

## VI College of Arts and Sciences

Paul J. Morman, Dean

R. Gerald Keil, Associate Dean for Graduate and Administrative Affairs

Mary Jo Vesper, Associate Dean for Undergraduate and Student Affairs

Rae Ellen Huff, Assistant Dean

Sam F. Johnson, Assistant Dean

The College of Arts and Sciences affirms as its primary mission 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 students' legitimate career aspirations.

The faculty of the College of Arts and Sciences, therefore, encourage students to use 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:

Biochemistry	Geology	Physics
Biology	Human Ecology	Physics-Computer
Chemistry	Mathematics	Science
Computer Information	Medical Technology	Pre dentistry
Systems	Nuclear Medicine	Premedicine
Computer Science	Technology	Psychology
Criminal Justice	Physical Science	

Other programs leading to the bachelor's degree:

Fine Arts (B.F.A.)	Music Performance (B.Mus.)
General Studies (B.G.S.)	Music Therapy (B.Mus.)
Music (B.Mus.)	Photography (B.F.A.)
Music Education (B.Mus.)	Visual Communication Design (B.F.A.)

### Established Interdisciplinary Majors

American Studies, International Studies, and Premedicine-Pre dentistry 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.

## FOREIGN LANGUAGE REQUIREMENT

Any student admitted to the College of Arts and Sciences must have had two years of high school study of a single foreign language or make up the deficit at the University. The semester hours of credit received for making up this deficit will not count towards the total number of semester hours required for graduation.

## 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-A22 or the department chairperson or program director.

	<i>Semester Hours</i>
<i>Major Concentration</i> (with at least 24 semester hours at 300-400 level) .....	30-45
<i>Breadth Requirement</i> (See Distribution Table below.) .....	52-61
<i>General Education Requirements:</i> These courses may also be counted for other requirements where applicable. (See Chapter V.) .....	30
<i>Program and General Electives:</i> These courses must be external to the major discipline. Electives should be approved by the chairperson or dean since some restrictions exist. ....	14-38

### 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.

<i>Natural Science:</i> Four semester hours must be in an approved natural science course (Biology, Chemistry, Geology, Physics) with an accompanying laboratory. ....	7
<i>Mathematics:</i> Three semester hours selected from courses in the Department of Mathematics (MTH 102, 204, 205 excluded) .....	3
<i>Social and Behavioral Sciences:</i> 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, Human Ecology, Management, Marketing, Military Science, Social Work, and appropriate courses in ASI. ....	12
<i>Humanities:</i> American Studies, Communication, English, History, Humanities Studies, Languages, Music, Philosophy, Religious Studies, Visual Arts, 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 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
<i>Philosophy and Religious Studies</i> .....	12
<i>Communication Skills</i> (ENG 101-102 or 114 or 198; CMM 101): Each student should demonstrate competence in written and oral communication before the completion of the first 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. ....	0-9



## 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.

	<i>Semester Hours</i>
<i>Major Concentration</i> (with at least 24 semester hours at 300-400 level). ....	30-60
<i>Breadth Requirement</i> (See Distribution Table below.) .....	41-50
<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. ....	10-49

### 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 course(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, Human Ecology, Management, Marketing, Military Science, Social Work, and appropriate courses in ASI. ....	6
<i>Humanities:</i> American Studies, Communication, English, History, Humanities Studies, Languages, Music, Philosophy, Religious Studies, Visual Arts, 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 Religious Studies</i> .....	12
<i>Communication Skills</i> (ENG 101-102 or 114 or 198; CMM 101): Each student should demonstrate competence in written and oral communication before the completion of the first 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. ....	0-9

## DEGREE REQUIREMENTS

For the bachelor's degree, it is necessary to complete all the requirements listed in one of the programs in this chapter. A maximum of four semester hours of general activities courses, a maximum of two semester hours of physical education activities courses, a maximum of ten semester hours of MIL courses, and a maximum of six hours of technology courses may be counted in the semester hours required for the degree. The final 30 semester hours must be earned in residence at the University of Dayton.

## 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.

# AMS

## AMERICAN STUDIES (AMS)

In this interdisciplinary program, students take courses in their choice of a dozen fields, thereby learning the skills of integrating, coordinating and making connections. The program, one of four hundred nationwide, is most appropriate for those whose interests encompass several traditional majors.

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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 200, 300, 301, 400 .....	12
First area courses .....	24
Courses from Group A or B or C .....	15
Supporting courses in the elected disciplines .....	9
Second area courses from one of the two remaining groups .....	9
Third area courses from the remaining group .....	6

#### *Group A*

ENG 305, 317<sup>2</sup>, 319<sup>2</sup>, 320<sup>2</sup>, 325, 327, 329<sup>2</sup>, 331<sup>2</sup>, 332<sup>2</sup>, 335, 337, 339,  
380<sup>2</sup>, 451, 453, 455, 468, 490<sup>2</sup>  
MUS 304, 305, 306, 307, 404<sup>2</sup>  
VAH 370, 482, 480, 490<sup>2</sup>

#### *Group B*

HST 351, 352, 355, 365, 370, 371, 375, 376, 380, 391, 398, 399, 417,  
450, 454, 456, 460, 461, 466, 470, 473, 476, 477, 479, 490, 491<sup>2</sup>,  
492<sup>2</sup>, 495, 499<sup>2</sup>  
PHL 304, 310, 311, 314, 317, 318, 320, 323, 330, 331, 340<sup>2</sup>, 361  
REL 326, 327, 328, 364, 367, 371, 372, 373, 376, 385, 477

#### *Group C*

ECO 346, 347, 430, 442, 445, 471, 485, 490  
POL 301, 303, 310, 311, 313, 335, 350, 360, 408, 411, 413, 450, 471, 475  
PSY 334, 341, 351, 361, 363, 443, 461, 462, 471  
SOC 321, 328, 336, 337, 339, 341, 343, 351, 352  
ANT 310, 315, 335, 353, 406, 449  
SWK 311

Natural science .....	7
Mathematics (MTH 102, 204, 205 excluded) .....	3
Social and behavioral sciences .....	12
Humanities .....	18
Philosophy and religious studies .....	12
Communication skills .....	0-9
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>This course can be counted only when the material is appropriate to American Studies. Consult program director.

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## AMERICAN STUDIES COMMITTEE

Francis J. Henninger (English), *Director, American Studies Program*  
Arons (English), Bregenzer (Sociology, Anthropology and Social Work),  
Cadegan (History), Kimble (Psychology), Kunkel (Philosophy)

## COURSES OF INSTRUCTION

AMS 200. INTERDISCIPLINARY AMERICA: An introduction to the study of American culture, using methods and theory from a variety of disciplines to explore three periods pivotal to the definition of "American."  
3 sem. hrs.

AMS 300. AMERICAN CULTURES: Study of American artifacts to discern how they indicate the periods in the life of the 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.



## ANT

### ANTHROPOLOGY (ANT)

Anthropology is the study of people at all times and places. It emphasizes understanding total cultural systems. The Department of Sociology, Anthropology, and Social Work 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 anthropology research on urban issues. Considers how cities arose and how urban people make a living, organize, and think. Considers urban futures. *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.*

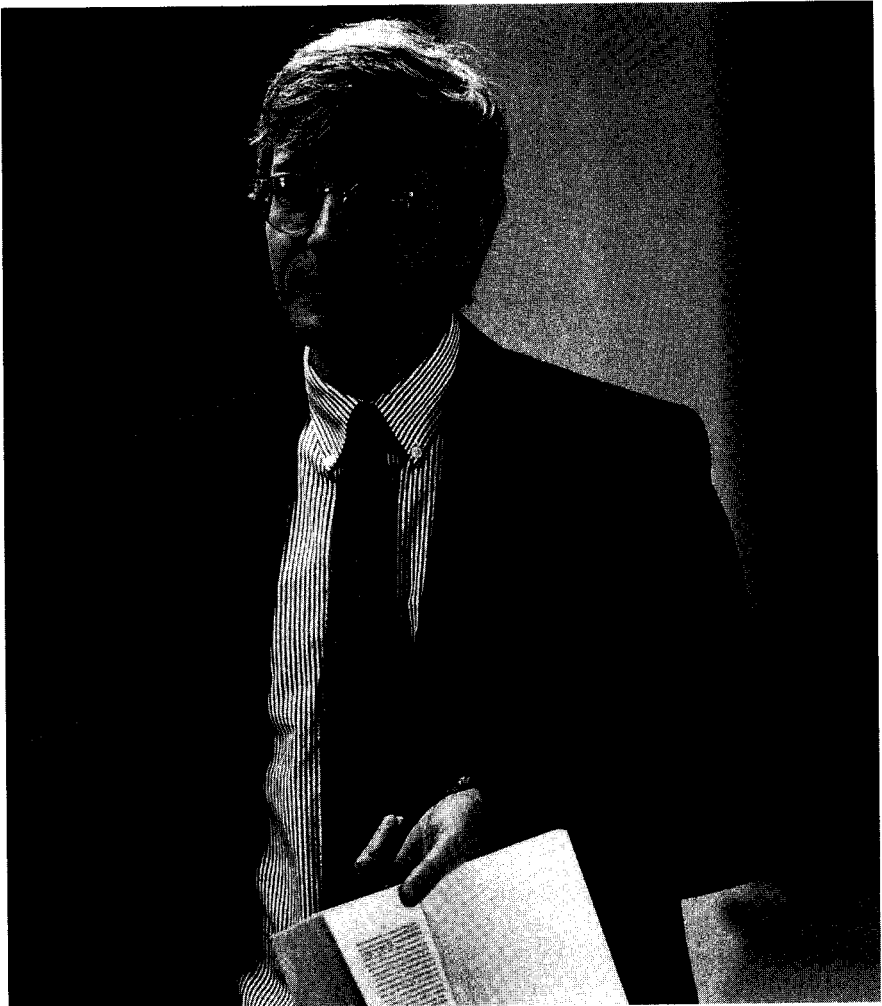
ANT 406. CULTURAL CHANGE: The process of social changes in the modern world; culture lag and conflict of norms; individual and social problems arising from conflicting systems of values and norms. Prerequisite: ANT 150 or permission of instructor. *3 sem. hrs.*

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.*

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\*General education course. See Chapter V.



# BIO

## BIOLOGY (BIO)

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

	<i>Semester Hours</i>
Biology (including at least 24 sem. hrs. at 300-400 level) .....	41
Core courses: BIO 151, 152, 152L, 201L, 299, 412, 420 .....	13
Environmental/Ecological—Select two <sup>2</sup> : BIO 301, 314-314L, 320-320L 330-330L, 402-402L, 430-430L, 435-435L, 441, 444-444L, 450-450L, 452-452L, 461-461L .....	7
Basic Biomedical—Select two <sup>3</sup> : BIO 309-309L, 403-403L, 404, 411-411L, 412L <sup>4</sup> , 425-425L, 440-440L, 442-442L, 462, 464-464L, 466-466L .....	7
Electives: Four courses, two with accompanying laboratories, from above groups. <sup>5</sup> .....	14
Supporting sciences .....	30-31
CHM 123, 123L, 124, 124L, 313, 313L, 314, 314L .....	16
MTH 148-149 or 116, 148 (by placement) .....	6-7
PHY 201, 201L, 202, 202L .....	8
Communication skills .....	3-12
CMM 101 .....	0-3
ENG 101,102 or 114 or 198 .....	0-6
Select one: ENG 272, 316, 370, 378 .....	3
Philosophy and religious studies .....	12
Humanities .....	12
Arts study .....	3
HST 101 or 102; 340 or 341 .....	6
Elective .....	3
Social and behavioral sciences .....	12
First-year experience: ASI 150 .....	0-1
General electives to total .....	120-121

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

<sup>2</sup>One with accompanying laboratory. BIO 430 strongly recommended as one of two courses.

<sup>3</sup>One with accompanying laboratory. BIO 462 strongly recommended as one of two courses.

<sup>4</sup>Qualifies only as a laboratory elective (see below)

<sup>5</sup>Non-BIO science courses may be included with approval.

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

The Bachelor of Science program in biology is designed to prepare a student for a career in the life sciences. Graduates of the program are competitive for entry into graduate programs in biology as well as professional schools, such as medical, dental, osteopathic, and veterinary.

The department has two primary areas of faculty interest: environmental/ecological science and basic biomedical science. The former includes ecology, population biology, ecological physiology, animal behavior, environmental microbiology, community and restoration ecology, evolutionary biology, and plant physiology, as well as environmental biology in the narrow sense. The biomedical science course offerings include molecular biology, cell biology, general and medical microbiology, immunology, genetics, mammalian physiology, and developmental biology. In addition, advanced undergraduates may enroll in graduate courses for undergraduate credit with the consent of the chairperson.

In line with the two areas of research interests, the department encourages students (in consultation with their advisors) to declare one of the two as an area of concentration of study no later than the end of the sophomore year. For the student more interested in a broad approach to biology, the department recommends a third option, the general biology option (any combination of upper-level biology courses that fulfills the program requirements).

The department offers a research mentorship program for upper-level students majoring in biology. The program allows a student to work closely with both faculty and graduate students in laboratory and/or field research. Participation in the program is based on the recommendation of a member of the faculty. The mentorship program is designed to provide a significant advantage for those students who intend to enter a graduate program.

The department also offers a combined Bachelor and Master of Science degree in Biology. This accelerated program is designed for students who display strong potential for research in biology. It provides a liberal arts education, a broad background in biology, 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. A detailed description of the B.S.-M.S. program may be obtained from the departmental office.

## FACULTY

John J. Rowe, *Chairperson*

*Distinguished Service Professor:* Noland

*Professors:* Bajpai, Burky, Geiger, McDougall, Rowe, Williams

*Associate Professors:* Breitwisch, Chantell, Kearns, Laufersweiler, Tsonis,

Vesper

*Assistant Professors:* Friese, Wright

*Clinical Adjunct Associate Professors:* Stull, Taylor

## 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 each 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 each 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 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 organizational 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 reviewing, abstracting, and presenting biological information. Primarily for sophomores. 1 sem. hr.

BIO 301. EVOLUTION: Theory and evidence of organic evolution, with emphasis on microevolutionary change and population genetics. Prerequisites: BIO 101-102 or 151-152; BIO 412 recommended. 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 each week 2 sem. hrs.

**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 each 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 330. ANIMAL BEHAVIOR:** An evolutionary approach to the study of animal behavior, emphasizing both proximate mechanisms and functional explanations of the survival value of behavior. Prerequisite: One year of biology. *3 sem. hrs.*

**BIO 330L. ANIMAL BEHAVIOR LABORATORY:** Field and laboratory exercises to accompany BIO 330. Should be taken concurrently with BIO 330. One 3-hour laboratory each week and occasional Saturday field trips. *1 sem. hr.*

**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 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. GLOBAL ENVIRONMENTAL BIOLOGY:** Presentation of the biological and ecological principles needed for critical discussion and evaluation of current global environmental issues including food production, human population growth, role of humans and pollution in environmental degradation, and conservation of agricultural, forest and other natural resources. No science credit for biology majors. Prerequisites: An introductory course in the natural sciences. *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. No science credit for biological science majors. Prerequisite: Introductory biology. *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: Course to accompany BIO 402. *1 sem. hr.*

BIO 403. PHYSIOLOGY I: A physico-chemical examination of the physiological events occurring in a living system with emphasis on physiology of the cell, excretion, nerves, muscles, bone, blood, heart, circulation, and respiration. Prerequisites: BIO 101-102 or 151-152; CHM 313-314. *3 sem. hrs.*

BIO 403L. PHYSIOLOGY I 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 404. PHYSIOLOGY II: Study of the gastrointestinal physiology, hormonal regulation of metabolism, and growth and reproduction of higher vertebrates, including primates. Prerequisites: BIO 101-102 or 151-152; CHM 313-314. *3 sem. hrs.*

BIO 411. GENERAL MICROBIOLOGY: 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 each week. *1 sem. hr.*

\* 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 concurrently with or following the lecture course. *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 425. PARASITOLOGY: Introduction to the morphology, life history, and clinical significance of parasites and other symbionts. Prerequisites: 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 each week. *1 sem. hr.*

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 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:** Study of animal development, including morphological patterns of development, mechanisms of cellular differentiation, cell-cell interactions during development, and mechanisms of differential gene expression. Emphasis on understanding development at the cellular and molecular levels. Prerequisites: BIO 101-102 or 151-152; CHM 313-314. 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 each week. 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 each 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 each week. *1 sem. hr.*

BIO 462. MOLECULAR BIOLOGY: 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. *3 sem. hrs.*

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. Prerequisites: Junior or senior standing; BIO 403. *3 sem. hrs.*

BIO 464L. PATHOPHYSIOLOGY LABORATORY: Course to accompany BIO 464. *1 sem. hr.*

BIO 466. BIOLOGY OF INFECTIOUS DISEASE: 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. Prerequisite: BIO 411. *3 sem. hrs.*

BIO 466L. BIOLOGY OF INFECTIOUS DISEASE LABORATORY: Laboratory experiments to demonstrate immunological, serological, determinative, and medical bacteriology. Two 2-hour laboratory periods each 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 serves 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.

The B.S. program in biochemistry follows a curriculum which satisfies the needs of students who anticipate careers in the life sciences. A mark of distinction and rigor is that each student is required to conduct research, which normally includes a ten-week summer period following the junior year and culminates with the submission of a research thesis and the presentation of a seminar.

The B.S. program in chemistry is approved by the American Chemical Society for the training of professional chemists. Qualified students may participate in cooperative education following the completion of the sophomore year. Each student in the B.S. program in chemistry is required to conduct an original research project. 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, 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. Cooperative education students substitute work experience for research.

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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<sup>2</sup></i>	<i>Semester Hours</i>
Chemistry .....	37
Required courses	
Year 1: CHM 123, 123L, 124, 124L .....	8
Year 2: CHM 201, 201L, 313, 313L, 314, 314L .....	12
Year 3: CHM 302 or 303-304 .....	3-6
Year 4: CHM 496 .....	1
Chemistry electives	
Choose from the following: CHM 317, 404, 412, 415, 417, 418L, 420, 427, 451, 452, 490L, 498, 499 .....	10-13
(May substitute two upper-level courses from other science departments with permission of chairperson.)	
Supporting science requirements (Complete during first two years.)	
MTH 148, 149, 367, or 168, 169 .....	8-9
PHY 201, 201L, 202, 202L .....	8
Communication skills .....	3-9
CMM 101 .....	0-3
ENG 101-102 or 114 or 198 <sup>3</sup> .....	3-6
Philosophy and religious studies .....	12

Social and behavioral sciences .....	12
Humanities .....	18
First-year experience: ASI 150 .....	0-1
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>Advanced placement is permitted.

<sup>3</sup>If composition requirement is waived, student should select an ENG elective.

## PROGRAM S2: BACHELOR OF SCIENCE WITH A MAJOR IN BIOCHEMISTRY (BCM)<sup>1</sup>

<i>Summary of Requirements<sup>2</sup></i>	<i>Semester Hours</i>
Chemistry requirements .....	39
Year 1: CHM 123, 123L, 124, 124L .....	8
Year 2: CHM 201, 201L, 313, 313L, 314, 314L .....	12
Year 3: CHM 303, 303L, 304, 451, 452, 462L <sup>3</sup> , 495, 498 .....	17
Year 4: CHM 496, 497 .....	2
Biology requirements .....	11
Year 1: BIO 151, 152, 152L .....	7
Year 2: BIO elective and laboratory .....	4
Science breadth requirements .....	10
Choose from the following: CHM 404, 415, 415L, 417, 418L, 427, 499; BIO 314, 403, 404, 411, 412, 427, 440, 462	
Supporting science requirements .....	
MTH 168, 169, 218; CPS 132 .....	15
PHY 206, 207, 210L .....	7
Communication skills .....	3-9
CMM 101 .....	0-3
ENG 101-102 or 114 or 198 <sup>4</sup> .....	3-6
Foreign language .....	6-8
Philosophy and religious studies .....	12
Social and behavioral sciences .....	6
Humanities .....	9
First-year experience: ASI 150 .....	0-1
General Education courses and academic electives to total .....	120-127

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

<sup>2</sup>Advanced placement is permitted.

<sup>3</sup>Students who take CHM 499 are not required to enroll in CHM 462L.

<sup>4</sup>If composition requirement is waived, student should select an ENG elective.

## PROGRAM S3: BACHELOR OF SCIENCE WITH A MAJOR IN CHEMISTRY (CHM)<sup>1</sup>

<i>Summary of Requirements<sup>2</sup></i>	<i>Semester Hours</i>
Chemistry .....	48
Year 1: CHM 123, 123L, 124, 124L .....	8
Year 2: CHM 201, 201L, 313, 313L, 314, 314L .....	12
Year 3: CHM 303, 303L, 304, 304L, 317, 417, 418L, 495 .....	13
Year 4: CHM 415, 415L, 496, 497, 498 .....	9

Chemistry electives	
Choose from the following: CHM 404, 412, 420, 427, 451, 452, 490L, 499 .....	6
(May substitute one approved science course from another department.)	
Supporting science requirements (Complete during first two years.)	
MTH 168, 169, 218; CPS 132 .....	15
PHY 206, 207, 208, 210L, 211L .....	11
Communication skills .....	3-9
CMM 101 .....	0-3
ENG 101-102 or 114 or 198 <sup>3</sup> .....	3-6
Foreign language .....	6-8
Philosophy and religious studies .....	12
Social and behavioral sciences .....	6
Humanities .....	9
First-year experience: ASI 150 .....	0-1
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.

<sup>2</sup>Advanced placement is permitted.

<sup>3</sup>If composition requirement is waived, student should select an ENG elective.

## FACULTY

Albert V. Fratini, *Chairperson*

*Distinguished Service Professor:* Lucier

*Professor Emeritus:* Michaelis

*Professors:* Fox, Fratini, R. Keil, Knachel, Singer

*Associate Professors:* Johnson, Morrow

*Assistant Professors:* Church, Glass, Hunnicutt

*Laboratory Instructors:* Hils, Jeffery, P. Keil, Nelson, Schwendeman, Tabesh, Webb

## COURSES OF INSTRUCTION

- \* 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: Course to accompany CHM 115 or to be elected by students in CHM 200 who lack previous chemistry laboratory experience. One 3-hour laboratory each week. 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. 3 sem. hrs. each

CHM 123L-124L. GENERAL CHEMISTRY LABORATORY: Laboratory course to complement CHM 123-124. One 3-hour laboratory session each week. CHM 123 is a corequisite for CHM 123L. CHM 124 is a corequisite for CHM 124L. 1 sem. hr. each

- \* CHM 200. CHEMISTRY AND SOCIETY: A course for nonscience majors. The application of chemical principles to the examination of issues such as environmental quality, disease, hunger, synthetic materials, and law enforcement. Requires one year of high school chemistry or equivalent. Depending upon background and experience, a student needing a laboratory course may enroll in either CHM 115L or CHM 123L. 3 sem. hrs.



CHM 201. QUANTITATIVE ANALYSIS: Application of the principles of chemical equilibrium to the theory and techniques of gravimetric, volumetric, spectrophotometric, and electroanalytical methods of chemical analysis. Prerequisites: CHM 124, 124L. 3 sem. hrs.

CHM 201L. QUANTITATIVE ANALYSIS LABORATORY: Course to accompany CHM 201 lecture. One 3-hour laboratory period each week. 1 sem. hr.

CHM 302. PHYSICAL CHEMISTRY: Essential elements of thermodynamics, chemical kinetics, equilibria, and electrochemistry for those with a primary interest in the life sciences. For B.A. chemistry majors and premedical, predental, and biology majors. Prerequisite: CHM 124. 3 sem. hrs.

CHM 303-304. PHYSICAL CHEMISTRY: Fundamentals of thermodynamics, chemical kinetics, electrochemistry, and spectroscopy with a mathematics format. For B.S. chemistry majors and chemical engineers. Prerequisites: CHM 201 or equivalent, CHM 303. Corequisite: MTH 218. 3 sem. hrs. each

CHM 303L-304L. PHYSICAL CHEMISTRY LABORATORY: Course to accompany CHM 303-304. One 3-hour laboratory each week. Corequisite: MTH 218. 1 sem. hr. each

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. 3 sem. hrs. each

CHM 313L-314L. ORGANIC CHEMISTRY LABORATORY: Common separation, purification, and analytical techniques including chromatography and spectroscopy are stressed in CHM 313L. Synthesis and characterization of organic materials utilizing skills from the first term are stressed in CHM 314L. One 3-hour laboratory each week. Corequisites: CHM 313 and 314, respectively. CHM 313L is a prerequisite for CHM 314L. 1 sem. hr. each

CHM 317. SPECTROSCOPIC IDENTIFICATION OF ORGANIC COMPOUNDS: The use of nuclear magnetic resonance, infrared, and mass spectrometry in elucidating structures. Emphasis on interpretation and integration of spectral data in problem solving. Prerequisites: CHM 314, 314L or equivalent. 1 sem. hr.

CHM 404. SPECIAL TOPICS IN PHYSICAL CHEMISTRY: Thorough treatment of topics such as electrochemistry, macromolecules, photochemistry, or spectroscopy. Prerequisite: CHM 302 or 303. May be repeated as topics change. 3 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: Chemical analysis based on modern instrumentation. Chromatographic, electrochemical, and spectroscopic methods. Prerequisites: CHM 201, 201L, 302 or 304. 2 sem. hrs.

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

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

CHM 418L. INORGANIC CHEMISTRY LABORATORY: Laboratory course dealing with the synthesis and characterization of inorganic and organometallic compounds. Topics include vacuum and inert atmosphere techniques, separation and purification, spectroscopic characterization, X-ray diffraction, magnetic moment, and conductance measurements. Prerequisites: CHM 201L, 316L. Corequisite: CHM 417. 1 sem. hr.

CHM 420. BIOCHEMISTRY: The fundamental aspects of the chemistry and biochemistry of carbohydrates, lipids, proteins, and nucleic acids. Enzymology, protein purification, bioenergetics, metabolism of carbohydrates, lipids, amino acids, nucleotides and nucleic acids, elementary molecular biology, and control processes are described. Suitable preparation for medical school; recommended for nonchemistry majors. Prerequisite: CHM 314. 3 sem. hrs.

CHM 427. MEDICINAL CHEMISTRY: The chemical mechanisms of action of the major drug classes will be surveyed with particular emphasis on the facets of organic chemistry that control drug-receptor interactions, metabolism and mechanisms of toxicity and resistance. Prerequisites: CHM 314 and CHM 420 or CHM 451. First term. 3 sem. hrs.

CHM 451. GENERAL BIOCHEMISTRY I: Discussion of the chemistry and biochemistry of carbohydrates, amino acids, proteins, and nucleic acids, including health-science and methodologic aspects. Descriptions of enzymology, protein purification, and carbohydrate metabolism related to such topics as bioenergetics, membranes, and disease processes. Prerequisites: CHM 201, 314. 3 sem. hrs.

CHM 452. GENERAL BIOCHEMISTRY II: Discussion of selected topics in bioenergetics, and metabolism of lipids, amino acids, porphyrins, nucleic acids, and proteins. Current aspects of nutrition, biochemical genetics, endocrinology, regulation, and genetic engineering addressed and related to health-science topics as time permits. Suitable preparation for medical school. Prerequisite: CHM 451. 3 sem. hrs.

CHM 462L. BIOCHEMISTRY LABORATORY: Laboratory course to accompany biochemistry lecture courses. Spectrophotometry, pH and dissociation, enzymologic methodology and analytical techniques, chromatographic techniques. Corequisite: CHM 420 or 451. 1 sem. hr.

CHM 490L. SCIENTIFIC GLASSBLOWING: 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. One 3-hour laboratory each week. Prerequisite: Permission of the chairperson. Grading Option 2. 1 sem. hr.

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: After discussions of the chemical literature and information retrieval, resumes, graduate education, and career opportunities, students present technical talks on topics with social, ethical, or historical implications. Required of all chemistry majors, both B.S. and B.A. 1 sem. hr.

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. hr.

CHM 498-499. RESEARCH AND THESIS: All students in the B.S. program (except Cop) are required to enroll for a minimum of 3 semester hours in a research course (CHM 498). Students may take additional research credits (CHM 499) 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. Prerequisite: Permission of the chairperson. 3-6 sem. hrs.

\*General education course. See Chapter V.

## CLA

### CLASSICS (CLA)

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

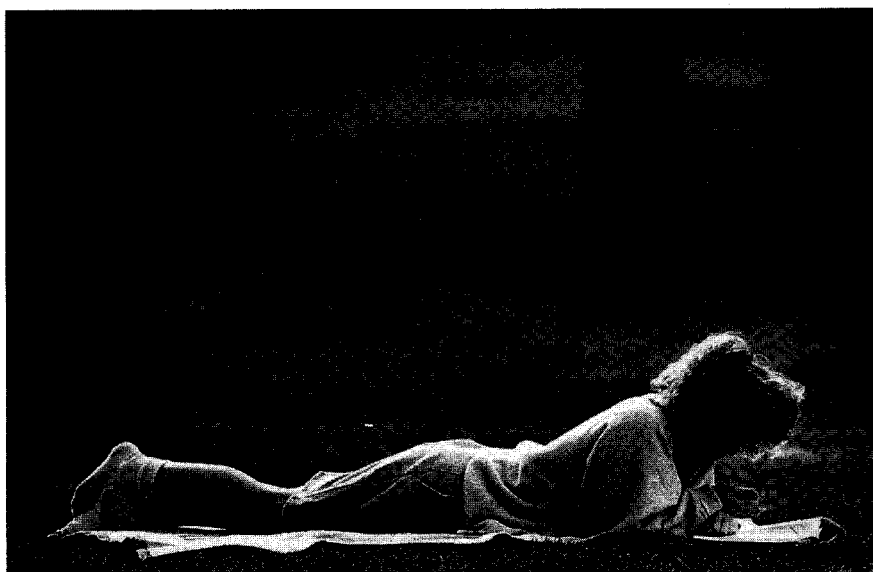
#### COURSES OF INSTRUCTION

CLA 105. CLASSICAL ELEMENTS IN THE ENGLISH LANGUAGE: A study of Greek and Latin elements in bioscientific terminology to improve comprehension of derivatives from the classical languages in both specialized writings and traditional literature. *3 sem. hrs.*

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. *3 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 culture 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.*



## COMMUNICATION (CMM)

The course requirements for communication majors are 36 semester hours. Teacher certification through the E11 program is an option for communication majors. Consult department chairperson for details.

