INTRODUCTION TO PHILOSOPHY: Introduction to philosophical reflection and study of some central philosophical questions in the Western intellectual tradition, including questions of ethics, human knowledge, God, and human nature. Major philosophers read include Plato, Descartes, Hume, and Mill. This course is a prerequisite for all other PHL courses except PHL 201. 3 sem. hrs.

\*PHL 201. PRACTICAL LOGIC: Introduction to the principles of correct reasoning; techniques for the evaluation of arguments; common fallacies in argumentation; applications to current issues in ethics and other areas. 3 sem. hrs.

PHL 302. SYMBOLIC LOGIC: Concentrated study of the valid forms of deductive argument and proof in the propositional logic and in predicate logic; study of formal systems and of logic and language. 3 sem. hrs.

\*PHL 304. PHILOSOPHY OF HUMAN NATURE: The nature of human beings; the functions of consciousness, the possibility of freedom, the sources of values, and the goals of human life. 3 sem. hrs.

\*PHL 306. PHILOSOPHY OF KNOWLEDGE: Various criteria, origins, and definitions of knowledge proposed by common sense, science, philosophy, and mysticism; questions of evidence, consistency, and validity pertaining to the problem of truth and belief. 3 sem. hrs.

\*PHL 307. PHILOSOPHY AND WOMEN: Issues and problems related to feminist analysis of society and its ideals, such as equal opportunity, sex roles and gender, reverse discrimination, violence, and language. 3 sem. hrs.

\*PHL 308. METAPHYSICS: Issues and problems under such topics as appearance and reality; universals; relations of mind and matter; the nature of persons and personal identity; causality; freedom and determination. 3 sem. hrs.

- \*PHL 310. SOCIAL PHILOSOPHY: The concepts of liberty, justice, and equality as they relate to social problems such as punishment and rehabilitation, insanity and responsibility, privacy, population regulation, economic injustice, environmental degradation, discrimination, and reverse discrimination. *3 sem. hrs.*
- \*PHL 311. PHILOSOPHY OF RELIGION: The main issues involved in religious belief and practice, such as the relationship between reason and revelation; critical presentation of views of main writers in the field. *3 sem. hrs.*
- \*PHL 312. ETHICS: Various types of moral and ethical theory in the Western tradition and major problems such as the extent of human responsibility and the conditions for making ethical judgments. *3 sem. hrs.*
- \*PHL 313. BUSINESS ETHICS: Review of general ethical theory; ethical assessments of incidents that often occur in commerce affecting employees, employers, consumers, competitors, or the local community. *3 sem. hrs.*
- \*PHL 314. PHILOSOPHY OF LAW: Major concepts of law to include the nature of law, legal reasoning, liberty, justice, responsibility, punishment. *3 sem. hrs.*
- \*PHL 315. MEDICAL ETHICS: Introduction to morality in general and inquiry into the major moral problems of medical practice: human life and the preservation of its integrity. *3 sem. hrs.*
- \*PHL 316. ENGINEERING ETHICS: Introduction to ethical issues in engineering by developing theories of moral justification and codes of ethics for engineers, and by applying these theories and codes to moral issues in engineering. *3 sem. hrs.*
- \*PHL 317. ETHICS AND NUCLEAR WAR: Study in applied ethics focusing on three aspects of the arms race: declassified data on the reality of the nuclear arms buildup; normative analysis of such themes as war, pacifism, just cause, deterrence, and nuclear proliferation; and moral assessment of alternatives for the future. *3 sem. hrs.*
- \*PHL 318. FAMILY ETHICS: Introduction to the development of the concept of a family in the tradition of Western philosophy and the philosophic analysis of contemporary ethical problems in marriage and in parenthood. *3 sem. hrs.*
- \*PHL 320. PHILOSOPHY OF ART: Theories of art and criteria of evaluation developed by philosophers, artists, and critics; the relationship between art and society and between artistic and other human values. *3 sem. hrs.*
- \*PHL 323. PHILOSOPHY AND LITERATURE: Critical examination of philosophical concepts in selected literary masterpieces, ancient and modern. *3 sem. hrs.*
- \*PHL 330. PHILOSOPHY OF SCIENCE: Study of the presuppositions and implications of scientific inquiry from a humanistic viewpoint; explanation in science, the relation between facts and theories, and problems of verification. *3 sem. hrs.*
- \*PHL 331. SCIENCE, OBJECTIVITY, AND VALUES: Study of three interrelated issues: the limits of scientific methodology; science as a social institution; and science and human values. *3 sem. hrs.*
- PHL 340. SPECIAL PROBLEMS IN PHILOSOPHY: Examination of perennial and contemporary problems of philosophy. May be repeated when topic varies. *3 sem. hrs.*
- \*PHL 350. CLASSIC GREEK PHILOSOPHY: The Greek origins of Western scientific, philosophical, and political thought; relationships to current thought; ideas of the pre-Socratics, Plato, and Aristotle in their cultural contexts. *3 sem. hrs.*

- \*PHL 351. CLASSIC ISLAMIC, CHRISTIAN, JEWISH PHILOSOPHY: Major philosophical problems from the 4th through the 16th centuries and their importance in shaping current beliefs and traditions in the Augustinian, Jewish, Islamic, Persian, Thomist, and Oxford cultural settings; human action, conscience, freedom, and law. 3 sem. hrs.
- \*PHL 352. MODERN PHILOSOPHY: Development of philosophy in the 17th, 18th and 19th centuries, with emphasis on problems in the theory of knowledge, the philosophy of mind, and the relation between knowledge and human action for their impact on later philosophy. 3 sem. hrs.
- \*PHL 353. CONTEMPORARY PHILOSOPHY: A study of some of the major philosophical movements in the 20th century including phenomenology, existentialism, critical theory (Frankfurt School), hermeneutics, and analytic philosophy. 3 sem. hrs.
- PHL 355. EASTERN PHILOSOPHY: Introduction to the ways of Asian wisdom, considering Oriental philosophy as a specialized learning directed to the attainment of enlightenment and equanimity. 3 sem. hrs.
- \*PHL 356. CHRISTIAN PHILOSOPHY: Major issues such as the relation of faith to reason, the relation of science to faith, and the problem of natural law; works by contemporary philosophers such as Kierkegaard, Marcel, Maritain, Noonan, and Plantinga. 3 sem. hrs.
- \*PHL 358. MARXIST PHILOSOPHY: Introduction to the thought of Karl Marx through a study of the historical setting of the man and his writings, along with recent interpretations of his thought. 3 sem. hrs.
- \*PHL 359. PHENOMENOLOGY: The historical origin of phenomenology, its nature, goals, and scope; impact on the social sciences, psychology, and psychiatry with emphasis on the thought of Husserl and his students. 3 sem. hrs.
- \*PHL 360. EXISTENTIALISM: Major themes in representatives of the existentialist movement, such as human freedom, the absurdity of human existence, the primacy of action, and the roles of speculation and the emotions. 3 sem. hrs.
- \*PHL 361. AMERICAN PHILOSOPHY: Introduction to selected writings of such classical American thinkers as Thoreau, James, Mead, Dewey, Santayana, and Whitehead. Topics include knowledge, freedom, and human values. 3 sem. hrs.
- PHL 362. PHILOSOPHY OF LANGUAGE: Theories of meaning and reference and their philosophical significance. 3 sem. hrs.
- PHL 390. SUMMER NONRESIDENCE COURSE: A course designed for those students regularly enrolled at the University of Dayton who cannot attend classes in the third term and are in good academic standing. Topics are determined by the professor. Prerequisite: Three sem. hrs. of philosophy. 3 sem. hrs.
- PHL 431. PLATO AND ARISTOTLE: Study of some philosophical problems raised by Plato and Aristotle and discussed in contemporary philosophy, such as justice and responsibility; certainty and necessity; the cause-reason distinction in explanations; or predication and being. Required of philosophy majors. 3 sem. hrs.
- PHL 432. DESCARTES AND HUME: Study of some philosophical problems raised by Descartes and Hume and discussed in contemporary philosophy, such as origin of ideas, existence of primary and secondary qualities, relationship of mind and body, scientific method, certainty, personal identity, causality. Required of philosophy majors. 3 sem. hrs.

**PHL 440. ADVANCED PROBLEMS IN PHILOSOPHY:** Detailed examination of some of the more technical problems of philosophy as well as those problems that arise in interdisciplinary settings upon which philosophers have brought their technical skills to bear. May be repeated when topic varies. *3 sem. hrs.*

**PHL 451. SEMINAR IN INDIVIDUAL PHILOSOPHERS:** Detailed examination of the thought of an individual philosopher (e.g., Aquinas, Kant, Rawls, Quine) who is of sufficient importance to warrant special study. May be repeated when topic varies. *3 sem. hrs.*

**PHL 461. PHILOSOPHICAL SEMINAR — CONTEMPORARY EPISTEMOLOGY:** Study of recent philosophical work in the theory of knowledge inclusive of scepticism, knowledge and belief, evidence and justification, theories of perception and knowledge, human interests and valuation. Required of a philosophy major unless PHL 462 or 463 is taken. *3 sem. hrs.*

**PHL 462. PHILOSOPHICAL SEMINAR—CONTEMPORARY ETHICS:** Study of recent philosophical work in ethics inclusive of an analysis of ethical concepts, theories of normative ethics, theories of human action, and moral justification. Required of a philosophy major unless PHL 461 or 463 is taken. *3 sem. hrs.*

**PHL 463. PHILOSOPHICAL SEMINAR — CONTEMPORARY METAPHYSICS:** Study of recent work in metaphysics inclusive of the nature of metaphysics, causality, free will and determinism, personal identity and the theory of mind and body. Required of a philosophy major unless PHL 461 or 462 is taken. *3 sem. hrs.*

**PHL 490. DIRECTED READINGS:** Guided independent study primarily for philosophy majors but open to students who have completed 12 sem. hrs. in philosophy. Normally, 3 sem. hrs., but in certain cases the chairperson may approve 1, 2, or 4 sem. hrs. May be repeated when topic varies. Prerequisite: Permission of the instructor and the chairperson. *3 sem. hrs.*

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\*General education course. See Chapter V.



## PHOTOGRAPHY (PHO)

Any student interested in photography as a major or minor field should consult with the head of the Photography Division or the chairperson of the Department of Performing and Visual Arts.

Requirements for the major are outlined below in Programs A15 and A16. For a minor in photography, the student takes 18 semester hours: PHO 101, PHO 201, and 12 semester hours of upper-level courses.

Fees are noted in course descriptions if required. These are variable. Information on current fees is obtainable in the Photography Office.

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**PROGRAM—A15: BACHELOR OF ARTS WITH A MAJOR IN PHOTOGRAPHY (PHO)<sup>1</sup>**


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| <i>Dept.</i>   | <i>No.</i> | <i>Course</i>                              | <i>Semester Hours</i> |                 |
|----------------|------------|--|-----------------------|-----------------|
|                |            |  |                       |                 |
| Freshman Year  |            |  | <i>1st Term</i>       | <i>2nd Term</i> |
| PHO            | 100        | Freshman Seminar                           | 0                     |                 |
| PHO            | 101        | Basic Photography                          | 3                     |                 |
| PHO            | 201        | Intermediate Photography                   |                       | 3               |
| PHO            | 315        | History of Photography                     |                       | 3               |
| ART            | 112        | Principles of Design                       | 3                     |                 |
| ENG            | 101-102    | College Composition I and II               | 3                     | 3               |
| HST            | 101 or 102 | History of Western Civilization            | 3                     |                 |
| SPE            | 101        | Fundamentals of Effective Speaking         |                       | 3               |
| —              | —          | General education or breadth requirements  | 3                     | 3               |
|                |            |  | 15                    | 15              |
|                |            |  |                       |                 |
| Sophomore Year |            |  |                       |                 |
| PHO            | 302        | Color Photography I                        | 3                     |                 |
| PHO            | 330        | Photographic Techniques                    |                       | 3               |
| PHO            | —          | Photography elective                       |                       | 3               |
| PHY            | 108-108L   | Physical Science of Light and Color        | 4                     |                 |
| —              | —          | General education and breadth requirements | 9                     | 9               |
|                |            |  | 16                    | 15              |
|                |            |  |                       |                 |
| Junior Year    |            |  |                       |                 |
| PHO            | 410        | Advanced Photography                       | 3                     |                 |
| PHO            | —          | Photography elective                       |                       | 3               |
| ART            | —          | Choose one: 103, 104, 216, 226, 253, 254   |                       | 3               |
| MTH            | —          | Mathematics requirement                    | 3                     |                 |
| —              | —          | General education and breadth requirements | 9                     | 9               |
|                |            |  | 15                    | 15              |
|                |            |  |                       |                 |
| Senior Year    |            |  |                       |                 |
| PHO            | 460-461    | Senior Seminar                             | 3                     | 3               |
| PHO            | —          | Photography electives                      | 3                     | 3               |
| —              | —          | Breadth requirements and electives         | 9                     | 8               |
|                |            |  | 15                    | 14              |

*Semester Hours*

|   |     |
|---|-----|
| Communication skills .....  | 3-9 |
| Major Program—Required courses .....  | 30  |
| Photography electives .....   | 12  |
| Total in major program .....  | 42  |
| Breadth requirements—Natural science .....  | 7   |
| Mathematics .....   | 3   |
| Social and behavioral science ..  | 12  |
| Humanities .....  | 18  |
| Philosophy and/or religious studies .....   | 12  |
| Total breadth requirement .....   | 52  |
| General education requirements <sup>2</sup> and academic electives to total at least .... | 120 |

<sup>1</sup>See also Distribution Table for Bachelor of Arts programs and Chapter V for General Education Requirements.

<sup>2</sup>Courses taken as part of the general education requirement may also fulfill the breadth requirement. Check with program advisor.

**PROGRAM—A16: BACHELOR OF FINE ARTS WITH A MAJOR IN PHOTOGRAPHY (PTY)**

| <i>Dept.</i>   | <i>No.</i> | <i>Course</i>                              | <i>Semester Hours</i> |                 |
|----------------|------------|--|-----------------------|-----------------|
|                |            |  |                       |                 |
| Freshman Year  |            |  | <i>1st Term</i>       | <i>2nd Term</i> |
| PHO            | 100        | Freshman Seminar                           | 0                     |                 |
| PHO            | 101        | Basic Photography                          | 3                     |                 |
| PHO            | 201        | Intermediate Photography                   |                       | 3               |
| PHO            | 315        | History of Photography                     |                       | 3               |
| ART            | 112        | Principles of Design                       | 3                     |                 |
| ENG            | 101-102    | College Composition I and II               | 3                     | 3               |
| SPE            | 101        | Fundamentals of Effective Speaking         |                       | 3               |
| HST            | 101 or 102 | History of Western Civilization            | 3                     |                 |
| —              | —          | General education and breadth requirements | 3                     | 5               |
|                |            |  | 15                    | 17              |
| Sophomore Year |            |  |                       |                 |
| PHO            | 302        | Color Photography I                        | 3                     |                 |
| PHO            | 310        | Slide-Tape Production                      | 3                     |                 |
| PHO            | —          | Choose one: 320, 321, 322                  |                       | 3               |
| PHO            | 330        | Photographic Techniques                    |                       | 3               |
| PHO            | 415        | Recent History of Photography              |                       | 3               |
| ART            | 103 or 104 | Introductory Drawing                       | 3                     |                 |
| PHY            | 108-108L   | Physical Science of Light and Color        | 4                     |                 |
| MTH            | —          | Mathematics                                |                       | 3               |
| —              | —          | General education and breadth requirements | 3                     | 4               |
|                |            |  | 16                    | 16              |
| Junior Year    |            |  |                       |                 |
| PHO            | 402        | Color Photography II                       | 3                     |                 |
| PHO            | 410        | Advanced Photography                       | 3                     |                 |
| PHO            | —          | Photography electives                      | 6                     | 8               |
| ART            | 472        | Art in the Twentieth Century               |                       | 3               |
| ART            | —          | Choose one: 216, 226, 253, 254             |                       | 3               |
| —              | —          | General education and breadth requirements | 3                     | 3               |
|                |            |  | 15                    | 17              |

| Senior Year |         |  |    |
|-------------|---------|--|----|
| PHO         | 460-461 | Senior Seminar                             | 3  |
| PHO         | —       | Photography electives                      | 8  |
| —           | —       | General education and breadth requirements | 6  |
|             |         |  | 17 |
|             |         |  | 3  |
|             |         |  | 9  |
|             |         |  | 5  |
|             |         |  | 17 |

|   |     |
|---|-----|
| Communication skills  | 3-9 |
| Major Program—Required courses  | 47  |
| Photography electives   | 31  |
| Total in major program  | 78  |
| Breadth Requirements <sup>1</sup> —Natural science-mathematics                                    | 7   |
| Social-behavioral science   | 6   |
| Humanities  | 15  |
| Philosophy and/or religious studies   | 12  |
| Total breadth requirement   | 40  |
| General education requirements <sup>2</sup> and academic electives to total at least <sup>3</sup> | 130 |

<sup>1</sup>Check with program advisor for distribution of breadth requirements.

<sup>2</sup>See Chapter V. Courses taken as part of the general education requirements may also fulfill the breadth requirement. Check with program advisor.

<sup>3</sup>A minimum of 54 sem. hrs. must be completed in upper-level (300-400) courses.