Minors in communication must have CMM 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 CMM 201, CMM 330, and four of the following five courses: CMM 331; CMM 353; CMM 431; CMM 432; CMM 450.

The department also offers a Bachelor of Arts with a major in theatre. See THR.

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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>
English 101-102 or ENG 114 or ENG 198 .....	3-6
Natural science .....	7
Mathematics (MTH 102, 204, 205 excluded) .....	3
Philosophy and religious studies .....	12
Major program <sup>2</sup> .....	36
Foundation (required of all CMM majors) .....	9
CMM 101; CMM 201; CMM 202	
Concentration Requirements and Electives .....	27
<b>CONCENTRATIONS</b>	
General Communication (CMM)	
Foundation .....	9
Required (3 credit hours from each of the other five concentrations) .....	15
Any courses in CMM or THR .....	12
Communication Management (CMT)	
Foundation .....	9
CMM 320; CMM 321; CMM 412; CMM 421 .....	12
Two courses from the following:	
CMM 351; CMM 352; CMM 420; CMM 322; CMM 498 .....	6
Any courses in CMM or THR .....	9
Journalism (JRN)	
Foundation .....	9
CMM 330; CMM 430; CMM 431; CMM 432 .....	12
Two courses from the following:	
CMM 331; CMM 332; CMM 412; CMM 416; CMM 498 .....	6
Any courses in CMM or THR .....	9
Public Relations (PUB)	
Foundation .....	9
CMM 360; CMM 412; CMM 460; CMM 461 .....	12
Two courses from the following:	
CMM 332; CMM 351; CMM 421; CMM 469; CMM 498 .....	6
Any courses in CMM or THR .....	9

Electronic Media (RTV)	
Foundation .....	9
CMM 340; CMM 341 or CMM 342; CMM 343; CMM 446 .....	12
Two courses from the following:	
CMM 412; CMM 449; CMM 442; CMM 498 .....	6
Any courses in CMM or THR .....	9
Theatre (CTR)	
Foundation .....	9
THR 203; THR 310; THR 340; THR 415 .....	12
Two courses from the following:	
THR 305; THR 307; THR 323; THR 325; THR 326; THR 330; THR 424 .....	6
Any courses in CMM or THR .....	9
Two units of 12 sem. hrs. each selected from anthropology, economics, political science, psychology, sociology, management, criminal justice, social work, education, marketing, military science, human ecology, social work, 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, music, philosophy, religious studies, visual arts. (In English, philosophy, and religious studies, at least 6 sem. hrs. must be 300-400 level.) .....	
	18
First-year experience: ASI 150 .....	0-1
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>At least 24 of the required 36 sem. hrs. in all communication concentrations must be 300-400 level.

## FACULTY

Thomas D. Skill, *Chairperson*

*Professor Emerita:* Wolff

*Professors:* Cusella, Gilvary, Morlan, Rang, Thompson

*Associate Professors:* Blatt, Harwood, Lain, Robinson, Skill, Wallace, Yoder

*Assistant Professors:* Anderson, Griffin, Selka, Taylor, Watters, Watts, Weatherly, Zerbinos

*Lecturers:* Angel, Hueth

## COURSES OF INSTRUCTION

CMM 101. FUNDAMENTALS OF ORAL COMMUNICATION: Introductory course in the fundamental skills of oral communication. Development of communicative self-confidence through interpersonal and small group process, persuasive reasoning, listening theory and practice, and public speaking. 3 sem. hrs.

CMM 201. FOUNDATIONS OF MASS COMMUNICATION: Historical development of mass media in America; survey of mass media theories, impact of mass media on people and society, the role and influence of the news media, new technologies, programming, and pressure groups. 3 sem. hrs.

**CMM 202. FOUNDATIONS OF COMMUNICATION THEORIES AND RESEARCH:** Study of the nature and scope of communication theories and research. Examination of how the communication discipline developed from classical traditions to its modern perspective. *3 sem. hrs.*

**CMM 310. 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 students' voices through tape recordings. *3 sem. hrs.*

**CMM 311. STUDIES IN ORAL PERFORMANCE:** Oral performance of poetry, prose, and drama; combining study of vocal modulations, pitch, inflection, and tone color with intellectual and emotional analysis of selections as a means of making the literature alive and immediately present. *3 sem. hrs.*

**CMM 312. LISTENING THEORY AND APPLICATION:** Study of theories and related application during comprehensive, discriminate, empathic, and appreciative listening; emphasis on listening competently and responsibly. *3 sem. hrs.*

**CMM 313. 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.*

**CMM 320. INTERPERSONAL COMMUNICATION:** Study of the student's own communication behavior through face-to-face spontaneous interaction with others. *3 sem. hrs.*

**CMM 321. 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.*

**CMM 322. 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.*

**CMM 330. NEWSWRITING:** Writing for the news media, concentrating on determining news values, developing newsgathering and newswriting techniques, and improving writing skills. Prerequisites: CMM 201, typing skills. Studio fee. *3 sem. hrs.*

**CMM 331. INTERPRETATIVE AND FEATURE WRITING:** Writing non-news materials: features, personality stories, columns, reviews, consumer information. New journalism. Contents and organization of feature sections. Studio fee. *3 sem. hrs.*

**CMM 332. PUBLICATION DESIGN:** Layout and design of newspapers, newsletters, brochures, and magazines. Type selection, copy preparation, cost appraisal, printing methods. Studio fee. *3 sem. hrs.*

**CMM 333. 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.*

CMM 340. 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.

CMM 341. AUDIO PRODUCTION: Study of the theory and process of current audio production practices, including the operation of basic studio equipment. Exercises in methods of sound reproduction in the audio studio, including recording of voice music, and sound effects. Some writing for the aural medium. Prerequisite: CMM 340. Studio fee. 3 sem. hrs.

CMM 342. FUNDAMENTALS OF TELEVISION PRODUCTION. Intensive practice in preparation and production of studio-based television programs. Process and fundamentals of studio production and post-production editing. Studio fee. 3 sem. hrs.

CMM 343. 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: CMM 340. 3 sem. hrs.

CMM 350. PROPAGANDA ANALYSIS: Use and abuse of propaganda. Editorial persuasion. Propaganda devices and techniques. An application of the principles of Aristotelean logic to the field of communication. 3 sem. hrs.

CMM 351. PUBLIC SPEAKING: 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.

CMM 352. PERSUASION: Analysis of the motivations that lead to belief and action of individuals and audiences. Study in the techniques of persuasion. Practical application of theory. 3 sem. hrs.

CMM 353. 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.

CMM 360. PRINCIPLES OF PUBLIC RELATIONS: Survey of the field of public relations emphasizing writing and public relations, theoretical implications of the field, the practitioner's role in organization and the community. 3 sem. hrs.

CMM 390. INDEPENDENT STUDY: 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 the department chairperson. 3 sem. hrs.

CMM 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.

CMM 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.

**CMM 411. HEALTH COMMUNICATION:** Examination of communication theory and research as they relate to health care. Issues include reassurance, the role of the patient, interviews, health organizations, the media and health, compliance, providing explanations, and health care professions frequently neglected. 3 sem. hrs.

**CMM 412. RESEARCH METHODS IN COMMUNICATION:** Introduction to data gathering and analytical quantitative methods used in the communication discipline. Focus on and practice in survey methods, questionnaire development, and sampling. 3 sem. hrs.

**CMM 413. COMMUNICATION IN THE INFORMATION AGE:** Examination of issues related to development, economics, programming, and the future of new mass communication technologies. Prerequisite: CMM 340. 3 sem. hrs.

**CMM 414. GLOBAL COMMUNICATION:** Introduction to the main topics in the field of global communication. Emphasis on comparative mass media and current issues in global communication. 3 sem. hrs.

**CMM 415. WOMEN AND COMMUNICATION:** Seminar focusing on gender differences in communication, unique aspects to women's communication, and women's rhetoric. Current theory and research examined. 3 sem. hrs.

\* **CMM 416. 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.

**CMM 420. COMMUNICATION AND CONFLICT MANAGEMENT:** 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.

**CMM 421. 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.

**CMM 430. 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: CMM 330. Typing skills. Studio fee. 3 sem. hrs.

**CMM 431. PUBLIC AFFAIRS REPORTING:** Advanced reporting and newswriting. Analysis and structure of stories on all government areas. Information-gathering techniques and specialized reporting. Prerequisite: CMM 330. Typing skills. Studio fee. 3 sem. hrs.

**CMM 432. THE LAW AND NEWS MEDIA:** Limitations of freedom of the press. The right of the people to know and 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.

**CMM 439. SPECIAL TOPICS IN JOURNALISM:** Concentrated study in special areas of journalism. May be repeated with change of topic. 3 or 6 sem. hrs.



**CMM 440. 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: CMM 330. Studio fee. *3 sem. hrs.*

**CMM 441. BROADCAST COMMERCIAL COPYWRITING:** Study and application of principles of the differences between the two media as they affect commercial copy requirements. Prerequisite: CMM 340. *3 sem. hrs.*

**CMM 442. ADVANCED TELEVISION PRODUCTION:** Advanced techniques of both studio and electronic field production and post-production editing for television. Prerequisite: CMM 342. Studio fee. *3 sem. hrs.*

**CMM 446. ELECTRONIC MEDIA MANAGEMENT:** Survey of the leadership/management roles and responsibilities of broadcasting, cable television and corporate media enterprises. Prerequisite: CMM 340. *3 sem. hrs.*

**CMM 449. TOPICS IN ELECTRONIC MEDIA:** Concentrated study in special areas of electronic media production, criticism, and management. May be repeated once with change of topic. Depending on topic, prerequisites may be imposed. *3 sem. hrs.*

**CMM 450. POLITICAL CAMPAIGN COMMUNICATION:** Analysis of the nature and functions of selected communication variables within political election campaigns. *3 sem. hrs.*

**CMM 451. RHETORIC OF SOCIAL MOVEMENTS:** Examination of the rhetoric of contemporary advocates through application of the basic elements of argumentation and persuasion. *3 sem. hrs.*

**CMM 452. SURVEY OF RHETORICAL THEORY:** Examination of the foundations of the field of communication. Major focus on the development of rhetorical theory with attention to rhetorical analysis and criticism. *3 sem. hrs.*

**CMM 460. ADVANCED PUBLIC RELATIONS:** Focus on advanced topics in public relations. Emphasis on expanding writing and critical thinking skills learned in CMM 360. Analysis of case studies and development of response plans. Prerequisite: CMM 360. *3 sem. hrs.*

**CMM 461. 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: CMM 330 or 412. *3 sem. hrs.*

**CMM 469. TOPICS IN PUBLIC RELATIONS:** A concentrated study in specific areas of public relations. Development of specialized projects. May be repeated once with change of topics. Prerequisites: CMM 360 and 460. *3 sem. hrs.*

**CMM 498. COMMUNICATION INTERNSHIP:** Communication work experience in an approved organization. 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.*

**CMM 499. SPECIAL TOPICS IN COMMUNICATION:** Concentrated study in specific areas of speech communication. May be repeated once with change of topic. *3-6 sem. hrs.*

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\* General education course. See Chapter V.

## COMPUTER SCIENCE (CPS)

The Department of Computer Science offers two programs leading to the Bachelor of Science: Program S4, in computer science, and Program S4C, in computer information systems. The main differences in the programs are in the mathematics and science requirements and in the application emphases. They have the same introductory core sequence of computer science courses.

The Computer Science program is accredited by the Computer Science Accreditation Commission (CSAC) of the Computing Sciences Accreditation Board (CSAB), a specialized accrediting body.

*S4—Computer Science:* Computer science is the study of algorithms and their implementation in the environment of computer hardware. It includes the study of data structures, software design, programming languages, and computer elements and architecture. A student entering this program is expected to be able to take calculus and nonremedial English. A transfer student must ordinarily be in good standing and have a cumulative average of at least 2.5 based on a scale of 4. Each student must take appropriate upper-level electives to ensure depth in at least three of five CPS subject areas as arranged with the advisor.

*S4C—Computer Information Systems:* This program emphasizes computer science concepts with particular attention to systems analysis and design, computer communications, and applications in one of the concentration areas listed in the description of the S4C program requirements.

A minor in computer science includes CPS 150, 151, 250, 350, and three other courses numbered 320 or above, excluding 435 and 437. A minor in computer information systems includes CPS 150, 151, 242, 310, 312, and two courses numbered 320 or above, excluding 435 and 437.

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### PROGRAM S4: BACHELOR OF SCIENCE WITH A MAJOR IN COMPUTER SCIENCE (CPS)<sup>1</sup>

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	<i>Semester Hours</i>
Computer science .....	45
Introductory core sequence: CPS 150, 151, 242, 250	
Further core requirements: CPS 341, 346, 350, 387	
Six additional upper-level courses, numbered 310 or above	
Mathematics: MTH 168, 169, 218, 302 <sup>2</sup> , 367 .....	18
Natural science: PHY 206, 207, 210L, 211L, or CHM 123, 124, 123L, 124L or BIO 151, 152, 152L, 201L or GEO 115, 116, 115L, 116L-and 2 additional courses acceptable for Science or Engineering majors .....	14
Communication skills .....	0-9
Humanities .....	9
Social and behavioral sciences .....	6
Philosophy and religious studies, including PHL 319 .....	12
First-year experience: ASI 150 .....	0-1
General Education courses and academic electives <sup>3</sup> to total at least .....	120

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

<sup>2</sup>CPS 353 may be substituted for MTH 302.

<sup>3</sup>A concentration or a minor in a specific discipline is recommended.

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**PROGRAM S4C: BACHELOR OF SCIENCE WITH A MAJOR IN  
COMPUTER INFORMATION SYSTEMS (CIS)<sup>1</sup>**

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	<i>Semester Hours</i>
Computer science .....	42
Introductory core sequence: CPS 150, 151, 242, 250, 341	
Further core requirements: CPS 310, 312, 346, 350	
Four additional upper-level courses, numbered 320 or above	
Concentration: A minor in one of the following areas: Anthropology, Biology, Chemistry, Communication, Criminal Justice, Economics, English, Family Development, Geology, History, Human Ecology, Languages, Mathematics, Music, Philosophy, Physics, Political Science, Psychology, Social Work, Sociology, Religious Studies, Accounting, Finance, International Business, Management, Marketing; or the following block of courses: ACC 207, 208; ECO 203, 204; MGT 311; MKT 305 .....	15-27
Communication skills .....	0-9
Humanities <sup>2</sup> .....	9
Mathematics: Calculus and statistics, (e.g., MTH 148,149,215) <sup>2</sup> .....	9
Natural science <sup>2</sup> .....	8
Social and behavioral sciences <sup>2</sup> .....	6
Philosophy and religious studies, including PHL 319 <sup>2</sup> .....	12
First-year experience: ASI 150 .....	0-1
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.

<sup>2</sup>This requirement will be satisfied in some cases by the minor that is chosen.

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## FACULTY

To Be Announced, *Chairperson*

*Professor Emeritus:* Jehn, Kester

*Professor:* Winslow

*Associate Professors:* Lang, Schoen, Smith

*Assistant Professors:* Gowda, Maruyama, Pan, Shah

*Adjunct Associate Professors:* Jarrett, Lokai

*Adjunct Assistant Professors:* Beitel, Keim

*Adjunct Instructor:* Skudlarek

## 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, CIS, or PCS majors.

3 sem. hrs.

CPS 111. INTRODUCTION TO PERSONAL COMPUTERS: Introduction to the use of personal computers. Emphasis on the use of the operating system, text processors, spreadsheets, database packages, and elementary communications.

*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. Corequisite: MTH 168.

*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. Not open to CPS, CIS, or PCS majors.

*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. 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 structures, program modularity, and abstract data type, using a compiler language. Prerequisite: CPS 150.

*4 sem. hrs.*

CPS 242. INTRODUCTION TO FILE PROCESSING: The file processing environment, blocking and buffering, secondary storage devices, sequential file organization, relative file organization, and various indexed file organizations using a suitable compiler language such as COBOL. Prerequisite: CPS 150. Corequisite: CPS 151.

*3 sem. hrs.*

CPS 250. ALGORITHMS AND PROGRAMMING III: Study of computer organization and architecture by developing basic programming skills in an assembler language (currently 68000 or VAX) and in "C." Prerequisite: CPS 151.

*4 sem. hrs.*

CPS 308. SURVEY OF EXPERT SYSTEMS: An introduction to expert systems. Topics include knowledge structuring, production rules, and design tools. Specific systems are presented. Not open to CPS, CIS, or PCS majors.

*3 sem. hrs.*

CPS 309. TOPICS IN COMPUTER SCIENCE: Lectures or laboratory work in areas of current interest. May be taken more than once. Does not count as upper level credit for major/minors.

*1-4 sem. hrs.*

CPS 310. SYSTEMS ANALYSIS: Methodologies for producing software, software development life cycles, top-down approach, data flow diagram, data dictionary, mini-specifications, object analysis, event analysis, real-time systems specifications, automated analysis tools. Prerequisite: CPS 151. *3 sem. hrs.*

CPS 312. SYSTEMS DESIGN: Ideas behind structured design, tools of structured design, coupling and cohesion of modules, transform and transaction analyses, packaging, optimization, data structure and object-oriented design methodologies, automated design tools. 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: Logic and proofs, sets and counting, Boolean algebra, graph theory, directed graphs, mathematical machines, formal languages and grammars. Prerequisite: CPS 150. *3 sem. hrs.*

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

CPS 346. OPERATING SYSTEMS I: 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 250, 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. *3 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: MTH 169; CPS 132 or 150. *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: Study of the elements of computer design. 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, CPS 341. *3 sem. hrs.*

CPS 388. COMPUTER SYSTEM DESIGN II: Detailed analysis of a specific microcomputer 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 ENGINEERING:** A thorough examination of modern software methodologies, of the managerial and technological skills essential to the design and construction of high-quality software, and of the productivity and human factors in software development. Prerequisite: CPS 350. 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: CPS 151. 3 sem. hrs.

**CPS 430. DATABASE MANAGEMENT SYSTEMS:** Physical and logical organization of data files; hierarchical, network, and relational database models; the data definition language and the data manipulation language of a commercial database management system; query languages. Prerequisite: CPS 350. 3 sem. hrs.

**CPS 435. MANAGEMENT OF DATABASES:** The technology of network, hierarchical and relational database management systems, and the management of data in a business environment. Logical and physical database design with emphasis on the relational model in local and corporate systems. The role of the database administrator. Not open to CPS, CIS, or PCS majors or minors. Prerequisite: CPS 310. 3 sem. hrs.

**CPS 437. SURVEY OF DATA COMMUNICATIONS:** Concepts of data communications hardware and software; in local area (LAN) and wide area (WAN) networks. Fundamentals of business network design in the layered network architectures: X.25, OSI, SNA, and TCP/IP. Not open to CPS, CIS, or PCS majors or minors. Prerequisite: CPS 310. 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. OPERATING SYSTEMS II:** 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. Prerequisite: CPS 346. 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: CPS 132 or 150, MTH 302, 319. Recommended: 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 surface in space. Prerequisites: CPS 350, MTH 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. Prerequisite: CPS 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. Prerequisite: CPS 470. 3 sem. hrs.

CPS 480. ARTIFICIAL INTELLIGENCE: Basic concepts and techniques of intelligent systems. Emphasis on representations, problem solving, search strategies, expert systems, logic systems, and AI programming. Design and implementation of AI applications. Prerequisite: CPS 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)

Program S5, 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 and investigative services at the local, state, and 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. Those who enter the University of Dayton as first-year students, 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.

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 so 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 S5: BACHELOR OF SCIENCE WITH A MAJOR IN CRIMINAL JUSTICE<sup>1</sup>

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

<i>General Track (CRJ)</i>	<i>Semester Hours</i>
Criminal justice .....	33
CRJ 205, 210, 220, 305, 320 .....	15
CRJ electives .....	18
Social and behavioral sciences .....	24
POL 201, 301, 306 .....	9
PSY 101; PSY 341 or SOC 341 .....	6
PSY 363 or SOC 325 .....	3
SOC 327, 328 .....	6



Humanities <sup>1</sup> .....	9
Arts study .....	3
HST 102; 355 or 376 or 460 .....	6
Philosophy and religious studies <sup>1</sup> .....	12
REL 103 .....	3
PHL 103; 310 or 312; 314 .....	9
Communication skills .....	6-12
ENG 101, 102; or 114 or 198; 272 or 316 or 474 .....	6-9
CMM 101 .....	0-3
Natural sciences (2 courses—lectures with laboratories) <sup>1</sup> .....	8
Quantitative studies .....	9
ACC 301 .....	3
CPS 144 <sup>2</sup> .....	3
MTH 207 .....	3
General Education courses and upper-divisional 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.

<sup>2</sup>CPS 111 and a MTH elective (114, 116, 128, or 148) may be substituted.

<i>Law Enforcement Track (CRL)</i>	<i>Semester Hours</i>
Criminal justice .....	30
CRJ 205, 220, 305, 310, 315, 320 .....	18
CRJ electives (upper-divisional) .....	12
Social and behavioral sciences .....	27
POL 201, 301, 450; POL 413 or SOC 336 or SOC 328 .....	12
PSY 101, 363; PSY 341 or SOC 341 .....	9
SOC 323, 327 .....	6
Humanities <sup>1</sup> .....	9
Arts study .....	3
HST 102, 460 .....	6
Philosophy and religious studies <sup>1</sup> .....	12
REL 103 .....	3
PHL 103; 310 or 312; 314 .....	9
Communication skills .....	9-15
ENG 101, 102; or 114 or 198; 370; 272 or 316 or 474 .....	9-12
CMM 101 .....	0-3
Natural sciences (2 courses—lectures with laboratories) <sup>1</sup> .....	8
Quantitative studies .....	9
ACC 301 .....	3
CPS 144 <sup>2</sup> .....	3
MTH 207 .....	3
General Education courses and upper-divisional 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.

<sup>2</sup>CPS 111 and a MTH elective (114, 116, 128, or 148) may be substituted.

<i>Corrections Track (CRC)</i>	<i>Semester Hours</i>
Criminal Justice .....	30
CRJ 205, 210, 320, 323, 410 .....	15
CRJ electives (upper-divisional) .....	15

Social and behavioral sciences .....	24
POL 201, 301; POL 305 or 306 or SOC 328 .....	9
PSY 101, 431; PSY 341 or SOC 341 .....	9
SOC 323, 327 .....	6
Humanities <sup>1</sup> .....	9
Arts study .....	3
HST 102, 460 .....	6
Philosophy and religious studies <sup>1</sup> .....	12
REL 103 .....	3
PHL 103; 310 or 312; 314 .....	9
Communication skills .....	9-15
ENG 101, 102; or 114 or 198; and 370; 272 or 316 or 474 .....	9-12
CMM 101 .....	0-3
Natural sciences (2 courses—lectures with laboratories) <sup>1</sup> .....	8
Quantitative studies .....	9
ACC 301 .....	3
CPS 144 <sup>2</sup> .....	3
MTH 207 .....	3
General Education courses and upper-divisional 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.

<sup>2</sup>CPS 111 and a MTH elective (114, 116, 128, or 148) may be substituted.

### OPTION B: TRANSFER PROGRAM

To be admitted as a major in the S5 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 Office of Admission, the Criminal Justice Program, and the College of Arts and Sciences through the admission counselor, the assigned academic advisor, and the assistant 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 .....	(BIO, CHM, GEO, PHY) .....8
Statistics <sup>1</sup> .....	(MTH 207) .....3
Introduction to Criminal Justice .....	(CRJ 205) .....3
Research in Criminal Justice .....	(CRJ 320) .....3

<sup>1</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 102.

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.

<i>General Track (CRJ)</i>	<i>Semester Hours</i>
Criminal justice .....	18
(CRJ 210 is specifically required as a prerequisite for students concentrating in the criminal justice general track <i>in addition</i> to the 18 semester hours in criminal justice if it was not included in the associate degree program.)	
CRJ 220, 305 .....	6
CRJ electives (upper-divisional) .....	12
Social and behavioral sciences .....	15
POL 301, 306 .....	6
PSY 341 or SOC 341 .....	3
PSY 363 or SOC 325 .....	3
SOC 328 .....	3
Humanities <sup>1</sup> .....	6
Arts study .....	3
HST 355 or 376 or 460 .....	3
Philosophy and religious studies <sup>1</sup> .....	12
REL 103 .....	3
PHL 103, 314 .....	6
PHL 310 or 312 .....	3
Communication skills .....	3-6
ENG 272 or 316 or 474 .....	3
CMM 101 .....	3
Quantitative studies: CPS 144 <sup>2</sup> .....	3
General Education courses and upper-divisional electives to total at least .....	66

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

<sup>2</sup>CPS 111 and a MTH elective (114, 116, 128, or 148) may be substituted.

<i>Law Enforcement Track (CRL)</i>	<i>Semester Hours</i>
Criminal justice .....	15
(CRJ 220 and CRJ 305 are specifically required as prerequisites for students concentrating in the law enforcement track <i>in addition</i> to the 15 semester hours in criminal justice if they were not included in the associate degree program.)	
CRJ 310, 315 .....	6
CRJ electives (upper-divisional) .....	9
Social and behavioral sciences .....	18
POL 301, 450 .....	6
SOC 328 .....	3

PSY 341 or SOC 341 .....	3	
PSY 363 .....	3	
SOC 323 .....	3	
Humanities <sup>1</sup> .....		6
Arts study .....	3	
HST 460 .....	3	
Philosophy and religious studies <sup>1</sup> .....		12
REL 103 .....	3	
PHL 103, 314 .....	6	
PHL 310 or 312 .....	3	
Communication skills .....		9
ENG 272 or 316 or 474 .....	3	
ENG 370 .....	3	
CMM 101 .....	3	
Quantitative studies: CPS 144 <sup>2</sup> .....		3
General Education courses and upper-divisional electives to total at least .....		66

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

<sup>2</sup>CPS 111 and a MTH elective (114, 116, 128, or 148) may be substituted.

### *Corrections Track (CRC)*

### *Semester Hours*

Criminal justice .....		15
(CRJ 210 is specifically required as a prerequisite for students concentrating in the criminal justice corrections track <i>in addition</i> to the 15 semester hours in criminal justice if it was not included in the associate degree program.)		
CRJ 323, 410 .....	6	
CRJ electives (upper-divisional) .....	9	
Social and behavioral sciences .....		15
POL 301 .....	3	
POL 305 or POL 306 or SOC 328 .....	3	
PSY 341 or SOC 341 .....	3	
PSY 431 .....	3	
SOC 323 .....	3	
Humanities <sup>1</sup> .....		6
Arts study .....	3	
HST 460 .....	3	
Philosophy and religious studies <sup>1</sup> .....		12
REL 103 .....	3	
PHL 103, 314 .....	6	
PHL 310 or 312 .....	3	
Communication skills .....		9
ENG 272 or 316 or 474 .....	3	
ENG 370 .....	3	
CMM 101 .....	3	
Quantitative studies: CPS 144 <sup>2</sup> .....		3
General Education courses and upper-divisional electives to total at least .....		66

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

<sup>2</sup>CPS 111 and a MTH elective (114, 116, 128, or 148) may be substituted.

## FACULTY

James A. Adamitis, *Director*

*Associate Professors:* Adamitis, Ingram

*Lecturer:* Heffernan

*Adjunct Instructors:* Abraham, Alexander, Apolito, Frapwell

## 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. *3 sem. hrs.*

CRJ 300. CRIME, JUSTICE AND TECHNOLOGY: Studies the impact technology has on influencing the regulatory process of the criminal justice system; its role in characterizing techno-crimes; moral ramifications and/or dilemmas confronting the practitioner, transgressor and victim; the implications of technology on violations of individual and social rights. *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 and 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 399. SPECIAL TOPICS IN CRIMINAL JUSTICE: An extensive examination of a current topic effecting the criminal justice system and its law enforcement, corrections or judicial components. May be repeated to a maximum of 3 semester credits when the topic changes. *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: Theoretical approaches to understanding violent change in political institutions and the criminal justice system; the continuum between violence and nonviolence; revolution, revolt, terrorism, and political assassination. Emphasis on the roles of criminal justice and government agencies in meeting political dissent. *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 420. COMPUTER CRIME: Study of the theoretical and practical foundations of white-collar crime in the computer arena. Types of computer crime, methods of commission, federal and state laws, prevention and detection, apprehension and punishment, and the future of computer crime. Prerequisite: CPS 144. 3 sem. hrs.

CRJ 436. CRIME AND JUSTICE IN THE BRITISH ISLES: Comparison of crime and the administration of justice in the British Isles and the U.S. Trends in British criminal and juvenile justice. Available only during the summer session. 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: Sophomore 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 Career Placement Center. 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.

# 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.

For a minor in economics, 18 semester hours are required: ECO 203-204, 346-347, and any two elective courses from economics.

For course descriptions, see ECO, Chapter VII.

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

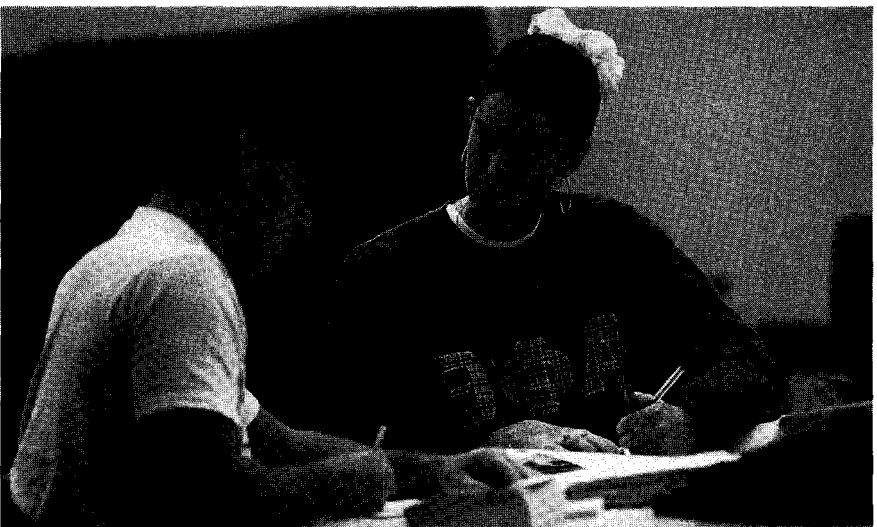
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	<i>Semester Hours</i>
Economics .....	30
ECO 203, 204, 346, 347, and 18 sem. hrs. of upper-division electives.	
Mathematics .....	6-9
MTH 148, 207 required; MTH 149 strongly recommended.	
Natural science .....	7
Social and behavioral sciences .....	12
Humanities .....	18
Philosophy and religious studies .....	12
Communication skills .....	0-9
First-year experience: ASI 150 .....	0-1
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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## ENG

### ENGLISH (ENG)

The University requirement in English composition is satisfied by the completion of ENG 101-102, ENG 114, or ENG 198. Either ENG 114 or ENG 198 is the equivalent of ENG 102 as a prerequisite for 200- and 300-level English courses. For placement information, see Reading and Writing Skills under Basic Skills Requirements in Chapter V. For additional details, consult the department chairperson or the coordinator of composition.

Students majoring in English must complete at least 36 semester hours of English courses including first-year composition, at least one 200-level literature course or ENG 151, and at least 24 semester hours at the 300-400 level.

Students minoring in English must complete at least 12 semester hours of upper-divisional (300-400) courses in addition to the composition requirement. Students in B.A. programs can acquire teacher certification in English through the Ell program. (See EDT.) For details, consult the department chairperson.

The English department awards a writing certificate to students who achieve a 3.0 grade-point average in 18 semester hours of approved writing and writing-related courses, including at least 12 semester hours of upper-divisional (300-400) courses, and who pass a final examination including an impromptu essay. For details, consult the department chairperson.

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

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	<i>Semester Hours</i>
English .....	36
First-year composition: ENG 101-102 or 114 or 198 .....	0-6
One 200-level literature course or ENG 151 .....	3
Shakespeare: ENG 362 or an equivalent seminar .....	3
One other major author course: ENG 405, 431, or a seminar on a single author .....	3
One genre course: ENG 317, 319, 320, 324, 329, 330, or an approved substitute .....	3
One literary period course: ENG 407, 410, 414, 433, 438, 444, 448, 451, 453, 455, 482, or the equivalent .....	3
One advanced writing course: ENG 308, 310, 312, 316, 370, 372, 376, 378, or 474 .....	3
ENG electives, including at least 9 sem. hrs. at 300-400 level .....	12-18
CMM 101 .....	3
Natural science .....	7
Mathematics (MTH 102, 204, 205 excluded) .....	3
Social and behavioral sciences .....	12
Humanities .....	18
Philosophy and religious studies .....	12
First-year experience: ASI 150 .....	0-1
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

James P. Farrelly, *Chairperson*

Sara G. Wieland, *Coordinator of Composition*

*Professors Emeriti:* Cochran, Labadie, McCarthy, Murphy, Palumbo

*Professors:* August, Bedard, Farrelly, Henninger, Kimbrough,

K. Marre, Martin, Patrouch, Pici

*Associate Professors:* Arons, Cameron, Macklin, L. Marre, Means,

Ruff, Stockum

*Assistant Professors:* Boehnlein, Conniff, Durham, Shereen, Thomas, Tuss, Wilhoit, Youngkin

## 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-year students who show high proficiency. First term only. Open by permission only. 3 sem. hrs.

\* ENG 151. INTRODUCTION TO LITERATURE: A critical study of literary forms—fiction, drama, and poetry—representative of various eras and cultures. May be taken concurrently with ENG 102. Prerequisite: ENG 101 or equivalent. 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 first-year students 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 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 18th 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. 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 19th 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. Prerequisite: ENG 102 or equivalent. 3 sem. hrs.
- ENG 332. STUDIES IN LITERATURE AND FILM: Studies in literary texts and the film treatments of those texts. 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 20th-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 19th and early 20th 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 19th 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. hr.*
- 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 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 16th 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 17th 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 19th 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-19th 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 20th 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 476. COMPOSITION THEORY: Study of the principal current theories of composition, with application to the teaching and evaluating of writing. Prerequisite: ENG 316 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.*

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\*General education course. See Chapter V.

## FAMILY DEVELOPMENT (FDV)

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, psychology, education, communication, human ecology, 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:

	<i>Semester Hours</i>
Basic theory course in family development (Choose one.) .....	3
HEC 318 Family Living	
SOC 331 Marriage and the Family	
Families and society (Choose one.) .....	3
HST 352 History of the American Family	
SOC 355 Families and the Economy	
Dynamics of family life (Choose one.) .....	3
CMM410 Family Communication	
PHL 318 Family Ethics	
REL 344 Christian Marriage	
ASI 448 Seminar in Family Development (required) .....	1
Electives (Choose two.) .....	6
BIO 390 Sex and Fertility Regulation	
HEC 306 Family Management	
HEC 325 Child Development	
HEC 329 Child Development Practicum	
PSY 251 Human Growth and Development	
PSY 351 Child Psychology	
PSY 355 Psychology of the Exceptional Child	
PSY 462 Human Sexuality	
REL 362 Christian Family Values and Television	
REL 466 Theology of Sexuality	
SOC 322 Sex Roles and Society	
SOC 323 Juvenile Delinquency	
SOC 330 Perspectives on Aging	
SWK 330 Perspectives on Aging	
SWK 325 Child Abuse	
SWK 331 Death, Dying, and Suicide	

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*

Brenda Donnelly, *Research Associate*

Allik (Psychology), DeLuca (Human Ecology), Herbenick (Philosophy),

L. Majka (Sociology, Anthropology and Social Work), Huff (College of Arts and Sciences), Taylor (Sociology, Anthropology and Social Work)



## GEN

### 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 first year but not later than the end of the junior year. Students in good academic standing may transfer from one program to another, provided they meet the requirements of, and can be accommodated by, the programs into which they wish to transfer.

The first-year student is required to seek approval of course selections 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 College office. 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.

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 a minor concentration must take 12 semester hours in 300-400 level courses, and any prerequisites.

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### PROGRAM S6: BACHELOR OF SCIENCE WITH A MAJOR IN GEOLOGY (GEO)<sup>1</sup>

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	<i>Semester Hours</i>
Geology .....	38
Mathematics 168-169 <sup>2</sup> .....	8
Chemistry 123-124 .....	8
Physics 206-207 <sup>3</sup> .....	6
Science electives <sup>4</sup> .....	16
Philosophy and religious studies .....	12
Communication skills .....	0-9
Social and behavioral sciences .....	6
Humanities .....	9
First-year experience: ASI 150 .....	0-1
General Education requirements and academic electives to total at least .....	120

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<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 148-149 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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## FACULTY

Charles J. Ritter, *Chairperson*  
*Distinguished Service Professor: Springer*  
*Professor: Ritter*  
*Associate Professor: Sandy*  
*Assistant Professor: Pair, Koziol*

## COURSES OF INSTRUCTION

\* GEO 103. PRINCIPLES OF PHYSICAL GEOLOGY: 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 each 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 each week. *1 sem. hr.*

\* GEO 116. HISTORICAL GEOLOGY: A comprehensive study of earth history from its origins to the present. Prerequisites: GEO 109 or 115, permission of instructor. *3 sem. hrs.*

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

GEO 198. GEOLOGY, LANDSCAPE, AND ENVIRONMENT OF THE MIAMI VALLEY: Field-based course examining the geologic history of the Miami Valley and Dayton area; processes leading to the modern landscape; the impact of human activity will be assessed. Prerequisite: GEO 109 or 115 or permission of instructor. Summer. *3 sem. hrs.*

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 each 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. Second term, each year. Prerequisites: GEO 109 or 115, permission of instructor. *3 sem. hrs.*

GEO 208L. ENVIRONMENTAL GEOLOGY LABORATORY: Course to accompany GEO 208. Two hours each week. *1 sem. hr.*

- \* GEO 218. ENGINEERING GEOLOGY: A comprehensive study of geologic principles applicable to civil engineering practices. First 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 each 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 each week. Second term, alternate years. *1 sem. hr.*

GEO 303. FIELD GEOLOGY: Study of field relationships in an area of Britain containing abundant igneous, metamorphic, and sedimentary rocks. 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 each week. Second term, alternate years. *1 sem. hr.*

GEO 308. PROBLEMS AND DECISIONS IN ENVIRONMENTAL GEOLOGY: An in-depth examination of selected environmental problems and the way in which scientific information guides practice and policy. Topics will range from investigations of natural hazards to considerations of land use and water resources. Prerequisite: GEO 109 or GEO 115 or permission of instructor. *3 sem. hrs.*

GEO 308L. PROBLEMS AND DECISIONS IN ENVIRONMENTAL GEOLOGY LABORATORY: Course to accompany GEO 308. Two hours each week and periodic field work. *1 sem. hr.*

GEO 309. SURFACE AND GROUNDWATER HYDROLOGY: This course is designed to provide a science or engineering student with the fundamental concepts and principles central to the study of water as a resource. This will include an examination of all components of the hydrologic cycle including surface-water hydrology and management, groundwater hydrogeology, and water resource management. Prerequisite: GEO 109 or GEO 218 or permission of instructor.

3 sem. hrs.

GEO 309L. SURFACE AND GROUNDWATER HYDROLOGY LABORATORY: Laboratory exercises to accompany GEO 309. Three hours per week.

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 each week. Second term, alternate years.

1 sem. hr.

GEO 401. PALEONTOLOGY: The study of ancient life. The morphology, ecology, evolution, and stratigraphic distributions of selected invertebrates, vertebrates, and plants. First term, alternate years.

3 sem. hrs.

GEO 401L. PALEONTOLOGY LABORATORY: Course to accompany GEO 401. Two hours each week. First term, alternate years.

1 sem. hr.

GEO 403. SEDIMENTOLOGY: Detailed study of sediments: their sources, environments of deposition, and methods of consolidation. Emphasis on the interpretation of ancient sediments. Prerequisites: GEO 201, 204, 301. First term, alternate years.

3 sem. hrs.

GEO 403L. SEDIMENTOLOGY LABORATORY: Course to accompany GEO 403. Two hours each week. First term, alternate years.

1 sem. hr.

GEO 498. GEOLOGICAL RESEARCH AND THESIS: Research project within an area of the geological sciences, including, but not limited to, environmental geology, geochemistry, geomorphology, or paleontology. The results are to be presented in a written thesis. Prerequisite: Permission of instructor.

4 sem. hrs.

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\*General Education course. See Chapter V.

## HISTORY (HST)

History critically studies the past and those key values which have shaped society. History also provides students with a sense of perspective and with the ability to make critical judgments. Those with a sharply honed historical consciousness know that often what appears to be a simple solution to a simple problem will not work because unexpressed historical forces and traditions lie just beneath the surface. Therefore, historical consciousness helps to make the world comprehensible. To be ignorant of history is to be, in a very fundamental way, intellectually defenseless, unable to understand the workings of this or other societies. Thus all totalitarian societies have stringently controlled the study and writing of history. They recognize that a free mind needs to know its past, to debate and discuss how the world came to be as it is, in order to know what to defend and what to change and how to resist imposed ideologies.

Students majoring in history are offered a flexible curriculum that allows them to have a double major or one or more minors. Students are also strongly encouraged to develop interdisciplinary areas of concentration to meet their interests and vocational goals. Examples of areas of concentration are pre-law, business, international affairs, and historical administration, preservation, and archival management. Majors should consult the department chairperson for a departmental advising brochure and further details. History majors pursue professions in numerous fields including education, law and government, international affairs, archives and museums, communications, and business.

Students in B.A. programs can acquire teacher certification in history through the E11 program (See EDT). For details, consult the department chairperson.

History minors must complete 18 semester hours as follows: HST 101 or 102, HST 251 or 252, two upper-level courses in American history, and two upper-level courses in non-American history.

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### PROGRAM A6: BACHELOR OF ARTS WITH A MAJOR IN HISTORY (HST)<sup>1</sup>

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	<i>Semester Hours</i>
History .....	36
HST 101, 102, 251, 252 .....	12
HST 301 .....	3
HST seminar: HST 490, 491, or 492 .....	3
HST electives .....	18
These electives should be distributed fairly evenly between American and non-American history.	
Natural science .....	7
Mathematics (MTH 102, 204, 205 excluded) .....	3
Social and behavioral sciences .....	12
Humanities .....	18
Philosophy and religious studies .....	12
Communication skills .....	0-9
Quantification skills or foreign language <sup>2</sup> .....	6-8

First-year experience: ASI 150 .....	0-1
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>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 as well.

## FACULTY

John A. Heitmann, *Chairperson*

*Professors Emeriti:* Beauregard, King, Maras, Mathias, Steiner, Vines

*Professors:* Alexander, Eid, Morman, Palermo, Rhee

*Associate Professors:* Amin, Flockerzie, Heitmann, Hitchner, Schweikart, Taylor

*Assistant Professors:* Bannan, Bednarek, Cadegan, Carlson, Cooley, Hirshfield, Hunt, Smith, Vieson

## COURSES OF INSTRUCTION

NOTE: HST 101 or HST 102 or the equivalent is a prerequisite for all other HST courses.

- \* HST 101. HISTORY OF WESTERN CIVILIZATION FROM ITS CLASSICAL ROOTS TO 1715: Survey of Western civilization beginning in Antiquity and concluding with the Enlightenment. The course will investigate the social, economic, cultural, political, environmental forces, and events. 3 sem. hrs.
- \* HST 102. HISTORY OF WESTERN CIVILIZATION SINCE 1715: Survey of Western Civilization from the 18th century to the present. The course will investigate the social, economic, cultural, political, and environmental forces that shaped European Society and the world in the Modern Period. 3 sem. hrs.
- HST 198. HISTORY HONORS SEMINAR: Study and seminar discussion of selected historical documents dealing with major events and trends in Western Civilization since 1715. Open by permission only to first-year students in the University Honors Program. 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: Historical methods, philosophy, and introductory historiography, the last based on the professor's field of specialization. Required for junior history majors. 3 sem. hrs.



- \* HST 302. HISTORY OF ANCIENT GREECE: Survey of Greek history and culture from the Bronze Age to Alexander the Great. *3 sem. hrs.*
- HST 303. HISTORY OF THE ROMAN REPUBLIC AND EMPIRE: Survey of Roman history with emphasis on the political, social, and institutional evolution of the Roman state and the organization and structure of the Roman Empire. *3 sem. hrs.*
- \* HST 305. 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 307. 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 311. 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 312. 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 313. RESTORATION, REVOLUTION, AND REACTION—EUROPE 1815-1890: 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. MODERN EUROPE IN DECLINE, 1890-1945: Historical study of the decline and fall of European civilization from the eve of World War I to the end of World War II, including an examination of political, economic, social, and cultural conditions. *3 sem. hrs.*
- \* HST 315. EUROPE IN THE POSTWAR ERA—1945 TO THE PRESENT: Historical survey of domestic and foreign politics, economics, society, and culture in postwar Europe (East and West) from 1945 to the present. *3 sem. hrs.*
- HST 317. HISTORICAL PERSPECTIVES ON WESTERN CHRISTIANITY, 100-1300: Historical analysis of the interaction of Western society and culture with Christianity from the Apostolic Era to the end of the Middle Ages. *3 sem. hrs.*
- HST 318. HISTORICAL PERSPECTIVES ON WESTERN CHRISTIANITY, 1300 TO THE PRESENT: Historical analysis of the interaction of Western society and culture with Christianity from the Renaissance to the present. *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 TO 1860: History of Kievan Russia and Orthodox Christianity, the Mongol Conquest, the rise of autocracy, reforms and rebellions, revolutionary movements, and the rise of the Empire to the Crimean War. *3 sem. hrs.*



HST 326. HISTORY OF THE SOVIET UNION AND ITS SUCCESSOR STATES, 1860 TO THE PRESENT: Social, political, and cultural history of Russia from the great reforms of the late empire, through the wars, revolutions, and reconstructions of the Soviet Period, to the present. 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 EAST ASIA: Brief review of the early historical development of East Asia; study of China and Japan in the 19th and 20th centuries, emphasizing political, religious, cultural, and economic development. 3 sem. hrs.

HST 336. HISTORY OF AFRICA TO 19TH CENTURY: Study of African history from the emergence of Africa's ancient kingdoms to the end of the trans-Atlantic slave trade in the nineteenth century. 3 sem. hrs.

HST 337. HISTORY OF AFRICA: 19TH CENTURY TO THE PRESENT: Emphasis: colonialism and its impact, the growth of nationalism and the problems of contemporary Africa. 3 sem. hrs.

HST 339. HISTORY OF SOUTH AFRICA: Study of South African society with emphasis on historical interpretations of the origins of segregation, economic growth, nationalism, Apartheid, Bantusans, and other issues of contemporary significance. 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 they influenced the varying reactions of 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 349. TECHNOLOGY AND THE CULTURE OF WAR: Investigation of the role of invention and engineering as it has been related to defense and war throughout the ages, focusing on the interrelationship of policy, strategy, organization, and technology from a global perspective. 3 sem. hrs.

- \* HST 351. HISTORY OF AMERICAN WOMEN: 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 352. HISTORY OF THE AMERICAN FAMILY: Survey of the historical development of American family life from the colonial period to the present. 3 sem. hrs.

HST 353. HISTORY OF WOMEN IN EUROPEAN SOCIETIES: Study of the changing roles of women in European societies from the roots of industrialization 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 358. SOCIAL AND CULTURAL HISTORY OF LATIN AMERICA: Survey of social and cultural history of Latin America and the Caribbean from pre-Columbian times to the present. Emphasis on the interaction between the European colonizer and the Amerindian and African peoples of the hemisphere. 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 366. AMERICAN LITERATURE AS HISTORY: An examination of American literature as a source of evidence for American history, emphasizing the historical and cultural circumstances that shape literary activity. 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 371. HISTORY OF AMERICAN BUSINESS: Historical study of the evolution of modern capitalism from the colonial period to the present. 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 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 406. 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 408. PEACEMAKING IN THE MODERN WORLD—EUROPEAN DIPLOMACY, 1815 TO 1945: Study of European international relations from 1815 to 1945, with emphasis on the great peace conferences of this period: the Congress of Vienna, the Paris Peace Settlement, and the Yalta and Potsdam conferences. 3 sem. hrs.

HST 413. ITALIAN FASCISM: The rise of Italian fascism: a critical historical examination of the origins of European totalitarianism. 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 421. MODERN GERMANY: Analysis of the development of the German state from 1848 through the period of unification, Second Empire, Weimar Republic, Third Reich, the post-World War II Germanies, 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 431. NATIONAL CULTURES OF THE SOVIET UNION AND ITS SUCCESSOR STATES: The history of the formation of the Soviet Union and of national and cultural relations between the Russians and their Slavic, Baltic, Caucasus, Central Asian, and Siberian neighbors. 3 sem. hrs.

HST 432. RUSSIAN CULTURE AND CINEMA: The history of popular tastes and revolutionary experimentation in film, literature, the arts and daily life in Russia and the Soviet Union from 1900 to the present. 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 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 466. HISTORY OF SCIENCE, TECHNOLOGY, AND THE MODERN CORPORATION: Historical study of the emergence of 20th-century science-based industry. 3 sem. hrs.

\* HST 467. HISTORY OF CIVIL ENGINEERING: Historical study of the development of civil engineering from its origins in the ancient world to the present. 3 sem. hrs.

HST 468. HISTORY OF AMERICAN AVIATION: This course will examine the influence of aviation on the American culture, economy, and military. It will also highlight the development of aviation/aerospace technology. 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 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 479. HISTORY OF HIGHER EDUCATION IN AMERICAN SOCIETY: Critical historical examination of the evolution of American higher education from the antebellum college to the modern university.

3 sem. hrs.

HST 482. 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. SENIOR 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 and professional experience through work with approved organizations such as historical societies, architectural preservation boards, and business firms. Prerequisite: Permission of supervising instructor.

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.

## HUMAN ECOLOGY (HEC)

Human ecology 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. It is a diversified field integrating many disciplines.

The Bachelor of Science with a major in Human Ecology is currently awarded in two areas: Human Ecology (General) and Human Ecology (Food and Nutrition).

A student wishing to choose human ecology as an area of minor concentration must take 12 semester hours of 300-400-level courses in consultation with the chairperson of the Department of Human Ecology. The following specific minors are available:

Human Ecology—Fashion Merchandising: HEC 314, 360, 362, 404

Human Ecology—Consumer Science: HEC 321, 331, 341, elective

Human Ecology—Family and Child Development: HEC 310, 318, 325, 429, 436  
or 470

Human Ecology—Food Systems: HEC 200, 200L, 303, 304, 308, 407

Human Ecology—Food and Nutrition: HEC 300, 300L, 303, 310, 341

### HUMAN ECOLOGY (GENERAL)

Students following the General Human Ecology 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. Fashion Merchandising (HEM)
- II. Consumer Science (HES)
- III. Family and Child Development (HEL)
- IV. Interior Design (HEI)

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### PROGRAM S7: BACHELOR OF SCIENCE WITH A MAJOR IN HUMAN ECOLOGY (GENERAL) (HEG)<sup>1</sup>

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	<i>Semester Hours</i>
Human ecology .....	37-38
HEC 103, 105, 303, 306 or 321, 318, 320, 360, elective .....	21
Concentration requirements	
I. HEM--HEC 314, 341, 362, 404, 436 and/or 470 .....	16
(A minor in MKT is required.)	
II. HES--HEC 331, 341, 362, 436 and/or 470, elective .....	16
(Support courses in CRJ, ECO, MKT, POL, SOC are required.)	
III. HEL--HEC 310 or 403, 325, 329, 417, 429, 436 and/or 470 .....	16
(Support courses in EDT, PSY are required.)	
IV. HEI--HEC 314, 330, 340, 350, 395, 396, 470 .....	17
(Support courses are required: VAF 104, 112, 216; VAH 274, 275; VAI 305, 308.)	
Mathematics-management information systems:	
MTH 207, elective (MTH 102, 204, 205 excluded) .....	6
Natural science: 2 courses—lectures with laboratories <sup>1</sup> .....	8

Social and behavioral sciences .....	6
Philosophy and religious studies .....	12
Humanities .....	9
Communication skills: ENG 101-102 or 114 or 198; ENG elective; CMM 101 .....	3-12
First-year experience: ASI-150 .....	0-1
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.

## HUMAN ECOLOGY (FOOD AND NUTRITION)

The Bachelor of Science with a major in human ecology (Food and Nutrition) allows for the following two areas of concentration:

- Program S8: Bachelor of Science with a Major in Human Ecology  
(Food and Nutrition—ADA Plan V) (HEA)
- Program S8A: Bachelor of Science with a Major in Human Ecology  
(Food and Nutrition—Nutrition) (HEN)

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### PROGRAM S8: BACHELOR OF SCIENCE WITH A MAJOR IN HUMAN ECOLOGY (FOOD AND NUTRITION— DIDACTIC PROGRAM IN DIETETICS) (HEA)<sup>1</sup>

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This program leads to a Bachelor of Science in preparation for a required post-baccalaureate dietetic internship or a preprofessional practice program. Upon successful completion of the post-baccalaureate experience, graduates are eligible to become active members of the American Dietetic Association and to sit for the registration examination to become registered dietitians.

Acceptance into a dietetic internship or preprofessional practice program is very competitive. Post-baccalaureate programs maintain increasingly high admission standards. Acceptance is based on the grades of major and support courses, recommendation letters, work experience, extracurricular activities, motivation, and knowledge of the profession. A grade point average above 2.9 in both the major and support courses is recommended. At the end of the second year the Advisory Committee evaluates all students enrolled in the American Dietetic Association Didactic Program in Dietetics (S8). Any student whose cumulative average after two years of study is below 2.8 will be advised to consider changing his or her major.

Students generally make formal application in the second semester of the senior year to dietetic internships and/or preprofessional practice programs. Selection of a dietetic internship is made through computer matching.

Students enrolled in the American Dietetic Association Didactic Program in Dietetics do not practice as student dietitians in any observation experience. Therefore, no professional liability insurance is required.

Additional undergraduate costs may include a laboratory coat and public transportation fares to an observation site. Students are encouraged to join the American Dietetic Association as affiliate members at \$36.00 per membership year (June 1 to May 31).



	<i>Semester Hours</i>
Human ecology .....	40
HEC 200, 200L, 303, 304, 308, 318, 357, 401, 402, 403, 405, 407, 460, 490, food elective	
Natural science: BIO 151, 152, 152L, 403, 411L; CHM 123, 123L, 124, 124L, 313, 313L, 314, 314L, 420 .....	30
Mathematics-management information systems:	
MTH 207, elective (MTH 102, 204, 205 excluded) .....	6
ACC 301 .....	3
MGT 311, 314 .....	6
Social and behavioral sciences .....	12
Philosophy and religious studies .....	12
Humanities .....	9
Communication skills: ENG 101-102 or 114 or 198; 370 or 272 or 372; CMM 101 .....	3-12
First-year experience: ASI 150 .....	0-1
General Education courses and academic electives to total at least .....	121-131

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

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### PROGRAM S8A: BACHELOR OF SCIENCE WITH A MAJOR IN HUMAN ECOLOGY (FOOD AND NUTRITION— NUTRITION) (HEN)<sup>1</sup>

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Program S8A: The nutrition program is a preparatory study of nutrition for graduate work and research.

	<i>Semester Hours</i>
Human ecology .....	30
HEC 200, 200L, 303, 318, 327, 357, 401, 403, 410, 410L, 436, 451, 460	
Natural science: BIO 151, 152, 152L, 403, 411L; CHM 123, 123L, 124, 124L, 313, 313L, 314, 314L, 420 .....	30
Mathematics-management information systems:	
MTH 207, elective (MTH 102, 204, 205 excluded) .....	6
Social and behavioral sciences .....	6
Philosophy and religious studies .....	12
Humanities .....	9
Communication skills: ENG 101-102 or 114 or 198; 370 or 372, CMM 101 .....	12
First-year experience: ASI 150 .....	0-1
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.

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## FACULTY

Julia A. Palmert, *Chairperson*

*Professor Emerita:* Schroeder

*Assistant Professors:* De Luca, Dellwo, Palmert

*Part-time Instructors:* Cosenza, Freeman, Ganote, Geiger, Kuehn, Leakas, Miller, Rethman, Schroer, Sebek, Stoesz, Stoa, West, Voisard



## COURSES OF INSTRUCTION

HEC 103. INTRODUCTION TO HUMAN ECOLOGY: Study of the role and scope of human ecology with emphasis on professional development. 1 sem. hr.

HEC 105. AESTHETICS OF HUMAN ECOLOGY: Study of the principles and elements of art in order to develop sensory awareness and sensitivity in response to the environment, and a greater appreciation of art, design and aesthetics. 3 sem. hrs.

HEC 200. INTRODUCTORY FOODS: Study of scientific principles applied to the processing and preparation of food to maintain nutritional quality and aesthetic value. Corequisite: HEC 200L. 2 sem. hrs.

HEC 200L. INTRODUCTORY FOODS LABORATORY: Course to accompany HEC 200 lecture. Two 2-hour periods each week. Corequisite: HEC 200. 2 sem. hrs.

HEC 202. INTRODUCTION TO 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 practice. 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 300. CULTURAL ASPECTS OF FOOD: Study of the relationship among consumers, their culture and society, and their food; the historical evolution of food; socioeconomic influences on foodways. Open to the University. 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: Study of the nutrient needs of humans and of their choices of foods as modified by socioeconomic, cultural, and life cycle factors. 3 sem. hrs.

HEC 304. QUANTITY FOOD PRODUCTION: Study of quantity food service systems. Coordinated working experience. Prerequisites: HEC 200, 200L. 3 sem. hrs.

HEC 305. GLOBAL NUTRITION: A study of the global nature of our food systems focusing on the impact of our food decisions on the environment, agricultural production and processing, world population relative to food supply, hunger, biotechnology, and safety of our food supply. Open to the University. 3 sem. hrs.

HEC 306. FAMILY MANAGEMENT: A systems approach to the study of family 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. Open to the University. 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. Prerequisites: HEC 200, 200L or equivalent. *3 sem. hrs.*
- HEC 310. CHILD NUTRITION: Nutrition as it applies to the optimal and critical growth of children, including the relationships among the physical, mental, socioeconomic, and emotional factors of development. *3 sem. hrs.*
- HEC 314. 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 318. FAMILY LIVING: Study of the family as a basic unit of society, the purpose and function of marriage and the family, elements contributing to the success or failure of a marriage, and contemporary issues facing the family. *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. CONSUMER ECONOMICS: The economic interrelationship of the political, business, and household systems from the consumer point of view. The use of economic tools in identifying ways to improve the 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 age eight. Observation and work in laboratory 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. Prerequisites: HEC 200, 200L. 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. Laboratory 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: Introduction to the process of interior design with emphasis on design principles and elements, space planning, lighting, and furniture arrangement and selection. *3 sem. hrs.*

HEC 331. MONEY MANAGEMENT: Study of the management of personal and household financial resources and allocation of income to various consumption activities. Open to the University. *3 sem. hrs.*

HEC 340. INTERIOR DESIGN II: An overview of architectural details, background treatments, accessories, and building systems. Design projects developed through programming, space planning, and graphic communications. Prerequisites: HEC 314, 330, 395. *3 sem. hrs.*

\* HEC 341. CONSUMERS AND SOCIAL ISSUES: 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: Introduction to the business aspect of interior design, barrier-free design, and developing design solutions by space analysis and planning to meet user needs. Prerequisites: HEC 340, 396, VAI 308. *3 sem. hrs.*

HEC 351. CONSUMER POLICY: This course will address the consumer policy process and some major factors affecting this process. Sources of policy-relevant information and methods for impacting the process will be studied. The student will apply the information learned to issues specific to his/her major. Open to the University. *2 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 395. BASIC DRAFTING: Study and application of basic principles and techniques for communicating space and construction in a graphic form appropriate for interior designers. *2 sem. hrs.*

HEC 396. INTERIOR ENVIRONMENTS: Study and application of basic principles and techniques of the integration of interior systems such as plumbing, heating, electricity, lighting, and acoustics for interior designers. Prerequisite or corequisite: HEC 395. *2 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, BIO 403, CHM 420. *3 sem. hrs.*

HEC 402. NUTRITIONAL THERAPY: Study of human pathophysiology and nutritional assessment and modification in relation to the effective prevention and treatment of disease. Prerequisites: CHM 420, 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. INSTRUCTIONAL METHODS FOR HUMAN ECOLOGY: Instructional planning and developing media, methods, and materials for teaching human ecology subject matter. *3 sem. hrs.*

HEC 407. FOOD SERVICE SYSTEMS MANAGEMENT: Study of management theories as applied to institutional and commercial food service operations. *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 417. INFANT AND TODDLER PROGRAM MANAGEMENT: Study of program curriculum design, implementation, and management that is developmentally age-appropriate for children from birth to thirty months. Observation and work in laboratory school arranged. *3 sem. hrs.*

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 major areas of study. Original investigation, independent conferences, and reports are required. Prerequisite: Approval of department chairperson and instructor. *1-6 sem. hrs.*

HEC 437. MEAL MANAGEMENT: Study of the influences on food patterns resulting from the relationship between the economy and the consumer. Open to the University. Corequisite: HEC 437L. *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. HUMAN ECOLOGY LABORATORY INTERNSHIP: Practical field experience in the student's major area of study. Prerequisite: Permission of department chairperson. Grade option 2. *1-6 sem. hrs.*

HEC 490. TOPICS IN HUMAN ECOLOGY: Presentation and discussion of topics in a specialized area of human ecology. Can be repeated under special circumstances. *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*  
 Conard (Languages), Gilvary (Communication), K. Marre (English),  
 Zembaty (Philosophy)

## 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 315. CHINESE CULTURE: Survey of the major elements of Chinese culture from ancient times to the present with emphasis on philosophy, literature, and art. Lectures, discussions, and readings are in English. *3 sem. hrs.*

HMS 360. LATIN AMERICA THROUGH LITERATURE: Selected readings in contemporary Latin American literature (in translation) reflecting current issues. Conducted in English. *3 sem. hrs.*

\* HMS 395. CONTEMPORARY INTELLECTUAL TRENDS, EUROPE: Multidisciplinary course in art, film, literature, music, and philosophy, concentrating on the post-World War II period. *6 sem. hrs.*

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\*General education course. See Chapter V.