## FACULTY

Patrick S. Gilvary, *Chairperson, Department of Performing and Visual Arts*

Sean Wilkinson, *Head of Photography Division*

Associate Professor: Wilkinson

Assistant Professor: Teemer

Instructor: Wilbers

Part-time Instructors: Grant, Patterson, Peterson

## COURSES OF INSTRUCTION

**PHO 101. BASIC PHOTOGRAPHY:** Fundamentals of black-and-white still photography: camera function, exposure, film processing, and printing. Emphasis on gaining sound technical and creative control of the medium. No previous experience required. Studio fee. 3 sem. hrs.

**PHO 201. INTERMEDIATE PHOTOGRAPHY:** Specific projects to increase technical competence and expand visual awareness. Exposure, film processing and printing variables, basic lighting, and view camera controls. Prerequisite: PHO 101 or equivalent. Studio fee. 3 sem. hrs.

**PHO 250. CREATIVE PHOTOGRAPHY GALLERY:** First-hand experience in operating a photography gallery of sound reputation. Selecting and hanging exhibits, correspondence with photographers represented, production of publicity material. 2 sem. hrs.

**PHO 302. COLOR PHOTOGRAPHY I:** Introduction to theory and techniques of color transparency, color negative, and color printing. Individual practice in lighting, color emulsions, filtration, and corrections. Prerequisite: PHO 201. Studio fee.

*3 sem. hrs.*

**PHO 310. SLIDE-TAPE PRODUCTION:** Use of black-and-white or color transparencies, theory, copy techniques, masking, mounting, titling, storyboard techniques, and sound recording and editing techniques. Students produce a slide tape show using projectors, dissolve units, and audio equipment. Prerequisite: PHO 201 or permission. Studio fee.

*3 sem. hrs.*

**PHO 315. HISTORY OF PHOTOGRAPHY:** The technical and aesthetic history of photography, from the camera obscura through the 1930's; changing perception of the medium and its development as an art form and as social document. Film rental fee.

*3 sem. hrs.*

**PHO 320. STUDIO LIGHTING:** Extensive practical experience in both tungsten and electronic flash lighting techniques. Still-life and portrait photography. Prerequisite: PHO 201. Studio fee.

*3 sem. hrs.*

**PHO 321. STILL-LIFE PHOTOGRAPHY:** Tungsten and electronic flash lighting techniques in the studio. Large and medium format cameras; primarily black and white films. Prerequisite: PHO 201. Studio fee.

*3 sem. hrs.*

**PHO 322. PORTRAIT PHOTOGRAPHY:** Studio and outdoor portrait and fashion techniques with natural, tungsten, and electronic flash lighting; all camera formats; personal and formal approaches. Prerequisite: PHO 201. Studio fee.

*3 sem. hrs.*

**PHO 330. PHOTOGRAPHIC TECHNIQUES:** Experiments and discoveries in the control of photographic materials. Relationships and variables in photographic chemistry and print manipulation, uses of graphic arts, and nonsilver imagery. Prerequisite: PHO 201. Studio fee.

*3 sem. hrs.*

**PHO 350. VIEW CAMERA AND ZONE SYSTEM:** Extensive experience with the view camera, examination of refined techniques, various applications, and concepts of large format photography. Prerequisite: PHO 201. Studio fee.

*3 sem. hrs.*

**PHO 380. BIO-MEDICAL PHOTOGRAPHY INTERNSHIP I:** The first half of a full year's commitment to thorough training in the work of the bio-medical photographer. Practical experience at a local hospital. See also PHO 480. Prerequisites: PHO 201, 302, 320, 410, 420. Studio fee.

*3 sem. hrs.*

**PHO 390. SPECIAL PROBLEMS IN PHOTOGRAPHY:** Series of assignments to guide independent study in photography, formulated to meet individual needs of the student. Prerequisites: PHO 201 and permission. Studio fee.

*1-5 sem. hrs.*

**PHO 402. COLOR PHOTOGRAPHY II:** Further study of the techniques and aesthetics peculiar to color photography. Straightforward and manipulated printing methods; masking, color analysis, chemical variations, and alternative processes such as dye transfer. Prerequisite: PHO 302. Studio fee.

*3 sem. hrs.*

**PHO 410. ADVANCED PHOTOGRAPHY:** Students with a substantial commitment to photography and with demonstrated technical skills work on individual projects and participate in group critiques and discussion. Prerequisites: PHO 201, 302, 315. Studio fee.

*3 sem. hrs.*

**PHO 412. ADVANCED AUDIO-VISUAL PRODUCTION:** Techniques and methods in the production of professional quality slide and tape presentations. Advanced skill development and theory. Prerequisite: PHO 310. Studio fee.

*3 sem. hrs.*



PHO 415. RECENT HISTORY OF PHOTOGRAPHY: The many directions of creative, documentary, and illustrative photography from the end of World War II to the present. Prerequisite: PHO 315. *3 sem. hrs.*

PHO 420. PHOTOJOURNALISM: A variety of ways of using photography as documentation, narrative, and propaganda. Editing of work, layout, and image-text relationships. Personal photographic essay required. Prerequisite: PHO 201. Studio fee. *3 sem. hrs.*

PHO 425. ADVANCED PHOTO JOURNALISM: Continued study of photography in the printed news media. Assignments based on actual working situations; emphasis on professional capabilities. Prerequisite: PHO 420. Studio fee. *3 sem. hrs.*

PHO 430. COMMERCIAL AND ILLUSTRATIVE PHOTOGRAPHY: Commercial, industrial, architectural, and illustrative photographic work both in the studio and on location. Individual practice in solving problems associated with professional photography. Prerequisites: PHO 320 and permission. Studio fee. *3 sem. hrs.*

PHO 435. ADVANCED COMMERCIAL PHOTOGRAPHY: Further development of skills and content introduced in PHO 430. More detailed and sophisticated aspects of photographic illustration and commercial photography. Prerequisite: PHO 430. Studio fee. *3 sem. hrs.*

PHO 450. PHOTOGRAPHY INTERNSHIP: Practical applications of photographic skills. Opportunities for advanced development and practical experience in professional working environments. Repeatable up to 9 sem. hrs. *1-3 sem. hrs.*

PHO 460-461. SENIOR SEMINAR: Each senior photography major completes a thesis-like body of work. Detailed individual critiques. Requirements include participation in a group exhibition in a recognized gallery and completion of a professional-quality portfolio. Studio fee. *3 sem. hrs. each*

PHO 480. BIO-MEDICAL PHOTOGRAPHY INTERNSHIP II: The second half of a full year's commitment to thorough training in the work of the bio-medical photographer. Practical experience at a local hospital. See PHO 380. Prerequisites: PHO 201, 302, 320, 380, 410, 420. Studio fee. *3 sem. hrs.*

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Photography studio fees—\$65-\$80

Film rental fees—\$15

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## PHYSICAL SCIENCE (PSC)

The Physical Science Program is administered by the Department of Physics. It provides a broad training in the physical sciences that is desirable for one who plans to pursue a goal built on a composite science background. The physical science major combines adequate physics, chemistry, geology, and mathematics to provide for the student a sound working knowledge of physical science. Since the program is less specialized than one in a single science, it has provision for adequate course selections and sufficient electives to provide the opportunity for concentrated study in a discipline chosen to meet the career objectives of the individual student. The academic advisors work closely with students in this program.

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### PROGRAM—S10: BACHELOR OF SCIENCE WITH A MAJOR IN PHYSICAL SCIENCE (PSC)<sup>1</sup>

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|   | <i>Semester Hours</i> |
|---|-----------------------|
| Basic physics: PHY 206, 207, 208, 210L, 211L, 214 .....   | 13                    |
| Basic chemistry: CHM 123, 123L, 124, 124L .....   | 8                     |
| Basic geology: GEO 115, 115L, 116, 116L .....   | 8                     |
| Basic mathematics: MTH 101, 118, 119, 218, 219 .....  | 19                    |
| Upper-level physical sciences (at least 12 sem. hrs. in physics) .....  | 24                    |
| Philosophy and/or religious studies .....   | 12                    |
| Humanities .....  | 9                     |
| Social and behavioral sciences .....  | 6                     |
| Communication skills .....  | 3-12                  |
| College Composition (ENG 101, 102), Effective Speaking (SPE 101),<br>and Computer Programming (CPS 144). Some of these requirements<br>can be waived if the student has demonstrated proficiency. |                       |
| General education courses and academic electives to total at least .....  | 120                   |

<sup>1</sup>Consult General Requirements for All Bachelor of Science Programs and Chapter V for General Education Requirements.

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### SAMPLE FRESHMAN PROGRAM

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| <i>Dept.</i> | <i>No.</i> | <i>Course</i>                    | <i>1st Term<sup>1</sup></i> | <i>2nd Term</i> |
|--------------|------------|----------------------------------|-----------------------------|-----------------|
| PHY          | 100        | Freshman Seminar                 | 1-0-0                       |                 |
| MTH          | 101        | Pre-Calculus Mathematics         | 4-0-4                       |                 |
| MTH          | 118        | Analytic Geometry and Calculus I |                             | 4-0-4           |
| CHM          | 123-124    | General Chemistry I and II       | 3-0-3                       | 3-0-3           |
| CHM          | 123L-124L  | Chemistry Laboratory             | 0-3-1                       | 0-3-1           |
| PHY          | 206        | General Physics I                |                             | 3-1-3           |
| PHY          | 210L       | General Physics Laboratory I     |                             | 0-3-1           |
| ENG          | 101-102    | College Composition I and II     | 3-0-3                       | 3-0-3           |
| —            | —          | General education requirements   | 6-0-6                       |                 |
|              |            |                                  | 17                          | 15              |

<sup>1</sup>For example, 3-0-3 means 3 class hrs., 0 lab. hrs., 3 sem. hrs. of credit.

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## PHYSICS (PHY)

The program leading to the Bachelor of Science with a major in Physics is designed to provide a strong, yet versatile, basis for a subsequent scientific career or advanced study. Minimum requirements for all majors are listed below, but students planning for graduate work in physics or an allied area are advised to select additional mathematics courses and additional physics courses similar to those shown in the sample program. A physics major must complete all 300-400-level courses with a 2.0 minimum grade-point average. The grade-point average for all physics courses must also be at least 2.0.

For the major in physics a formal minor is not necessary. If one is chosen, it can be in any academic area of the University with the provision that the student has the permission of the chairperson of the Department of Physics and the chairperson of the minor field. The physics program is flexible, even permitting a second major with the above provisions. Students planning graduate study in allied areas such as medicine, engineering, applied mathematics, computer science, law, and business should use the minor or second major and open electives to gain competence in the discipline of interest. Students in other disciplines who wish to minor in physics may take 12 semester hours of any upper-level physics courses.

An attractive feature of the physics program is the opportunity for upper-level students to gain experience by involvement with the faculty and staff in their research efforts through the Undergraduate Research Participation projects. Prospective majors are encouraged to write or visit the Department of Physics for more detailed information. New students are invited to confer with the chairperson to plan individual programs.

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**PROGRAM—S11: BACHELOR OF SCIENCE WITH A MAJOR  
IN PHYSICS (PHY)<sup>1</sup>**

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|   | <i>Semester Hours</i> |
|---|-----------------------|
| Physics .....   | 37                    |
| Basic courses: PHY 206, 207, 208, 210L, 211L, 214 .....   | 13                    |
| PHY 301, 303, 314, 390, 408, 430, 431, and 300-400-level electives ..   | 24                    |
| Mathematics: MTH 118, 119, 218, 219, 302 .....  | 18                    |
| Chemistry: CHM 123, 124, and associated laboratory .....  | 8                     |
| Philosophy and/or religious studies .....   | 12                    |
| Humanities .....  | 9                     |
| Social and behavioral sciences .....  | 6                     |
| Communication skills .....  | 3-12                  |
| College Composition (ENG 101, 102), Effective Speaking (SPE 101),<br>and Computer Programming (CPS 144). Some of these requirements<br>can be waived if the student has demonstrated proficiency. |                       |
| Minor (300-400-level courses) if chosen .....   | 12                    |
| General education courses and academic electives to total at least .....  | 120                   |

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<sup>1</sup>Consult General Requirements for All Bachelor of Science Programs, and Chapter V for General Education Requirements.

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SAMPLE PROGRAM<sup>1</sup>

| Dept.          | No.       | Course  | 1st Term <sup>2</sup> | 2nd Term |
|----------------|-----------|---|-----------------------|----------|
| Freshman Year  |           |   |                       |          |
| PHY            | 100       | Freshman Seminar  | 1-0-0                 |          |
| PHY            | 206-207   | General Physics I and II                                  | 3-1-3 <sup>2</sup>    | 3-1-3    |
| PHY            | 210L-211L | General Physics Laboratory I and II                       | 0-3-1 <sup>2</sup>    | 0-3-1    |
| MTH            | 118-119   | Analytic Geometry and Calculus I and II                   | 4-0-4                 | 4-0-4    |
| CHM            | 123-124   | General Chemistry I and II                                | 3-0-3                 | 3-0-3    |
| —              | —         | Communication skills <sup>3</sup>                         | 3-0-3                 | 3-0-3    |
| —              | —         | General education requirements                            | 3-0-3                 | 3-0-3    |
|                |           |   | 17                    | 17       |
| Sophomore Year |           |   |                       |          |
| PHY            | 208       | General Physics III                                       | 3-0-3                 |          |
| PHY            | 214-314   | Electronics I and II                                      | 1-3-2                 | 1-3-2    |
| PHY            | 321       | Atomic and Nuclear Physics <sup>4</sup>                   |                       | 3-0-3    |
| MTH            | 218-219   | Calculus III, Differential Equations                      | 4-0-4                 | 3-0-3    |
| CHM            | 123L-124L | Chemistry Laboratory                                      | 0-3-1                 | 0-3-1    |
| —              | —         | Communication skills <sup>3</sup>                         | 3-0-3                 | 3-0-3    |
| —              | —         | General education requirements                            | 3-0-3                 | 3-0-3    |
|                |           |   | 16                    | 15       |
| Junior Year    |           |   |                       |          |
| PHY            | 301       | Thermal Physics   | 3-0-3                 |          |
| PHY            | 303-403   | Intermediate Mechanics I and II                           | 3-0-3                 | 3-0-3    |
| PHY            | 390       | Quantum Mechanics   |                       | 3-0-3    |
| PHY            | 430-431   | Advanced Laboratory                                       | 0-4-2                 | 0-4-2    |
| MTH            | 302       | Linear Algebra and Matrices                               | 3-0-3                 |          |
| —              | —         | General education requirements                            | 3-0-3                 | 6-0-6    |
| —              | —         | Minor <sup>5</sup>  | 3-0-3                 | 3-0-3    |
|                |           |   | 17                    | 17       |
| Senior Year    |           |   |                       |          |
| PHY            | 404       | Optics <sup>4</sup>                                       |                       | 3-0-3    |
| PHY            | 408-409   | Intermediate Electricity and Magnetism I, II <sup>4</sup> | 3-0-3                 | 3-0-3    |
| PHY            | 421       | Solid State <sup>4</sup>                                  |                       | 3-0-3    |
| PHY            | 432-433   | Advanced Laboratory <sup>4</sup>                          | 0-4-2                 | 0-4-2    |
| —              | —         | General education requirements                            | 6-0-6                 |          |
| —              | —         | Electives <sup>6, 7</sup>                                 | 3-0-3                 | 3-0-3    |
| —              | —         | Minor <sup>5</sup>  | 3-0-3                 | 3-0-3    |
|                |           |   | 17                    | 17       |

<sup>1</sup>Consult General Requirements for All Bachelor of Science Programs and Chapter V for General Education Requirements.

<sup>2</sup>For example, 3-1-3 signifies 3 hrs. lecture, 1 hr. recitation, 3 sem. hrs. credit; 0-3-1 signifies 0 hrs. lecture, 3 hrs. laboratory, 1 sem. hr. credit.

<sup>3</sup>Students should show proficiency in composition by the end of the freshman year, and facility in speech and computer programming by the end of the sophomore year.

<sup>4</sup>In this example, 37 upper-level sem. hrs. in the major are shown (24 required).

<sup>5</sup>Consult department chairperson concerning minor.

<sup>6</sup>Electives can be used for developing a second major or a second minor, for special problems courses (PHY 399, 499), or as "free" electives.

<sup>7</sup>In this example program, 133 total sem. hrs. are shown; the minimum required is 120 sem. hrs. With some summer work, advanced credit by examination, etc., a student can complete the program in 3½ or possibly even 3 academic years.

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## FACULTY

J. Michael O'Hare, *Chairperson*

*Distinguished Professor:* Bueche

*Professor Emeritus:* Mann

*Professors:* Graham, Kepes, Miner, O'Hare, Schneider, Yaney

*Associate Professor:* Berney

*Assistant Professors:* Craver, Erdei

*Adjunct Professor:* Grant

*Adjunct Assistant Professor:* Murray

*Laboratory Instructor:* Streiff

## COURSES OF INSTRUCTION

PHY 100. SEMINAR: Opportunity to become acquainted with the broad spectrum of modern science through periodic meetings with the entire department. Invited speakers, films, student presentations, book reviews, and informal discussions. For all physics and physical science majors. *No credit*

\*PHY 105. PHYSICAL SCIENCE: Broad introduction to physical science. Emphasis on concepts and scientific thought processes in dealing with principles in physics; some applications to chemistry, astronomy, and meteorology. Demonstrations and laboratory experiences. For nonscience students. Prerequisite: None. *4 sem. hrs.*

\*PHY 108. PHYSICAL SCIENCE OF LIGHT AND COLOR: A treatment of physical science with emphasis on light, color, and the interaction of light with materials. For nonscience students. Prerequisite: None. *3-4 sem. hrs.*

PHY 108L. LIGHT AND COLOR LABORATORY: Laboratory experiences to accompany PHY 108. *1 sem. hr.*

\*PHY 109. SCIENCE AND UNDERSTANDING: Directed readings, discussions, lectures, and the viewing of *Cosmos*, a film series using astronomy as a unifying theme, to gain insight into the nature of science as a human endeavor. For nonscience students. Prerequisite: None. *3 sem. hrs.*

\*PHY 151-152. CONCEPTS IN PHYSICS: Basic background and appreciation of physics principles and concepts using a minimum of mathematical formalism; development of skills and knowledge to appreciate the place of science in contemporary society. For nonscience students. Prerequisite: None. *1-4 sem. hrs. each*

PHY 150L. PHYSICS LABORATORY: Laboratory experiences to accompany 100-level physics lecture courses. Corequisite: A physics course. *1 sem. hr.*

**\*PHY 201. GENERAL PHYSICS:** Topics from mechanics, thermal and mechanical properties of matter, wave motion and sound, and electricity without the formalism of calculus. First term each year. *3 sem. hrs.*

**PHY 201L. GENERAL PHYSICS LABORATORY:** Introductory laboratory appropriate for students of the health sciences. Experimental scientific techniques and the use of standard laboratory equipment. One two-hour period per week. First term each year. Corequisite: PHY 201 or 206. *1 sem. hr.*

**\*PHY 202. GENERAL PHYSICS:** Continuation of PHY 201 with a treatment of electricity and magnetism, wave motion and properties of light, atomic and nuclear physics. Prerequisite: PHY 201. Second term each year. *3 sem. hrs.*

**PHY 202L. GENERAL PHYSICS LABORATORY:** Experimental scientific techniques and the use of standard laboratory equipment. One two-hour period per week. Second term each year. Prerequisite: PHY 201L. *1 sem. hr.*

**\*PHY 203. MODERN TECHNICAL PHYSICS:** Introduction to selected topics in modern physics without the formalism of calculus. For engineering technology students. Prerequisites: Trigonometry, college algebra, and introductory statics and dynamics. *3 sem. hrs.*

**PHY 203L. TECHNICAL PHYSICS LABORATORY:** Laboratory experiences to accompany PHY 203. *1 sem. hr.*

**PHY 204. INTRODUCTION TO MEDICAL ELECTRONIC INSTRUMENTATION:** Lecture and laboratory course introducing basic physical principles and practices encountered in the operation of some electronic instrumentation used in medical technology. For medical technology students. Prerequisite: None. *2 sem. hrs.*

**\*PHY 206. GENERAL PHYSICS I—MECHANICS:** Introductory course in mechanics. Calculus concepts developed as needed. Three lectures, one recitation per week. Corequisite: MTH 118 or 112. *3 sem. hrs.*

**\*PHY 206H. GENERAL PHYSICS I—MECHANICS (HONORS):** Introductory course in mechanics for students with a strong background in physics. Three lectures, one recitation per week. By invitation only. *3 sem. hrs.*

**\*PHY 207. GENERAL PHYSICS II—ELECTRICITY AND MAGNETISM:** The basic principles of electricity and magnetism. Three lectures, one recitation per week. Prerequisites: PHY 206 or 201, MTH 118. *3 sem. hrs.*

**\*PHY 207H. GENERAL PHYSICS II—ELECTRICITY AND MAGNETISM (HONORS):** Basic principles of electricity and magnetism. Three lectures, one recitation per week. By invitation only. *3 sem. hrs.*

**\*PHY 208. GENERAL PHYSICS III—MECHANICS OF WAVES:** Introduction to wave phenomena (including sound, light, and matter waves) leading to basic concepts in modern physics. Prerequisites: PHY 207, MTH 119; or PHY 202, MTH 113. *3 sem. hrs.*

**\*PHY 208H. GENERAL PHYSICS III—MECHANICS OF WAVES (HONORS):** Introduction to modern physics through a study of wave phenomena including sound, light, and matter waves. By invitation only. *3 sem. hrs.*

**PHY 210L. GENERAL PHYSICS LABORATORY I:** Introduction to laboratory methods, handling of data, and analysis of results. Experiments appropriate to the background of students with an interest in mathematical and physical sciences. Two hours laboratory, one hour recitation per week. Corequisite: PHY 206. *1 sem. hr.*

**PHY 211L. GENERAL PHYSICS LABORATORY II:** Laboratory methods, data handling, and analysis of results. Experiments appropriate to the background of students with an interest in mathematical and physical sciences. Two hours laboratory, one hour recitation per week. Prerequisite: PHY 210L. *1 sem. hr.*

**PHY 214. ELECTRONICS FOR SCIENTISTS I:** Introduction to electronic circuits with a consideration of D.C. and A.C. circuit analysis, diodes, bipolar and field-effect transistors, and other semiconductor circuit devices. Demonstrations and bench-top experience. Prerequisite: PHY 211L or 202L, or equivalent. *2 sem. hrs.*

**\*PHY 250. DESCRIPTIVE ASTRONOMY:** Descriptive survey for students who have had little or no previous exposure to astronomy; material from ancient times to present, including pulsars and quasi-stellar objects. Prerequisite: None. *3-4 sem. hrs.*

**PHY 299. SPECIAL PROBLEMS:** Special topical courses, laboratory, tutorial, or library work in areas of current interest. Students should consult the composite. *1-4 sem. hrs.*

**PHY 301. THERMAL PHYSICS:** Thermodynamical descriptions of many particle systems obtained from microscopic statistical considerations; laws of thermodynamics, kinetic theory of dilute gases, and Fermi-Dirac and Bose-Einstein statistics. Corequisite: MTH 219. Prerequisite: PHY 208. *3 sem. hrs.*

**PHY 303. INTERMEDIATE MECHANICS I:** The fundamental concepts of mechanics: virtual work, kinematics, special theory of relativity. Lagrange's equation and central forces, particle dynamics. Corequisite: MTH 219. Prerequisite: PHY 208. *3 sem. hrs.*

**PHY 314. ELECTRONICS FOR SCIENTISTS II:** Continuation of PHY 214; thyristors such as SCR, linear IC, digital IC, and other discrete and integrated semiconductor circuit devices. Demonstrations and bench-top experience. Prerequisite: PHY 214. *2 sem. hrs.*

**PHY 321. ATOMIC AND NUCLEAR PHYSICS:** Concepts and models of the structure of matter; atoms, ions, electrons and nuclei, radioactivity, interactions of radiation with matter, particle detection, accelerators, nuclear models, nuclear reactions and processes, and fundamental particles. Prerequisite: PHY 208 or consent of instructor. *3 sem. hrs.*

**PHY 390. INTRODUCTION TO QUANTUM MECHANICS:** Basic postulates of quantum mechanics with applications made to atomic physics. Prerequisites: PHY 208, MTH 219, 302. *3 sem. hrs.*

**PHY 395. RESEARCH PARTICIPATION I:** Individual projects conducted as part of the physics Undergraduate Research Participation program to encourage involvement of students with faculty researchers. Projects must be arranged in advance with faculty research directors. *1-6 sem. hrs.*

**PHY 399. SPECIAL PROBLEMS IN (NAMED AREA):** Special topical courses, laboratory, tutorial, or library work in areas of current interest. Students should consult the composite. *1-4 sem. hrs.*

PHY 403. INTERMEDIATE MECHANICS II: Emphasis on solving physical problems; noninertial coordinate systems, rigid body motion, rotating systems, coupled systems, introductory fluid statics and dynamics, normal coordinates, and the descriptions of mechanics appropriate for the transition to wave mechanics. Prerequisite: PHY 303. *3 sem. hrs.*

PHY 404. PHYSICAL OPTICS: The electromagnetic wave theory of light, propagation of waves, reflection, refraction, dispersion, polarization, dichroism, birefringence, superposition of waves, interference, diffraction, Fourier optics. Prerequisites: PHY 208, MTH 219. *3 sem. hrs.*

PHY 408. INTERMEDIATE ELECTRICITY AND MAGNETISM I: Electrostatics, Coulomb's law, Gauss's law, potential, dielectric materials, electrostatic energy, solutions to Laplace's and Poisson's equations, Biot-Savart law, Faraday induction law, magnetization, and Maxwell's equations. Prerequisites: PHY 208, MTH 219. *3 sem. hrs.*

PHY 409. INTERMEDIATE ELECTRICITY AND MAGNETISM II. Further study of electric and magnetic fields with emphasis on solving problems; Maxwell's equations, propagation of electromagnetic waves, electromagnetic radiation. Prerequisite: PHY 408. *3 sem. hrs.*

PHY 420. INTRODUCTION TO SOLID STATE: Classification of solids, crystals and crystal structures, survey of lattice properties, free electron theory, band theory of solids, semi-conductors, and crystal imperfections. Prerequisites: PHY 208, MTH 219. *3 sem. hrs.*

PHY 430-431-432-433. ADVANCED LABORATORY: Experimental investigations based on principles from atomic and nuclear physics, electricity and magnetism, modern and classical optics, mechanics, solid state, cryogenics, x-ray diffraction, surface physics, or electronics. Not all experiments available every semester; consult chairperson for details. Prerequisite: PHY 214. Corequisite: An advanced course in physics. *2 sem. hrs. each*

PHY 440. QUANTUM MECHANICS II: Study of selected principles in quantum mechanics. Prerequisite: PHY 390. *3 sem. hrs.*

PHY 441. TOPICS IN MODERN PHYSICS: Elements of modern optics, solid state, and other selected subjects. Consult chairperson for details. Prerequisite: PHY 390 or equivalent. *3 sem. hrs.*

PHY 460. SEMINAR: Presentation of papers by undergraduate students, faculty, and guest lecturers on topics of concern to the modern physicist. Reviews of books and films appropriate to the group. *1 sem. hr.*

PHY 495. RESEARCH PARTICIPATION II: Individual projects conducted as part of the physics Undergraduate Research Participation program to encourage involvement of students with faculty researchers. Projects must be arranged in advance with faculty research directors. *1-6 sem. hrs.*

PHY 499. SPECIAL PROBLEMS IN (NAMED AREA) (HONORS): Laboratory, tutorial, or library work in one of such selected topics as solid state physics, polymers, atomic and nuclear physics, modern optics, theoretical physics, surface physics, or general physics. Prerequisite: Permission of department chairperson. *1-6 sem. hrs.*

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\*General education course. See Chapter V.



## POLITICAL SCIENCE (POL)

A major in political science requires POL 201, 202 or 214, 207, 317, 421, and an additional 21 semester hours in political science including 18 semester hours at the 300-400 level. The advanced courses must be chosen in consultation with the advisor and in accordance with academic and career objectives. Students electing concentrations in pre-law, urban affairs, and public administration are encouraged to take POL 495, Internship. Students in the pre-law concentration may replace POL 207 with six semester hours in accounting (ACC 207-208 or ACC 301-302).

A minor in political science includes POL 201 and four 300-400 level courses selected by the student to strengthen academic or career objectives.

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### PROGRAM—A17: BACHELOR OF ARTS WITH A MAJOR IN POLITICAL SCIENCE (POL)<sup>1</sup>

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|   | <i>Semester Hours</i> |
|---|-----------------------|
| <i>Political science</i> .....  | 36                    |
| <i>Natural science</i> .....  | 7                     |
| <i>Mathematics</i> .....  | 3                     |
| <i>Social and behavioral sciences</i> .....                                     | 12                    |
| <i>Humanities</i> .....   | 18                    |
| <i>Philosophy and/or religious studies</i> .....                                | 12                    |
| <i>Communication skills</i> (ENG 101, 102, SPE 101) .....                       | 3-9                   |
| <i>General education courses and academic electives to total at least</i> ..... | 120                   |

<sup>1</sup>See also Distribution Table for Bachelor of Arts programs and Chapter V for General Education Requirements.

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### MINORS AND AREA CONCENTRATIONS

A student may elect a minor in education under the E-11 Program or in any related discipline within the College of Arts and Sciences. The student must consult with the department administering the discipline for the particular requirements of a minor. In addition, the student may elect any *one* of the four multi-disciplinary concentrations in urban affairs, pre-legal training, international affairs, or public administration developed by the Department of Political Science.

#### I. Urban Affairs

Students are required to take POL 360, Urban Politics; SOC 351, Cities; and any three of the following courses:

|         |                                   |
|---------|-----------------------------------|
| BIO 399 | The Bio-Ecology of Man, or        |
| GEO 208 | Environmental Geology             |
| HST 355 | American Urban History            |
| PSY 342 | Community Problems and Psychology |
| SOC 328 | Racial and Ethnic Minorities      |
| CRJ 401 | Political Violence                |
| ECO 445 | Public Finance, or                |
| ECO 485 | Urban and Regional Economics      |

#### II. Pre-Law

Students are required to take POL 301, American Judicial Process, or POL 411, Constitutional Law, and at least one composition course (ENG 272 or 316 or 474) and three of the following courses:

|         |                                    |
|---------|------------------------------------|
| ECO 204 | Principles of Macroeconomics       |
| ENG —   | Literature (ENG 203 or 204 or 205) |
| PHL 301 | Practical Logic                    |
| SOC 326 | Law and Society                    |
| SOC 327 | Criminology                        |

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 202, Introduction to Comparative Politics, and POL 214, Introduction to International Politics, and any four of the following:

|         |                                 |
|---------|---------------------------------|
| PSY 341 | Social Psychology               |
| ECO 450 | Comparative Economic Systems    |
| ECO 460 | Economic Development and Growth |
| ECO 461 | International Economics         |
| HST —   | Upper-level electives           |

Choices of history electives should be based on the students' interests and career objectives. Students electing the concentration of international affairs are also encouraged to acquire competence in a foreign language and to participate in study-abroad programs.

### IV. *Public Administration*

Students are required to take POL 305, Introduction to Public Administration; POL 306, Public Policy Analysis; POL 495, Internship in Government; and at least three of the following courses:

|         |   |
|---------|---|
| ACC 301 | Financial Reporting and Administration        |
| MGT 314 | Personnel Management                          |
| MGT 318 | Human Relations for Management                |
| COM 301 | Publicity and Public Relations                |
| ENG 370 | Report Writing, or                            |
| ENG 372 | Applied Written Communication                 |
| PSY 334 | Industrial Psychology                         |
| CRJ 447 | Contemporary Issues in Justice Administration |
| SWK 337 | Social Welfare Policy Services                |
| ECO 445 | Public Finance                                |

### V. *Political Journalism*

Students are required to take COM 120, Introduction to Mass Communication Media; JRN 206, Newswriting; and three of the following courses:

|         |                                    |
|---------|------------------------------------|
| SPE 301 | Speechwriting                      |
| SPE 314 | Political Campaign Communication   |
| JRN 301 | Public Affairs Reporting           |
| JRN 303 | Interpretative and Feature Writing |
| COM 440 | The Law and News Media             |

## FACULTY

Gerald E. Kerns, *Chairperson*

*Professor:* Lapitan

*Associate Professors:* Ahern, Fogel, Karns, Kerns

*Assistant Professors:* Bilocerkowycz, Ghery, Inscho, Nelson

*Adjunct Assistant Professors:* Baker, Darvich, Hillman, Soter, Woy-Hazleton

## COURSES OF INSTRUCTION

- \*POL 101. GOVERNMENT AND SOCIETY: Examination of the major types of contemporary political systems and the relationship between their ideological assumptions and the operational realities. Types examined are democratic capitalist, democratic socialist, communist, and fascist/statist. *3 sem. hrs.*
- POL 201. THE AMERICAN POLITICAL SYSTEM: Study of the American political system, its attitudinal and constitutional base, its structure and processes. *3 sem. hrs.*
- POL 202. INTRODUCTION TO COMPARATIVE POLITICS: Analysis of major concepts and approaches in the study of comparative government and politics. *3 sem. hrs.*
- POL 207. POLITICAL ANALYSIS: Introduction to the basic concepts and processes of research in political science. *3 sem. hrs.*
- POL 214. INTRODUCTION TO INTERNATIONAL POLITICS: Analysis of the dynamic forces of conflict and cooperation in world politics. *3 sem. hrs.*
- POL 300. POLITICAL ISSUES: Introductory examination of contemporary political issues selected by the instructor; such topics as welfare, political morality, political campaigns, institutional reform, and political economy. *3 sem. hrs.*
- POL 301. THE AMERICAN JUDICIAL PROCESS: Study of the American judicial system with emphasis on the courts and the bar; criminal and civil legal processes in detail. *3 sem. hrs.*
- POL 303. STATE GOVERNMENT AND POLITICS: Comparative study of the political institutions, processes, and systems of the fifty states and their effect on the content and administration of selected public policies, programs, and services. *3 sem. hrs.*
- POL 305. INTRODUCTION TO PUBLIC ADMINISTRATION: Basic principles of organization and management in executive departments of government at all levels; questions of planning, leadership, and control. *3 sem. hrs.*
- POL 306. PUBLIC POLICY ANALYSIS: Introduction to public policy-making systems and the methodology of policy analysis; theories of policy formulation, the policy-making process, means for measuring policy effectiveness, analysis of proposals for policy change. *3 sem. hrs.*
- POL 310. PARTIES AND INTEREST GROUPS: Descriptive analysis of the nature and interaction of parties and interest groups, and their role in the American political system. *3 sem. hrs.*
- POL 311. PUBLIC OPINION AND POLITICAL BEHAVIOR: The formation, maintenance, change, and impact of public opinion in the American political system; the role of theory and analysis of data in understanding public and political behavior. *3 sem. hrs.*
- POL 313. THE AMERICAN PRESIDENCY: Study of the American presidency, the development of presidential powers, and its leadership role in the political system. *3 sem. hrs.*