## 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 101-102. DEVELOPMENT OF PHILOSOPHY AND RELIGION IN THE WEST I, II: Survey of major issues in Western philosophy and religious thought from ancient Hebrew and Greek times to the present. Parallel to the first-year history and English courses in CORE. (Completion of both courses fulfills the PHL 103 requirement.) Required of and restricted to students in CORE. *3 sem. hrs. each*

ASI 150. INTRODUCTION TO THE UNIVERSITY: Examination of the values that form academic progress in the College; discussion of strategies for taking full advantage of academic opportunities and integrating formal and experiential learning. *1 sem. hr.*

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 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 298. 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 first-year students enrolled in the University Honors Program. Prerequisite: Permission of program director. *3 sem. hrs.*



- \* 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 395. INTERNSHIP IN SCIENCE: Application of scientific knowledge to specific projects in an approved organization. Applied-knowledge experience open to juniors and seniors as a supplement to their science curriculum. Permission of the internship director in the student's major department is required. *1-3 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 399. INTERDISCIPLINARY TOPICS: Study of special topics or themes of an interdisciplinary nature. Specific subtitles announced in composite. May be repeated as topics change. *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. *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 program director. *6 sem. hrs.*

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\*General education course. See Chapter V.



## INTERNATIONAL DEVELOPMENT STUDIES (IND)

The interdisciplinary minor in international development studies provides students of all majors with an understanding of Third World development as a perspective from which to view their majors. It gives students the cultural, historical, and political sensitivity required for working effectively in the interest of developing countries. Students who pursue the minor are encouraged to participate in the immersion experience, an opportunity to do independent study in their major disciplines in a developing country. Competence in speaking an appropriate foreign language is expected.

The minor in international development studies consists of 15 semester hours of courses, of which 12 semester hours are upper divisional (300-level or above).

These are distributed as follows:

	<i>Semester Hours</i>
Required courses .....	6
ASI 398 Special Topics in International Development	
ANT 150 Cultural Anthropology	
Anthropology elective (Choose one.) .....	3
ANT 310 Culture and Personality	
ANT 315 Language and Culture	
ANT 352 Cultures of Latin America	
ANT 406 Cultural Change	
History elective (Choose one.) .....	3
HST 348 United States and Third World Crises	
HST 357 Latin America in the Twentieth Century	
HST 482 History of Mexico	
HST 484 The Caribbean Since 1801	
Political science elective (Choose one.) .....	3
POL 323 Comparative Politics: Latin America	
POL 324 Comparative Politics: Southern Asia	
POL 325 Comparative Politics: The Middle East	
POL 457 Political Change in the Third World	

Other appropriate courses may be substituted with the approval of the director. Students wishing to qualify for the international development studies minor must declare this intention to the director and their respective deans by the mid-point of the junior year.

INTERNATIONAL DEVELOPMENT STUDIES ADVISORY  
COMMITTEE

Philip Aaron, S.M., *Director, International Development Studies*  
Bregenzer (Sociology, Anthropology, and Social Work), Geiger (Biology),  
Karns (Political Science), Lapitan (Political Science), Payne (Philosophy),  
Taylor (History)

## 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 fields such as government service, international business, international law, teaching, and social service. The curriculum includes a core of required courses, a concentration (East Asia, Latin America, Russia and Eastern Europe, Western Europe, global development), a foreign language requirement, and additional hours of course work drawn from the multidisciplinary elective pool.

Majors are also required to include an international and/or cross-cultural experiential component in their program. This may be satisfied through study abroad, internship, immersion, service, or work. The Center for International Programs assists students in identifying the most appropriate opportunities.

No minor in international studies is available.

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### PROGRAM A7: 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 .....	70
Natural science .....	7
Mathematics (MTH 102, 204, 205 excluded) .....	3
Philosophy and religious studies .....	12
Communication skills .....	0-9
First-year experience: ASI 150 .....	0-1
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. Humanities and Social Sciences breadth requirements are fulfilled through requirements for the major.

The major in international studies consists of a minimum of 70 semester hours of coursework distributed as follows:

#### *Required courses (30 semester hours)*

ECO 203,204,450	HST 102
ENG 272	POL 202, 214, 410, 455
GEO 103	

#### *Concentration (21 semester hours)*

Each major must select one of the following five concentrations, which must correspond with the foreign language chosen.

*East Asia:* HST 330; POL 328 or 329; and any five of the following courses:

ECO 460; HMS 315; HST 440, 445; PHL 355; POL 407; REL 201

*Latin America:* ANT 352; HST 358, REL 464 (choose one); ASI 398, ECO 460, POL 457 (choose one); HST 357; HST 482, HST 484 (choose one); POL 323; POL 404; SPN 342

*Russia and Eastern Europe:* HST 314, HST 315 (choose one); HST 325; HST 326; HST 328; POL 321; POL 409; HST 431, HST 432 (choose one)

*Western Europe:* HST 314, HST 315; HST 419, HST 421, HST 428 (choose two); HMS 395 or choice of two—ENG 357, ENG 358, PHL 359, PHL 360; POL 320

*Global Development:* ANT 406, SOC 328 (choose one); ASI 398; BIO 395; ECO 460; HST 335, HST 339, HST 357, HST 358 (choose one); POL 457; REL 201, REL 202, REL 376, REL 464, REL 472 (choose one)

*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, 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.

*Experiential Requirement (1-3 semester hours)*

INS majors must include an international and/or cross-cultural experiential component in their program prior to graduation. This requirement can be satisfied through participation in a study abroad program, an internship, immersion, service, or work experience. The experience must be for a minimum of four weeks. The requirement is satisfied by taking either INS 395 or INS 495.

*Electives (12 semester hours)*

The remaining 12 semester hours are to be chosen from the other four concentrations or from the following elective pool:

ANT	315, 351, 406
BAI	301
CMM	414
CRJ	336, 436
ECO	461
ENG	205, 306, 356, 357, 358
FIN	450
HEC	305
HMS	360
HST	311, 312, 313, 322, 325, 335, 339, 348, 349, 358, 375, 406, 408, 413, 416, 423, 424, 438, 470, 482, 484
INS	390, 399, 495
MGT	430
MKT	440, 445
PHL	317, 320, 321, 323, 327, 332, 350, 351, 352, 353, 358, 359, 360
POL	325, 327, 331, 335, 406, 408, 437, 471
PSY	445
REL	201, 202, 374, 406, 463, 472
SOC	328, 350
VAH	201, 202, 203, 350, 360, 382, 450, 460, 470, 471, 480

Any upper-level foreign language course (French, German, Italian, Russian, Spanish)

With permission, other courses including special topics courses and independent study

## INTERNATIONAL STUDIES POLICY COMMITTEE

Margaret P. Karns, *Director, Center for International Programs*

Aaron (International Studies), Bilocerkowycz (Political Science),

Bregenzer (Sociology, Anthropology, and Social Work), Flockerzie (History),

O'Meara (Languages).

## COURSES OF INSTRUCTION

INS 390. MODEL UNITED NATIONS: Examination of the work and procedures of the United Nations and its constituent bodies, study of various international issues and policies of member states, as well as of parliamentary diplomatic practices such as caucusing, resolution writing, and speech making in preparation for participation in Model United Nations simulations. Prerequisite: Permission of instructor.

*1 sem. hr.*

INS 395. INTERNATIONAL EXPERIENCE: Orientation for and evaluation of study abroad, internship, immersion, work or service experience in a foreign country, organization involved in international activities, or a cross-cultural setting in the United States. Grading option two only.

*1 sem. hr.*

INS 399. INDEPENDENT STUDY: Independent reading and research on an interdisciplinary topic in international studies chosen by the student in consultation with one or more faculty members. May be repeated. Prerequisite: Permission of program director.

*3 sem. hrs.*

INS 495. INTERNATIONAL STUDIES INTERNSHIP: Practical, supervised experience with an approved organization dealing with international affairs. Repeatable up to six hours. Prerequisite: Permission of program director.

*1-6 sem. hrs.*



## LANGUAGES (LNG)

The Department of Languages offers courses in modern languages—French, German, Italian, Russian, and Spanish—as well as in the classical language Latin. The language programs include instruction in the communicative skills, literature, and culture. The department also offers some literature and culture courses taught in English (see CLA and HMS) and Dramatic Kinesics in a Foreign Language. (See ASI.)

The Department of Languages conducts one-month study programs especially for language students in Spain, Mexico, Germany, and France. Language courses may also be offered through the Interdepartmental Summer Study Abroad Program. (See Chapter X.)

Students in B.A. programs can acquire teacher certification in languages through the E11 program. (See EDT.) For details, consult the department chairperson.

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. For assistance with placement, consult the department.

A language major may choose a major in a single language (French, German, Spanish) or a composite major in two languages.

A student may minor in French, German, Italian, Russian, or Spanish by completing 12 semester hours of upper-level (300-400) courses.

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**PROGRAM A8: BACHELOR OF ARTS WITH A MAJOR IN  
LANGUAGES (LNG)<sup>1</sup>**

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	<i>Semester Hours</i>
Languages .....	24
<i>Major in a Single Language</i> (at least 24 sem. hrs. at the 300-400 level): A major in a modern language must take 311 or 312, 321 or 322 <sup>2</sup> , and at least two courses, including at least one in literature, from the following: 341, 342, 360, 361, 362, 381, 450, 451, 471, 472.	
<i>Composite Major in Languages</i> (at least 24 sem. hrs. at the 300-400 level distributed between two languages): Courses must include at least 3 sem. hrs. of literature.	
Communication skills .....	0-9
Humanities .....	18
Philosophy and religious studies .....	12
Natural science .....	7
Mathematics (MTH 102, 204, 205 excluded) .....	3
Social and behavioral sciences .....	12
First-year experience: ASI 150 .....	0-1
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>In Italian take ITA 313 and 314.

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## FACULTY

Andria Chiodo, *Chairperson*

*Professors:* Conard, McKenzie

*Associate Professors:* Neufang, O'Meara, Romaguera

*Assistant Professors:* Castello-Lamas, Chiodo, Krugh, Peñas-Bermejo

*Lecturers:* Bredestege, Fogel, E. Hatch, E. L. Hatch

## COURSES OF INSTRUCTION

Placement in a course is determined on the basis of a student's background and proficiency in the language. Therefore the prerequisite for each course indicates the proficiency level required for enrollment.

## FRENCH

FRN 103-104. ELEMENTARY FRENCH I, II: Basic elements of the French language with emphasis on audio-oral skills. Language laboratory required. Prerequisite: None for FRN 103; FRN 103 for 104. *4 sem. hrs. each*

FRN 201-202. INTERMEDIATE FRENCH I, II: Development of listening, speaking, reading, and writing skills. Language laboratory required. Prerequisites: FRN 104 for 201; FRN 201 for 202. *3 sem. hrs. each*

FRN 226. BASICS OF COMPUTER FRENCH: Introduction to French computer vocabulary and expressions and to the literature and status of the information sciences in France. Translation of articles and advertisements in the field from French to English. Prerequisite: FRN 202. *1 sem. hr.*

FRN 290. FRENCH GRAMMAR AND SYNTAX: Systematic review of basic grammatical concepts necessary for communicating effectively in French. Extensive practice in analyzing, producing, and explaining correct grammatical structures. Strongly recommended for prospective teachers. Prerequisite: FRN 202. *3 sem. hrs.*

FRN 311-312. FRENCH CONVERSATION I, II: Intensive practice in speaking French to develop oral communication skill. Emphasis on vocabulary development, listening comprehension, simulation of life-like situations, and discussions on French life and culture. May be taken in either sequence. Prerequisite: FRN 202. *3 sem. hrs. each*

FRN 321-322. 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 and creativity. Initiation into the concept of style in French prose. May be taken in either sequence. Prerequisite: FRN 311 or 312. *3 sem. hrs. each*

FRN 325. 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. Prerequisite: FRN 311 or 312. *3 sem. hrs.*

FRN 326. ADVANCED COMPUTER FRENCH: Intensive practice of translation from English to French and French to English of professional and technical computer-related literature from such fields as business, computer science, and education. Prerequisites: FRN 226; 311 or 312. *1 sem. hr.*

FRN 331. 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. Prerequisite: FRN 311 or 312. *3 sem. hrs.*

FRN 341. 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. Prerequisite: FRN 311 or 312. *3 sem. hrs.*

\* FRN 350. FRENCH LITERATURE IN TRANSLATION: Course to acquaint nonmajors and nonminors with major French writers and literary movements. Conducted in English. Repeatable when subtitle and content change. No prerequisite. *3 sem. hrs.*

FRN 360. 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. Prerequisite: FRN 311 or 312. *3 sem. hrs.*

\* FRN 361-362. 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. May be taken in either sequence. Prerequisite: FRN 311 or 312. *3 sem. hrs. each*

FRN 370. 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. Prerequisite: FRN 202. *1-6 sem. hrs.*

FRN 381. HISTORY OF FRENCH CINEMA: A survey of the trends, styles, and principal directors in the history of French cinema. Discussion of personal, social, and cultural values portrayed in films. Prerequisite: FRN 311 or 312. *3 sem. hrs.*

FRN 425. 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 321 or 322; 325. *3 sem. hrs.*

\* FRN 450. FRENCH LITERATURE: Lectures and discussion concentrating on specialized genres, periods, or authors. Repeatable when subtitle and content change. Prerequisite: FRN 311 or 312. *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. Prerequisites: FRN 202 and permission. *1-3 sem. hrs.*

## GERMAN

GER 102. INTENSIVE ELEMENTARY GERMAN: Basic elements of the German language with emphasis on grammar, pronunciation, reading, speaking, and aural comprehension. Offered only in a German-speaking country in connection with ISSAP or another UD summer abroad program. No prerequisite.

*3 sem. hrs.*

GER 103-104. ELEMENTARY GERMAN I, II: Basic elements of German language with emphasis on pronunciation, speaking, reading, and grammar. Language laboratory required. Prerequisite: None for GER 103; GER 102 or 103 for 104.

*4 sem. hrs. each*

GER 201-202. INTERMEDIATE GERMAN I, II: Systematic grammar review. Increased use of the language in written exercises and classroom discussions based on readings. Exposure to the development of German civilization and culture. Prerequisites: GER 104 for 201; GER 201 for 202.

*3 sem. hrs. each*

GER 311-312. GERMAN CONVERSATION: 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. Prerequisite: GER 202.

*3 sem. hrs. each*

GER 321-322. GERMAN COMPOSITION I, II: Practice in writing German on a variety of topics. Systematic grammar review and vocabulary enrichment. Short stories and periodicals are read and discussed to provide models, topics, and information. May be taken in either sequence. Prerequisite: GER 311 or 312.

*3 sem. hrs. each*

GER 325. COMMERCIAL GERMAN: Introduction to the business language and customs and the economic profile of the German-speaking countries. Basic vocabulary of the office and the world of trade, introduction to formal business correspondence and transactions. Prerequisite: GER 311 or 312 or the equivalent.

*3 sem. hrs.*

GER 341. 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. Prerequisite: GER 311 or 312.

*3 sem. hrs.*

GER 350. GERMAN LITERATURE IN TRANSLATION: Course to acquaint nonmajors and nonminors with major German writers and literary movements. Conducted in English. Repeatable when subtitle and content change. No prerequisite.

*3 sem. hrs.*

GER 361-362. SURVEY OF GERMAN LITERATURE I, II: German literature and its development from 750 A.D. to the present. Study of exemplary works and literary movements. May be taken in either sequence. Prerequisite: GER 311 or 312.

*3 sem. hrs. each*

GER 370. STUDY ABROAD: Intensive study in a foreign country whose everyday language is German, treating the culture and civilization of the country. Conducted in German. Available only during the summer session. Repeatable when subtitle and content change. Prerequisite: GER 202.

*1-6 sem. hrs.*



GER 450. 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. Prerequisite: GER 311 or 312. *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. Prerequisites: GER 202 and permission. *1-3 sem. hrs.*

## ITALIAN

ITA 103-104. ELEMENTARY ITALIAN I, II: 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. Prerequisite: None for ITA 103; ITA 103 for 104. *4 sem. hrs. each*

ITA 201-202. INTERMEDIATE ITALIAN I, II: 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. Prerequisites: ITA 104 for 201; ITA 201 for 202. *3 sem. hrs. each*

ITA 313-314. COMMUNICATING IN ITALIAN I, II: Intensive practice in speaking and writing Italian at an advanced level. Emphasis on building vocabulary, learning correct idiomatic usage, increasing fluency, and improving syntax and style. The class is conducted in Italian. May be taken in either sequence. Prerequisite: ITA 202. *3 sem. hrs. each*

ITA 341-342. 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. May be taken in either sequence. Prerequisite: ITA 202. *3 sem. hrs. each*

ITA 361-362. SURVEY OF ITALIAN LITERATURE I, II: 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. May be taken in either sequence. Prerequisite: ITA 202. *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. Prerequisites: ITA 202 and permission. *1-3 sem. hrs.*

## LATIN

LAT 103-104. ELEMENTARY LATIN I, II: Development of a foundation for reading classical Latin. Prerequisite: None for LAT 103; LAT 103 for 104. *4 sem. hrs. each*

LAT 201-202. INTERMEDIATE LATIN I, II: Systematic review of grammar, exercises in vocabulary development, readings from Caesar, Cicero, Virgil, or Ovid. Prerequisite: LAT 104 for 201; LAT 201 for 202. *3 sem. hrs. each*

LAT 321. LATIN COMPOSITION AND SYNTAX: Practice in writing Latin, for enrichment of vocabulary, refinement of grammar, and control of major Latin prose styles. Prerequisite: LAT 202. *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. Prerequisite: LAT 202. *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. Prerequisite: LAT 202 or permission. *1-3 sem hrs.*

## RUSSIAN

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. Prerequisite: None for RUS 103; RUS 103 for 104. *4 sem. hrs. each*

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. Prerequisites: RUS 104 for 201; RUS 201 for 202. *3 sem. hrs. each*

RUS 311-312. RUSSIAN CONVERSATION: 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. *3 sem. hrs. each*

RUS 321. 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 361. 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. *1-6 sem. hrs.*

## SPANISH

SPN 103-104. ELEMENTARY SPANISH I, II: Development of a foundation for understanding, speaking, reading, and writing Spanish. Language laboratory required. Prerequisite: None for SPN 103; SPN 103 for 104. *4 sem. hrs. each*

SPN 201-202. INTERMEDIATE SPANISH I, II: Intensive development of the basic principles of Spanish through writing and conversation, stressing fluency. Language laboratory required. Prerequisites: SPN 104 for 201; SPN 201 for 202. *3 sem. hrs. each*

SPN 270. 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. Prerequisite: SPN 104 or equivalent. *1-6 sem. hrs.*

SPN 290. SPANISH GRAMMAR & SYNTAX: Systematic review of basic grammatical concepts necessary for communicating effectively in Spanish. Extensive practice in analyzing, generating, and explaining correct grammatical structures. Recommended for prospective teachers. Prerequisite: SPN 202 or the equivalent. *3 sem. hrs.*

SPN 311-312. SPANISH CONVERSATION I, II: Development of fluency in the vocabulary and idioms of the spoken language through discussion of topics related to contemporary life in the Hispanic world. May be taken in either sequence. Prerequisite: SPN 202. *3 sem. hrs. each*

SPN 321-322. SPANISH COMPOSITION I, II: Practice in composition on a variety of topics. Systematic refinement and mastery of grammar and assimilation of stylistic patterns. Emphasis on developing facility in writing clearly and correctly in Spanish. Prerequisites: SPN 311 or 312 for 321; SPN 321 for 322. *3 sem. hrs. each*

SPN 325. COMMERCIAL SPANISH: Introduction to commercial correspondence as a basis for developing skills in writing Spanish business letters and other correspondence. Prerequisite: SPN 311 or 312. *3 sem. hrs.*

SPN 341. SPANISH CULTURE AND CIVILIZATION: Readings and discussions on the historical, social, political, and cultural phenomena of Spain. Conducted in Spanish. Prerequisite: SPN 311 or 312. *3 sem. hrs.*

SPN 342. IBERO-AMERICAN CULTURE AND CIVILIZATION: Readings and discussions on the historical, social, political, and cultural phenomena of Ibero-America. Conducted in Spanish. Prerequisite: SPN 311 or 312. *3 sem. hrs.*

SPN 350. HISPANIC LITERATURE IN TRANSLATION: Course to acquaint nonmajors and nonminors with major Spanish and Spanish-American writers and literary movements. Conducted in English. Repeatable when subtitle and content change. No prerequisite. *3 sem. hrs.*

SPN 361-362. SURVEY OF SPANISH LITERATURE I, II: Readings and analysis of the works of major Spanish authors and discussion of the principal literary trends in Spain from the Middle Ages to the 20th century. Lectures, discussions, and assignments in Spanish. May be taken in either sequence. Prerequisite: SPN 311 or 312. *3 sem. hrs. each*

SPN 363-364. SURVEY OF SPANISH-AMERICAN LITERATURE I, II: Readings and analysis of the works of major Spanish-American authors and discussion of the principal literary trends in Spanish America from Discovery and Conquest through Realism and Naturalism (I) and Modernism through the present day (II). Conducted in Spanish. May be taken in either sequence. Prerequisite: SPN 311 or 312. *3 sem. hrs. each*

SPN 370. STUDY ABROAD: Intensive study in a foreign country whose every-day 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. Prerequisite: SPN 202. *1-6 sem. hrs.*

SPN 450. TOPICS IN SPANISH LITERATURE: Lectures and discussions concentrating on specialized genres, periods, or authors of Peninsular literature prior to the 20th century. Conducted in Spanish. Repeatable when subtitle and content change. Prerequisite: SPN 311 or 312. *3 sem. hrs.*

SPN 451. TOPICS IN SPANISH-AMERICAN LITERATURE: Lectures and discussions concentrating on specialized genres, periods, or authors of Spanish-American literature prior to the 20th century. Conducted in Spanish. Repeatable when subtitle and content change. Prerequisite: SPN 311 or 312. *3 sem. hrs.*

SPN 471. TOPICS IN SPANISH LITERATURE OF THE 20TH CENTURY: Lectures and discussions concentrating on specialized periods, genres, or authors of 20th-century Peninsular literature. Conducted in Spanish. Repeatable when subtitle and content change. Prerequisite: SPN 311 or 312. *3 sem. hrs.*

SPN 472. TOPICS IN SPANISH-AMERICAN LITERATURE OF THE 20TH CENTURY: Lectures and discussions concentrating on specialized periods, genres or authors of 20th-century Spanish-American literature. Conducted in Spanish. Repeatable when subtitle and content change. Prerequisite: SPN 311 or 312. *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. Prerequisites: SPN 202 and permission. *1-3 sem. hrs.*

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\*General Education course. See Chapter V.

## MTH

### MATHEMATICS (MTH)

The Department of Mathematics offers programs leading to the Bachelor of Arts with a Major in Mathematics and the Bachelor of Science with a Major in Mathematics. The B.A. has a stronger liberal arts component, while the B.S. has a stronger natural science component. Each program requires 39 semester hours of mathematics with additional course work satisfying the degree requirements of the College of Arts and Sciences. These programs are intended to provide a sound background for students wishing to pursue graduate study in a variety of scientific or professional fields and to develop the mathematical skills necessary for students seeking employment in the scientific and business communities.

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#### PROGRAM A9: BACHELOR OF ARTS WITH A MAJOR IN MATHEMATICS (MTA)<sup>1</sup>

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	<i>Semester Hours</i>
Mathematics .....	39
Basic calculus: MTH 168, 169, 218 .....	12
Upper-level requirements: MTH 302, 319, 361, 430 .....	12
Upper-level electives (Departmental approval required.) .....	15
Natural science .....	7
Social and behavioral sciences .....	12
Humanities .....	18
Philosophy and religious studies .....	12
Communication skills .....	0-9
First-year experience: ASI 150 .....	0-1
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.

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#### PROGRAM S9: BACHELOR OF SCIENCE WITH A MAJOR IN MATHEMATICS (MTH)<sup>1</sup>

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	<i>Semester Hours</i>
Mathematics .....	39
Basic calculus: MTH 168, 169, 218 .....	12
Upper-level requirements: MTH 302, 319, 361, 430 .....	12
Upper-level electives (Departmental approval required.) .....	15
Minor: 300-400-level courses in chosen area .....	12
Natural science (Departmental approval required.) .....	14
Computer science .....	3
Social and behavioral sciences .....	6
Humanities .....	9
Philosophy and religious studies .....	12
Communication skills .....	0-9
First-year experience: ASI 150 .....	0-1
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.

## FACULTY

Thomas E. Gantner, *Chairperson*

*Distinguished Service Professor:* Schraut

*Professors:* Elloe, Gantner, McCloskey, Peterson, Rice, Stander, Steinlage

*Associate Professors:* Back, Friel, Gorton, Higgins, Islam, Mashburn,

Mushenheim, Shaughnessy

*Assistant Professor:* Kauflin

*Lecturers:* Neff, Saintignon

## COURSES OF INSTRUCTION

MTH 102. 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 108. INTEGRATED ALGEBRA AND TRIGONOMETRY: Review of the algebraic skills necessary for MTH 168, including properties of order, arithmetic of polynomials, factoring, complex fractions, finding roots of polynomial equations, exponents, functions, domains and ranges, composition, inverses, graphing, and basic properties of trigonometric functions. First term each year. 2 sem. hrs.

MTH 114. CONTEMPORARY MATHEMATICS: A study of contemporary mathematical topics and their applications. Topics may include management science, statistics, social choice, size and shape, and computer mathematics. Prerequisite: Two years of high school algebra. 3 sem. hrs.

MTH 116. 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 128. FINITE MATHEMATICS: Topics from mathematics used in business, including systems of equations, inequalities, matrix algebra, linear programming, logarithms. Prerequisite: MTH 102 or sufficient college preparatory mathematics. 3 sem. hrs.

MTH 129. CALCULUS FOR BUSINESS: Continuation of MTH 128. Compound interest and annuities, fundamental concepts and applications of differential and integral calculus. Prerequisite: MTH 128 or sufficient college preparatory mathematics. 3 sem. hrs.

MTH 148. 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 116 or equivalent. Intended for students in the life and social sciences. 3 sem. hrs.

MTH 149. 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 algebra, vector calculus, partial derivatives, and multiple integrals. Prerequisite: MTH 148. 3 sem. hrs.

MTH 168. 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 116 or equivalent. 4 sem. hrs.

**MTH 169. ANALYTIC GEOMETRY AND CALCULUS II:** Continuation of MTH 168. Conic sections, techniques of integration with applications to science and engineering, infinite series, indeterminate forms, Taylor's theorem. Prerequisite: MTH 168.

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. Prerequisite: MTH 204.

3 sem. hrs.

**MTH 207. INTRODUCTION TO STATISTICS:** Introduction to the concepts of statistical thinking for students whose majors do not require calculus. Methods of presenting data, including graphical methods. Using data to make decisions and draw conclusions. Basic ideas of drawing a sample and interpreting the information that it contains. 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 149 or consent of instructor.

3 sem. hrs.

**MTH 218. ANALYTIC GEOMETRY AND CALCULUS III:** Continuation of MTH 169. Solid analytic geometry, vectors and vector functions, multivariable calculus, partial derivatives, multiple integrals. Prerequisite: MTH 169.

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 319. Mathematics majors take MTH 319.

3 sem. hrs.

**MTH 295. HISTORICAL ROOTS OF ELEMENTARY MATHEMATICS:** Fundamental historical development of modern arithmetic, geometry, and number systems from early Egyptian, Babylonian, and Greek sources. Students may not receive credit for both this course and MTH 395. Prerequisite: MTH 204 or permission of instructor.

3 sem. hrs.

**MTH 301. ESSENTIALS OF MATHEMATICAL REASONING:** Techniques of proof, mathematical induction, recursion, counting methods, symbolic logic. Introduction to algebra of sets, infinities, and axiom systems. Open to students who will enroll in upper-level mathematics courses. Corequisite: MTH 218 or 302. Second term, each year.

1 sem. hr.

**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 in one extra hour each week. Prerequisites: MTH 218 and permission of 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 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 in one extra hour each week. Prerequisites: MTH 218 and permission of instructor. First term, each year. 4 sem. hrs.