POL 317. DEVELOPMENT OF POLITICAL THEORY: Analysis of selected theorists and political doctrines forming the tradition of Western thought on politics and society. Theorists including Plato, Aristotle, the Stoics, St. Augustine, St. Thomas Aquinas, Machiavelli, Hobbes, Locke, Rousseau, Burke, Hegel, Marx, and Lenin presented in their historical and sociopolitical contexts. *3 sem. hrs.*

POL 320-327. COMPARATIVE POLITICS: Analysis of governmental institutions and political processes of selected countries in each of the following areas:

POL 320—Western Europe

POL 321—Soviet Union

POL 322—The Far East

POL 323—Latin America

POL 324—Southern Asia

POL 325—The Middle East

POL 326—Africa

POL 327—Southern Europe

*3 sem. hrs. each*

POL 360. URBAN POLITICS: Study of the nature of urban political systems in the U.S. with emphasis on explanation of differences in their policy responses. *3 sem. hrs.*

POL 406. INTERNATIONAL LAW AND ORGANIZATION: Study of rules governing the community of nations; their nature, sources, and development; the international agencies responsible for their development, interpretation, and administration. *3 sem. hrs.*

POL 408. AMERICAN FOREIGN POLICY: Critical study of the American foreign policy process and evaluation of the substances of American foreign policy. *3 sem. hrs.*

POL 409. SOVIET FOREIGN POLICY: A broad introduction to the Soviet Union's relationship with the West: political, economic, and military cooperation and competition. *3 sem. hrs.*

POL 410. COMPARATIVE FOREIGN POLICY: 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 behaviors. *3 sem. hrs.*

POL 411. CONSTITUTIONAL LAW: Analysis of the role of the U.S. Supreme Court in its interpretation of the Constitution. Emphasis on the various methods of judicial interpretation as they affect such provisions as the commerce clause, the taxing and spending powers, due process, the dimensions of presidential and congressional authority, and the doctrine of judicial review. *3 sem. hrs.*

POL 413. THE POLITICS OF BUREAUCRACY AND REGULATION: Examination of the nature and meaning of bureaucracy in contemporary American society and the devices for its evaluation and control. *3 sem. hrs.*

POL 414. LEGISLATIVE POLITICS: Study of the U.S. Congress, its organization and procedures, and its powers and influence in the political system. *3 sem. hrs.*

POL 421. SEMINAR IN POLITICAL SCIENCE: Seminar on current problems and issues in political science. May be taken more than once when content changes. Prerequisite: Permission of professor. *3 sem. hrs.*

POL 431. INDEPENDENT STUDY AND RESEARCH: Individual reading and research on selected topics under faculty direction. Recommended for seniors only. Prerequisite: Permission of professor. *3 sem. hrs.*

**POL 437. PROBLEMS IN INTERNATIONAL POLITICS:** Focus on selected problems in international politics such as the causes of war, negotiation, the Middle East, and the North-South conflict. May be repeated as the topic changes. Prerequisite: POL 214 or permission. *3 sem. hrs.*

**POL 450. CIVIL LIBERTIES:** Analytical examination of civil liberties in the U.S. with emphasis on the Supreme Court as arbiter in the endless conflict between the demand for individual liberty and the needs of constitutional authority. *3 sem. hrs.*

**POL 452. POLITICAL VIOLENCE:** Consideration of theoretical approaches to understanding violent change in political institutions; the continuum between violence and nonviolence of revolution, revolt, campus dissent, and political assassination. Emphasis on the roles of criminal justice and government agencies in meeting dissent. (Same as CRJ 401.) *3 sem. hrs.*

**POL 455. THE THEORY AND PRACTICE OF COMMUNISM:** Consideration of the theory and practice of Communism, its relationship to Marxism, the special impact of Lenin and Stalin, and the schisms within the Communist world since World War II, involving Tito, Mao, and Eurocommunism. *3 sem. hrs.*

**POL 456. THEORY AND PRACTICE OF FASCISM:** The psychological and attitudinal elements of fascism; its manifestations in Italy, Germany, Spain, France, and Austria; its relevance as a political phenomenon today. *3 sem. hrs.*

**POL 457. POLITICAL CHANGE IN THE THIRD WORLD:** Analysis of the concepts of development and change within the context of Third World nations; emphasis on the impact of modernization on political processes and change. *3 sem. hrs.*

**POL 475. AMERICAN POLITICAL THOUGHT:** Ideas that have shaped the American political system: Puritanism, the American Revolution, Hamiltonianism, Jeffersonianism, racism, nativism, social Darwinism, the New Deal, and contemporary liberalism and conservatism. *3 sem. hrs.*

**POL 479. SELECTED TOPICS IN PUBLIC POLICY:** Intensive examination of policy process, outcomes, and impact in an area or areas of American public policy selected by the instructor; such topics as transportation, education, welfare, national defense, urban and community development, civil rights, and science and technology. May be repeated once when topic changes. *3 sem. hrs.*

**POL 495. INTERNSHIP:** Supervised experience in government agencies and programs. Pre-law students are assigned to law firms and judicial chambers. Prerequisite: Permission of supervising professor. *3 sem. hrs.*

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\*General education course. See Chapter V.

PREMEDICINE (MED)  
AND PREDENTISTRY (DEN)

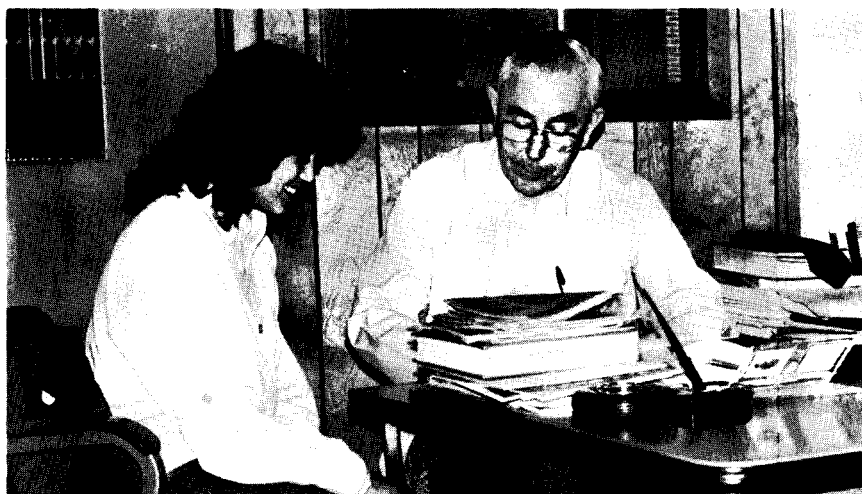
Students who intend to continue their education at the professional school level (medical, dental, osteopathic) should choose undergraduate majors that hold the greatest interest for them. The minimum academic requirements for admission to professional schools are met by a number of degree programs at the University of Dayton. Students with strong interests in biology or chemistry should enroll in Program S1 (B.S. in Biology) or Program A2 (B.A. in Chemistry) or S2 (B.S. in Chemistry). From an academic standpoint students in these and other science programs are as fully qualified for admission to professional schools as are those students who follow the formal premedicine-predentistry curriculum. These students may utilize all the premedical counseling and advisory facilities available at the University. However, in order to receive adequate counseling, they must declare their professional school intentions to a premedical-predental advisor as early as possible. (See list of advisors below.)

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 courses in the humanities and the social sciences. Students contemplating a career in medicine or dentistry should realize that preference is given to candidates who have the most complete education, as well as good scholastic standing. Program S12 offers a maximum choice of science and nonscience electives. Premedical-predental students can change to biology or (B.A.) chemistry majors during the junior year without any loss of semester hours.

The Premedical-Predental Faculty Committee is responsible for curriculum requirements, program changes, course advising, general counseling, and the preparation of recommendation letters that are required of all applicants to the health professional schools. The following professors are currently members of this committee: *Chairperson*—C. J. Chantell (Biology), T. P. Graham (Physics), C. I. Michaelis (Chemistry), J. M. Ramsey (Biology), K. C. Schraut (Mathematics), and S. S. Singer (Chemistry).

A chapter of the National Premedical Honor Society, Alpha Epsilon Delta, is established on campus. Both the Medical College Admissions Test and the Dental Aptitude Testing Program are usually administered on campus each spring and fall. All prospective medical, dental, and osteopathic school applicants must take these tests, usually in the spring of the junior year. Information about these tests may be obtained from the premedical-predental office.

The increasingly high admission standards for professional schools make it imperative that the premedical and predental student give full time to study. The undergraduate cumulative grade-point average is an important criterion in gaining admission to a professional school. The minimum acceptable cumulative average for most medical and dental schools is over 3.0. For this reason, the Premedical-Predental Faculty Committee conducts a sophomore evaluation of



all students enrolled in Program S12. Any student whose cumulative average after two years is below 2.8 will be advised to consider changing his or her major.

#### PREMEDICINE-PREDENTISTRY CURRICULUM SUMMARY

|   | <i>Semester Hours</i> |
|---|-----------------------|
| Specified science courses .....           | 45                    |
| Elective science courses .....            | 17                    |
| Communication skills .....                | 12                    |
| Philosophy and/or religious studies ..... | 12                    |
| Social-behavioral science .....           | 12                    |
| Humanities .....                          | 12                    |
| General electives .....                   | 16                    |
|   | <u>126</u>            |

#### Science Courses

##### *Major Concentration—Specified*

BIO 151, 152, 152L, 201L

CHM 123, 123L, 124, 124L, 201, 201L, 313, 313L, 314, 314L

CPS 144 or 150

PHY 201, 201L, 202, 202L (May substitute PHY 206, 207, 208, 201L, 202L)

MTH 112, 113 (May substitute depending on background)

##### *Major Concentration—Elective*

Minimum of five lecture courses in biology, chemistry, computer science, mathematics (recommended choice from comparative anatomy, cell biology, **embryology**, **genetics**, **microbiology**, **physiology**, **parasitology**, **physical chemistry**, **biochemistry**, **biostatistics**). These science electives must be directly related to the major field of interest. Laboratory sections must accompany two of the science electives.

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**PROGRAM—S12: BACHELOR OF SCIENCE WITH A MAJOR IN  
PREMEDICINE (MED) OR PREDENTISTRY (DEN)<sup>1</sup>**


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| <i>Dept.</i>          | <i>No.</i> | <i>Course</i>  | <i>1st Term<sup>2</sup></i> | <i>2nd Term</i> |
|-----------------------|------------|--|-----------------------------|-----------------|
| <b>Freshman Year</b>  |            |  |                             |                 |
| BIO                   | 100        | Freshman Seminar   | 1-0-0                       |                 |
| BIO                   | 151-152    | Concepts of Biology  | 3-0-3                       | 3-3-4           |
| CHM                   | 123-124    | General Chemistry  | 3-3-4                       | 3-3-4           |
| MTH                   | 112-113    | Introductory Calculus <sup>3</sup>                         | 3-0-3                       | 3-0-3           |
| ENG                   | 101-102    | College Composition I and II                               | 3-0-3                       | 3-0-3           |
| SPE                   | 101        | Fundamentals of Effective Speaking                         |                             | 3-0-3           |
| —                     | —          | General education requirements <sup>4</sup>                | 3-0-3                       |                 |
|                       |            |  | 16                          | 17              |
| <b>Sophomore Year</b> |            |  |                             |                 |
| BIO                   | 201L       | Biology Laboratory Investigations                          | 0-3-1                       |                 |
| CHM                   | 313-314    | Organic Chemistry  | 3-3-4                       | 3-3-4           |
| PHY                   | 201-202    | Physics <sup>5</sup>                                       | 3-2-4                       | 3-2-4           |
| HST                   | 101 or 102 | History of Western Civilization                            | 3-0-3                       |                 |
| —                     | —          | General education requirements and electives               | 3-0-3                       | 9-0-9           |
|                       |            |  | 15                          | 17              |
| <b>Junior Year</b>    |            |  |                             |                 |
| CHM                   | 201        | Quantitative Analysis                                      | 2-4-4                       |                 |
| CPS                   | —          | Computer science elective <sup>6</sup>                     |                             | 3-0-3           |
| —                     | —          | Science electives <sup>7</sup>                             | 3-3-4                       | 3-3-4           |
| HST                   | —          | History elective <sup>8</sup>                              | 3-0-3                       |                 |
| ENG                   | —          | English elective <sup>9</sup>                              |                             | 3-0-3           |
| PHL                   | 315        | Medical Ethics   |                             | 3-0-3           |
| —                     | —          | General education requirements and electives               | 3-0-3                       | 3-0-3           |
|                       |            |  | 14                          | 16              |
| <b>Senior Year</b>    |            |  |                             |                 |
| —                     | —          | Science electives <sup>7</sup>                             | 3-3-4                       | 6-0-6           |
| —                     | —          | General education requirements and electives <sup>10</sup> | 12-0-12                     | 9-0-9           |
|                       |            |  | 16                          | 15              |

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<sup>1</sup>Consult General Requirements for All Bachelor of Science Programs and Chapter V for General Education Requirements.

<sup>2</sup>For example, 3-0-3 means 3 class hrs., 0 lab. hrs.; 3 sem. hrs. of credit.

<sup>3</sup>Placement test may necessitate initial course in precalculus (MTH 101). Depending on background and interests, two calculus sequences are available, MTH 112-113, MTH 118-119. Well qualified students are strongly advised to elect MTH 118-119. (See Mathematics Courses of Instruction.)

<sup>4</sup>Some general education courses are specified in the program (e.g., BIO 152, PHL 315); others are to be chosen from the listing of approved courses. See Chapter V.

<sup>5</sup>Well qualified students are strongly advised to take PHY 206-207-208 with PHY 201-202 laboratories.

<sup>6</sup>Select CPS 144 or 150.

<sup>7</sup>Recommend selection from BIO 309, 403, 407, 411, 412, 440, CHM 302, 420, 551, 552, CPS, MTH 215.

<sup>8</sup>Select HST 340 or 341.

<sup>9</sup>Select from ENG 203, 204, 205, 272, 316, 474, or, with advisor's permission, other ENG course that emphasizes writing.

<sup>10</sup>A full year of a modern foreign language is strongly recommended.

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## PSYCHOLOGY (PSY)

Psychology is the scientific study of behavior, and as such is a diverse field that touches all aspects of human endeavor.

The objectives of the Department of Psychology are to provide students with learning experiences in and out of the classroom which will increase their critical thinking skills, facilitate their acquisition of the body of knowledge inherent in the study of human behavior, equip them with its research methodology, and prepare them for employment or graduate school. The department is large enough to have all of the academic and social benefits that a university department can provide and small enough to provide individual attention to every student.

The Department of Psychology offers both the Bachelor of Arts and the Bachelor of Science. Each student, in consultation with an advisor, selects a program leading to either a Bachelor of Arts or a Bachelor of Science with appropriate elective credits according to individual interests and goals. The availability of both degrees allows the student to plan a double major or a major in psychology with a strong concentration of study in a related or complementary discipline.

Each psychology major must complete PSY 101, 216, and 217 early in his or her academic career. The remaining requirements are stated in the two outlines below. Exceptions to these requirements must be approved by the chairperson.

For a minor in psychology a student must complete PSY 101 and 12 semester hours of upper-level (300-400) courses and their prerequisites.

All graduate psychology (500-level) courses are open for credit to undergraduate students with permission of the advisor and the instructor. See the Graduate issue of the University Bulletin for a listing of graduate courses. Courses usually offered as combined undergraduate and graduate courses are so designated in the course descriptions.

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### PROGRAM—A18: BACHELOR OF ARTS WITH A MAJOR IN PSYCHOLOGY (PSY)<sup>1</sup>

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|  | <i>Semester Hours</i> |
|--|-----------------------|
| Psychology requirements and electives .....                              | 34                    |
| PSY 101, 216 <sup>2</sup> , 217 .....                                    | 10                    |
| Select two courses from PSY 321, 322, 323, 422 .....                     | 6                     |
| Select two courses from PSY 341, 351, 361, 363 .....                     | 6                     |
| PSY electives .....  | 12-23                 |
| Natural sciences .....   | 7                     |
| Mathematics .....  | 3                     |
| Social and behavioral sciences <sup>3</sup> .....                        | 12                    |
| Humanities .....   | 18                    |
| Philosophy and/or religious studies .....                                | 12                    |
| Communication skills (SPE 101; ENG 101 and 102, or 114 or 198) .....     | 3-9                   |
| General education courses and academic electives to total at least ..... | 120                   |

<sup>1</sup>See also Distribution Table for Bachelor of Arts programs and Chapter V for General Education Requirements.

<sup>2</sup>May substitute MTH 207 or 215 for PSY 216. It is recommended that students who

have had fewer than 3 years of high school mathematics and/or are deficient in mathematics skills take MTH 107 before taking PSY 216.

<sup>3</sup>Courses exclusive of PSY.

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PROGRAM—S13: BACHELOR OF SCIENCE WITH A MAJOR IN  
PSYCHOLOGY (PSS)<sup>1</sup>

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|  | <i>Semester Hours</i> |
|--|-----------------------|
| Psychology requirements and electives .....                              | 34                    |
| PSY 101, 216 <sup>2</sup> , 217 .....                                    | 10                    |
| Select two courses from PSY 321, 322, 323, 422 .....                     | 6                     |
| Select two courses from PSY 341, 351, 361, 363 .....                     | 6                     |
| PSY electives .....  | 12-23                 |
| Natural sciences <sup>3</sup> .....                                      | 24                    |
| Mathematics 112 and 113 <sup>4</sup> .....                               | 6                     |
| Humanities <sup>5</sup> .....  | 9                     |
| Social and behavioral sciences <sup>6</sup> .....                        | 6                     |
| Philosophy and/or religious studies .....                                | 12                    |
| Communication skills (SPE 101; ENG 101 and 102, or 114 or 198) .....     | 3-9                   |
| General education courses and academic electives to total at least ..... | 120                   |

<sup>1</sup>See Distribution Table for All Bachelor of Science Programs and Chapter V for General Education Requirements.

<sup>2</sup>May substitute MTH 207 or 215 for PSY 216. It is recommended that students who have had fewer than 3 years of high school mathematics and/or are deficient in mathematics skills take MTH 107 before taking PSY 216.

<sup>3</sup>Two 3-sem.-hr. natural science courses (BIO, CHM, GEO, PHY) with accompanying laboratories are required. The remaining 16 sem. hrs. may be fulfilled by courses in BIO, CHM, GEO, PHY, and CPS courses as well as by MTH courses beyond the departmental MTH requirement.

<sup>4</sup>May substitute MTH 101 for MTH 112 and MTH 112 for MTH 113.

<sup>5</sup>See advisor since graduate study often requires a foreign language.

<sup>6</sup>Courses exclusive of PSY.

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## FACULTY

Kenneth J. Kuntz, *Chairperson*

*Professors:* Butter, DaPolito, Polzella

*Associate Professors:* Allik, Berg, Biers, Bower, Jacobson, Katsumaya, Kimble, Korte, Kuntz

*Assistant Professors:* Champney, Fine

*Adjunct Faculty:* Kennedy, Rueth, Szoke, Thornton

## COURSES OF INSTRUCTION

PSY 101. INTRODUCTORY PSYCHOLOGY: Study of human behavior including development, motivation, emotion, personality, learning, perception; general application of psychological principles to personal, social, and industrial problems. Students must participate in departmental research. 3 sem. hrs.

PSY 216. ELEMENTARY STATISTICS: Basic probability and applied statistics: 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 MTH 107 or equivalents. 3 sem. hrs.

**PSY 217. EXPERIMENTAL PSYCHOLOGY:** Basic concepts of scientific methods as applied to psychological problems. Experiments to familiarize students with application of scientific methodology to study of human psychological processes. Required of all psychology majors. Prerequisites: PSY 101, 216. *4 sem. hrs.*

**PSY 251. HUMAN GROWTH AND DEVELOPMENT:** Focuses on stages of human development from infancy through the aging adult. Emphasis is on various theoretical approaches and the development associated with each stage. Psychology majors may not take for credit toward major. Prerequisite: PSY 101. *3 sem. hrs.*

**PSY 321. COGNITIVE PROCESSES:** Information-processing approach to attention, perception, memory imagery, and thought. Theoretical structures including neuron modeling of higher cognitive and experimental process. Prerequisite: PSY 101. *3 sem. hrs.*

**PSY 322. LEARNING:** Foundations of the learning process. Classical instrumental paradigms and variants of each considered prior to investigations of complex learning. Prerequisite: PSY 101. *3 sem. hrs.*

**PSY 323. PSYCHOLOGY OF PERCEPTION:** Introduction to major theoretical and experimental work in perception, including visual, auditory, proprioceptive, and other sensory systems. Prerequisite: PSY 101. (Also PSY 529.) *3 sem. hrs.*

**PSY 333. PSYCHOLOGICAL TESTS AND MEASUREMENTS:** Survey of major tests of intelligence, aptitude, interest, and personality presently used in clinics, schools, personnel offices, and research settings. Emphasis on evaluation and comparison, rationale of construction, ethical considerations. Prerequisites: PSY 101, 216 or equivalent. *3 sem. hrs.*

**PSY 334. INDUSTRIAL PSYCHOLOGY:** Introduction to modern efforts to improve human performance in industrial organization and society; selection and placement of employees, morale, training, and incentives. Prerequisite: PSY 101. *3 sem. hrs.*

**\*PSY 341. SOCIAL PSYCHOLOGY:** Survey of major theoretical and experimental work in the field; attitudes, conformity, emotions, group dynamics. Prerequisite: PSY 101. *3 sem. hrs.*

**PSY 344. INTERPERSONAL RELATIONS:** Social psychological research in nonverbal behavior, social exchange, self-disclosure, and interpersonal attraction and how these are related to developing relationships. Prerequisite: PSY 101. *3 sem. hrs.*

**PSY 351. CHILD PSYCHOLOGY:** Study of psychological processes from the developmental point of view; changes in perception, cognition, emotion, and social behavior from infancy to adolescence. Prerequisite: PSY 101. *3 sem. hrs.*

**PSY 352. FIELD EXPERIENCE IN CHILD PSYCHOLOGY:** Practical experience with a community agency providing instructional, recreational, or therapeutic services. Volunteer 3-5 hours weekly. Prerequisites: PSY 101 and previous or concurrent registration in PSY 351. Grade option 2 only. *1 sem. hr.*

**PSY 355. PSYCHOLOGY OF THE EXCEPTIONAL CHILD:** Survey of developmental theory and research related to childhood exceptionality, including major emotional disorders, giftedness, retardation, and the psychological implications of chronic physical illness and disorders of speech, vision, and hearing. Focus on etiology, identification, and intervention. Prerequisite: PSY 101. *3 sem. hrs.*

**PSY 361. PERSONALITY:** Introduction to the study of personality through theoretical views and clinical and experimental findings. Prerequisite: PSY 101. *3 sem. hrs.*

**PSY 363. ABNORMAL PSYCHOLOGY:** Patterns of disordered behavior; social, psychological, and physiological factors; theoretical explanations of abnormal behavior. Prerequisite: PSY 101. *3 sem. hrs.*

**PSY 364. PSYCHOTHERAPY:** Survey of current types of psychotherapy. Emphasis on similarities and differences in underlying theories of behavioral change and associated techniques. Prerequisite: PSY 101. *3 sem. hrs.*

**PSY 367. BEHAVIOR MODIFICATION:** Description of approaches to the modification of behavior integrating material from learning theory, abnormal behavior, and psychotherapy. Prerequisite: PSY 322 or equivalent. *3 sem. hrs.*

**PSY 368. INTRODUCTION TO HEALTH PSYCHOLOGY:** Survey of the application of psychology in health. Topics include psychophysiology and biofeedback, pain sensation, symptom perception, the psychological and social dimensions of health and illness, health decision making, and the influence of psychological and social support systems in health care utilization and in coping with stress and illness. Prerequisite: PSY 101 or equivalent. *3 sem. hrs.*

**PSY 405. COMPUTER APPLICATION IN PSYCHOLOGY:** Review of basic computing concepts and a computer language (BASIC, FORTRAN or Pascal). Use of computers by psychologists in statistical analysis, in everyday work, in the study of psychological principles; application of psychology to the design of computer systems. Prerequisites: PSY 101, CPS 144, CPS 150; or permission of instructor. Majors only. *3 sem. hrs.*

**PSY 422. PHYSIOLOGICAL PSYCHOLOGY:** Neurophysiological analysis of attention, sensation, perception, emotion, motivation, and learning. Electrophysiological methods are discussed. Prerequisite: PSY 101. *3 sem. hrs.*

**PSY 423. COGNITIVE NEUROPSYCHOLOGY:** Relationship between diseases of the central nervous system and cognitive disorders; aphasic disorders of language and speech; disorders of perception; disorders associated with brain damage. Prerequisites: PSY 101 and permission of instructor. *3 sem. hrs.*

**PSY 431. INTERVIEWING AND COUNSELING:** Techniques and theories of interviewing and counseling. Practice through role playing and case study. Prerequisite: PSY 101 or permission of the instructor. *3 sem. hrs.*

**PSY 435. HUMAN FACTORS:** Essential psychological concepts and methods to improve use of human efforts and equipment. Principles governing design of equipment for human use. Prerequisite: PSY 216. *3 sem. hrs.*

**PSY 443. PSYCHOLOGY OF WOMEN:** Scholarly approach to current topics, which vary but may include sex role learning, images of women in the mass media, sex differences, and the feminist movement. Open to all interested students, male and female. Prerequisite: PSY 101. *3 sem. hrs.*

**PSY 452. COGNITIVE DEVELOPMENT IN CHILDREN:** Major approaches to the study of cognitive development; attentional and mediational development in children's learning, memory, and problem solving; language development and Piaget's theory. Prerequisite: PSY 351 or permission of instructor. (Also PSY 574.) *3 sem. hrs.*

**PSY 457. TELEVISION AND ITS EFFECTS ON CHILDREN:** Readings in psychological research on the broad effects of television on children. Emphasis on analyzing and evaluating the research. Prerequisite: PSY 101. *3 sem. hrs.*

**PSY 461. CURRENT IMPLICATIONS OF DRUG DEPENDENCY:** Survey of effects, symptoms, treatment, casualties, and myths associated with drug use and abuse. Emphasis on existing treatment methods and psychological implications of drug dependency. Prerequisite: PSY 101. *3 sem. hrs.*

**PSY 462 HUMAN SEXUAL BEHAVIOR:** Psychological factors in human sexuality; psychosexual development, causes and treatments of sexual dysfunction, variations and deviations in sexual behavior. *3 sem. hrs.*

**\*PSY 471. HISTORY OF PSYCHOLOGY:** The evolution of psychology from its origins in philosophy, science, clinical, and applied settings. Emphasis on integrating these systems and schools of thought with modern psychology. Prerequisite: PSY 101 or permission of instructor. (Also PSY 526.) *3 sem. hrs.*

**PSY 493. INDEPENDENT STUDY:** Problems of special interest investigated under faculty direction. Area and criteria for evaluation to be specified prior to registration. May be repeated for up to 6 sem. hrs. Prerequisite: Permission of instructor. *1-6 sem. hrs.*

**PSY 494. READINGS IN PSYCHOLOGY:** Directed reading in a specific area of interest, under faculty supervision. Topic and criteria for evaluation to be specified prior to registration. May be repeated for up to 6 sem. hrs. Prerequisite: Permission of instructor. *1-6 sem. hrs.*

Note: A total of no more than 6 sem. hrs. of PSY 493 and/or PSY 494 may be counted toward the required 34 sem. hrs. for a psychology major.

**PSY 495. SPECIAL TOPICS IN PSYCHOLOGY:** Topics of special interest to faculty and students; intensive critical evaluation of appropriate literature. Prerequisite: Permission of the instructor. *1-3 sem. hrs.*

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\*General education course. See Chapter V.



## RELIGIOUS STUDIES (REL)

The Department of Religious Studies sees itself as a community of scholars serving the University community and the local community by teaching, research, criticism, and action. The main concern of the department is an understanding and elucidation of the Judaeo-Christian religious experience, as it is exemplified in the Roman Catholic tradition. This implies not only a deep investigation of the Roman Catholic position but also a dialogue with other Christian traditions and an exploration of the religious heritage of the human race.

The department realizes also that it cannot perform its function adequately if it isolates itself from other departments of the University. It, therefore, has engaged in and will seek to engage itself even more in interdisciplinary studies. The department, through its participation in the Sanders Judaic Studies Program, is able to offer special courses in this area.

Students majoring in religious studies must complete 36 semester hours in the Department of Religious Studies. A minimum of 24 semester hours are to be at the 300-400 level. At least 9 semester hours are to be at the 400 level. Students minoring in religious studies must complete 18 semester hours in the Department of Religious Studies. A minimum of 12 semester hours are to be at the 300-400 level. At least 3 semester hours are to be at the 400 level.

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### PROGRAM—A19: BACHELOR OF ARTS WITH A MAJOR IN RELIGIOUS STUDIES (REL)<sup>1</sup>

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|  | <i>Semester Hours</i> |
|--|-----------------------|
| Religious studies .....  | 36                    |
| a. One course in each of these four areas:                               |                       |
| Biblical studies   |                       |
| Historical theology  |                       |
| Systematic theology  |                       |
| Christian ethics—religion and culture                                    |                       |
| b. Electives   |                       |
| Natural science .....  | 7                     |
| Mathematics .....  | 3                     |
| Social and behavioral sciences .....                                     | 12                    |
| Humanities .....   | 18                    |
| Foreign language <sup>2</sup> .....                                      | 6-8                   |
| Philosophy .....   | 9                     |
| Communication skills .....   | 3-9                   |
| General education courses and academic electives to total at least ..... | 120                   |

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<sup>1</sup>See also Distribution Table for Bachelor of Arts programs and Chapter V for General Education Requirements.

<sup>2</sup>Where appropriate, this credit may apply to the humanities breadth requirement.

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## FACULTY

Rev. James L. Heft, S.M., *Chairperson*

*Professors:* Boulet, Burns, Friedland, Frost, Kohmescher, L'Heureux, T. Martin, Roberts

*Associate Professors:* Anderson, Barnes, Hater

*Assistant Professors:* Doyle, Heft, Kozar, J. Martin, Thimmes, Zukowski

## COURSES OF INSTRUCTION

Courses of instruction in religious studies are classified as follows:

I. *History of Religions*

- REL 201 Religions of the World I
- \*REL 202 Religions of the World II
- REL 301 The New Religions
- REL 305 Ancient Near Eastern Religions
- REL 307 Judaism
- REL 406 Jewish Thought
- REL 408 Issues in the History of Religions

II. *Biblical Studies*

- \*REL 211 The Old Testament in Modern Study
- \*REL 212 The New Testament in Modern Study
- REL 311 Religion of Israel
- REL 316 Synoptic Gospels
- REL 317 Studies in St. John
- REL 318 Studies in St. Paul
- REL 411 The Prophets
- REL 418 Biblical Issues

III. *Historical Theology*

- REL 322 History of Early Christianity
- REL 326 Protestant Christianity
- REL 327 American Religious Experience
- REL 428 Issues in Historical Theology

IV. *Systematic Theology*

- \*REL 140 Catholicism Today
- \*REL 146 Dynamics of Religion
- REL 340 The Church—A Catholic Understanding
- REL 341 Significance of Jesus
- REL 343 The Sacraments—Mysteries of Christ
- REL 349 Search for Immortality
- REL 356 The Christian Tradition of Prayer
- REL 438 Contemporary Theologies
- REL 441 Theology of Mary
- REL 442 Problem of God
- REL 445 Issues of the Church Today
- REL 447 Selected Catholic Doctrines
- REL 448 Issues in Theology
- REL 450 Religion and Science

V. *Christian Ethics—Religion and Culture*

- \*REL 150 Religion and Values
- \*REL 265 Christian Ethics
- REL 362 Christian Family Values and Television
- REL 364 Current Moral Issues
- REL 365 Christian Marriage
- REL 367 Christian Ethics and the Health Care Professions
- REL 368 Christian Ethics and the Business World
- REL 372 Religion and Film
- REL 373 Religion and Literature
- REL 374 Religion and Art
- REL 463 Peace and Justice
- REL 466 Theology of Sexuality
- REL 478 Religion and Culture

VI. *Religious Education*

- REL 383 Philosophy of Religious Education
  - REL 484 Practicum
  - REL 487 Teaching in Religious Education
  - REL 488 Spirituality and Religious Education
- 

- \*REL 140. CATHOLICISM TODAY: General introduction to current theological thinking on Catholic belief and practice. 3 sem. hrs.
- \*REL 146. DYNAMICS OF RELIGION: Introductory description and analysis of the origins and functions of various forms of religion, including their effects on individuals and cultures. 3 sem. hrs.
- \*REL 150. RELIGION AND VALUES: A study of the religious experience in various periods and various religious movements. Analysis and evaluation of the ordinary rather than the extraordinary experience of religiousness. 3 sem. hrs.
- REL 201. RELIGIONS OF THE WORLD I: Introduction to Far Eastern religious traditions, in particular Hinduism, Buddhism, Confucianism, Taoism, and Shintoism. 3 sem. hrs.
- \*REL 202. RELIGIONS OF THE WORLD II: Introduction to religions originating in the Near East, in particular Zoroastrianism, Judaism, Christianity, and Islam. 3 sem. hrs.
- \*REL 211. THE OLD TESTAMENT IN MODERN STUDY: Introduction to the historical and prophetic literature of the Old Testament, surveyed in the light of contemporary historical, literary, and form-critical methodologies. 3 sem. hrs.
- \*REL 212. THE NEW TESTAMENT IN MODERN STUDY: Introduction to selected books of the New Testament, surveyed in the light of contemporary historical, literary, form-critical, and redaction-critical methodologies. 3 sem. hrs.
- \*REL 265. CHRISTIAN ETHICS: Introduction to the reflection upon Christian morality; discussion of various approaches in Christian ethics, the elements of ethical judgments, and some specific ethical issues. 3 sem. hrs.



REL 301. THE NEW RELIGIONS AND PERSONAL TRANSFORMATION: Experiential and holistic approach to contemporary movements that use ideas and techniques of Eastern religions to promote personal growth and transformation.

3 sem. hrs.

REL 305. ANCIENT NEAR EASTERN RELIGIONS: Examination of the religions of the ancient Near East, with special attention to their relation to the Old Testament.

3 sem. hrs.

REL 307. JUDAISM: Basic introduction to Judaism: its history, its faith, its worship.

3 sem. hrs.