MTH 367. STATISTICAL METHODS I: Probability distributions including binomial, hypergeometric, Poisson, and normal. Estimation of population mean and standard deviation: Confidence intervals and tests of hypotheses using  $t$ -, Chi-square, and  $F$ -statistics. Prerequisite: MTH 149 or 218. Mathematics majors enroll in MTH 411 instead of 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 and computer applications. Prerequisite: MTH 367. Mathematics majors enroll in MTH 412 instead of 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 148 or 168 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 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 in one extra hour each week. Prerequisites: MTH 302 and permission of 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 in one extra hour each week. Prerequisites: MTH 302 and permission of 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), 302, and permission of instructor. Second term, alternate years. *3 sem. hrs.*

**MTH 441. MATHEMATICS CLINIC:** Student teams will be responsible for the development and/or modification and testing of a mathematical model designed for a particular purpose. Faculty guidance. Prerequisites: MTH 440 and permission of 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. Prerequisite: Permission of 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. READINGS IN (NAMED AREA):** Individual study in specialized areas carried out under the supervision of a staff member. May be taken more than once. Prerequisite: Permission of chairperson. *1-3 sem. hrs.*

## MEDICAL TECHNOLOGY (MET)

The program leading to a Bachelor of Science with a major in Medical Technology is University-based (the University holds the sponsorship for the program) and is fully accredited by the Committee on Allied Health Education and Accreditation (CAHEA). The MET program employs a 3+1 curricular structure. The first three years consist of a sequence of courses that provide a liberal arts education with an academic emphasis in the life sciences, including an introduction to medical technology. The fourth year is a 13 month period of instruction that consists of didactic MET courses (lectures and accompanying laboratories) taught at the University, and supervised clinical rotations in the clinical laboratories of our Dayton area hospital affiliates: Good Samaritan Hospital, Kettering Medical Center, and St. Elizabeth Medical Center.

Students must successfully complete all the prerequisite requirements for the B.S. degree prior to entering the clinical year. Acceptance into the clinical year is based on grades (a 2.5 grade point average is recommended), motivation and interview performances.

The MET curriculum is designed to meet all of the academic requirements of the University of Dayton and of the National Accrediting Agency for Clinical Laboratory Sciences (NAACLS). Students are awarded a baccalaureate degree at the University's summer commencement exercises. Successful completion of the program qualifies the graduate to take a national examination to become a certified medical technologist.

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### PROGRAM S10: BACHELOR OF SCIENCE WITH A MAJOR IN MEDICAL TECHNOLOGY (MET)<sup>1</sup>

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	<i>Semester Hours</i>
Required science and mathematics courses .....	54-55
BIO 151, 152, 152L, 411, 411L, 425, 425L, elective .....	18
CHM 123, 123L, 124, 124L, 201, 313, 313L, 314, 314L .....	19
PHY 201, 201L, 202, 202L .....	8
MTH 148 <sup>2</sup> , 207 .....	6-7
CPS 111 .....	3
Medical technology courses .....	46
MET 201L, 332, 332L, 333, 333L, 334, 334L, 335, 335L, 337, 337L, 338, 338L, 432, 432L, 433, 433L, 434, 434L, 439, 440L, 441, 442, 443, 444	
Communication skills .....	6-12
CMM 101 .....	0-3
ENG 101-102 or 114 or 198; ENG elective .....	6-9
Philosophy and religious studies .....	12
Humanities .....	9
Social and behavioral sciences .....	6
First-year experience: ASI 150 .....	0-1
Total semester hours .....	133-141

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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>If background is not suitable for calculus, then substitute MTH 116, Precalculus, for MTH 148.

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## FACULTY

Suzanne L. Columbus, *Program Director*

*Associate Professor:* Chantell

*Assistant Professors:* Columbus, Conley

*Clinical Assistant Professors:* Chu, Dickman, Gilleland, Nagy

*Lecturer:* Schieltz

## COURSES OF INSTRUCTION

MET 201L. BASIC CLINICAL LABORATORY TECHNIQUES: Introduction to basic techniques such as specimen collection, safety, quality control, and medical terminology; computer applications. Prerequisites: BIO 151, CHM 123. 1 sem. hr.

MET 332. CLINICAL CHEMISTRY I: Human physiological chemistry with applications of analytical techniques to the examination of body fluids and tissues. Prerequisites: CHM 314, 201; BIO 152. Corequisite: MET 332L. 3 sem. hrs.

MET 332L. CLINICAL CHEMISTRY I LABORATORY: Laboratory manipulations to accompany MET 332. Corequisite: MET 332. 1 sem. hr.

MET 333. CLINICAL MICROBIOLOGY I: Study of microorganisms found in human infection, their isolation, identification, and prophylaxis. Prerequisites: BIO 411, CHM 314. Corequisite: MET 333L. 3 sem. hrs.

MET 333L. CLINICAL MICROBIOLOGY I LABORATORY: Laboratory manipulations to accompany MET 333. Corequisite: MET 333. 1 sem. hr.

MET 334. HEMATOLOGY I: Instruction in the morphology of the blood and blood-forming tissues. Prerequisite: BIO 152. Corequisite: MET 334L. 2 sem. hrs.

MET 334L. HEMATOLOGY I LABORATORY: Laboratory manipulations to accompany MET 334. Corequisite: MET 334. 2 sem. hrs.

MET 335. IMMUNOLOGY I: Study of the immune system, in particular antigen-antibody reactions in vitro. Prerequisites: BIO 152, CHM 124. Corequisite: MET 335L. 2 sem. hrs.

MET 335L. IMMUNOLOGY I LABORATORY: Laboratory manipulations to accompany MET 335. Corequisite: MET 335. 1 sem. hr.

MET 337. IMMUNOHEMATOLOGY: Study of the principles of blood banking, transplantation immunity, and autoimmunity. Prerequisites: BIO 152, MET 335. Corequisite: MET 337L. 2 sem. hrs.

MET 337L. IMMUNOHEMATOLOGY LABORATORY: Laboratory manipulations to accompany MET 337. Corequisite: MET 337. 1 sem. hr.

MET 338. MYCOLOGY: Culture and identification of fungi, including saprophytes and those causing superficial and deep mycoses. Prerequisite: BIO 152. Corequisite: MET 338L. 1 sem. hr.

MET 338L. MYCOLOGY LABORATORY: Laboratory manipulations to accompany MET 338. Corequisite: MET 338. 1 sem. hr.

MET 432. CLINICAL CHEMISTRY II: Theory and principles of a variety of quantitative techniques with evaluation of procedures and results. Basic metabolic processes and common disease conditions that correlate with the analytical tests studied. Prerequisites: MET 332, 332L. Corequisite: MET 432L. 2 sem. hrs.

MET 432L. CLINICAL CHEMISTRY II LABORATORY: Laboratory manipulations to accompany MET 432. Corequisite: MET 432. 1 sem. hr.

MET 433. CLINICAL MICROBIOLOGY II: Study of nonroutine procedures and organisms in microbiology; identification of unusual microorganisms including mycobacteria and viruses. Prerequisites: MET 333, 333L. Corequisite: MET 433L. 1 sem. hr.

MET 433L. CLINICAL MICROBIOLOGY II LABORATORY: Laboratory manipulations to accompany MET 433. Corequisite: MET 433. 1 sem. hr.

MET 434. HEMATOLOGY II: Study of disease correlations and nonroutine hematological examinations of body fluids including bone marrows; identification of abnormal cells. Prerequisites: MET 334, 334L. Corequisite: MET 434L. 2 sem. hrs.

MET 434L. HEMATOLOGY II LABORATORY: Laboratory manipulations to accompany MET 434. Corequisite: MET 434. 1 sem. hr.

MET 435. ADVANCED STUDY IN IMMUNOLOGY-IMMUNOHEMATOLOGY: Study of advanced theories and problem-solving techniques for immunology and immunohematology laboratory tests. Required for students with MLT certification only. Prerequisites: MET 337, 337L, 444, or equivalent. 2 sem. hrs.

MET 439. CLINICAL PATHOLOGY SEMINAR: Current developments and special topics. Corequisite: MET 444. 1 sem. hr.

MET 440L. BODY FLUID ANALYSIS LABORATORY: Study of body fluids. Pathophysiology of the formation and nature of all the body fluids; techniques of examination for diagnostic information. Prerequisite: BIO 151. 1 sem. hr.

MET 441. CLINICAL EDUCATION AND ADMINISTRATION: Focus on the basic considerations of laboratory management and theories of task-oriented instruction. 1 sem. hr.

MET 442. 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. 2 sem. hrs.

MET 443. APPLIED CLINICAL PROCEDURES I: Supervised experience in a hospital clinical laboratory with rotations in all sections. Prerequisites: MET 201, 332, 332L, 334, 334L, 335, 335L, 440L. 4 sem. hrs.

MET 444. APPLIED CLINICAL PROCEDURES II: A continuation of MET 443. 8 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 first and second years) and an advanced course (normally third and fourth 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 a 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 monthly salary or about \$700.

In addition to ROTC instruction, a student must attain an equal level of professional military education. Army officers, like other professionals, cannot be satisfied with a collection of knowledge found only in their academic field. In order to be prepared to become officers, students are required to complete courses in military history, written communication skills, human behavior, computer literacy, mathematical reasoning, and foreign language (Army scholarship recipients only). These courses may be taken in conjunction with academic majors.

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

Major James A. Roy, U.S. Army, *Chairperson*

*Professor:* Roy

*Assistant Professors:* Burger, Edgren, Tolson

*Instructors:* Riggleman, Basil

## COURSES OF INSTRUCTION<sup>1</sup>

MIL 100 (UD). LEADERSHIP LABORATORY: Practical training in military courtesy, drill and ceremony, military skills, map reading, marksmanship, and tactics. 1 sem. hr.

MIL 101 (UD). LEADERSHIP I: ROTC programs and opportunities; rappelling, leadership, communications and management skills, and pistol marksmanship. Optional field trips, field exercises, physical training, leadership laboratory and social events. 1 sem. hr.

MIL 102 (UD). LEADERSHIP II: Rifle marksmanship, fundamentals and principles of leadership, management techniques for individual and group behavior. Optional physical training, leadership laboratory, and social events. 1 sem. hr.

MIL 121 (SCC).<sup>2</sup> Same as MIL 101 (UD). 0.7 sem. hr.

MIL 122-123 (SCC).<sup>2</sup> 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 basic map reading skills, basic military tactics, movement techniques, and some small unit weapons. Participation in leadership laboratory and two field training exercises. Optional physical training and social events. 2 sem. hrs.

MIL 202 (UD). FIRST AID AND LEADERSHIP: Leadership consideration for physical fitness, preventive medicine programs, and basic first aid procedures. Study of the role and branches of the Army and the role of the NCO. Participation in leadership laboratory. Optional physical training and social events. 2 sem. hrs.

MIL 221 (SCC).<sup>2</sup> Same as MIL 201 (UD). 1.4 sem. hrs.

MIL 222-223 (SCC).<sup>2</sup> 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-terrain association, operations orders, and small unit tactics. Physical training, leadership laboratory, two field training exercises, historical field trip, and social events are mandatory. *2 sem. hrs.*

**MIL 302 (UD). COMMUNICATIONS AND PROFESSIONAL KNOWLEDGE:** Study of emplacement of communications equipment, communication techniques used by the Army, employment of and defense against weapons systems, and the roles of various branches of the Army. Field training exercises, social events, physical training, and leadership laboratory are mandatory. *2 sem. hrs.*

**MIL 401 (UD). LEADERSHIP MANAGEMENT AND STAFF:** Study of military staff functions; how to conduct meetings, briefing, and training; how to conduct various types of counseling; and effective and ineffective leadership techniques. Physical training, leadership laboratory, historical field trip, social events, and field training exercises are mandatory. *2 sem. hrs.*

**MIL 402 (UD). APPLIED LEADERSHIP AND MANAGEMENT:** Leadership and management studies in professionalism, ethics, and military justice. Various types of military correspondence and the responsibilities of an officer. Physical training, leadership laboratory, field training exercises, and social events are mandatory. *2 sem. hrs.*

**MIL 411 (UD). AIR LAND BATTLE/LOW INTENSITY CONFLICT:** This course will identify and discuss the roles and mission of the branches found within the U.S. Army as they relate to Air Land Battle and Low Intensity Conflicts. Incorporates the background and experience of resident instructors and presentations by visiting service representatives. *2 sem. hrs.*

**MIL 412 (UD). U.S. MILITARY TODAY:** This course will identify and discuss the roles, missions, organizational structure and equipment, tactical and strategic employment, and future trends of the Armed Services. Incorporates the background and experience of resident instructors and presentations by visiting service representatives. *2 sem. hrs.*

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<sup>1</sup>Students should check with their deans for any restrictions on applying MIL courses to their degree programs.

<sup>2</sup>Course offered through the Consortium with Sinclair Community College.

## MUSIC (MUS)

Music is a unique form of expression and communication. A course of study provides for an aesthetic appreciation and an opportunity to translate musical concepts into a valuable and practical skill. The Department of Music of the University of Dayton provides academic coursework to foster artistic understanding and creative thinking, practical instruction to develop musical skills, and substantial laboratory and performance experience.

The Department of Music 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.

The Department of Music has numerous performing ensembles open to all students: The University Chorale, Chamber Singers, Opera Workshop, Ebony Heritage Singers, Celebration Vocal Transit, Miami Valley Symphony, University Wind Ensemble, Marching Band and Pep Band, Jazz Ensembles, and chamber instrumental ensembles.

The Department of Music offers five degree programs:

A10: Bachelor of Arts with a Major in Music (MUS)

A11: Bachelor of Music with a Major in Music Theory (MTY)  
or Composition (MUC)

A11A: Bachelor of Music with a Major in Performance (MUP)

A11B: Bachelor of Music with a Major in Music Therapy (MUT)

A11C: 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 Admission. In addition, all prospective students must (1) furnish the Department of Music 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 department office.

The Department of Music offers a minor in music, consisting of 22 semester hours, including 12 semester hours of upper-division coursework. It also offers a certificate in church music, consisting of 34 semester hours of coursework. Further information is available from the department office.

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### PROGRAM A10: BACHELOR OF ARTS WITH A MAJOR IN MUSIC (MUS)<sup>1</sup>

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	<i>Semester Hours</i>
Music requirements .....	42
Music theory: MUS 111-114, 211-214 .....	16
Music history and literature: MUS 301-302 .....	6
Conducting: MUS 240 .....	2
Performance studies, including functional keyboard skills (if needed) .....	12
Ensemble: MUS 491, 492 or 493 .....	4
Recital attendance: MUS 200 (7 semesters) .....	0
Music electives .....	2



Communication skills .....	0-9
Natural science .....	7
Mathematics (MTH 102, 204, 205 excluded) .....	3
Social and behavioral sciences .....	12
Humanities .....	18
Philosophy and religious studies .....	12
First-year experience: ASI 150 .....	0-1
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.

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**PROGRAM A11: BACHELOR OF MUSIC WITH A MAJOR IN MUSIC THEORY (MTY) OR COMPOSITION (MUC)<sup>1</sup>**

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	<i>Semester Hours</i>
Music requirements .....	87
Requirements for both MTY and MUC	
Music theory: MUS 111-114, 211-214 .....	16
Music history and literature: MUS 301-302, elective .....	9
Orchestration or arranging: MUS 316 or 318 .....	2
Composition: MUS 321-322 .....	4
Conducting: MUS 240, 345 or 346 .....	4
Performance studies: MUS 399 and/or 499; 296-299 <sup>2</sup> .....	12
Ensemble: MUS 491, 492, or 493 .....	8
Recital attendance: MUS 200 (7 semesters) .....	0
Theory and/or composition electives .....	10
Music electives .....	10
Additional requirements for MTY <sup>3</sup>	
Counterpoint: MUS 311-312 .....	4
Style and design: MUS 413-414 .....	4
Research in music theory: MUS 418-419 .....	4
Additional requirements for MUC <sup>4</sup>	
Composition: MUS 121-122, 221-222, 421-422 .....	8
Score reading: MUS 314 .....	2
Advanced orchestration: MUS 416 .....	2
Communication skills .....	0-9
Philosophy and religious studies .....	12
Natural science .....	6
Mathematics (MTH 102, 204, 205 excluded) .....	3
Social and behavioral sciences .....	6
Humanities .....	6
First-year experience: ASI 150 .....	0-1
General Education courses and academic electives to total .....	136

<sup>1</sup>See Chapter V for General Education Requirements.

<sup>2</sup>Functional Keyboard Skills or equivalent is required.

<sup>3</sup>Each theory major must submit a research paper in the senior year.

<sup>4</sup>Each composition major must present one and a half recitals of original work by the senior year.

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**PROGRAM A11A: BACHELOR OF MUSIC WITH A MAJOR IN  
PERFORMANCE (MUP)<sup>1</sup>**

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	<i>Semester Hours</i>
Music requirements .....	87
Music theory: MUS 111-114, 211-214 .....	16
Music history and literature: MUS 301-302, elective .....	9
Conducting and arranging: MUS 240, 318 .....	4
Performance studies <sup>2</sup> .....	36
Major area of specialization .....	24-32
Minor area of specialization .....	4-12
Ensemble: MUS 491, 492, or 493 .....	8
Recital attendance: MUS 200 (7 semesters) .....	0
Music electives .....	14
Communication skills .....	0-9
Philosophy and religious studies .....	12
Natural science .....	6
Mathematics (MTH 102, 204, 205 excluded) .....	3
Social and behavioral sciences .....	6
Humanities .....	6
First-year experience: ASI 150 .....	0-1
General Education courses and academic electives to total .....	136

<sup>1</sup>See Chapter V for General Education Requirements.

<sup>2</sup>Performance study in major area must lead to a half junior solo recital and a full senior solo recital.

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**PROGRAM A11B: BACHELOR OF MUSIC WITH A MAJOR IN  
MUSIC THERAPY (MUT)<sup>1</sup>**

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	<i>Semester Hours</i>
Music requirements .....	81
Music theory: MUS 111-114, 211-214 .....	16
Music history and literature: MUS 301-302 .....	6
Conducting and arranging: MUS 240, 318 .....	4
Performance studies on the student's principal instrument leading to a minimum of a half-recital during the junior or senior year: MUS 399 .....	10
Vocal and instrumental methods, including accompanying instruments of piano and guitar: MUS 296-299, 292, 235, 338, 392, and three of the following: 237, 238, 239, 293 .....	11
Music therapy, including core courses and practicum: MUS 280, 285, 286, 287, 288, 385, 386, 387, 388, 485, 486 .....	19
Recreational music: MUS 282 .....	2
Music and dance electives .....	5
Ensemble .....	6
Recital attendance: MUS 200 (7 semesters) .....	0
Music therapy internship: MUS 489 <sup>2</sup> .....	2
Psychology: 101, 355, 363, and elective .....	12
Sociology .....	3
Science, including HPS 305 .....	6
Communication skills .....	0-9

Philosophy and religious studies .....	12
Mathematics (MTH 102, 204, 205 excluded) .....	3
Humanities .....	3
First-year experience: ASI 150 .....	0-1
General Education courses and academic electives to total .....	135

<sup>1</sup>See Chapter V for General Education Requirements.

<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, the graduate is eligible to take a national certification examination to become a Music Therapist—Board Certified.

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## PROGRAM A11C: BACHELOR OF MUSIC WITH A MAJOR IN MUSIC EDUCATION (MUE)<sup>1</sup>

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	<i>Semester Hours</i>
Music requirements <sup>2</sup> .....	66-68
Requirements for all specializations <sup>2</sup>	
Music theory: MUS 111-114, 211-214 .....	16
Functional keyboard skills <sup>3</sup> : MUS 296-299 .....	4
Music history and literature: MUS 301-302 .....	6
Arranging: MUS 318 .....	2
Performance studies on the student's principal instrument leading to a minimum of a half-recital during the junior or senior year: MUS 399 (7 semesters) .....	14
Recital attendance: MUS 200 (7 semesters) .....	0
Ensemble: MUS 491 or 492 or 493 (7 semesters) .....	0
Music electives .....	0-3
Additional requirements for band specialization <sup>4</sup>	
Music education: MUS 235, 331, 332, 333, 335, 336, 337, 338, 339, 430, 431 .....	22
Conducting: MUS 240, 346 .....	4
Additional requirements for orchestra specialization <sup>4</sup>	
Music education: MUS 235, 331, 332, 333, 335, 336, 337, 338, 339 .....	18
Conducting: MUS 240, 346 .....	4
String minor: MUS 399 (2 semesters) .....	4
Additional requirements for choral specialization <sup>4</sup>	
Music education: MUS 235, 237, 238, 239, 331, 332, 333, 335, 338 .....	13
Conducting: MUS 240, 345 .....	4
Guitar: MUS 292, 392 .....	1-2
Piano or voice minor: MUS 399 (3 semesters) .....	6
Additional requirements for classroom specialization <sup>4</sup>	
Music education: MUS 235, 237, 238, 239, 331, 332, 333, 335, 338 .....	13
Conducting: MUS 240 .....	2
Guitar: MUS 292, 392 .....	1-2
Piano minor: MUS 399 (4 semesters) .....	8
Teacher education <sup>2</sup> : EDT 110, 207, 208, 318, 351, 419, 422, 469 .....	30
Communication skills .....	0-9

Philosophy and religious studies .....	12
Natural science .....	7
History .....	3
Mathematics (MTH 102, 204, 205 excluded) .....	3
Social and behavioral sciences .....	3
Humanities .....	3-6
First-year experience: ASI 150 .....	0-1
General Education courses and academic electives to total .....	133-135

<sup>1</sup>See Chapter V for General Education Requirements.

<sup>2</sup>Students in the music education program are required to maintain a 2.0 cumulative grade point average, a 2.5 cumulative average in teacher education and music coursework, and a 2.75 cumulative average in music education and conducting coursework.

<sup>3</sup>Students will pass a keyboard proficiency examination upon completion of MUS 296-299.

<sup>4</sup>Students will select one of four specialty areas (band, orchestra, choral, classroom). Upon completion of the degree, candidates will receive certification from the State of Ohio to teach vocal, instrumental, and classroom music from kindergarten through senior high school.

### CERTIFICATE IN CHURCH MUSIC (MCH)<sup>1</sup>

Dept. No.	Course	Semester Hours
MUS 111-112	Theory of Music I .....	4
MUS 113-114	Aural Skills I .....	4
MUS 240	Fundamentals of Conducting .....	2
MUS 318	Fundamentals of Arranging .....	2
MUS 345	Choral Conducting .....	2
MUS 399	Organ, Voice, or Guitar Performance Studies .....	8
MUS 450	Choral Literature for the Church .....	3
MUS 451	Hymnody and Psalmody .....	2
MUS 459	Church Music Internship .....	2
MUS 493	University Chorale .....	2
REL 446	Liturgy .....	3
		34

<sup>1</sup>Students may also register for classes in this certificate program through the Office of Continuing Education.

### FACULTY

Linda J. Snyder, *Chairperson*

*Professor:* Benedum, Magnuson

*Associate Professors:* Chenoweth, Sandness, Snyder, Street

*Assistant Professors:* Baxter, Cox, Hartley, Hoffman, Jones

*Lecturer:* Zimmerman

*Part-time Instructors:* Baker, Bauserman, Bowen, Compton, Gilley, Hotopp, Hufnagle, Lindsay, Marquis, McCutcheon, McMillan, Melia, Oliver, Pepitone, Polonsky, Rodgers, Sweet, Vandevander, Varella, VandenBos, Watson, Zech

## COURSES OF INSTRUCTION

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. MUSIC LITERATURE FOR THE ELEMENTARY CLASSROOM: Study of music literature and its direct application to elementary classroom use. *2 sem. hrs.*

MUS 110. 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 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. *2 sem. hrs. each*

MUS 113-114. AURAL SKILLS I: Basic techniques of listening as applied to voice and keyboard: identification, dictation, and sight reading. Prerequisite: Placement examination. *2 sem. hrs each*

MUS 121-122. COMPOSITION I: Supplemental explorations for majors in music composition, to accompany work in MUS 111-112. Basic notational practices and application of traditional techniques to the creative process. Corequisite: MUS 111-112. *1 sem. hr. each*

MUS 191. 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 196. GROUP PIANO I: For the student with no previous piano study. Rudiments of music reading, performance of simple folk and popular music, basic knowledge of scales, key signatures, and chords. Open to all University students with permission of instructor. Fee. *1 sem. hr.*

MUS 197. GROUP PIANO II: Further development of techniques introduced in MUS 196. Prerequisites: MUS 196, permission of instructor. Fee. *1 sem. hr.*

MUS 198. GROUP PIANO III: Selected material appropriate to the level of advancement attained in MUS 197. Prerequisites: MUS 197, permission of instructor. Fee. *1 sem. hr.*

MUS 199. GROUP PIANO IV: Selected material appropriate to the level of advancement attained in MUS 198. Prerequisites: MUS 198, permission of instructor. Fee. *1 sem. hr.*

MUS 200. RECITAL ATTENDANCE: 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 201. MUSIC IN CONCERT: A survey of music literature, styles, and important composers, through preparation for and attendance at selected concerts on the campus and in the community. Concert ticket fees will be required. Open to all University students. *3 sem. hrs.*

\*MUS 203. SIGHTS AND SOUNDS OF MUSIC: An introduction to music and its literature, with emphasis on the way music has been shaped by its cultural, geographic, and historical contexts. Open to all University students. *3 sem. hrs.*

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. *2 sem. hrs. each*

MUS 213-214. AURAL SKILLS II: Advanced techniques of listening as applied to voice and keyboard: identification, dictation and sight reading. Prerequisite: MUS 114. *2 sem. hrs. each*

MUS 221-222. COMPOSITION II: Supplemental explorations for majors in music composition, to accompany work in MUS 211-212. Style analysis and synthesis, extension of traditional techniques, and basic instrumental applications. Corequisites: MUS 211-212. *1 sem. hr. each*

MUS 235. VOICE PEDAGOGY: Techniques for teaching singing. *1 sem. hr.*

MUS 237. BRASS INSTRUMENT LABORATORY: Introduction to the performance and pedagogical techniques for the brass instrument family. Fee. *1 sem. hr.*

MUS 238. WOODWIND INSTRUMENT LABORATORY: Introduction to the performance and pedagogical techniques for the woodwind instrument family. Fee. *1 sem. hr.*

MUS 239. STRING INSTRUMENT LABORATORY: Introduction to the performance and pedagogical techniques for the string instrument family. Fee. *1 sem. hr.*

MUS 240. FUNDAMENTALS OF CONDUCTING: Introductory-level course discussing basic conducting techniques, musical styles, interpretation, score study and analysis, transposition, and literature. Dual emphasis of choral and instrumental techniques. *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 282. RECREATIONAL MUSIC: Functional use of nonsymphonic instruments, rhythm band instruments, musical games, and community singing for both children and adults. *2 sem. hrs.*

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. Orientation in the clinical field. 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, including work with adult mentally ill clients. *1 sem. hr.*

MUS 288. PRACTICUM IN MUSIC THERAPY II: Pre-internship field experiences with handicapped children and/or adults. *1 sem. hr.*

MUS 292. BEGINNING GUITAR CLASS: Introduction to playing the guitar; emphasis on chord playing and accompaniment; application of the guitar to music teaching. Fee. *1 sem. hr.*

MUS 293. 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 294. HARPSICHORD CLASS: 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 296. FUNCTIONAL KEYBOARD SKILLS I: Class instruction in development of basic performance technique, sight reading, accompanying, transposing, playing by ear, improvising, and score reading. Prerequisite: Permission of instructor. Music majors only. Fee. 1 sem. hr.

MUS 297. FUNCTIONAL KEYBOARD SKILLS II: Further development of techniques introduced in MUS 296. Prerequisites: MUS 296, permission of instructor. Music majors only. Fee. 1 sem. hr.

MUS 298. FUNCTIONAL KEYBOARD SKILLS III: Continuation of MUS 297 with emphasis on improvisation and harmonization techniques. Prerequisites: MUS 297, permission of instructor. Music majors only. Fee. 1 sem. hr.

MUS 299. FUNCTIONAL KEYBOARD SKILLS IV: Continuation of MUS 298 with emphasis on advanced chord work and modulation techniques. Prerequisites: MUS 298, permission of instructor. Music majors only. Fee. 1 sem. hr.

\* MUS 301-302. MUSIC HISTORY AND LITERATURE I, 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 305. AFRICAN-AMERICAN SACRED MUSIC: A historical survey of African-American sacred music from its African roots to the present with an emphasis on developments in recent decades. Examines spirituals, the ring-shout, civil rights songs, the various forms of Gospel music, traditional hymnody of the African-American church and the musical aspects of black preaching. 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, including European influences. Open to all University students. 3 sem. hrs.

MUS 308. 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 309. THE OPERA: Survey of the development of the opera from its 17th-century beginnings to the present. 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. Prerequisites: MUS 211-212. 2 sem. hrs.

MUS 312. 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 313. ADVANCED AURAL SKILLS: Advanced training in dictation, solfège and aural analysis. Prerequisite: MUS 215 or permission of instructor. 2 sem. hrs.

MUS 314. 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 316. 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 of instructor. 2 sem. hrs.

MUS 318. FUNDAMENTALS OF ARRANGING: Arranging studies for woodwinds, brass, percussion, strings, and choir. Individual examination of instruments; projects. Prerequisite: MUS 212 or permission of instructor. 2 sem. hrs.

MUS 321-322. COMPOSITION III: Beginning explorations of original composition which utilize equally the concepts of pitch, temporal elements, timbres, and dynamics. Prerequisite: MUS 214 or permission of instructor. 2 sem. hrs. each

MUS 331. CHORAL MUSIC PEDAGOGY: Pedagogical techniques for choral ensembles. Topics include the singing voice, the changing voice, organization, artistic development, and rehearsal techniques. 2 sem. hrs.

MUS 332. INSTRUMENTAL MUSIC PEDAGOGY: Pedagogical techniques for band and orchestra. Topics include teaching and rehearsal techniques, learning theories, philosophy, literature, and programming. Field experience will be required. 2 sem. hrs.

MUS 333. ORGANIZATION OF THE SCHOOL MUSIC PROGRAM: Survey of techniques and materials necessary for successful organization of the school music program. Topics include budgeting, scheduling, and use of audio-visual materials. 2 sem. hrs.