REL 311. RELIGION OF ISRAEL: 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; biblical traditions against the background of Ancient Near Eastern history and religion.

3 sem. hrs.

REL 316. SYNOPTIC GOSPELS—EARLY LIVES OF JESUS: Each of the Synoptic Gospels offers a distinct view of the life and ministry of Jesus. Comparison of the Markan, Matthean, and Lukan interpretations of the person of Jesus, his function in the community, and his message to the people.

3 sem. hrs.

REL 317. STUDIES IN ST. JOHN—REALIZATION OF HOPE: The Gospel of John proclaims the total fulfillment of God's promises and human expectations in Jesus Christ. Analysis of the theological argumentations of the fourth gospel and the significance of the Johannine position in view of the theology of hope.

3 sem. hrs.

REL 318. STUDIES IN ST. PAUL—MODELS OF SALVATION: St. Paul's theology as the product of a man who was exposed to a diversity of religions, cultures, and ideologies. Discussion of topics, motifs, symbols, and structures in Pauline theology to disclose numerous possibilities for a Christian approach to life and death.

3 sem. hrs.

REL 322. HISTORY OF EARLY CHRISTIANITY: Examination of the formative years of the early Christian Church (AD 30-130) in the context of political, social, and economic developments of the time.

3 sem. hrs.

REL 326. PROTESTANT CHRISTIANITY: Survey of the development of Protestant thought from the Reformation.

3 sem. hrs.

REL 327. AMERICAN RELIGIOUS EXPERIENCE: American Christianity, Protestant and Catholic, in American culture past and present: origins and expansion of American churches and the roles these churches have played in shaping American culture.

3 sem. hrs.

REL 340. THE CHURCH—A CATHOLIC UNDERSTANDING: A biblical and theological study of the meaning of the Church which explores the relationship between Christ and the Church, the various models for understanding the Church, and the mission of the Church.

3 sem. hrs.

REL 341. SIGNIFICANCE OF JESUS: Historical discussion of what has been thought about the person and significance of Jesus in the past, with emphasis on modern assessments of Jesus.

3 sem. hrs.

REL 343. THE SACRAMENTS—MYSTERIES OF CHRIST: A study of the meaning of sacramentality. The sacraments in the context of Christ as the sacrament of the human encounter with God and in the context of the Church as the sacrament of Christ.

3 sem. hrs.

REL 349. SEARCH FOR IMMORTALITY: An examination of how other disciplines regard the question of immortality and a theological evaluation of their insights.

3 sem. hrs.

REL 356. THE CHRISTIAN TRADITION OF PRAYER: Study of several types and forms of Christian prayer from various periods in Church history. The meaning of the act of faith expressed in prayer and its relationship to belief.

3 sem. hrs.

REL 362. CHRISTIAN FAMILY VALUES AND TELEVISION: Comparative study of the criteria and rationale for family life in various Christian pronouncements with present values and practices in society as reflected in and promoted by current television programming.

3 sem. hrs.

REL 364. CURRENT MORAL ISSUES: An examination of one or more issues (individual and/or social) in contemporary reflection on Christian moral life. May be repeated when topic changes.

3 sem. hrs.

REL 365. CHRISTIAN MARRIAGE: Analysis of the sanctifying dignity of Christian marriage as a sacrament and commitment to share in the divine creative plan.

3 sem. hrs.

REL 367. CHRISTIAN ETHICS AND THE HEALTH CARE PROFESSIONS: Study of, and reflection upon, the principles of Christian ethics as these relate to the health care professions.

3 sem. hrs.

REL 368. CHRISTIAN ETHICS AND THE BUSINESS WORLD: Study of, and reflection upon, the principles of Christian ethics as these relate to the business world.

3 sem. hrs.

REL 372. RELIGION AND FILM: Study of issues common to narrative films and religious thought; the power of various film techniques, dominant models in religious and film reflection, the similar roles imagination plays in film and religious thought.

3 sem. hrs.

REL 373. RELIGION AND LITERATURE: Joint study of literature and religion, seeking the sacred in the secular, discussing the doctrines of man and of God in major modern writings, especially those of current collegiate interest.

3 sem. hrs.

REL 374. RELIGION AND ART: Investigation into the relationship between religion and art, treating Renaissance and post-Renaissance painting and sculpture as vehicles and manifestations of Christian apocalyptic and humanist world-views at given times. Basic literary sources of Christian art and effects of secularization on Christian art.

3 sem. hrs.

REL 383. PHILOSOPHY OF RELIGIOUS EDUCATION: An attempt to construct a philosophy of religious education; various contemporary theoretical models, dimensions of teaching religion in a pluralistic society, the polarization generated.

3 sem. hrs.

REL 392. SPECIAL QUESTIONS: Examination of issues pertinent to religion in either one or a series of courses. May be repeated when topic changes.

1-3 sem. hrs.

REL 399. READINGS IN RELIGIOUS STUDIES: Directed readings in a specific area of interest under the supervision of a staff member. May be taken more than once. By permission only. *1-3 sem. hrs.*

REL 406. JEWISH THOUGHT: 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. *3 sem. hrs.*

REL 408. ISSUES IN THE HISTORY OF RELIGIONS: Examinations of current issues in the study of the history of religions. May be repeated when topic changes. *3 sem. hrs.*

REL 411. THE PROPHETS—RADICAL TRADITIONALISTS: The prophetic traditions of the Old Testament as an attempt to say that tradition can function in times of crisis. An attempt to understand the prophets and to question their contemporary validity. *3 sem. hrs.*

REL 418. BIBLICAL ISSUES: Examination of specific biblical themes, motifs, problems, and traditions. May be repeated when topic changes. *3 sem. hrs.*

REL 428. ISSUES IN HISTORICAL THEOLOGY: Examination of a specific issue in the development of Christian thought, such as Fathers of the Church, Reformation Theology, Modernism, and Vatican II. May be repeated when topic changes. *3 sem. hrs.*

REL 438. CONTEMPORARY THEOLOGIES: 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 topic changes. *3 sem. hrs.*

REL 441. THEOLOGY OF MARY: Study of the place of the Mother of God in the great truths of faith in the light of chapter eight of the Constitution on the Church. *3 sem. hrs.*

REL 442. PROBLEM OF GOD: 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 humanity. *3 sem. hrs.*

REL 445. ISSUES OF THE CHURCH TODAY: 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 topic changes. *3 sem. hrs.*

REL 447. SELECTED CATHOLIC DOCTRINES: Detailed study of several important current theological questions primarily from a Catholic systematic and historical perspective. *3 sem. hrs.*

REL 448. ISSUES IN THEOLOGY: Examination of an issue or theme of Christian faith in the light of modern knowledge and sensibilities, such as faith and doubt, or theology of death. May be repeated when topic changes. *3 sem. hrs.*

REL 450. RELIGION AND SCIENCE: Survey of the ways science has affected religion on specific doctrines, methods of knowing what is true, and general world views; study of religious response to these. *3 sem. hrs.*

REL 463. PEACE AND JUSTICE: Detailed investigation of various aspects of the relationship between peace and justice, including the dynamics of institutionalized injustice and analysis of it from the point of view of the Church's social teaching. Case studies. *3 sem. hrs.*

REL 466. THEOLOGY OF SEXUALITY: A study of sexuality as seen in the Judaeo-Christian tradition with emphasis on an understanding of recent theological approaches to sexuality and a theological critique of the findings presented by related disciplines. *3 sem. hrs.*

REL 478. RELIGION AND CULTURE: Examination of a specific issue in Western culture, especially American, in light of the Judaeo-Christian tradition, such as religion and music. May be repeated when topic changes. *3 sem. hrs.*

REL 484. PRACTICUM: Supervised in-service experience in an area of religious education chosen by the student. By permission only. *3 sem. hrs.*

REL 487. TEACHING IN RELIGIOUS EDUCATION: Study of religious education theory and practice for students who will be teaching religious education in the school and parish. Various models and methods of religious education. Emphasis on process and religious education as developmental. *3 sem. hrs.*

REL 488. SPIRITUALITY AND RELIGIOUS EDUCATION: Exploration of impact of liturgy and spirituality on contemporary models of religious education; study of inter-relationship between faith experience and religious content: basic principles for developing practical programs. *3 sem. hrs.*

REL 490. SEMINAR: Research projects and discussions to help students integrate their university studies and relate them to their own future. Senior majors. Others by permission. *3 sem. hrs.*

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\*General education course. See Chapter V.



## SELF-DIRECTED LEARNING (SDL)

Self-Directed Learning provides an opportunity for students to design courses 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, SDL offers students a wide range of options in both content and methods of learning. Students may earn from 6 to 17 semester hours per term in SDL, normally on the Satisfactory/No Credit grading option. Students may thus complement the usual college experience 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. They may take a problem-centered rather than a discipline-centered approach.

Regarding method: SDL 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 develop and evaluate the individual program and interpret the resultant learnings to the academic community.

Upon acceptance into the program, the SDL student registers for a block of ASI-SDL credit. At the end of the term, 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 semester hours of credit awarded in each area. Student rationales, which describe the work of the semester and justify the credit awarded, are kept on file.

SDL work, recorded as Arts and Sciences Interdisciplinary (ASI) credit and designated ASI-SDL, may earn general elective credit, be used to satisfy breadth requirements, or, with permission of appropriate chairpersons, be given departmental credit. See also ASI.

### STAFF

Bruce M. Taylor, *Director*  
Janet Kalven, *Associate Director*

## SOCIAL WORK (SWK)

The objectives of the social work program at the University of Dayton are (1) to provide opportunities for students to develop their intellectual and personal capacities for a value-committed, knowledge-based approach to social welfare issues, policies, and programs; (2) to offer a liberal-arts-based discipline that prepares students for graduate study in social work and for entry into the profession; (3) to provide opportunity for students to explore diverse life styles and achieve new knowledge and insights related to cultures, racial and ethnic groups, and value systems different from their own; (4) to prepare and motivate students to contribute to the identification and resolution of social problems.

The undergraduate social work program at the University of Dayton is fully accredited by the Commission on Accreditation of the Council on Social Work Education.

The program is designed to develop generalist practitioners who have the basic competencies for intervention in a variety of problem situations involving individuals, families, groups, organizations, and communities. The primary focus of the program is to educate and train generalist practitioners for urban settings.

The program is organized around a competency-based educational model. Specific learning objectives are stated for each course in the program and for the curriculum as a whole.

Students wishing to major or minor in social work are to consult with a social work faculty advisor. Students majoring in social work must complete a total of 47 semester hours in social work courses. Courses required include SWK 101, 201, 210, 320, 330, 337, 340, 350, 376, 377, 431, 432, and two social work electives. Those wishing to minor in social work must complete SWK 101 and 12 semester hours of upper-level social work courses and their prerequisites.

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### PROGRAM—S14: BACHELOR OF SCIENCE WITH A MAJOR IN SOCIAL WORK (SWK)<sup>1</sup>

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|  | <i>Semester Hours</i> |
|--|-----------------------|
| SWK 101, 201, 210, 320, 330, 337, 340, 350, 376, 377, 431, 432.....          | 41                    |
| SWK electives .....  | 6                     |
| Communication skills (ENG 101-102, SPE 101) .....                            | 3-9                   |
| Natural sciences (BIO 114, 395, with laboratories) .....                     | 8                     |
| Mathematics-computer science (at least 3 sem. hrs. MTH) .....                | 6                     |
| Social and behavioral sciences (POL 201; PSY 101, 251; 3 sem. hrs. SOC)..... | 12                    |
| Philosophy and/or religious studies .....                                    | 12                    |
| General education courses and electives to total at least.....               | 120                   |

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<sup>1</sup>Consult General Requirements for All Bachelor of Science Programs and Chapter V for General Education Requirements.

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## FACULTY

Sandra K. Moore, *Acting Director*

*Associate Professor: McDonald*

*Assistant Professors: Moore, Ruffolo*

*Part-Time Instructors: Axiotes, Caplan*

## COURSES OF INSTRUCTION

**\*SWK 101. SOCIAL WELFARE AND SOCIETY:** Study of the emergence of social welfare in contemporary society. Concept, structure, and functions of social welfare with emphasis on interrelationships among social systems; overview of current social welfare programs and a model for analysis of social services. *3 sem. hrs.*

**SWK 201. INTRODUCTION TO SOCIAL WORK PRACTICE:** The knowledge, values, and skills utilized by the social worker. Introduction to a generalist framework of practice and the problem-solving process in preparation for intervention with client systems, especially with ethnic and racial minorities in urban settings. An agency observational experience is required. Prerequisite: SWK 101. *4 sem. hrs.*

**SWK 210. BASIC HELPING SKILLS IN SOCIAL WORK PRACTICE:** Knowledge and skills essential to the social work helping process. Basic social work competencies in report writing, recording, introductory interviewing techniques, and the establishment of the professional relationship. Major emphasis on self-awareness and the professional use of self. Prerequisites: SWK 101, 201. *3 sem. hrs.*

**SWK 320. ADVANCED SOCIAL WORK PRACTICE I:** A variety of social work processes with opportunity to develop skill in choosing appropriate intervention strategies. Practice in implementing various models for working with client systems (individuals, families, and groups) in an urban setting. Prerequisites: SWK 101, 201, 210. *3 sem. hrs.*

**SWK 324. CHILD WELFARE SERVICES:** Scope, problems, and trends in social welfare services to children. The role of the social worker in protective service, foster care, adoption, group and institutional settings. Children's rights, permanent planning for children, and child advocacy. Prerequisite: SWK 101 or permission of director. *3 sem. hrs.*

**SWK 330. SOCIAL WELFARE AND SOCIAL WORK IN A PLURALISTIC SOCIETY:** Understanding of and appreciation for ethnic, racial and cultural diversity in a pluralistic society. The commonalities and differences in families and communities and the impact of racism on social work practice. Emphasis on the urban community. Prerequisites: SWK 101, 201, 210. *3 sem. hrs.*

**SWK 333. LEGAL ASPECTS OF SOCIAL WORK:** Orientation to the legal system as it affects the provision of human services and the profession; social legislation and court decisions as they affect child welfare, public assistance, mental health, housing, and probation and parole services. Prerequisite: SWK 101 or permission of director. *3 sem. hrs.*

**SWK 337. SOCIAL WELFARE POLICY AND SERVICES:** Study of how social welfare policies are developed and translated into social services. A framework for analysis applied to specific social policies. The role of the social work practitioner in analyzing and planning for social welfare. Prerequisites: SWK 101, 201, 210. *3 sem. hrs.*

**SWK 339. CHILD ABUSE:** Comprehensive study of child abuse: its history, scope, causal factors, indicators for detection, treatment resources and modalities, and community responsibility. Prerequisite: SWK 101 or permission of director. *3 sem. hrs.*

**SWK 340. ADVANCED SOCIAL WORK PRACTICE II:** Social work intervention strategies with organizations and communities; emphasis on skills needed for practice in an urban community. Prerequisites: SWK 101, 201, 210. *3 sem. hrs.*

**SWK 350. HUMAN BEHAVIOR AND THE SOCIAL ENVIRONMENT:** Synthesis of theory and concepts from the biological, behavioral, and social sciences. Specific content from the cultural, social, and biopsychological systems integrated with the social work systems model and the implications for social work practice. Prerequisites: SWK 320, 340, all extra-departmental requirements for HBSE sequence. *3 sem. hrs.*

**SWK 376. RESEARCH IN SOCIAL PROBLEMS:** Empirical research methodology and statistics. Study of research design and statistical analysis; proposal writing and appropriate computer usage. Prerequisites: SWK 101, 201. *3 sem. hrs.*

**SWK 377. SOCIAL WORK RESEARCH:** Evaluation of social work practice and social welfare programs: program evaluation methods, social welfare policy research, proposal writing, and planning and evaluation of social welfare delivery systems. Prerequisite: SWK 376. *3 sem. hrs.*

**SWK 422. PARENTING: SOCIAL WELFARE ROLE:** Comprehensive study of historical and contemporary perspectives on parenting, future of parenting (assessing trends and choices in family structure and function), cross-cultural comparisons, policy and legal aspects of parenting, societal influences on parenting. Prerequisite: SWK 101 or permission of director. *3 sem. hrs.*

**SWK 431. FIELD EXPERIENCE AND SEMINAR I:** Practicum in which senior students demonstrate competencies learned in the classroom. Minimum of 15 hours of work per week in selected social agency under professional supervision. Concurrent with 15 hours of seminar. Open only to majors. Prerequisite: SWK 350. *5 sem. hrs.*

**SWK 432. FIELD EXPERIENCE AND SEMINAR II:** Practicum providing further opportunity to apply social work knowledge, values, and skills. Minimum of 15 hours of work per week in selected social agency under professional supervision. The final stage in preparation for beginning social work practice. Open only to majors. Prerequisite: SWK 431. *5 sem. hrs.*

**SWK 443. DEATH, DYING, AND SUICIDE:** Study of the phenomena of death and dying. The role and responsibility of the professional in working with the dying and their survivors. Study of suicide in this society. Open only to third- and fourth-year students. Second term each year. Elective credit. Prerequisite: SWK 101 or permission of director. *3 sem. hrs.*

**SWK 455. SOCIAL SERVICES IN THE HEALTH FIELD:** The role of social services in health care facilities and governmental health programs. U.S. health care policies and programs; methods of social work intervention in medical settings. Elective credit. Prerequisite: SWK 101 or permission of director. *3 sem. hrs.*

**SWK 465. INDEPENDENT STUDY:** Individual research, study, and readings on specific topics and/or projects of importance to social work practitioners, supervisors, and administrators. Under individual faculty direction. Prerequisite: Permission of program director. *3 sem. hrs.*

**SWK 499. SPECIAL TOPICS:** Exploration of special topics related to the field of human services. Assessment of appropriate literature and research. May be repeated as topics change. Prerequisite: Permission of director. *1-3 sem. hrs.*

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\*General education course. See Chapter V.