MUS 335. ELEMENTARY MUSIC PEDAGOGY: Pedagogical techniques for classroom music. Topics include the pedagogical methods of Orff, Kodaly, Suzuki, and Dalcroze; lesson-plan design and implementation. 2 sem. hrs.

MUS 336. WOODWIND PEDAGOGY: Pedagogical techniques for the woodwind instruments. Separate section for each instrument. Clarinet and flute are full-term courses. Oboe, bassoon, and saxophone courses are 7 weeks long. Fee. 1/2-1 sem. hr.

MUS 337. BRASS PEDAGOGY: Pedagogical techniques for the brass instruments. Separate section for each instrument. Trumpet is a full-term course. Horn, trombone, and baritone/tuba courses are 7 weeks long. Fee. 1/2-1 sem. hr.

MUS 338. PERCUSSION PEDAGOGY: Pedagogical techniques for the percussion instruments. Fee. 1 sem. hr.

MUS 339. STRING PEDAGOGY: Pedagogical techniques for the string instruments. Separate sections for upper strings and lower strings. Each section is a full-term course. Upper strings should be taken before lower strings. Fee. 1 sem. hr.



MUS 345. CHORAL CONDUCTING: Continuation of techniques introduced in MUS 240, dealing specifically with techniques for choral ensembles. Prerequisite: MUS 240. 2 sem. hrs.

MUS 346. INSTRUMENTAL CONDUCTING: Continuation of techniques introduced in MUS 240, dealing specifically with techniques for band and orchestra. Prerequisite: MUS 240. 2 sem. hrs.

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 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. 0-1 sem. hr.

MUS 390. MARCHING BAND: Plays at all home and some away football games. Membership includes winds, percussion, twirlers, and Flyerettes. Concentrates on quality sound, offering a wide variety of musical styles. Combines show and corps style elements in presentations. No auditions for winds or percussion. Open to all University students. 0-1 sem. hr.

MUS 390. PEP BAND: Membership is by audition, and includes winds and percussion only. Performs at all home men's basketball games and some away games. Open to all University students, with priority given to marching band members. 0-1/2 sem. hr.

MUS 390. UNIVERSITY STRINGS: Ensemble of 20 string players specializing in string orchestra music. 0-1 sem. hr.

MUS 390. CHAMBER SINGERS: Select ensemble of 16-24 mixed voices which performs chamber music from all style periods in on-campus and off-campus concerts. Audition required. 0-1 sem. hr.

MUS 390. JAZZ ENSEMBLE: Ensemble specializes in the interpretation and performance of traditional and contemporary big band jazz, including the art of improvisation. 0-1 sem. hr.

MUS 390. JAZZ COMBO: Small ensemble study of works by major American jazz composers. Emphasis on group and individual improvisation. 0-1/2 sem. hr.

MUS 390. OPERA WORKSHOP: Performance techniques for the singer-actor through the study and performance of music from operatic literature. 0-1/2 sem. hr.

MUS 390. EBONY HERITAGE SINGERS: Ensemble specializing in the sacred music of African Americans with particular emphasis on contemporary gospel music. Open to the entire University community regardless of ethnic background or religious affiliation. No audition required. 0-1/2 sem. hr.

MUS 390. CELEBRATION VOCAL TRANSIT: Small ensemble of 13-16 mixed voices which specializes in vocal jazz, pop music and show tunes. Presents several on-campus and off-campus concerts annually. Audition required. 0-1 sem. hr.

MUS 390. STRING ENSEMBLE: 0-1/2 sem. hr.

MUS 390. PIANO ENSEMBLE: 0-1/2 sem. hr.

MUS 390. BRASS ENSEMBLE: Study of repertoire for small brass ensembles including brass quintet, horn ensemble, and others. 0-1/2 sem. hr.

MUS 390. PERCUSSION ENSEMBLE: 0-1/2 sem. hr.

MUS 390. WOODWIND ENSEMBLE: A combination of woodwind instruments to include flute choir, clarinet choir, saxophone choir, woodwind quintet, and others. 0-1/2 sem. hr.

MUS 390. CLASSICAL GUITAR ENSEMBLE: 0-1/2 sem. hr.

MUS 390. JAZZ GUITAR ENSEMBLE: 0-1/2 sem. hr.

MUS 390. BAROQUE ENSEMBLE: 0-1/2 sem. hr.

MUS 390. HANDS IN HARMONY: A sign-singing ensemble. 0-1/2 sem. hr.

MUS 392. ADVANCED GUITAR CLASS: Note reading in first position; advanced chord work and introduction to chord solo playing. Prerequisite: MUS 292 or equivalent. Fee. 1 sem. hr.

MUS 399. PERFORMANCE STUDIES: Private instruction (one half-hour lesson each week) in piano, voice, organ, violin, viola, cello, bass, flute, oboe, clarinet, bassoon, saxophone, trumpet-cornet, French horn, trombone, baritone, tuba, percussion, harp, harpsichord, classical and pick-style guitar, and jazz lessons in piano, guitar, bass, drums, brass, woodwinds, and improvisation. Prerequisite: Permission of instructor. Fee. 1-2 sem. hrs.

MUS 401. 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 402. 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 403. 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 404. 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 405. PIANO LITERATURE I: Comprehensive survey of literature for the piano from the early keyboard music to the romantic period. Required of piano performance majors. Prerequisite: Permission of instructor. *2 sem. hrs.*

MUS 406. PIANO LITERATURE II: Continuation of comprehensive survey of literature of keyboard music from the romantic period to the present day. Required of piano performance majors. Prerequisite: Permission of instructor. *2 sem. hrs.*

MUS 413. STYLE AND DESIGN—ANALYSIS: Exploration of appropriate analytical techniques as applied to Western music from the Renaissance to the present. Prerequisite: MUS 212 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 416. ADVANCED ORCHESTRATION: Continuation of MUS 316. Intensive instrumentation studies and detailed analysis of orchestral work. Prerequisite: MUS 316. *2 sem. hrs.*

MUS 418-419. 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 421-422. COMPOSITION IV: Advanced work in musical composition: writing multi-movement forms of both vocal and instrumental music. Prerequisites: MUS 321-322, permission of instructor. *2 sem. hrs. each*

MUS 423. COMPOSITION FOR LARGE ENSEMBLES: Preparation and execution of an extended work for large instrumental or vocal ensemble. All aspects of score and part preparation, notation, orchestration, correction, rehearsal, and performance will be considered. Prerequisite: Permission of instructor. *2 sem. hrs.*

MUS 424. ADVANCED NOTATIONAL TECHNIQUES: Study of special problems in contemporary notation and calligraphy. Work will be done through analysis of 20th-century techniques and creative solutions to individual problems. Prerequisite: Permission of instructor. *2 sem. hrs.*

MUS 425. ELECTRONIC MUSIC COMPOSITION: Study of musical electronic techniques, ranging from tape recorders and musique concrete through synthesizer and computer-generated and organized sound. Prerequisite: Permission of instructor. *2 sem. hrs.*

MUS 426. IMPROVISATIONAL MUSIC COMPOSITION: Discussion, study, and performance of improvisational musical techniques, including historical overview of classical extemporization, stream of consciousness, jazz, and aleatory and indeterminism. Prerequisite: Permission of instructor. *2 sem. hrs.*

MUS 430. JAZZ PEDAGOGY: Methods and materials for the organization and teaching of jazz performance classes. Topics include teaching improvisation, the rhythm section, and repertoire for the school jazz band. Corequisite: Participation in the jazz program. *2 sem. hrs.*

MUS 431. MARCHING BAND PEDAGOGY: Methods and materials for the organization and teaching of the high school marching band. Topics include teaching and rehearsal techniques, drill design, and philosophy. Field experience will be required. Corequisite: Participation in marching band. 2 sem. hrs.

MUS 435. 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 436. PIANO PEDAGOGY II: Continuation of MUS 435 through the material of grades III and IV. Prerequisite: MUS 435 or five terms of piano study or equivalent. 2 sem. hrs.

MUS 439. SEMINAR IN MUSIC EDUCATION: Problem solving for the music teacher. Group discussion of topics arising from the student teaching experience. Corequisite: EDT 422. 3 sem. hrs.

MUS 440. ADVANCED INSTRUMENTAL CONDUCTING: Individualized instruction dealing with advanced analysis, interpretation, aural skills, repertoire study, and conducting. Prerequisite: MUS 346. 2 sem. hrs.

MUS 450. CHORAL LITERATURE FOR THE CHURCH: Survey of music appropriate for several types of church choirs and for the liturgical seasons; examination of the role of the choir and director in worship. Prerequisite: MUS 240. 3 sem. hrs.

MUS 451. HYMNODY AND PSALMODY: Survey of hymnody from medieval to modern times and of various denominations. Survey of psalm settings, with emphasis on those appropriate for congregational participation. 2 sem. hrs.

MUS 459. CHURCH MUSIC INTERNSHIP: Minimum of one semester's supervised service as organist and/or choral director in an approved parish setting. Prerequisites: Completion of half of certificate requirements; permission. 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. 1-9 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 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 491. MIAMI VALLEY SYMPHONY: Performing ensemble of string, wind, brass, and percussion players; preparing literature for orchestra and chamber orchestra. Open to all University community members by audition. 0-1 sem. hr.

MUS 492. UNIVERSITY WIND ENSEMBLE: Select band that performs the finest in wind literature. Presents regular concerts during fall and winter terms. 0-1 sem. hr.

MUS 493. UNIVERSITY CHORALE: Mixed vocal ensemble performing music from all style periods in regular concert appearances. Open to all University students. 0-1 sem. hr.

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 560. SPECIAL STUDIES IN MUSIC: Studies in specialized areas of music. Prerequisite: Permission of instructor. 1-4 sem. hrs.

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\*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 Department of Music.

	<i>Fee per term</i>
Small group instruction in various instruments (MUS 196-199, 237, 238, 239, 292, 293, 294, 296-299, 336, 337, 338, 339, 392) .....	\$ 40.00
MUS 399 Performance Studies: One 30-minute lesson weekly .....	\$ 100.00
MUS 499 Performance Studies: One 60-minute lesson weekly .....	\$ 180.00

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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 didactic and clinical curriculum off campus. The University is affiliated with the Nuclear Medicine Institute (NMI) at the University of Findlay, Findlay, Ohio, for the senior-year curriculum. A student must complete 92-100 preclinical semester hours before beginning the NMI program. The NMI is accredited by the Committee on Allied Health Education and Accreditation (CAHEA). Completion of the NMI program qualifies students to take a national examination so as to become certified nuclear medicine technologists. The curriculum is planned to meet the requirements of the University of Dayton, the NMI, and the National Accrediting Agency for Clinical Laboratory Sciences (NAACLS). The student must complete all preclinical semester hours before entering a fourth-year program at the NMI.

### CLINICAL YEAR

Acceptance into the fourth-year program at the University of Findlay is competitive. Students make formal applications to the NMI in the fall term of the junior year. Acceptance is based on preclinical grades (minimum C+ average over all and in the sciences), recommendation letters, motivation, and knowledge of the profession. Personal interviews are not required. The fourth-year program lasts twelve months and has two separate phases. The didactic component consists of formal lectures, student laboratories, and seminars conducted at the NMI from September to December. The eight-month clinical component that follows consists of preceptorship experiences conducted in a department of nuclear medicine at one of the hospital affiliates of the NMI (in Ohio and surrounding states). Upon completion of the fourth year, students are granted the Bachelor of Science with a major in Nuclear Medicine Technology at the University's winter commencement exercises.

Tuition and fees for the entire fourth year are established by the NMI. Students will pay their NMI tuition and fees through the University of Dayton. The University will charge the students the Basic University Fee for Terms I and II. Specific information on such matters as fourth-year tuition and fees, room and board, book costs, dress codes, and grading policies is in the NMI information brochures available in the health professions office.

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### PROGRAM S10C: BACHELOR OF SCIENCE WITH A MAJOR IN NUCLEAR MEDICINE TECHNOLOGY (NMT)<sup>1</sup>

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<i>Preclinical Years</i>	<i>Semester Hours</i>
Required science and mathematics courses .....	54-55
BIO 151, 152, 152L, 309, 309L, 403, 403L .....	16
CHM 123, 123L, 124, 124L, 201, 201L, 313, 313L, 314, 314L .....	20
PHY 201, 201L, 202, 202L .....	8
MTH 148 <sup>2</sup> , 207 .....	6-7
MET 201L .....	1
CPS 144 or equivalent .....	3

Communication skills .....	6-12
CMM 101 .....	0-3
ENG 101-102 or 114 or 198; ENG elective .....	6-9
Philosophy and religious studies .....	12
Humanities .....	9
Social and behavioral sciences .....	9
General elective .....	3
First-year experience: ASI 150 .....	0-1
Preclinical semester-hour total .....	93-101

#### *Clinical Year*

NMT semester hours at the NMI and affiliated hospital .....	38
First Term: NMT 430, 431, 432, 433, 434, 435, 436 .....	20
Second Term: NMT 431L, 435L, 436L .....	12
Third Term: NMT 437 .....	6

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

<sup>2</sup>If background is not suitable for calculus, then substitute MTH 116, Precalculus, for MTH 148.

## FACULTY

Suzanne L. Columbus, *University Program Director*

Clinical Assistant Professor: Markon

## COURSES OF INSTRUCTION

The courses taken during the first three years at the University of Dayton, listed under Program S10C, are described under the individual departments. The senior year is conducted at affiliated hospitals.

**NMT 430. INTRODUCTION TO NUCLEAR MEDICINE TECHNOLOGY SCIENCE:** Topics include medical terminology, cardiopulmonary resuscitation (CPR), emergency medical procedures, medical ethics, and terminology specific to the field of nuclear medicine. 1 sem. hr.

**NMT 431. NUCLEAR SCINTIGRAPHY:** Theoretical aspects of nuclear medicine imaging procedures including applicable pathophysiology, technical aspects for data acquisition, and computer analysis of data as well as systemic radionuclide therapy procedures. 3 sem. hrs.

**NMT 431L. CLINICAL NUCLEAR SCINTIGRAPHY LABORATORY:** Practical applications related to NMT 431. 6 sem. hrs.

**NMT 432. RADIATION PHYSICS:** Applicable aspects of nuclear and atomic physics covered in theory and mathematical formulae. Theoretical topics include atomic and nuclear structure, radioactive decay, interactions with matter, and radionuclide production methods. Mathematical concepts are the decay equation, dose calculations, inverse square law, shielding formula, radioactive equilibrium, and radiation dosimetry. 5 sem. hrs.

NMT 433. NUCLEAR MEDICINE INSTRUMENTATION: Basic principles of both in vitro and in vivo instrumentation. The design, operation, and quality control of gas detectors and scintillation detectors; survey equipment, spectrometers, and stationary imaging devices with their application to nuclear medicine. Laboratory experience with single channel analyzers and Anger cameras. *5 sem. hrs.*

NMT 434. RADIATION BIOLOGY AND RADIATION PROTECTION: Topics in radiobiology include ionization and energy transfer; the molecular, cellular, tissues and organ responses to radiation; and acute and chronic effects of radiation. Topics in radiation protection include licensing requirements, guidelines for radiation protection, governing agencies, radiation signs, record keeping, personnel and area monitoring, radionuclide receipt, storage, and disposal, and management of clinical radiation spills. *2 sem. hrs.*

NMT 435. RADIOISOTOPES IN RADIOASSAY: Topics include the basic principles of immunology, various types of radioassays, sensitivity and specificity of procedures, proper test protocol and procedures, pathology of various tests, and normal values. Nonimaging laboratory studies such as venipuncture, blood volumes, red cell studies, and gastrointestinal absorption studies. *2 sem. hrs.*

NMT 435L. RADIOASSAY LABORATORY: Practical applications related to NMT 435. *3 sem. hrs.*

NMT 436. RADIOPHARMACEUTICALS: Topics include tracer theory, pharmacological actions, localization methods, radiopharmaceutical properties, radionuclide generators, radiopharmaceutical preparations and quality control, and transient vs. secular equilibrium. All routinely used radiopharmaceuticals are discussed. *2 sem. hrs.*

NMT 436L. RADIOPHARMACEUTICAL LABORATORY: Practical applications related to NMT 436. *3 sem. hrs.*

NMT 437. CLINICAL NUCLEAR MEDICINE: Completion of 1,400 hours of supervised clinical training at an affiliate hospital. Instruction and participation in the performance of various clinical nuclear medicine procedures, patient care, administrative duties, radiopharmaceutical preparation and quality control, equipment quality control, quality assurance, and radiation safety. *6 sem. hrs.*



## PHL

### 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 majoring in philosophy must successfully complete a minimum of 33 semester hours as described below in program A12.

The philosophy minor consists of 18 semester hours of coursework, at least 12 of which must be at the 300-400 level. Required courses are 103, 201 or 302, 350 or 351 or 352, one 400-level seminar, and 6 additional semester hours at the 300-400 level. Courses in logic and the history of philosophy are prerequisites for 400-level seminars.

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#### PROGRAM A12: BACHELOR OF ARTS WITH A MAJOR IN PHILOSOPHY (PHL)<sup>1</sup>

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	<i>Semester Hours</i>
Philosophy .....	33
<i>Major Requirements:</i> PHL 103, 302, 350, 352, and any four 400-level seminars; 9 additional sem. hrs. at the 300-400 level. Courses in logic and the history of philosophy are prerequisites for 400-level seminars.	
Natural science .....	7
Mathematics (MTH 102, 204, 205 excluded) .....	3
Social and behavioral sciences .....	12
Humanities .....	18
Religious studies .....	9
Foreign language or quantitative skill courses <sup>2</sup> .....	6-8
Communication skills .....	0-9
First-year experience: ASI 150 .....	0-1
General Education courses and 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>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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### FACULTY

Patricia A. Johnson, *Chairperson*

*Professors Emeriti:* Dieska, Nersoyan, Rhodes

*Professors:* Herbenick, Johnson, Kunkel, Monasterio, Tibbetts, Ulrich, Zembaty

*Associate Professors:* Benson, Payne, Quinn, Richards

*Assistant Professors:* Fischer, Fouke, Inglis, Luke, Mosser

*Instructors:* Mullins

## COURSES OF INSTRUCTION

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, and metaphysics. Readings from major figures in the history of philosophy such as Plato, Aristotle, Augustine, Aquinas, Descartes, Hume, and Kant. 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 309. PHILOSOPHY OF MIND: An analysis of the concept of mind and allied issues such as the nature of human agency, autonomy, weakness of will, self-deception, and the rationality of emotions. *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 MODERN 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 319. INFORMATION ETHICS: Examination of ethical principles, codes, cases, incidents, and issues in the design, implementation, and use of computerized information systems. 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 321. ENVIRONMENTAL ETHICS: Study of the principal ethical perspectives on the treatment of animals and nature including such issues as agriculture, energy, pollution, and economics; assessment of political responses to current environmental problems. 3 sem. hrs.
- \* PHL 323. PHILOSOPHY AND LITERATURE: Critical examination of philosophical concepts in selected literary masterpieces, ancient and modern. 3 sem. hrs.
- \* PHL 325. PHILOSOPHY OF MUSIC: Examination of theories on the meaning of music; experiencing music as composer, performer, and listener; aesthetic criteria; moral effect of music. 3 sem. hrs.
- \* PHL 327. PHILOSOPHY OF PEACE: Examination of human violence and ethical justifications for war and exploration of resolutions for human conflict in processes such as pacifism, peacemaking, democratic world governance, nonviolent caring, and a sustainable economy. 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 332. TECHNOLOGY AND VALUES: Study of the social impact of technology — scientists' responsibility; technological change and social change; the "technological fix"; democracy and the new technological elite; counter-culture critiques of technology. 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 344. CORE SEMINAR IN PHILOSOPHY: Culminating course for students in CORE; discussion of selected readings on the issue of human values in a pluralistic society in such areas as wealth and poverty, education, and war and peace. Open only to students in CORE. 3 sem. hrs.
- \* PHL 345. HONORS SEMINAR IN PHILOSOPHY: Study and seminar discussion of selected major philosophical works and of the analysis, interpretation, and criticism of these works. Open by permission only to students in the University Honors Program. 3 sem. hrs.
- \* PHL 350. CLASSICAL 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. MEDIEVAL 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. Comparisons with Western traditions. 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 440. SEMINAR—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. 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. *3 sem. hrs.*

PHL 462. 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. *3 sem. hrs.*

PHL 463. 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. *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.



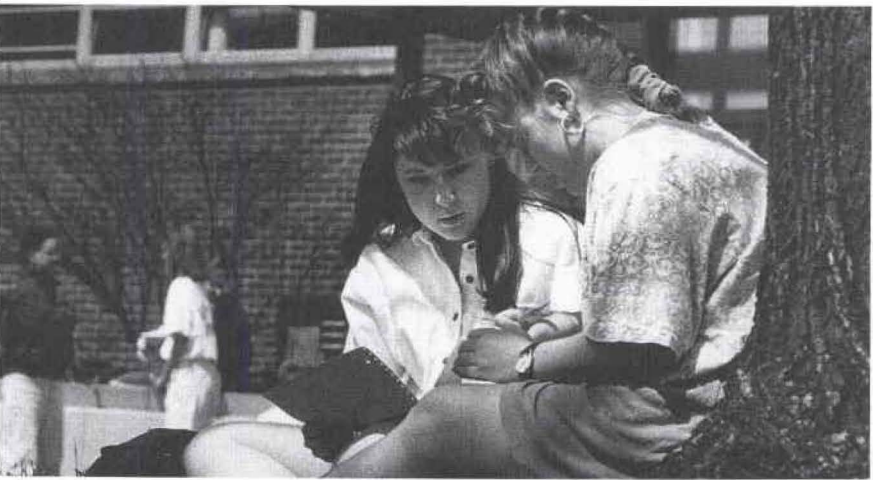
PHYSICAL SCIENCE (PSC)

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 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.

PROGRAM S11: BACHELOR OF SCIENCE WITH A MAJOR IN PHYSICAL SCIENCE (PSC)<sup>1</sup>

	<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 116, 168, 169, 218, 219 .....	19
Upper-level physical sciences (at least 12 sem. hrs. in physics) .....	24
Philosophy and religious studies .....	12
Humanities .....	9
Social and behavioral sciences .....	6
Communication skills .....	3-9
Computer Science: CPS 132 or 144 .....	3
First-year experience: ASI 150 .....	0-1
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.



## PHY

### 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 and physics courses. A physics major must complete all 300-400-level courses with a 2.0 minimum grade-point average.

Students in other disciplines who wish to minor in physics may take 12 semester hours of any upper-level physics courses.

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#### PROGRAM S12: 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 168, 169, 218, 219, 302 .....	18
Chemistry: CHM 123, 124, and associated laboratories .....	8
Philosophy and religious studies .....	12
Humanities .....	9
Social and behavioral sciences .....	6
Communication skills .....	3-9
Computer Science: CPS 132 or 144 .....	3
Minor (300-400-level courses) if chosen .....	12
First-year experience: ASI 150 .....	0-1
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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The combined program in physics and computer science leading to the Bachelor of Science with a major in Physics-Computer Science emphasizes the use of computer software in scientific applications and at the same time gives a foundation in the scientific disciplines of physics and computer science. Minimum requirements for the degree are listed below. Students are advised to select additional computer science, mathematics, and physics courses as electives.

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#### PROGRAM S12A: BACHELOR OF SCIENCE WITH A MAJOR IN PHYSICS-COMPUTER SCIENCE (PCS)<sup>1</sup>

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	<i>Semester Hours</i>
Computer Science .....	27
CPS 150, 151, 250, 346, 350, 353, and two additional courses numbered above 340. Additional numerical analysis courses are recommended.	
Mathematics: MTH 168, 169, 218, 219, 302 .....	18

Physics .....	27-30
PHY 206, 207, 208, 210L, 211L, 214, 314, and five additional courses numbered above 300, including a course in computational physics. In addition, a senior project involving some application of computers in physics is recommended.	
Communication skills .....	3-9
Humanities .....	9
Social and behavioral sciences .....	6
Philosophy and religious studies .....	12
First-year experience: ASI 150 .....	0-1
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.

## FACULTY

J. Michael O'Hare, *Chairperson*

*Distinguished Professor:* Bueche

*Professor Emeritus:* Mann

*Professors:* Graham, Kepes, Miner, O'Hare, Yaney

*Associate Professors:* Berney, Craver

*Assistant Professors:* Brecha, Erdei, Pedrotti

## 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. This course includes an integrated laboratory component. 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 sem. hrs.*

PHY 108L. LIGHT AND COLOR LABORATORY: Laboratory experiences to accompany PHY 108. *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 each 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: 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. 1 sem. hr.

- \* PHY 206. GENERAL PHYSICS I—MECHANICS: Introductory course in mechanics. Calculus concepts developed as needed. Three lectures, one recitation each week. Corequisite: MTH 148 or 168. 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 each 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 each week. Prerequisites: PHY 201 or 206, MTH 149 or 168. 3 sem. hrs.

- \* PHY 207H. GENERAL PHYSICS II—ELECTRICITY AND MAGNETISM (HONORS): Basic principles of electricity and magnetism. Three lectures, one recitation each 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 202, MTH 149; or PHY 207, MTH 169. 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 each 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 each 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. Prerequisite: PHY 208. Corequisite: MTH 219. 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. Prerequisite: PHY 208. Corequisite: MTH 219. 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, Coulumb'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 411. 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.

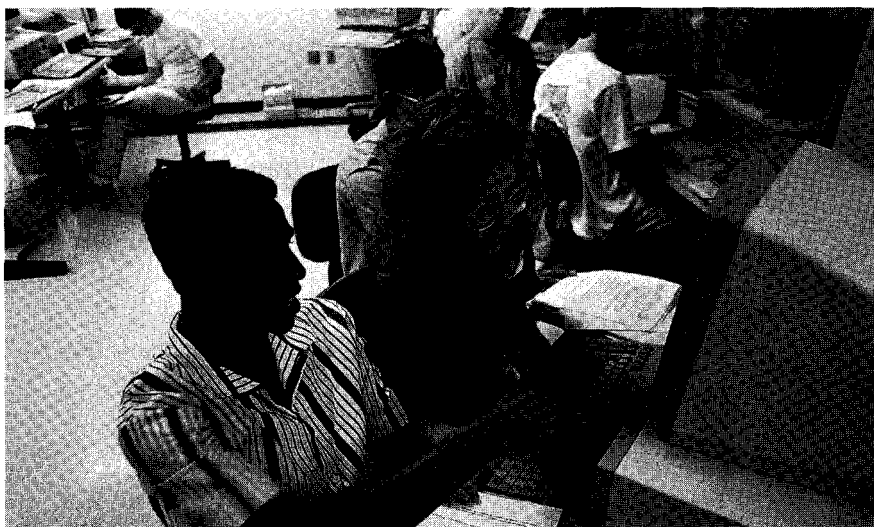
1-6 sem. hrs.

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.



## POL

### POLITICAL SCIENCE (POL)

A major in political science requires 36 semester hours of political science courses.

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 A13: BACHELOR OF ARTS WITH A MAJOR IN POLITICAL SCIENCE (POL)<sup>1</sup>

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	<i>Semester Hours</i>
Political science .....	36
POL 201, 202 or 214, 207, 317, and 24 additional sem. hrs. including 18 sem. hrs. at the 300-400 level (Students in the prelaw concentration may replace POL 207 with ACC 207-208.)	
Natural science .....	7
Mathematics (MTH 102, 204, 205 excluded) .....	3
Social and behavioral sciences .....	12
Humanities .....	18
Philosophy and religious studies .....	12
Communication skills .....	0-9
First-year experience: ASI 150 .....	0-1
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.

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### MINORS AND AREA CONCENTRATIONS FOR MAJORS

A student majoring in political science may elect a minor in education under the E11 program (see EDT) 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. Alternatively, the student may elect one of the four multidisciplinary concentrations in prelaw, international affairs, public administration and urban affairs, and political journalism developed by the Department of Political Science. A student completing an area concentration will, upon request, receive a certificate to that effect from the department.

	<i>Semester Hours</i>
1. Prewlaw	
Required: POL 301 or 411; ENG 272, 316, or 474 .....	6
Choose three: ECO 204; ENG 203, 204, or 205; PHL 201; SOC 326, 327 .....	9
Recommended: POL 495 .....	3
2. International Affairs	
Required: POL 202, 214 .....	6
Choose four: ANT 150; ECO 450, 460, 461; any upper-level non-American HST .....	12
Recommended: Foreign language through 311 and study abroad	
3. Public Administration and Urban Affairs	
Required: POL 305, 306, 360 .....	9
Choose three: MGT 314; HST 355; SOC 328; ENG 370 or 372; ECO 445 or 485; POL 495 .....	9

## 4. Political Journalism

Required: POL 303, 311; CMM 330 .....	9
Choose three: CMM 201; CMM 353; CMM 431, 331; POL 360, 450 .....	9

## FACULTY

David W. Ahern, *Chairperson*

*Professors:* Karns, Kerns, Lapitan

*Associate Professors:* Ahern, Bilocerkowycz, Fogel

*Assistant Professors:* Bartilow, Ensalaco, Ghery, Inscho, Nelson

*Lecturer:* Putka

## 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 judicial process as part of the political system. Focus on the participants (police, lawyers, judges, interest groups, litigants, jurors) and the process (criminal, civil, and appellate proceedings). 3 sem. hrs.

POL 303. STATE AND LOCAL GOVERNMENT: 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 political system. 3 sem. hrs.

POL 311. PUBLIC OPINION AND POLITICAL BEHAVIOR: The formation, maintenance, change, and impact of public opinion on 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. Theorists including Plato, Aristotle, the Stoics, Augustine, Aquinas, Machiavelli, Hobbes, Locke, Rousseau, Mill, Marx, Spencer, Lenin, Gasset, and Camus presented in their historical and socio-political contexts.

3 sem. hrs.

POL 320-329. COMPARATIVE POLITICS: Analysis of governmental institutions and political processes of selected countries or areas:

POL 320—Western Europe

POL 321—Russia and the New States

POL 323—Latin America

POL 324—Southern Asia

POL 325—The Middle East

POL 326—Africa

POL 327—Southern Europe

POL 328—China

POL 329—Japan

3 sem. hrs. each

POL 331. NATIONALISM AND ETHNOPOLITICS: An analysis of the politics of nationalism and ethnicity and their impact on social justice. Diverse case studies (US, USSR, Russia, Northern Ireland, Israeli-Palestinian) and institutions (European Community, United Nations) will be explored.

3 sem. hrs.

POL 335. UNITED STATES NATIONAL SECURITY POLICY: Analysis of various political, economic, and military issues and problems relating to U.S. national security.

3 sem. hrs.

POL 350. 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 360. URBAN POLITICS AND POLICY: 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 404. UNITED STATES-LATIN AMERICAN RELATIONS: This course examines the foreign relations of the United States with other countries of the Western hemisphere. Political, economic and security issues are examined from both theoretical and historical perspectives.

3 sem. hrs.

POL 405. FISCAL OPERATIONS IN GOVERNMENT: Course for students who plan careers in public service or not-for-profit agencies. Analytical tasks that relate to such fiscal areas as revenue estimation, budgeting, expenditure monitoring, and evaluation. Microcomputers may be used in instruction.

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 407. CHINESE FOREIGN POLICY: Analysis of the Chinese foreign policy structures and processes as well as the development of Chinese foreign policy and relations with the Soviet Union, the United States, and the Third World.

3 sem. hrs.

POL 408. AMERICAN FOREIGN POLICY: Critical study of the American foreign policy process and evaluation of the sources of American foreign policy. 3 sem. hrs.

POL 409. RUSSIAN FOREIGN POLICY: Analysis of the internal and external factors shaping the foreign policies of Russia and the independent republics. 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 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; 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. COMMUNISM AND POST-COMMUNISM: Analysis of communist theory and practice in various countries and the post-communist challenges facing states seeking to build democracy, a market economy, and overcome the communist legacy. 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 471. ENVIRONMENTAL POLICY:** Examination of environmental public policymaking and implementation in the U.S. and in the international arena. Analysis of domestic and international governmental responses to specific environmental issues.

**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. Prelaw 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.





## PRELAW

## PRELAW

At the University of Dayton, students thinking about attending law school join the Prelaw Program. That program provides them with the guidance and academic assistance necessary to prepare them for success in the study of law. Because law schools seek students with a broad, liberal arts education and discourage students from having a vocationally-oriented "prelaw" major, prelaw students at the University of Dayton select undergraduate majors based on their interests and aptitudes. They select these majors either as incoming first-year students or, with the aid of their prelaw advisors, later in their college career. However, in order to receive adequate counseling, all students thinking about postgraduate work in law should declare their prelaw intentions to the prelaw office as early as possible. This enables them to take full advantage of all the counseling, advising, and preparatory services provided by the Prelaw Program.

In addition to courses in their majors, prelaw students select courses that help develop analytical skills and academic abilities necessary to success in law school and careers in law. While no prelaw course of study is perfect for all students, particular courses taken in conjunction with a traditional academic major provide the prelaw student with an excellent academic preparation for legal study. Students take courses which emphasize the following:

1. Skill in the analysis and synthesis of ideas. Courses in such disciplines as history, literature, mathematics, philosophy, and the sciences develop critical, analytical thinking.

2. Proficiency in communicating ideas effectively and clearly. Courses in such areas as composition theory and process, in exposition and argumentation, in persuasion, and in the techniques and uses of research aid in the development of this ability.

3. Comprehension of the basic principles of the American political and legal system, including their origins and functions. Courses in British and American history, political science, and criminal justice promote an understanding of these concepts.

4. A critical examination of the ethical issues in the law and the legal profession. Courses in philosophy and religious studies form a basis for such an examination.

5. An understanding of the basic principles of economics and accounting.

Members of the Prelaw Faculty Committee help students develop an appropriate course of study based on their interests, aptitudes and goals. In addition, they provide students with information about law school recruitment, financial aid, the Law School Admission Test (LSAT), and the writing of applications and securing of recommendations. The Prelaw Program also sponsors LSAT preparation workshops, a prelaw internship for which students receive course credit while working in an attorney's office, and mock trial competition. A chapter of Phi Alpha Delta, a national law fraternity, is active on campus.

## PRELAW FACULTY COMMITTEE

Roberta Sue Alexander (History), *Director, Prelaw Program*

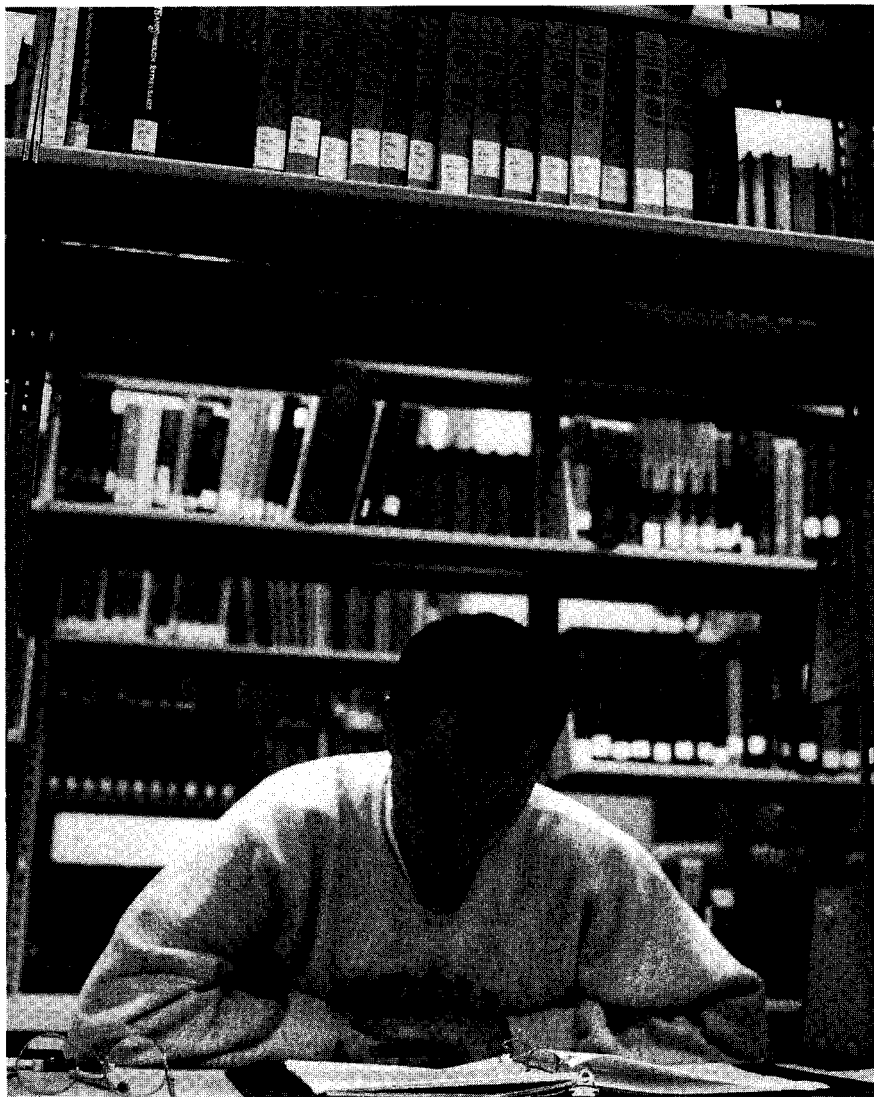
Gustafson (Economics), Ingram (Criminal Justice), Kerns (Political Science),

Kimbrough (English), Payne (Philosophy)

## COURSES OF INSTRUCTION

PLW 301. MOCK TRIAL I: Practice and performance of attorney and witness roles for Mock Trial National Competition case. Repeatable up to 4 semester hours. 1 sem. hr.

PLW 302. MOCK TRIAL II: Practice and performance of attorney and witness roles for Mock Trial National Competition. Repeatable up to 4 semester hours. Prerequisite: PLW 301 and invitation by mock trial coaches. 1 sem. hr.



## MED, DEN

### 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), A2 (B.A. in Chemistry), S2 (B.S. in Biochemistry), or S3 (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 the premedical office as early as possible.

Program S13, the B.S. for premedical and predental students, 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 S13 offers a wide choice of science and nonscience electives. Premedical-predental students can change to biology or (B.A.) chemistry majors as late as the junior year without any loss of semester hours.

The Premedical-Predental Faculty Committee is responsible for program policies, curricular requirements, course advising, general counseling, and the preparation of recommendation letters for applicants to the primary health professional schools. The Committee conducts a second-year evaluation of all S13 students for the purpose of assessing academic progress. A chapter of the National Premedical Honor Society, Alpha Epsilon Delta, is established on campus.

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#### PROGRAM S13: BACHELOR OF SCIENCE WITH A MAJOR IN PREMEDICINE (MED) OR PREDENTISTRY (DEN)<sup>1</sup>

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	<i>Semester Hours</i>
Required science courses .....	45-47
BIO 151, 152, 152L, 201L .....	8
CHM 123, 123L, 124, 124L, 201, 201L, 313, 313L, 314, 314L .....	20
CPS 111 .....	3
MTH 148-149 or 168-169 <sup>2</sup> .....	6-8
PHY 201, 201L, 202, 202L <sup>3</sup> .....	8
Elective science courses .....	17
Five lecture courses that must be selected from among mathematics, the natural sciences and/or engineering. The elective courses must be directly related to the primary field of interest. Laboratory sections must accompany two of the electives.	

Communication skills .....	6-12
CMM 101 <sup>4</sup> .....	3
ENG 101-102 or 114 or 198; ENG elective <sup>5</sup> .....	3-9
Philosophy and religious studies <sup>6</sup> .....	12
History .....	6
Humanities .....	12
A modern foreign language is strongly recommended.	
Social and behavioral sciences .....	12
General electives <sup>7</sup> .....	12
First-year experience: ASI 150 .....	0-1
Total semester hours .....	122-130
(See advisors for term-by-term course listings.)	

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

<sup>2</sup>Begin in MTH 116 if background is not suitable for MTH 148. MTH 116 counts as a general elective. Well qualified students are advised to take MTH 168-169.

<sup>3</sup>Well qualified students are strongly advised to take PHY 206-207-208 lecture sequence with PHY 201L and 202L.

<sup>4</sup>If CMM 101 is waived, a 3 sem. hr. Humanities course must be taken in its place.

<sup>5</sup>Select ENG elective from among ENG 203, 204, 205, 272, 316, or any 300-level general Education ENG elective.

<sup>6</sup>One PHL or REL elective must be an ethics course. Select from among PHL 312, 315; REL 265, 357.

<sup>7</sup>Only general elective courses can be taken under grading option 2.

PREMEDICAL-PREDENTAL FACULTY COMMITTEE

Charles J. Chantell (Biology), *Committee Chairperson*  
Bajpai (Biology), Berney (Physics), Fox (Chemistry), Graham (Physics),  
Kearns (Biology), Singer (Chemistry)



## PSY

### 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 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.

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#### PROGRAM A14: 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 science .....	7
Mathematics: MTH 114, 116, 128, 129, 148, 149, 168, or 169 .....	3
Social and behavioral sciences .....	12
Humanities .....	18
Philosophy and religious studies .....	12
Communication skills .....	0-9
First-year experience: ASI 150 .....	0-1
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>May substitute MTH 207 or 215 for PSY 216.

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**PROGRAM S14: 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 science <sup>3</sup> .....	24
MTH 148, 149 <sup>4</sup> .....	6
Humanities .....	9
Social and behavioral sciences .....	6
Philosophy and religious studies .....	12
Communication skills .....	0-9
First-year experience: ASI 150 .....	0-1
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.

<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 116, 128, 129, 168, or 169 for MTH 148 or 149.

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## FACULTY

F. Thomas Eggemeier, *Chairperson*

*Professors:* Butter, DaPolito, Eggemeier, Fine, Kimble, Polzella

*Associate Professors:* Allik, Biers, Bower, Katsuyama, Korte, Kuntz,  
Moroney, Whitaker

*Assistant Professors:* Roberson, Graetz, Elvers

*Adjunct Faculty:* Kennedy, Keuhnl, Martin, O'Connor, Reising, Ward

## 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: measures of central tendency and dispersion, sampling, estimation, hypothesis testing, tests between means, linear regression, correlation, and ANOVA. Prerequisites: PSY 101 and MTH 102 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 321L. COGNITIVE PROCESSES LABORATORY: In depth discussion of seminal research in cognition. Collection, analysis, and interpretation of data. Prerequisites: PSY 101, 216, 217, 321 or permission of instructor. *1 sem. hr.*

PSY 322. LEARNING: Foundations of the learning process. Classical and instrumental paradigms and variants of each considered in preparation for 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. *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. *3 sem. hrs.*

PSY 344. INTERPERSONAL RELATIONS: Social psychological research in non-verbal 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 4-5 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; 351 highly recommended.

3 sem. hrs.

PSY 361. PERSONALITY: Introduction to the study of personality through analysis of such major theories as those of Freud, Skinner, Maslow, and Rogers. The development of personality and the stability of personality characteristics over time. Review of 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 375. PSYCHOLOGY OF THE ARTS: Explores the psychological experiences associated with the creation and appreciation of music, art, and literature. Course content is presented in terms of the theories, methods, and research findings in the fields of perception, cognition, and development.

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 431. INTERVIEWING AND COUNSELING: Integrated approach to the theory, techniques, skills, and values of interviewing and counseling. Practice through written assignments, self study, classroom exercises, and role-playing. Prerequisite: PSY 101 or permission of 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 101.

3 sem. hrs.

PSY 443. PSYCHOLOGY OF WOMEN: Survey of topics related to the psychology of women, such as gender identity and roles, theories of female development, relationships, achievement, language, health issues, spirituality, sexuality, and violence. Prerequisite: PSY 101.

3 sem. hrs.

PSY 444. ENVIRONMENTAL PSYCHOLOGY: Study of the effects of the physical and social environment on human behaviors, attitudes, and affective responses. Prerequisites: PSY 101 and 341 or permission of instructor.

3 sem. hrs.

PSY 445. TECHNOLOGY, ENVIRONMENT, AND BEHAVIOR: Examines the cultural bases for the individual and societal choices which humans make about their use of technology. Technology is broadly defined to include human-machine systems.

3 sem. hrs.

PSY 450. PSYCHOLOGY FOR MINISTRY: Human development and adjustment, interpersonal communication, and the psychology of religion. Prerequisite: Acceptance into the Lay Ministry Program or permission of instructor.

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 SEXUALITY: Psychological factors in human sexuality including developmental, biological, and social perspectives. Such topics as sexual orientation, gender identity and roles, sexual relationships, sexual dysfunction, power and violence, and commercialization. *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 490. INTERNSHIP IN PSYCHOLOGY: Supervised experience arranged on an individual basis in appropriate settings. For psychology majors who have completed prescribed course work only. Consult internship director for details. May be repeated up to 6 sem. hrs. *1-6 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 490, 493 and/or 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.*

\*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 denominations and with other world religions. Through its participation in the Sanders Judaic Studies Program, the department offers special courses in this area. It also engages in interdisciplinary studies.

Students minoring in religious studies must complete 18 semester hours in the Department of Religious Studies. At least 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 A15: BACHELOR OF ARTS WITH A MAJOR IN RELIGIOUS STUDIES (REL)<sup>1</sup>

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	<i>Semester Hours</i>
Religious studies .....	36
At least 24 sem. hrs. at 300-400 level; at least 9 sem. hrs. at 400 level. At least one course in each of these four areas:	
Biblical studies	
Historical theology	
Systematic theology	
Christian ethics—religion and culture	
Natural science .....	7
Mathematics (MTH 102, 204, 205 excluded) .....	3
Social and behavioral sciences .....	12
Humanities .....	18
Foreign language <sup>2</sup> .....	6-8
Philosophy .....	9
Communication skills .....	0-9
First-year experience: ASI 150 .....	0-1
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>Where appropriate, this credit may apply to the humanities breadth requirement.

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## FACULTY

Rev. Joseph F. Kozar, S.M., *Interim Chairperson*

*Professors:* Anderson, Barnes, Branick, Burns, Friedland, Frost, Hater, Heft, Kohmescher, L'Heureux, Roberts

*Associate Professors:* Doyle, J. Martin, Zukowski

*Assistant Professors:* Buby, Kozar, McGrath, Thimmes, Weare, Yocum Mize

## COURSES OF INSTRUCTION

- REL 103. INTRODUCTION TO RELIGION: Examination of the nature of religion, comparative aspect of religion, and the function of religion as a source of interpretation of life. The "Catholic Option" takes the majority of its perspectives and examples about religious beliefs and practices from the Roman Catholic tradition. *3 sem. hrs.*
- \* 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 201. SELECTED RELIGIONS OF THE EAST: Introduction to several major religious traditions which originated in the East, including Hinduism, Buddhism, Jainism, Taoism, and Confucianism. *3 sem. hrs.*
- \* REL 202. RELIGIONS OF THE MIDDLE EAST: Introduction to the monotheistic religious traditions which originated in the Middle East, including 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, form-critical, and sociological 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, redaction-critical, and sociological methodologies. *3 sem. hrs.*
- \* REL 213. RELIGION AND VALUES IN ANCIENT ISRAEL: Introduction to the critical and sociological study of the Old Testament. Examination of texts and historical situations that reflect values-related issues, the relationship of religious belief and values, and the emergence of pluriform value systems within ancient Judaism. Prerequisite: 3 semesters of core curriculum courses. *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 305. ANCIENT NEAR EASTERN RELIGIONS: Examination of the mythology and religion of the Babylonians, Egyptians, and Canaanites with special attention to their relation to the Old Testament. *3 sem. hrs.*
- \* REL 306. BUDDHISM AND CHRISTIANITY: Exploration of the 2,500-year-old Buddhist tradition—the life of its founder, development of its teachings, rituals, and meditation techniques. Survey of the spread of Buddhism to the West in the 20th century. Parallels and contrasts with the Christian tradition. *3 sem. hrs.*
- \* REL 307. JUDAISM: Basic introduction to Judaism: its history, its faith, its worship. *3 sem. hrs.*
- \* REL 310. THE PENTATEUCH: Examination of the first five books of the Hebrew Bible, known as the Torah or Pentateuch, emphasizing the traditions that relate primeval beginnings, ancestral history, the exodus, wilderness wanderings, and the legal codes. *3 sem. hrs.*

- \* REL 311. THE PROPHETS: The prophetic texts of the Old Testament studied as reformulations of ancient religious traditions to meet new historical situations. The relevance of the prophets to contemporary life and thought. 3 sem. hrs.
- \* REL 312. THE PSALMS AND THE WISDOM LITERATURE: Critical examination of the biblical books of Psalms, Proverbs, Job, Ecclesiastes, and Ben Sira and of related literature within the historical context in which they arose. The contemporary relevance of this literature. 3 sem. hrs.
- \* REL 316. THE SYNOPTIC GOSPELS: With the Gospel of Mark as a point of departure, comparison of the Markan, Matthean, and Lukan narratives for an understanding of the various conceptions of Jesus found in these gospels. 3 sem. hrs.
- \* REL 317. STUDIES IN JOHN: Historical-critical study of the Gospel of John, its text, literary techniques, structure, and theology. The narrative world of John's Gospel related to the Johannine community. 3 sem. hrs.
- \* REL 318. STUDIES IN PAUL: Detailed examination of the letters of Paul, stressing the historical circumstances affecting their composition as well as the main religious ideas of Paul that govern their content. 3 sem. hrs.
- REL 319. THE BOOK OF REVELATION: Detailed critical analysis of various biblical apocalyptic texts as found in Judaism and early Christianity. Focus on the Book of Revelation against the background of other biblical and intertestamental apocalyptic texts. 3 sem. hrs.
- \* REL 323. HISTORY OF CHRISTIANITY I (100-1100): Study of important events movements, ideas, and people in the development of Christianity to the year 1100 including the formation of the Canon, early Church councils, Augustine, Gregory the Great, monasticism, the rise of Islam, Eucharistic and other controversies, and the Gregorian Reform. 3 sem. hrs.
- \* REL 324. HISTORY OF CHRISTIANITY II (1100-PRESENT): Study of important events, movements, ideas, and people in the development of Christianity from 1100 to the present, including the separation of the Churches of the East and West, rise of the mendicant orders, Scholasticism, key themes and figures of the Reformation, Vatican I, Modernist crisis, ecumenism, and Vatican II. 3 sem. hrs.
- REL 326. PROTESTANT CHRISTIANITY: Survey of the development of Protestant thought from the Reformation. 3 sem. hrs.
- \* REL 327. U.S. PROTESTANT AND JEWISH EXPERIENCE: The growth and development of Protestant Christianity in the U.S. in its various expressions; its interaction with American culture; the Jewish experience; the Orthodox in the U.S.; modern religious movements. 3 sem. hrs.
- \* REL 328. U.S. CATHOLIC EXPERIENCE: The growth and development of Catholic Christianity in the U.S.; its interaction with America, its culture, and its people. 3 sem. hrs.
- \* REL 340. THE CHURCH: 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: Emphasis on the identity of Jesus and on the significance that his ministry, death, and resurrection have for the salvation of humankind. 3 sem. hrs.

- \*REL 343. THE SACRAMENTS: 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 344. 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 349. SEARCH FOR IMMORTALITY: 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 361. CORE RELIGION SEMINAR: Culminating course for students in CORE. Discussion of readings on values in a pluralistic society; such issues as wealth and poverty, education, war and peace. Open only to students in CORE. 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 367. CHRISTIAN ETHICS AND HEALTH CARE ISSUES: 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 369. CHRISTIAN ETHICS AND ENGINEERING: Study in applied Christian ethics addressing the moral issues facing engineers. How to make a moral decision, engineering as a profession, codes of ethics, safety, environmental issues, confidentiality, employee rights, whistleblowing, consulting, conflicts, and career choices. 3 sem. hrs.
- \* REL 371. 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 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 humans 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 worldviews at given times. Basic literary sources of Christian art and effects of secularization on Christian art.

3 sem. hrs.

\*REL 376. THEOLOGY AND THE SOCIAL SCIENCES: Exploration of developments in Christian theology that have paralleled the rise of the human sciences, in particular of concepts of God, humanity, Church, sacraments, sin, and salvation in the light of history, anthropology, psychology, and sociology.

3 sem. hrs.

\*REL 377. THE INNER JOURNEY IN MYTH, BIBLE, AND LITERATURE: Study of stories of heroic figures in the Bible and in other literature as patterns of personal and spiritual development. Throughout, efforts to relate the material to the needs of contemporary persons.

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 385. LAY MINISTRY: A critical examination of lay ministry and its theological basis, in light of Vatican II and recent trends in the world and Church. Special topics: family ministry, ministry in the marketplace, leadership, evangelization, catechesis, women, social justice.

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 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. GOD AND ATHEISM: 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 446. CHRISTIAN LITURGY: Study of the basic principles of liturgy, the development of some of the basic forms of liturgy, and applications of the principles within current rites.

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 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 464. LIBERATION THEOLOGY: A historical-critical analysis and study of the theology of liberation and its specific expression among theologians of the Third World, particularly Latin America. *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 471. WOMEN AND RELIGION: Examination of the impact of the women's movement on Judaism, Christianity, and other major world religions. Survey of traditional religious attitudes toward women. Relevance of feminist approaches to scripture, ethics, spirituality, and ministry in understanding contemporary global issues. *3 sem. hrs.*
- \* REL 472. ECOLOGY AND RELIGION: Examination of the relationship between religion and ecology; bridges the contributions of traditional theological inquiry and modern scientific insights and offers an enlarged vision of ecological concerns. *3 sem. hrs.*
- \* REL 477. RELIGION AND SCIENCE: Survey of the ways science has affected religion on specific doctrines, methods of knowing what is true, and general worldviews; study of religious response to these. *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. RELIGIOUS EDUCATION—THEORY AND PRACTICE: Study of theory and practice of religious education for those who will be teaching religion in the school and parish. Various models and methods. 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 492. SPECIAL TOPICS: Concentrated study of issues and subjects pertinent to religion. May be repeated when topic changes. *1-3 sem. hrs.*

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\*General Education course. See Chapter V.

## SOCIAL WORK (SWK)

Social work is the profession sanctioned by society to provide social services. It is the professional activity of helping individuals, groups, or communities to enhance or restore their capacity for social functioning. The profession also engages in activities aimed at facilitating societal conditions that enhance and/or restore social functioning.

A minor in Social Work consists of a minimum of 15 semester hours, at least 12 of which are at the 300 or 400 level. No more than 6 semester hours of field experience credit can be accepted toward the minor. See also SOC.

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### COURSES OF INSTRUCTION

\* SWK 101. SOCIAL WELFARE AND SOCIETY: Study of the emergence and current functioning of the social welfare system in contemporary U.S. society. Selected social issues and the social welfare programs designed to address these issues will be highlighted. *3 sem. hrs.*

SWK 202. VOLUNTEERS IN COMMUNITY SERVICE: Basic knowledge and skills for providing volunteer services to the social service system. Focus on, and observation of, volunteer services in planning social service programs, fundraising, allocation of funds, and direct service. *3 sem. hrs.*

SWK 303. COMMUNITY PRACTICE AND RESEARCH: Study of the design and implementation of community research, including needs assessment and program evaluation in the social service system. Prerequisite: Permission of instructor. (Same as SOC 309) *3 sem. hrs.*

SWK 305. 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. *3 sem. hrs.*

SWK 307. MENTAL HEALTH SERVICES: Study of historical perspectives, deinstitutionalization, the community mental health movement, inpatient care, and innovative approaches. Policy and practice implications are examined. *3 sem. hrs.*

SWK 310. 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. *3 sem. hrs.*

SWK 311. 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. Prerequisite: SWK 101. *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. *3 sem. hrs.*

SWK 325. CHILD ABUSE: Comprehensive study of child abuse: its history, scope, causal factors, indicators for detection, treatment resources and modalities, and community responsibility. *3 sem. hrs.*

SWK 327. 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. *3 sem. hrs.*

SWK 330. PERSPECTIVES ON AGING: An introduction to the field of gerontology. Focus on the major physical, psychological, and social dynamics of aging. Selected issues will be highlighted. (Same as SOC 330.) *3 sem. hrs.*

SWK 331. 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. *3 sem. hrs.*

SWK 342. ADDICTIONS AND SELF HELP: Study of theories of substance and experience addictions, traditional treatment models, and the self-help movement as a treatment approach for addicted people. Focus on understanding the principles and processes of 12 step groups. *3 sem. hrs.*

SWK 392. 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. *1-3 sem. hrs.*

SWK 401. COMMUNITY FIELD EXPERIENCE: MICRO: Supervised field experience for students working with individuals and/or families in an agency setting. Concurrent seminar includes intensive basic communication and interviewing skill development. Students spend 150 hours in the agency. Prerequisite: Permission of instructor. *5 sem. hrs.*

SWK 402. COMMUNITY FIELD EXPERIENCE: MACRO: Supervised field experience for students interested in working with groups, organizations, and/or communities. Concurrent seminar includes overview of knowledge and skills for macro social work practice. Students complete 150 clock hours in a field placement. Prerequisite: Permission of instructor. *5 sem. hrs.*

SWK 465. INDEPENDENT STUDY: Individual research, study, and readings on specific topics and/or projects of importance to social work. Under individual faculty direction. Prerequisite: Permission of instructor. *3 sem. hrs.*

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\*General Education course. See Chapter V.

## SOCIOLOGY (SOC)

Sociology is the scientific study of society. The unique insight of sociology is that people are who they are largely because of their social experiences and interactions with others. "The sociological imagination" is the ability to understand the relationship between the individual experience and the broader social context. In addition to studying various aspects of social behavior, sociology studies the nature and causes of social problems such as crime, marital instability, poverty, and racism. The challenge facing sociologists is to apply their knowledge in ever more constructive ways for the improvement of society.

Students intending to major or minor in sociology should consult with the department chairperson to plan their programs of courses. Majors may concentrate their studies in the fields of human relations or community relations. The requirements for majoring in sociology are stated in the outline below. A minor in sociology requires 15 semester hours of courses in the discipline, with at least 12 of those at the 300-400 level.

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### PROGRAM A16: BACHELOR OF ARTS WITH A MAJOR IN SOCIOLOGY (SOC)<sup>1</sup>

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	<i>Semester Hours</i>
Sociology requirements and electives .....	37
SOC 101 or 204 .....	3
SOC 208, 303, 308, 308L, 409; SOC 351 or ANT 335 .....	16
SOC electives <sup>2</sup> : .....	18
Philosophy and religious studies .....	12
Communication skills .....	0-9
Natural science .....	7
Mathematics (MTH 102, 204, 205 excluded) .....	3
Social and behavioral sciences .....	12
Humanities .....	18
First-year experience: ASI 150 .....	0-1
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>No more than 6 hours of Field Experience or internship may count toward the Soc. major

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## FACULTY

Fred P. Pestello, *Chairperson, Department of Sociology, Anthropology, and Social Work*  
 Professor: M. Huth

*Associate Professors:* Bregenzer, Davis-Berman, Donnelly, L. Majka, T. Majka,

Miller, F. Pestello, H. Pestello, Saxton

*Assistant Professors:* Dandaneau, Taylor

*Adjunct Associate Professor:* Voydanoff

## 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 204L. URBAN PROBLEMS LABORATORY: Field study of selected urban problems. Focus on issues and problems of inequality, i.e., poverty, unemployment, discrimination, and homelessness as experienced by members of the urban community. (Corequisite SOC 204) *1 sem. hrs.*

SOC 208. SOCIAL RESEARCH METHODS: Study of the logic of research design, data-gathering strategies, types of measurement, and sampling techniques. Both inductive and deductive approaches. Participation in research projects. *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 308. DATA ANALYSIS: The analysis and interpretation of both quantitative and qualitative social science data. Prerequisite: SOC 208. Corequisite: SOC 308L. *3 sem. hrs.*

SOC 308L. DATA ANALYSIS LABORATORY: Training in appropriate computer programs and computer analysis of social science data. Prerequisite: SOC 208. Corequisite: SOC 308. *1 sem. hr.*

SOC 309. COMMUNITY PRACTICE AND RESEARCH: Study of the design and implementation of community research, including needs assessment and program evaluation in the social service system. Prerequisite: Permission of instructor. (Same as SWK 303) *3 sem. hrs.*

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 or guardians, school, church, police, business community, community agencies, and the juvenile justice and correctional system in preventing and 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 330. PERSPECTIVES ON AGING: An introduction to the field of gerontology. Focus on the major physical, psychological, and social dynamics of aging. Selected issues will be highlighted. (Same as SWK 330.) 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 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 336. ORGANIZATIONS IN MODERN SOCIETY: Analysis of the dynamics of organizations in modern industrial society. Organizational social psychology, organizational structure and process, and organization-community relations. 3 sem. hrs.