## SOCIOLOGY (SOC)

Sociology is the scientific study of social groups. Since groups come in all shapes and sizes, the subject matter of sociology ranges from the briefest of two-person interactions to the most enduring features of culture and society. The job of sociology is to look beyond the fragmented experience of individuals to the underlying structure and processes of society.

The objectives of the department are to develop analytical and critical skills, theoretical and factual information, and research methodology for future employment or graduate study.

Students majoring, minoring, or electing courses in the department do so for a variety of reasons. Some desire knowledge of social and cultural relationships as part of their general education. Others are planning careers in public service professions, human and community relations, or social research or planning. Others intend to pursue graduate work in sociology or anthropology.

Students intending to major or minor in sociology should consult with the departmental chairperson to plan their program of courses. Majors in sociology must complete 36 semester hours of course work in the department, 24 of which must be at the 300 or 400 level. We recommend that students begin the program of study with one of the following courses: SOC 101, SOC 204, or ANT 150. The requirements for majoring in sociology are stated in the outline below. A minor in sociology requires 15 semester hours of courses in the department, with at least 12 of those at the 300-400 level.

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### PROGRAM—A20: BACHELOR OF ARTS WITH A MAJOR IN SOCIOLOGY (SOC)<sup>1</sup>

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|  | <i>Semester Hours</i> |
|--|-----------------------|
| Sociology: Entry-level course <sup>2</sup> ; SOC 208, 303, 308, 308L, 409; ANT 300 ..... | 16                    |
| Sociology electives <sup>3</sup> .....   | 20                    |
| Philosophy and/or religious studies .....  | 12                    |
| Communication skills .....   | 3-9                   |
| Natural science .....  | 7                     |
| Mathematics .....  | 3                     |
| Social and behavioral science .....  | 12                    |
| Humanities .....   | 18                    |
| General education courses and academic electives to total at least .....                 | 120                   |

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<sup>1</sup>See also Distribution Table for Bachelor of Arts programs and Chapter V for General Education Requirements.

<sup>2</sup>All freshman students should take either SOC 101, SOC 204, or ANT 150. All sophomore-level students or above should consult with the chairperson for the appropriate first course.

<sup>3</sup>For the major, at least 24 sem. hrs. must be upper level (300-400) with no more than 12 of the 24 sem. hrs. in upper-level anthropology courses.

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For students wishing to focus their studies, the department offers two areas of concentration, in human relations and community relations. Human relations analyzes topics and issues affecting interpersonal communication and small groups. Students concentrating in human relations normally plan careers in human service organizations and commerce, in areas that require an understanding of interpersonal influence, small group dynamics, individual and group relationships, and interpersonal communication processes. Human relations specialists assist people experiencing difficulties with personal problems, substance abuse, interpersonal relationships, and other problems where individual and small group counseling is useful.

Community relations deals with social issues and problems affecting groups and communities. Students concentrating in community relations usually plan careers in community organizations and social service agencies, in areas that require a grasp of the nature of group relations, public opinion, and social change. Community relations specialists organize groups concerned with social problems, facilitate constructive relations among community groups, make referrals to community resources, and cooperate with other organizations in long-range community planning.

### *I. Human Relations*

Students are required to take

SOC 341, Self and Society; SOC 345, Small Group Dynamics; and any three of the following:

- SOC 325 Deviant Behavior
- SOC 331 Marriage and the Family
- SOC 340 Principles of Sociological Social Psychology
- SOC 342 Collective Behavior
- SOC 444 Interaction Processes
- ANT 310 Culture and Personality
- ANT 315 Language and Culture

In consultation with the student's advisor, other appropriate courses may be substituted for courses in the above list.

### *II. Community Relations*

Students are required to take

SOC 336, Organizations in Modern Society; SOC 351, Cities; and any three of the following:

- SOC 322 Sex Roles and Society
- SOC 323 Juvenile Delinquency
- SOC 327 Criminology
- SOC 328 Racial and Ethnic Minorities
- SOC 333 Industry and Society
- SOC 335 Social Implications of Aging
- SOC 339 Social Inequality
- SOC 343 Mass Communication in Modern Society
- ANT 335 Urban Anthropology
- ANT 406 Cultural Change

In consultation with the student's advisor, other appropriate courses may be substituted for courses in the above list.

## FACULTY

Patrick G. Donnelly, *Chairperson, Department of Sociology and Anthropology*  
Professor: Huth

Associate Professors: Bregenzer, L. Majka, T. Majka, Miller, Saxton

Assistant Professors: Donnelly, H. Pestello

Instructor: F. Pestello

## COURSES OF INSTRUCTION

SOC 101. PRINCIPLES OF SOCIOLOGY: Study of social groups, social processes, and society; the individual's relationship to society, social structure, social inequality, ethnic minorities, cities and human populations, and social institutions such as the family, education, religion, and government. 3 sem. hrs.

\*SOC 204. MODERN SOCIAL PROBLEMS: Course to familiarize nonsociology majors with contemporary problems in society; historical development, current status, and analysis of problems, using modern social theories. Content may vary from section to section. 3 sem. hrs.

SOC 208. SOCIAL INQUIRY: THE EMPIRICAL APPROACH: Description and analysis of the nature, use, and interrelationship of theory, theoretical problems, research questions, methods of empirical observation, and elementary data analysis techniques. 3 sem. hrs.

SOC 303. MODERN SOCIAL THEORY: Consideration of the works of modern theorists and major trends in the history of social thought. 3 sem. hrs.

SOC 304. EVALUATION RESEARCH METHODS: Training for students of social intervention. Practice in the formation of evaluative questions and techniques for answering these questions with demographic, survey, experimental and observational methods. Prerequisite: SOC 208. 3 sem. hrs.

SOC 308. SOCIOLOGICAL RESEARCH METHODS: Advanced training in research problem formation, logic for research designs, measurement and sampling techniques, data gathering strategies, and data analysis and interpretation techniques. Prerequisite: SOC 208. Corequisite: SOC 308L. 3 sem. hrs.

SOC 308L. DATA ANALYSIS LABORATORY: Application of research design, measurement and sampling techniques, and data analysis and interpretation. Appropriate computer techniques taught as part of the course. Prerequisite: SOC 208. Corequisite: 308. 1 sem. hr.

SOC 321. THE SOCIOLOGY OF WORK AND OCCUPATIONS: Survey of the major features of work and occupations in industrial society. The meaning of work, occupational choice and recruitment, occupational socialization, career patterns, and occupational rewards. Unemployment, underemployment, sex-typing, automation and alienation. 3 sem. hrs.

SOC 322. SEX ROLES AND SOCIETY: Research findings and major analytical approaches to study social and cultural influences on the development of personal sexual identity and relationships between men and women. Major social issues concerning human sexuality. 3 sem. hrs.

SOC 323. JUVENILE DELINQUENCY: The environmental and internal factors that influence or determine delinquent behavior; roles of individual juvenile offenders, parents/guardians, school, church, police, business community, community agencies, and the juvenile justice and correctional system in preventing/treating delinquent behavior. 3 sem. hrs.

SOC 325. **DEVIANT BEHAVIOR:** Description of various types of deviant behavior; for example mental illness, alcoholism, drug addiction, the professional criminal. Study of explanations for the consequences and the role of deviant behavior in modern society. *3 sem. hrs.*

SOC 326. **LAW AND SOCIETY:** Study of the legal system and practices from a sociological point of view; the historical origin and role of the law in society, issues relating to the law as an instrument of social control and/or social change; analysis of the legal profession. *3 sem. hrs.*

SOC 327. **CRIMINOLOGY:** Social and cultural nature, origin, and development of law; criminal behavior; crime control. The influence of society in the creation and organization of legal and crime control systems. Biological, psychological, and sociological factors leading to criminal behavior. *3 sem. hrs.*

SOC 328. **RACIAL AND ETHNIC MINORITIES:** Study of the major immigrant and racial groups in the United States and other countries. Issues and problems related to their minority status in the dominant culture. *3 sem. hrs.*

\*SOC 331. **MARRIAGE AND THE FAMILY:** Historical, cross-cultural, and current study of social relationships during dating and courtship, interpersonal communication in marriage and family life, sexuality in marriage, adjustments in parenthood, divorce and remarriage, alternatives to traditional marriage, and the future of marriage and family life. *3 sem. hrs.*

SOC 332. **SOCIOLOGY OF WOMEN:** Cross-societal analysis of the position of women, with emphasis on industrialized and developing societies. The social positions of women and men in the family, work, politics, and the legal system. Consideration of theories of the biological, psychological, and sociological bases for the behavior and characteristics of women in the context of societal institutions. *3 sem. hrs.*

SOC 333. **INDUSTRY AND SOCIETY:** Social processes of industrialization; structure and characteristics of industrial society in the U.S.; past, present, and futuristic dimensions of industrial society; impact of industrialization on labor, management, government, family, community, and nation. *3 sem. hrs.*

SOC 334. **RELIGION AND SOCIETY:** Definitions of religion and its role in society. Traditional and nontraditional expressions of religious life from the viewpoint of society. Varieties of religious experience and the interrelations between religious phenomena and other social institutions and societal behavior. *3 sem. hrs.*

SOC 335. **SOCIAL IMPLICATIONS OF AGING:** Introduction to the study of the aged and the process of aging; mutual impact of society and the aged. *3 sem. hrs.*

SOC 336. **ORGANIZATIONS IN MODERN SOCIETY:** Analysis of the dynamics of organizations in modern industrial society. Topics include organizational social psychology, organizational structure and process, and organization-community relations. *3 sem. hrs.*

SOC 337. **POLITICAL SOCIOLOGY:** Analysis of politics and society; social origins of political economic systems; ideology and legitimation; political movements and social change. *3 sem. hrs.*

SOC 338. **EDUCATION AND SOCIETY:** Study of educational patterns in society; education as a socialization process, the role of schools in social change, and the relationship between the individual and the educational system. *3 sem. hrs.*

SOC 339. **SOCIAL INEQUALITY:** Study of social inequality in society. Emphasis on the processes that divide people into unequal groups based on wealth, status, and power. The effects of inequality on individual life chances and life styles. *3 sem. hrs.*

SOC 340. PRINCIPLES OF SOCIOLOGICAL SOCIAL PSYCHOLOGY: Survey of the basic principles, concepts, theories, and methods of social psychology from the sociological perspective. 3 sem. hrs.

SOC 341. SELF AND SOCIETY: Theoretical and methodological study of micro-sociological processes; socialization, self conceptualization, deviant behavior, mental illness, power and social influence. 3 sem. hrs.

SOC 342. COLLECTIVE BEHAVIOR: Study of social protest, crowds, social movements, revolution, fads, fashion, public opinion processes, propaganda, and political and social responses to these phenomena. 3 sem. hrs.

SOC 343. MASS COMMUNICATION IN MODERN SOCIETY: Social-psychological analysis of the structure and processes of mass communication related to advertising, patterns of social behavior, social change, propaganda, censorship, media control, and social institutions. 3 sem. hrs.

SOC 345. SMALL GROUP DYNAMICS: Study of small group structure and processes from a sociological point of view. Application of theoretical concepts and research findings to friendship groups, work groups, and family interaction. 3 sem. hrs.

SOC 350. NATIONAL AND WORLD POPULATION TRENDS: Causes and consequences of national and world population trends; impact of population change on society; impact of social change on birth rates, death rates, migration, population composition and distribution. 3 sem. hrs.

SOC 351. CITIES: URBAN COMMUNITIES, PROBLEMS, AND PLANNING: Concepts of community; the history of cities; the development and nature of urban-metropolitan society; metropolitan area structure, population characteristics, and life styles; approaches to major urban problems; models of urban planning in the U.S. and Europe. 3 sem. hrs.

SOC 392. SELECTED TOPICS IN SOCIOLOGY: Examination of a current topic of general interest in sociology. Majors and nonmajors may enroll. Consult composite for topics. May be repeated once as topic changes. 3 sem. hrs.

SOC 409. ADVANCED STUDY IN SOCIOLOGY: Intensive analysis of primary literature and recent developments in one of the following: Interpersonal Relations, Issues in Contemporary Society, Major Social Groupings, Urban Affairs and Population, Anthropology. Consult composite for term topic. May be repeated once as topic changes. Required for majors. Prerequisite: Permission of instructor. 3 sem. hrs.

SOC 439. SOCIAL CLASSES IN MODERN SOCIETY: Study of social classes, social inequality, social mobility, prestige, power, and class conflict in modern industrial societies. 3 sem. hrs.

SOC 444. INTERACTION PROCESSES: Advanced theoretical and methodological study of basic interaction processes that make up social life, including hypnosis, social influence (selling), negotiation, solidarity, competition, and conflict. 3 sem. hrs.

SOC 492. SPECIAL TOPICS IN SOCIOLOGY: Intensive examination of current theoretical or methodological issues; faculty-advised research project or library work. Consult composite for topics. May be repeated once as topic changes. Prerequisite: Permission of instructor. 1 to 6 sem. hrs.

SOC 498. INDEPENDENT STUDY: Research or special readings on problems of interest to the student under the guidance of sociology staff member. Prerequisite: Permission of the chairperson. 1 to 6 sem. hrs.

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\*General education course. See Chapter V.

## SPEECH (SPE)

Speech courses are offered by the Department of Communication. See requirements and other courses of instruction under COM.

### COURSES OF INSTRUCTION

**SPE 101. FUNDAMENTALS OF EFFECTIVE SPEAKING:** Introductory course in the fundamental skills of speaking. Development of self-confidence through speaking opportunities, with special attention to poise, vocal variety, physical animation, and the communication of ideas. *3 sem. hrs.*

**SPE 206. FUNDAMENTALS OF BROADCASTING:** Lectures dealing with broadcasting as a business and as a cultural influence; broadcast regulation, programming, and organization of typical radio and television stations. *3 sem. hrs.*

**SPE 300. VOICE AND DICTION:** The four phases of speech production: proper breathing, phonation, resonance, and articulation. Emphasis on projection, quality, and clarity of speech. Analysis of student's voice through tape recordings. *3 sem. hrs.*

**SPE 301. SPEECH WRITING:** 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. *3 sem. hrs.*

**SPE 303. RHETORIC OF SOCIAL MOVEMENTS:** Examination of the rhetoric of contemporary advocates through application of the basic elements of argumentation and persuasion. *3 sem. hrs.*

**SPE 310. ORAL INTERPRETATION:** Oral interpretation of poetry and prose, combining study of vocal modulations, pitch, inflection, and tone color with intellectual and emotional analysis of selections. *3 sem. hrs.*

**SPE 311. ADVANCED SPEAKING TECHNIQUES:** Oral communication in professional situations. Adaptation of principles of effective speaking to specific audiences and occasions. Delivery of informational, problem-solving, and special-occasion speeches. *3 sem. hrs.*

**SPE 312. PERSUASION:** Analysis of the motivations that lead to belief and action of individuals and audiences. Study in the techniques of persuasion. Delivery of speeches in application of the theory. *3 sem. hrs.*

**SPE 314. SURVEY OF NEW MASS COMMUNICATION TECHNOLOGIES:** Examination of issues related to development, economics, programming, and the future of new mass communication technologies. Prerequisite: SPE 206. *3 sem. hrs.*

**SPE 316. RADIO WORKSHOP:** Laboratory in radio production techniques, including tape recording and editing, commercial structure, basic broadcast performance, and directing techniques. Prerequisite: SPE 206. Studio fee. *3 sem. hrs.*

**SPE 320. ADVANCED ORAL INTERPRETATION:** A continuation of SPE 310. Additional study in the techniques of group performance. Prerequisite: SPE 310.

*3 sem. hrs.*

**SPE 329. TELEVISION PRODUCTION:** Intensive practice in preparation and production of television programs. Camera technique, floor set-ups, and direction of crews and talent demonstrated through participation in television shows. Prerequisite: SPE 316. Studio fee.

*3 sem. hrs.*

**SPE 410. BROADCAST NEWS:** Study of the process and practice of news gathering, analysis, rewriting, and editing for the broadcast media. Theoretical background and practical application, including historical, legal, and ethical concerns for broadcast news personnel. Prerequisite: JRN 206. Studio fee.

*3 sem. hrs.*

**SPE 412. BROADCAST COMMERCIAL COPYWRITING:** Study and application of principles of the differences between the two media as they affect commercial copy requirements. Prerequisite: SPE 206.

*3 sem. hrs.*

**SPE 414. BROADCAST AND CABLE PROMOTION.** Study of cable company-initiated strategies and techniques to promote programs, stations, or networks as a means of building audience or advertisers. Building positive images of cablecasting in communities and markets. Prerequisite: SPE 314.

*3 sem. hrs.*

**SPE 416. BROADCAST PROGRAMMING:** Study of the programming strategies and practices used by broadcast management for attracting television and radio audiences. Prerequisite: SPE 206.

*3 sem. hrs.*

**SPE 418. WRITING FOR ELECTRONIC MEDIA:** Study of concrete approaches to and practice with the kinds of writing being done professionally in all program types on television and radio. Prerequisite: SPE 206.

*3 sem. hrs.*

**SPE 419. BROADCASTING PERFORMANCE:** Participation in a selected series of broadcasting projects, including both radio and television performance. Prerequisites: SPE 316 and either 310 or 329. Studio fee.

*3 sem. hrs.*

**SPE 420. BROADCAST SALES:** Examination of the basic aspects of radio and television sales, including agencies, station and network sales, and related problems and careers. Prerequisite: COM 304.

*3 sem. hrs.*

**SPE 429. ADVANCED TELEVISION PRODUCTION AND DIRECTING:** Advanced principles and practice in television production and directing. Emphasis on the aesthetics involved in production of a visually appealing broadcast. Communication majors and minors only. Prerequisites: SPE 316, 329. Studio fee.

*3 sem. hrs.*

**SPE 450. RADIO AND TELEVISION STATION MANAGEMENT:** Study of the organization and administration of the radio and television staff and station; the manager's role as applied to personnel, programming, sales, engineering, finances, and regulations. Prerequisite: MGT 305.

*3 sem. hrs.*

## TEACHER CERTIFICATION

COLLEGE BACCALAUREATE PROGRAM WITH  
TEACHER CERTIFICATION (E11A)

Students enrolled in the College of Arts and Sciences may enroll in the teacher education program (E11A) of the School of Education without transferring to the School of Education. The E11A program is designed for those students in the College of Arts and Sciences who wish to pursue secondary-school teaching certification and a major program of studies concurrently. Students admitted to the program must satisfy all the requirements for the Bachelor of Arts or Bachelor of Science in the College as well as the requirements designated by the School of Education and the State of Ohio for secondary school certification.

Teaching fields represented in the College of Arts and Sciences are Art, Biological Science, Chemistry, Communications (concentration in English or Speech), Earth Science, English, General Science, History, Language (Latin, French, German, Spanish, Italian), Mathematics, Music, Physics, Political Science, Social Psychology, Sociology, Speech, Theology (Religious Studies).

The education courses below constitute a minor concentration in the College degree program. They are listed in the order in which students usually take them. For course descriptions see EDT, Chapter VIII.

*Semester Hours*

|         |   |     |
|---------|---|-----|
| EDT 109 | Personal Aspects of Teaching .....        | 2   |
| EDT 110 | The Profession of Teaching .....          | 2   |
| EDT 207 | Child and Adolescent in Education .....   | 3   |
| EDT 208 | Teaching and Learning .....               | 3   |
| EDT 318 | Human Relations in Education .....        | 2   |
| EDT 351 | Secondary School, Self, and Society ..... | 3   |
| — —     | Methods course (fall term only) .....     | 4   |
| EDT 469 | Reading in the Content Areas .....        | 2-3 |
| EDT 420 | Student Teaching: Secondary .....         | 12  |
| EDT 419 | Philosophy of Education .....             | 3   |

Application for admission to the program is made through the Office of the Dean of the College of Arts and Sciences after completion of the freshman year. Applicants should normally have a cumulative grade point average of at least 2.9 at the time of their application.

Counseling relative to the degree program is given by the student's major department; counseling relative to certification is given by the chairperson of the Department of Teacher Education or a designated advisor.



## THEATRE (THR)

The Theatre Division of the Department of Performing and Visual Arts offers a solid academic foundation and an extensive program of theatre productions, including major productions in Boll Theatre and student experimental work in the Studio Theatre. The curriculum includes acting, directing, stagecraft, lighting, design, history, and theory. Its purpose is to provide opportunities and facilities for education and training in and understanding of theatre.

Theatre majors are required to audition for and participate in each major production, for which they receive credit in THR 100 or 300. All roles and stage positions are open to the entire University student body.

A minor in theatre requires a total of 21 semester hours: 3 in THR 105, Introduction to the Theatre; 3 in THR 100 or 300, Theatre Laboratory; 3 in theatre history or theory; and 12 additional at the 200 level and above.

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PROGRAM—A21: BACHELOR OF ARTS WITH A MAJOR IN  
THEATRE (THR)<sup>1</sup>

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| <i>Dept.</i>                | <i>No.</i> | <i>Course</i>   | <i>Semester Hours</i> |           |
|-----------------------------|------------|---|-----------------------|-----------|
| Freshman Year <sup>2</sup>  |            |   | 1st Term              | 2nd Term  |
| THR                         | 099        | Freshman Seminar  | 0                     |           |
| THR                         | 105        | Introduction to the Theatre                             | 3                     |           |
| THR                         | 205        | Theatre Stagecraft                                      |                       | 3         |
| SPE                         | 101        | Fundamentals of Effective Speaking                      | 3                     |           |
| ENG                         | 101-102    | College Composition I and II                            | 3                     | 3         |
| —                           | —          | General education and breadth requirements <sup>3</sup> | 6                     | 9         |
|                             |            |   | <u>15</u>             | <u>15</u> |
| Sophomore Year <sup>2</sup> |            |   |                       |           |
| THR                         | 210        | Acting I  | 3                     |           |
| THR                         | 211        | Theatrical Movement I                                   | 2                     |           |
| THR                         | 330        | Concepts of Scene Design                                | 3                     |           |
| THR                         | —          | Major program elective                                  |                       | 3         |
| —                           | —          | General education and breadth requirements              | 7                     | 12        |
|                             |            |   | <u>15</u>             | <u>15</u> |
| Junior Year <sup>2</sup>    |            |   |                       |           |
| THR                         | 100-300    | Theatre Laboratory <sup>4</sup>                         |                       | 3         |
| THR                         | 325-326    | Theory and Criticism of the Stage I or II               | 3                     |           |
| THR                         | 340        | The Director in the Theatre                             |                       | 3         |
| THR                         | —          | Major program elective                                  | 3                     |           |
| MTH                         | —          | Mathematics requirement                                 |                       | 3         |
| —                           | —          | General education and breadth requirements              | 6                     | 3         |
| —                           | —          | General Electives                                       | 3                     | 3         |
|                             |            |   | <u>15</u>             | <u>15</u> |
| Senior Year <sup>2</sup>    |            |   |                       |           |
| THR                         | 415 or 425 | History of the Theatre I or II                          | 3                     |           |
| THR                         | 485 or 490 | Theatre Seminar or Special Problems in Theatre          | 3                     |           |
| THR                         | —          | Major program elective                                  |                       | 3         |
| —                           | —          | General electives                                       | 9                     | 12        |
|                             |            |   | <u>15</u>             | <u>15</u> |

|   | <i>Semester Hours</i> |
|---|-----------------------|
| Communication skills .....  | 3-9                   |
| Major Program—Required courses (including THR 100, 300) ....                  | 29                    |
| Theatre electives .....   | 9                     |
| Total in THR .....  | 38                    |
| Breadth requirements—Natural science .....                                    | 7                     |
| Mathematics .....   | 3                     |
| Social and behavioral science .....   | 12                    |
| Humanities .....  | 18                    |
| Philosophy and/or religious studies .....                                     | 12                    |
| Total breadth requirement .....   | 52                    |
| General education <sup>3</sup> and academic electives to total at least ..... | 120                   |

<sup>1</sup>See also Distribution Table for Bachelor of Arts programs and Chapter V for General Education Requirements.

<sup>2</sup>Theatre Laboratory (THR 100 or 300) credit is granted each student who fulfills the 50-hour work requirement on a major production. This credit is granted retroactively.

<sup>3</sup>Courses taken as part of the general education requirements may also fulfill the breadth requirement. Check with program advisor.

<sup>4</sup>Theatre majors have 3 sem. hrs. of THR 100 or 300 applied toward the major requirement.

## FACULTY

Patrick S. Gilvary, *Chairperson, Department of Performing and Visual Arts, and Head of Theatre Division*

*Professor:* Gilvary

*Assistant Professor:* Selka

*Part-time Instructors:* Anderson, Engel

## COURSES OF INSTRUCTION

**THR 100. THEATRE LABORATORY:** Credit allowance for role playing and/or play production in major productions. Fifty hours of work minimum for one sem. hr. of credit. Repeatable up to 3 sem. hrs. in freshman-sophomore years. All registration retroactive. No advance registration. Three sem. hrs. from THR 100 or 300 required of all majors. 1-3 sem. hrs.

**THR 103. THEATRE APPRECIATION:** Introduction to the art and artists of the theatre to enhance the nonspecialist playgoer's enjoyment of various productions. Open to all University students except theatre majors. 2 sem. hrs.

**\*THR 105. INTRODUCTION TO THE THEATRE:** Analysis of the nature of theatre, its origin, and development from the standpoint of the play, the physical theatre, and its place in our culture. Required of all majors. Open to all University students. 3 sem. hrs.

**THR 201. BASIC DANCE FOR THE PERFORMING ARTIST:** Beginning course in movement introducing the basic principles of dance and performance technique. Open to all University students. 2 sem. hrs.

**THR 202. STAGE MAKEUP:** The basic principles of the art and technique of makeup so that the student may use them in design and execution to develop and project the character. Open to all University students. First term. Studio fee. 2 sem. hrs.

**THR 205. THEATRE STAGECRAFT:** Study and application of scene construction, rigging, backstage organization, production analysis, and technician-designer relationship. Required of all majors. Open to all University students. Studio fee. First term. *3 sem. hrs.*

**THR 207. THEATRE LIGHTING:** Study and application of lighting for the stage: instrument, controls, sources, elements of electricity, and lighting design for all types of theatres, as well as graph representation. Studio fee. *3 sem. hrs.*

**THR 210. ACTING I:** The study and practice of basic techniques in rehearsal and performance. Emphasis on self-analysis and self-awareness. Development of basic skills in vocal, emotional, and mental interpretation of character. Prerequisite: THR 105 or permission. Corequisite: THR 211. Required of all theatre majors. Open to all University students. *3 sem. hrs.*

**THR 211. THEATRICAL MOVEMENT I:** Special attention to the physical requirements of acting for the stage: balance, flexibility, coordination, control, and endurance. The study and practice of nonverbal skills in character portrayal. Corequisite: THR 210. Required of all theatre majors. Open to all University students. *2 sem. hrs.*

**THR 251. HISTORY OF FILM I:** The Silent Cinema—Analysis of the international development of film and performance styles in the silent era, including history and criticism of major directors and actors. Selected film screenings. Studio fee. *3 sem. hrs.*

**THR 252. HISTORY OF FILM II:** The Sound Cinema—Analysis of the effects of sound technology on cinema, including history and analysis of major films from the end of the silent era to the present. Selected film screenings. Studio fee. *3 sem. hrs.*

**THR 261. BEGINNING JAZZ DANCE:** Beginning course in the theory and practice of jazz dance. No prerequisite. *2 sem. hrs.*

**THR 271. BEGINNING BALLET:** Beginning course in the theory and practice of classical ballet technique. No prerequisite. *2 sem. hrs.*

**THR 300. THEATRE LABORATORY:** The third- and fourth-year level of credit allowance for role playing and/or play production. Requirements and registration same as for THR 100. *1-3 sem. hrs.*

**THR 301. INTERMEDIATE DANCE FOR THE PERFORMING ARTIST:** Intermediate-level course in movement for students interested in further developing dance and performance technique. Prerequisite: THR 201. *2 sem. hrs.*

**THR 303. SCENE PAINTING:** Basic principles of color paint theory and materials. Investigation of various scene-painting techniques. One three-hour class meeting weekly. Studio fee. Prerequisite: Permission. *3 sem. hrs.*

**THR 323. ACTING II:** Further study and practice of techniques introduced in Acting I. Emphasis on interaction, ensemble, group processes, and scene study. Corequisite: THR 324. Prerequisites: THR 105, 210, 211 or permission. *3 sem. hrs.*

**THR 324. THEATRICAL MOVEMENT II:** Continuation of THR 211. Emphasis on interpreting and employing body language. Corequisite: THR 323. Prerequisites: THR 105, 210, 211 or permission. *3 sem. hrs.*

**THR 325. THEORY AND CRITICISM OF THE STAGE I:** Survey of representative plays from classical to neo-classical periods as a basis for theatrical production and dramatic criticism. Prerequisite: THR 105. (THR 325 or 326 required of all majors.) First term each year. *3 sem. hrs.*

THR 326. THEORY AND CRITICISM OF THE STAGE II: Continuation of THR 325 from romantic to modern periods. Prerequisite: THR 105. (THR 325 or 326 required of all majors.) Second term each year. 3 sem. hrs.

THR 330. CONCEPTS OF SCENE DESIGN: Studies in the principles of composition and aesthetic theory as applicable to scene design. Development of personal design approach to plays of various styles. Required of all theatre majors. 3 sem. hrs.

THR 340. THE DIRECTOR IN THE THEATRE: The basic functions of a director in the production of play: interpretation, composition, movement, characterization, rhythm, design concept, and actor training. Required of all theatre majors. Prerequisites: THR 105, 205, 210, 211, 330. 3 sem. hrs.

THR 350. THEATRE STYLES: Examination of the relationships among playwright, audience, actor, designer, and director in the development of major theatre styles of expression. First term each year and summer term alternate years. 3 sem. hrs.

THR 351. BASIC FILM PRODUCTION: Introduction to scripting, photography, editing, and unsynchronized sound. Participation in film projects using student actors; responsibility for an individual project from concept to screening. 3 sem. hrs.

THR 361. INTERMEDIATE JAZZ DANCE: An intermediate course in the theory and practice of jazz dance and technique. Prerequisite: THR 261 or equivalent. 2 sem. hrs.

THR 371. INTERMEDIATE BALLET: Intermediate course in the theory and practice of classical ballet technique. Prerequisite: THR 271 or equivalent. 2 sem. hrs.

THR 414. ADVANCED SCENE DESIGN: Individual development in scene design through intensive study in plays of various styles. Detailed representation of design ideas in rendering and models required. Prerequisites: THR 205, 207, 330. 3 sem. hrs.

\*THR 415. HISTORY OF THE THEATRE I: History of theatre from pre-Grecian through Elizabethan; the physical theatre as reflection of and influence on civilization. (THR 415 or 425 required of all majors.) Open to all University students. 3 sem. hrs.

THR 424. PLAY DIRECTING: Study of the evolution of the modern director and the direction of two one-act plays or one full-length play. Prerequisite: THR 340. Studio fee. 3 sem. hrs.

THR 425. HISTORY OF THE THEATRE II: Continuance of 415 from the Italian Renaissance to the modern theatre. (THR 415 or 425 required of all majors.) Open to all University students. 3 sem. hrs.

THR 440. PROBLEMS IN THEATRE PRODUCTION AND DESIGN: Individual research and project work of student's selection under the direct supervision of faculty. Repeatable up to 12 sem. hrs. Prerequisite: Permission. 3 sem. hrs.

THR 485. THEATRE SEMINAR: Concentration on one theatrical figure, genre, or period for research and analysis. (THR 485 or 490 required of all majors.) Second semester every other year. Repeatable up to 6 sem. hrs. 3-6 sem. hrs.

THR 490. SPECIAL PROBLEMS IN THEATRE: Individual research and report on topic of student's choice in the field of theatre under direct supervision of faculty/staff. (THR 485 or 490 required of all majors.) Repeatable up to 15 sem. hrs. 3-5 sem. hrs.

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\*General education course. See Chapter V.

## WOMEN'S STUDIES (WST)

The interdisciplinary minor in women's studies provides a timely academic concentration appropriate to many majors and useful in many fields. As an academic pursuit, women's studies attempts to compensate for the traditional omission from many curricula of the historical and contemporary contributions of women. It also looks to the future, intending to enhance the dignity, worth, and effectiveness of all women.

The minor in women's studies consists of 13 to 15 semester hours. It must include the interdisciplinary seminar ASI 228, Focus on Women, and 12 semester hours in upper-division courses (300-level or above). The following courses are among those offered.

|         |  |
|---------|--|
| ASI 228 | Focus on Women   |
| ART 377 | Women Artists  |
| COM 404 | Women in Communication                                 |
| EDP 540 | Women in Sport (may be taken for undergraduate credit) |
| ENG 214 | Fiction: Women Writers                                 |
| ENG 319 | Contemporary Fiction: Women Writers                    |
| ENG 324 | The Novel: Contemporary Women Novelists                |
| ENG 329 | The Short Story: Women Writers                         |
| ENG 333 | Images of Women in Literature                          |
| ENG 380 | Studies in Literature: Modern Women Poets              |
| HST 351 | American Feminism                                      |
| MGT 440 | Women in Management                                    |
| PHL 340 | Philosophical Issues in Feminism                       |
| PSY 443 | Psychology of Women                                    |
| REL 418 | Biblical Issues: Male-Female in the Biblical World     |
| REL 448 | Women and Religion                                     |
| SOC 322 | Sex Roles and Society                                  |
| SOC 332 | Sociology of Women                                     |
| SWK 499 | Women's Issues in Social Welfare                       |
| UDI 222 | Black Women in America                                 |
| UDI 225 | Rape: Breaking the Silence                             |
| UDI 226 | Women in Science                                       |
| UDI 243 | Women in the Economy                                   |

In addition, independent study courses and self-directed learning (SDL) courses may be applicable. Topics courses in various departments may be applicable if they are readily identifiable as pertinent to women's studies.

Any student who wishes to be recorded as minoring in women's studies should notify his or her dean and the director of women's studies.

### WOMEN'S STUDIES COMMITTEE

Lorraine M. Murphy (English), *Director of Women's Studies*  
 Jacobson (Psychology), Johnson (Philosophy), Kalven (Self-Directed Learning), May (History), E. Murphy (College of Arts and Sciences), Perkins (History), Schwelitz (Biology), Stockum (English)