SOC 337. POLITICAL SOCIOLOGY: Study of political power. Political influence by economic elites, impact of bureaucracies, competing ideologies, alienation and nonvoting, and social movements as challenges to power structures. 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. SOCIAL PSYCHOLOGY IN SOCIETY: Survey of the basic principles, concepts, theories, and methods of social psychology from the sociological perspective. 3 sem. hrs.

\* SOC 341. SELF AND SOCIETY: Study of the relationship between self and others. Socialization, self conceptions, deviant behavior, social influence, and social control. 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 the social structures, relationships, and processes of small groups, including families, friends, work groups, and small organizations. *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. URBAN SOCIOLOGY: The study of the development of urban life from ancient times to the present, with an emphasis on contemporary urban population characteristics, social-economic-political structure, and problems. *3 sem. hrs.*

\* SOC 352. COMMUNITY: Study of the interaction of groups and individuals related by common situations, problems and intentions; creation, maintenance, eclipse, and restoration of close social ties in urban neighborhoods, small towns, and groups with similar interests and lifestyles. *3 sem. hrs.*

SOC 355. FAMILIES AND THE ECONOMY: The relationship between families and their socio-economic environment. Consideration of public issues including family policy and government programs to assist families. *3 sem. hrs.*

SOC 357. SOCIOLOGICAL PERSPECTIVES OF TECHNOLOGY: Study of the relation between society and technology. Issues include conceptions of society and technology; sources, uses, and impacts of technology; professional conduct in relation to technology; and various forms of the relation between society and technology. *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 as topic changes. *1-6 sem. hrs.*

SOC 398. SOCIOLOGICAL FIELD EXPERIENCE: Supervised research or community service experience complementing a specific upper division sociology course that is being taken concurrently. Prerequisite: Permission of instructor. Can be taken three times. *1 sem. hrs.*

SOC 409. SENIOR SEMINAR IN SOCIOLOGY: Synthesis of previous coursework; examination of the logic of social inquiry through the analysis of competing sociological perspectives on a particular issue. Required for majors. Prerequisite: Permission of instructor. *3 sem. hrs.*

SOC 437. MARX AND SOCIOLOGY: Study of Marx's writings on topics relevant to the social sciences. Comparison of contemporary Marxian scholarship in such areas as social inequality, political structures, urban change, ideology and consciousness, and models for the future. Prerequisite: Junior or senior standing. *3 sem. hrs.*

SOC 438. URBAN POVERTY: Study of the social factors that contribute to poverty in cities. Consideration of the social effects of government and other programs to alleviate poverty. *3 sem. hrs.*

**SOC 444. INTERACTION PROCESSES:** Advanced study of the interaction processes of social life. Bargaining and negotiation, cooperation, social influence, solidarity, competition, and conflict. *3 sem. hrs.*

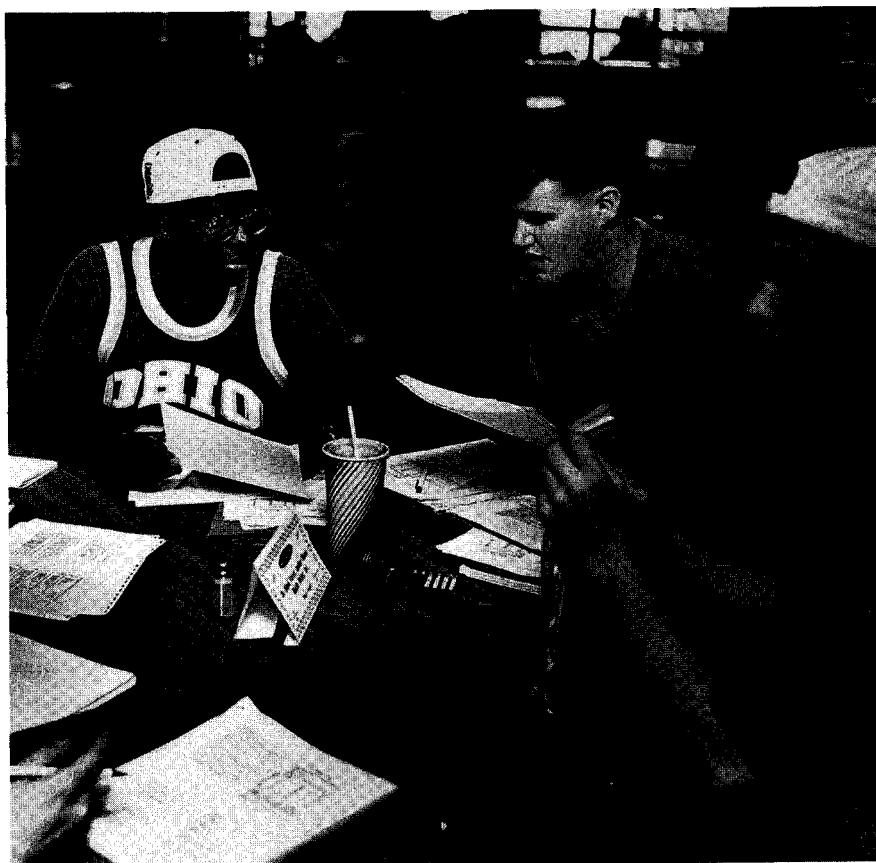
**SOC 492. SPECIAL TOPICS IN SOCIOLOGY:** Intensive examination of current theoretical or methodological issues; faculty-advised research project or library work. Consult composite for topics. May be repeated as topic changes. Prerequisite: Permission of instructor. *1-6 sem. hrs.*

**SOC 495. SOCIOLOGY INTERNSHIP:** Supervised work experience related to course work in sociology in appropriate government, social service, and private organizations. May be repeated to a maximum of 6 sem. hrs. Prerequisite: Permission of chairperson. *1-6 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 chairperson. *1-6 sem. hrs.*

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\*General Education course. See Chapter V.



## EDT

### 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, Communication, Computer Science, Drama/Theatre, Earth Science, English, General Science, History, Journalism, Language (Latin, French, German, Spanish), Mathematics, Music, Physical Science, Physics, Political Science, Psychology/Sociology, Social Studies, Speech/Communication, 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.

		<i>Semester Hours</i>
EDT 110	The Profession of Teaching .....	3
EDT 207	Child and Adolescent in Education .....	3
EDT 208	Teaching and Learning .....	3
EDT 318	Human Relations in Education .....	2-4
EDT 351	School, Self and Society .....	3
— —	Methods course (fall term only) .....	4
EDT 469	Reading in the Content Areas .....	2
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. Applicants should normally have cumulative grade-point averages 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)

A major in theatre, offered by the Department of Communication, provides a solid academic foundation and an extensive series of theatre productions, including major productions in Boll Theatre and experimental work in the Studio Theatre.

Theatre majors are required to audition for roles and participate in each major production, for which they receive credit in THR 100 or 300.

A minor in theatre requires a total of 21 semester hours: 3 each in THR 105, 203, 100 and/or 300, 415 or 425; and 9 additional at the 300 level and above. Courses in dance are not included.

The Department of Communication also offers a concentration in THR (CTR), as an option for the B.A. degree in Communication. See CMM.

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### PROGRAM A17: BACHELOR OF ARTS WITH A MAJOR IN THEATRE (THR)<sup>1</sup>

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	<i>Semester Hours</i>
Theatre requirements and electives .....	38
THR 100 and/or 300, 105, 305, 310, 325 or 326, 330, 340, 415 or 425, 440 or 485 or 490 .....	29
THR electives .....	9
Natural science .....	7
Mathematics (MTH 102, 204, 205 excluded) .....	3
Social and behavioral sciences .....	12
Humanities .....	18
Philosophy and religious studies .....	12
Communication skills .....	0-9
First-year experience: ASI 150 .....	0-1
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.

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## FACULTY

Thomas D. Skill, *Chairperson, Department of Communication*

*Professor:* Gilvary

*Assistant Professors:* Anderson, Selka

## 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 first and second years. All registration retroactive. No advance registration. Three sem. hrs. from THR 100 or 300 required of all majors.

1-3 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 203. TECHNICAL PRODUCTION: Introductory survey of scene design, construction, painting, and lighting. Current theory will be examined along with practical applications and techniques. 3 sem. hrs.

THR 261. BEGINNING JAZZ DANCE: Beginning course in the theory and practice of jazz dance. 2 sem. hrs.

THR 271. BEGINNING BALLET: Beginning course in the theory and practice of classical ballet technique. 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 305. THEATRE STAGECRAFT: Study and application of scene construction, rigging, backstage organization, production analysis, and technician-designer relationship. Required of all majors. Studio fee. 3 sem. hrs.

THR 307. 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 310. 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. 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. Prerequisites: THR 105, 310, or permission. 3 sem. hrs.

THR 324. THEATRICAL MOVEMENT: Emphasis on interpreting and employing body language. Corequisite: THR 323. Prerequisites: THR 105, 310, or permission. 2 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.)

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.)

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, 305, 310, 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.

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.) 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.

## VAR

### VISUAL ARTS (VAR)

The Department of Visual Arts teaches the perceptual, practical, and critical skills necessary for the creation and understanding of art in a variety of media and contexts. It also teaches the history of the visual arts and cultivates the ability to appreciate and articulate their meaning and value. The department emphasizes the highly integrative nature of the visual arts and their immense cultural and personal importance. In addition, the department offers opportunities for professional career development in many different fields.

The department offers seven degree programs:

Bachelor of Arts with a Major in Fine Arts (A18)

Bachelor of Fine Arts with a Major in Fine Arts (A18A)

Bachelor of Fine Arts with a Major in Visual Communication Design (A19A)

Bachelor of Arts with a Major in Photography (A20)

Bachelor of Fine Arts with a Major in Photography (A20A)

Bachelor of Arts with a Major in Interior Design (A21)

Bachelor of Fine Arts with Teacher Certification (A22)

#### Visual Arts Minors

A minor in Fine Arts requires 21 semester hours: VAF 104, 112; VAH 201 or 202 or 203; and 12 additional semester hours of VAF electives.

A minor in Visual Communication Design requires 24 semester hours. Students should consult with the area coordinator for specific information concerning requirements.

A student who chooses Photography as a minor must complete 12 semester hours of VAP 300-400-level courses and any prerequisites for those courses.

A minor in art History requires 18 semester hours: six semester hours of survey courses chosen from VAH 201, 202, and 203 and 12 additional semester hours of Art History electives at the 300-400-level.

#### Visual Arts Foundations

Visual Arts foundation courses introduce students to fundamental principles, practices, materials, and vocabulary common to all visual arts disciplines. These courses provide a common background of skill development along with an understanding of primary concepts in the visual arts and a basis for critical evaluation. All foundation courses share the objective of preparing students to face the challenges of their specific disciplines.

### FINE ARTS

The Bachelor of Arts (B.A.) with a Major in Fine Arts offers a program of study that introduces the student to a variety of media and approaches to the visual arts. This program combines the richness of a liberal arts education with opportunities to explore several possible directions in the visual arts.

The Bachelor of Fine Arts (B.F.A.) with a Major in Fine Arts offers a more intensive exploration of selected media and greater depth of study in a more extensive selection of visual arts courses.

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**PROGRAM A18: BACHELOR OF ARTS WITH A MAJOR IN FINE ARTS (ART)<sup>1</sup>**

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	<i>Semester Hours</i>
Major program requirements .....	44
VAF 104, 112, 206, 216, 217, 226 or 253, 240 or 330 .....	21
Select two from VAH 201, 202, 203; 470 or 471 or 480 or 481 .....	9
VAP 101 .....	3
VAF or VAP electives (300-400) .....	11
Communication skills .....	0-9
Natural science .....	7
Mathematics (MTH 102, 204, 205 excluded) .....	3
Social and behavioral sciences .....	12
Humanities .....	18
Philosophy and/or religious studies .....	12
First-year experience: ASI 150 .....	0-1
Program and general 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.

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**PROGRAM A18A: BACHELOR OF FINE ARTS WITH A MAJOR IN FINE ARTS (STA)<sup>1</sup>**

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	<i>Semester Hours</i>
Major program requirements .....	77
VAF 104, 112, 206, 207, 216, 217, 226, 253, 306, 330, 332, 354, 495, 496 .....	38
Select two from VAH 201, 202, 203; VAH electives (300-400 level) .....	12
VAP 101 .....	3
VAF concentration .....	12
Visual arts electives .....	12
Communication skills .....	0-9
Natural science .....	7
Mathematics (MTH 102, 204, 205 excluded) .....	3
Social and behavioral sciences .....	9
Humanities .....	12
Philosophy and/or religious studies .....	12
First-year experience: ASI 150 .....	0-1
Program and general electives to total at least .....	120-130

<sup>1</sup>See Chapter V for General Education Requirements.

## VISUAL COMMUNICATION DESIGN

The Visual Communication Design B.F.A. program combines a liberal arts education with traditional visual arts foundation and visual communication design courses. It prepares students for professional careers in graphic design, advertising design, illustration, and related fields. Attention is given to conceptual and visual problem-solving as well as the various ways in which design is used and how and why it is a significant cultural force. Program options include (1) design; (2) illustration, and; (3) computer imaging.

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### PROGRAM A19A: BACHELOR OF FINE ARTS WITH A MAJOR IN VISUAL COMMUNICATION DESIGN (VCD)<sup>1</sup>

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	<i>Semester Hours</i>
Major program requirements .....	84
<i>Design concentration:</i>	
VAF 104, 112, 206, 216, 217, 226 .....	18
VAD 215, 312, 315, 320, 350, 411, 412, 415, 498, 499 .....	26
VAR 200 .....	1
VAP 101, VAP elective .....	6
Select two from VAH 201, 202, 203; 390 .....	9
Visual arts electives .....	18
Marketing or Communication .....	6
<i>Illustration concentration:</i>	
VAF 104, 112, 206, 207, 216, 217, 226, 303, 306 .....	27
VAD 218, 312, 315, 321, 397, 398, 404, 498, 499 .....	23
VAR 200 .....	1
VAP 101 .....	3
Select two from VAH 201, 202, 203; 390 .....	9
Visual arts electives .....	15
Marketing or Communication .....	6
<i>Computer Imaging concentration:</i>	
VAF 104, 112, 206, 207, 216, 217, 226 .....	18
VAD 215 or 218, 312, 315, 320 or 321, 498, 499 .....	14
VAR 200 .....	1
VAP 101, 240, 340, 345, 440, 445 .....	18
Select two from VAH 201, 202, 203; 390 .....	9
Visual arts electives .....	18
Marketing or Communication .....	6
Communication skills .....	0-9
Natural science .....	7
Mathematics (MTH 102, 204, 205 excluded) .....	3
Social and behavioral sciences .....	3
Humanities .....	9
Philosophy and/or religious studies .....	12
First-year experience: ASI 150 .....	0-1
Program and general electives to total at least .....	124-128

<sup>1</sup>See Chapter V for General Education Requirements.

## PHOTOGRAPHY

The two programs in Photography (B.A. and B.F.A.) offer many approaches to using the medium. Art, journalism, advertising, and illustration are just a few of the fields in which accomplished photographers may find rewarding careers. The B.A. program emphasizes a traditional liberal arts background with a thorough grounding in photographic practice. The B.F.A. allows for greater concentration within photography and related disciplines. Electives allow students to pursue individual interests and goals.

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### PROGRAM A20: BACHELOR OF ARTS WITH A MAJOR IN PHOTOGRAPHY (PHO)<sup>1</sup>

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	<i>Semester Hours</i>
Major program requirements .....	45
VAP 101, 201, 302, 410, 460 .....	15
Select two: VAP 240 or 310, 320 or 321 or 322, 330 .....	6
VAF 104, 112, 216 or 217 .....	9
Select one from VAH 201, 202, 203; 382, 482 .....	9
Visual Arts electives (300-400 level) .....	6
Communication skills .....	0-9
Natural science .....	7
Mathematics (MTH 102, 204, 205 excluded) .....	3
Social and behavioral sciences .....	12
Humanities .....	18
Philosophy and/or religious studies .....	12
First-year experience: ASI 150 .....	0-1
Program and general 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.

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### PROGRAM A20A: BACHELOR OF FINE ARTS WITH A MAJOR IN PHOTOGRAPHY (PTY)<sup>1</sup>

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	<i>Semester Hours</i>
Major program requirements .....	72
VAP 101, 201, 302, 410, 460, 461 .....	18
Select two: VAP 240 or 310, 320 or 321 or 322, 330 .....	6
VAF 104, 112, 216 or 217 .....	9
Select two from VAH 201, 202, 203; 382, 480, 482 .....	15
Program electives .....	24
Communication skills .....	0-9
Natural science .....	7
Mathematics (MTH 102, 204, 205 excluded) .....	3
Social and behavioral sciences .....	9
Humanities .....	18
Philosophy and/or religious studies .....	12
First-year experience: ASI 150 .....	0-1
Program and general electives to total .....	121-131

<sup>1</sup>See Chapter V for General Education Requirements.

## INTERIOR DESIGN

The Interior Design program combines a sound liberal arts education with the technical skills and visual awareness needed to address problems of designing interior environments. Students learn how to find solutions that are creative, efficient, and humane; they learn to apply their abilities in ways that will enhance the function and quality of homes, businesses, and workplaces.

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### PROGRAM A21: BACHELOR OF ARTS WITH A MAJOR IN INTERIOR DESIGN (IDE)<sup>1</sup>

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	<i>Semester Hours</i>
Major program requirements .....	44
VAF 104, 112, 216, 217, 330 .....	15
Select two from VAH 201, 202, 203; 470 or 471 or 480 .....	9
VAI 305, 308 .....	4
HEC 314, 330, 340, 350, 395, 396 .....	16
Communication skills .....	0-9
Natural science .....	7
Mathematics (MTH 102, 204, 205 excluded) .....	3
Social and behavioral sciences .....	12
Humanities .....	18
Philosophy and/or religious studies .....	12
First-year experience: ASI 150 .....	0-1
Program and general 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.

## ART EDUCATION

The Bachelor of Fine Arts with Teacher Certification, a BFA (E11) program, offers students expertise in studio practice, art history, aesthetics, and critical analysis of art. Field experience in the Dayton vicinity allows students to transform theoretical knowledge into classroom practice. Graduates have excellent opportunities for teaching positions in public or private schools K-12, as well as for master's degree programs.

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### PROGRAM A22: BACHELOR OF FINE ARTS WITH TEACHER CERTIFICATION (E11) (FAE)<sup>1</sup>

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	<i>Semester Hours</i>
Major program requirements .....	63
VAF 104, 112, 206, 207, 216, 217, 226, 240, or 331, 253 or 354, 330, 495, 496 .....	32
VAE 483 .....	4
Select two from VAH 201, 202, 203; 470 or 471 or 480 and VAH elective .....	12
VAP 101 .....	3
Visual arts electives .....	12
Education requirements: EDT 110, 207, 208, 318, 351, 419, 421, 469 .....	28-30
Communication skills .....	0-9
Natural science .....	6
Mathematics (MTH 102, 204, 205 excluded) .....	3

Social and behavioral sciences .....	3
Humanities .....	6
Philosophy and/or religious studies (must include EDT 419) .....	12
First-year experience: ASI 150 .....	0-1
Program and general electives to total .....	121-131

<sup>1</sup>See also Chapter V for General Education Requirements.

FACULTY

Sean Wilkinson, *Chairperson*  
Professor: Wilkinson  
Associate Professors: Edwards, Gooch, Hitt, Niles, Wilbers, Zahner  
Assistant Professors: Crum, Langa, Marcinowski, Matlack  
Visiting Assistant Professor: Whitaker  
Lecturer: Britt  
Part-time Instructors: Baker, Clarke, Cleary, Faris, Grant, Holihan, Lucous, Martino, Missall, Peterson, Rudegeair, Schmitt, Stephan, Weber

COURSES OF INSTRUCTION

FINE ARTS

- VAF 103. INTRODUCTORY DRAWING: Introduction to 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.
- VAF 104. INTRODUCTORY DRAWING: Introduction of basic visual concepts, various drawing media, and approaches to experimental technique. Emphasis on perspective, perceptual awareness, volume in space, and expressive freedom. Studio fee. 3 sem. hrs.
- VAF 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.
- VAF 112. PRINCIPLES OF DESIGN: Study of the underlying elements and principles of design as they are used in two-dimensional composition and the creation of illusionistic three-dimensional space. 3 sem. hrs.
- VAF 206. INTRODUCTORY FIGURE DRAWING: Studies of the nude model and the skeleton. Methods of expressing the human form using norms of proportion and distortion. Gesture study and expression with a variety of media to develop basic visual vocabulary. Prerequisite: VAF 104. Model fee. 3 sem. hrs.
- VAF 207. INTERMEDIATE FIGURE DRAWING: Emphasis on integrating work done in VAF 206 with composition. Development of finished drawings with convincing volume and space. Continued study of the nude figure plus anatomical diagrams. Prerequisite: VAF 206. Model fee. 3 sem. hrs.



VAF 216. DESIGN AND COLOR: The study of color based on historical and contemporary color theories and the use of color in expressing and integrating design concepts. Prerequisite: VAF 112 or permission. 3 sem. hrs.

VAF 217. FUNDAMENTALS OF 3-D DESIGN: Introduction to basic principles and practices of design in three dimensions. Emphasis on current theory and construction techniques using a variety of media and methods. Studio fee. 3 sem. hrs.

VAF 226. INTRODUCTORY PAINTING: Painting with oils and acrylics; introduction to basic painting principles, techniques, and materials; still life, landscape, figure, and abstraction. Prerequisites: VAF 104, 112, 216, or permission. 3 sem. hrs.

VAF 228. INTRODUCTORY WATERCOLOR: Principles and techniques of transparent watercolor. Emphasis on technical mastery. Prerequisites: VAF 104, 112, 216, or permission. 3 sem. hrs.

VAF 240. CERAMICS—HAND BUILDING: Introduction to basic methods of working in clay using coil and slab techniques. Studio fee. 3 sem. hrs.

VAF 253. INTRODUCTORY PRINTMAKING: Introduction to the traditional printmaking methods of woodcut, intaglio, and lithography. Instruction in edition-printing techniques and curating of prints. Prerequisites: VAF 104, 112, or permission. Studio fee. 3 sem. hrs.

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

VAF 306. INTERMEDIATE PAINTING: Painting with oils or acrylics; continuing study of the principles and techniques of painting, with emphasis on personal expression and experimentation. Prerequisite: VAF 226 or 228 or permission. Studio fee. 3 sem. hrs.

VAF 309. INTERMEDIATE WATERCOLOR: Continuing investigation of watercolor techniques, both traditional and experimental. Still life, figure, landscape, and abstraction. Prerequisite: VAF 228 or permission. 3 sem. hrs.

VAF 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: VAF 104, 206, 207; junior or senior status. Repeatable up to 4 sem. hrs. Model fee. 1 sem. hr.

VAF 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. 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.

VAF 325. FIGURE PAINTING: Painting from the model with a variety of media. Traditional and contemporary approaches to the figure. Prerequisite: VAF 206 or 207, 226 or permission. Model fee. 3 sem. hrs.

VAF 330. INTRODUCTORY SCULPTURE: Consideration of forms as a means of developing an understanding of mass, shape, and control of medium. The use of various materials such as wood, plaster, and clay, with emphasis on integrating material with personal expression. Studio fee. 3 sem. hrs.

VAF 331. CERAMICS—WHEEL THROWING: Introduction to basic methods of working clay using the wheel. Studio fee. *3 sem. hrs.*

VAF 332. INTERMEDIATE SCULPTURE: Continued exploration of three-dimensional concepts and materials, concentrating on wood, stone, and metal. Prerequisite: VAF 330 or permission. Studio fee. *3 sem. hrs.*

VAF 340. 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.*

VAF 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: VAF 111 or 112. Studio fee. *2 sem. hrs.*

VAF 343. RAKU: A 400-year-old Japanese ceramic glaze firing technique adapted for the contemporary potter. Study includes glaze formulation, handbuilding and/or wheel throwing techniques. Studio fee. *3 sem. hrs.*

VAF 354. PRINTMAKING—INTRODUCTORY SILKSCREEN: Introduction to silkscreen printing, covering all methods of stencil preparation: paper, block-out, cut film, and light-sensitive film. Emphasis on edition-printing techniques and professional portfolio preparation. Prerequisite: VAF 253 or permission. Studio fee. *3 sem. hrs.*

VAF 355-356. PRINTMAKING—INTERMEDIATE AND ADVANCED SILK SCREEN: Further development of technical skills and creative applications in silk screen production. Prerequisite: VAF 354. Studio fee. *3 sem. hrs. each*

VAF 357. PRINTMAKING—LITHOGRAPHY: Investigation of lithographic printing techniques. Emphasis on metal plate technology and production of print editions. Prerequisite: VAF 253 or permission. Studio fee. *3 sem. hrs.*

VAF 358. PRINTMAKING—INTAGLIO: Advanced work in intaglio printing, including dry-point, color etching, aquatint, sugar-lift, and experimental etching methods. Prerequisite: VAF 253 or permission. Studio fee. *3 sem. hrs.*

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

VAF 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: VAF 112. Studio fee. *3 sem. hrs.*

VAF 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.*

VAF 367. STAINED GLASS: Introduction to 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, more advanced work in three-dimensional object building. Studio fee. *3 sem. hrs.*

VAF 392. CALLIGRAPHY: Principles of lettering; study of vertical and slant script styles. Applications in finished pieces of work. *3 sem. hrs.*

VAF 436. ADVANCED PAINTING: Directed advanced studio problems; contemporary issues in painting. Prerequisites: VAF 306, 325, or permission. Studio fee. *3 sem. hrs.*

VAF 490. SPECIAL PROBLEMS: A course for advanced individual work in fine arts. Approval based on academic standing and permission of instructor. Repeatable up to 15 sem. hrs. Studio fee. *1-5 sem. hrs.*

VAF 495-496. GRADUATION PORTFOLIO: Required of all B.F.A. fine arts and art education (E11) majors, to be taken during the senior year. Covers both aesthetic and pragmatic aspects of creating a portfolio. Faculty approval of portfolio is required for graduation. Grading option 2. *1 sem. hr. each*

## INTERIOR DESIGN

VAI 305. DRAWING FOR INTERIOR DESIGN I: Design and practice in the marker medium. Emphasis on presentation. Prerequisite: VAF 104. Studio fee. *2 sem. hrs.*

VAI 308. DRAWING FOR INTERIOR DESIGN II: Use of markers in rendering sketches that enable a client to visualize the designer's ideas. Prerequisite: HEC 395, VAI 305. Studio fee. *2 sem. hrs.*

VAI 490. SPECIAL PROBLEMS: A course for advanced individual work in interior design. Approval based on academic standing and permission of instructor. Repeatable up to 15 sem. hrs. Studio fee. *1-5 sem. hrs.*

## VISUAL COMMUNICATION DESIGN

VAD 215. COMPUTER APPLICATIONS—DESIGN: An introduction to page design software programs and their use in the design process. Prerequisite: VAR 200 or permission. Studio fee. *3 sem. hrs.*

VAD 218. COMPUTER APPLICATIONS—ILLUSTRATION: An introduction to drawing and paint software programs and their use in illustration. Prerequisite: VAR 200 or permission. Studio fee. *2 sem. hrs.*

VAD 307. DRAWING FOR GRAPHIC DESIGN: Exploration of materials, procedures, and drawing techniques for design presentations. Prerequisite: VAF 104 or permission. Studio fee. *3 sem. hrs.*

VAD 312. VISUAL FORM: Investigation of the perceptual and psychological effect of the visual elements—line, shape, value, volume, texture, and color—in visual communication. Exploration of word and image relationships. Prerequisite: VAF 216. Studio fee. *3 sem. hrs.*

VAD 315. TYPOGRAPHY: The fundamentals of typography and typographic design. Investigation of type as a functional and expression communication vehicle. Studio fee. *3 sem. hrs.*

VAD 317. AIRBRUSH TECHNIQUE: Fundamental course in the principles of air-brush in illustration and design. Prerequisites: VAF 104, 216. Studio fee. 3 sem. hrs.

VAD 318. GRAPHIC DESIGN FOR THREE DIMENSIONS: Investigation of materials, processes, and three-dimensional aesthetic principles applicable to packaging, product, exhibition, and environmental design. Prerequisite: VAF 217, 315, or permission. Studio fee. 3 sem. hrs.

VAD 320. COMPUTER-AIDED GRAPHIC DESIGN: An exploration of the use of the computer as both a tool and a medium for the design and production of visual communication. Prerequisites: VAD 215, 315, or permission. Studio fee. 3 sem. hrs.

VAD 321. COMPUTER-AIDED ILLUSTRATION: An exploration of the use of the computer as both a tool and a medium for the creation and production of illustrations. Prerequisites: VAD 218, 315, or permission. Studio fee. 3 sem. hrs.

VAD 350. DESIGN PROCESS: Focus on the development of visual communication, including concept development, visualization techniques, presentation formats, and production methods. Prerequisite: VAD 215, 312, 315, or permission. Studio fee. 3 sem. hrs.

VAD 395. ADVERTISING DESIGN: Emphasis on print advertising, its creation and presentation. Concept development and attention to advertising layouts that carry motivating images and messages to consumers about products, services, or ideas. 3 sem. hrs.

VAD 397. ILLUSTRATION I: Attention to conceptual, visual, and technical development. Exploration of various media and techniques employed by the illustrator in creating images for printed communication. Prerequisite: VAF 104 or permission. Studio fee. 3 sem. hrs.

VAD 398. ILLUSTRATION II: Interpretation and representation of concepts, products, or stories for magazines, books, newspapers, and advertising. Continued technical development with a variety of materials, media, and techniques. Prerequisite: VAD 397. Studio fee. 3 sem. hrs.

VAD 404. ILLUSTRATION III: Focus on developing an individual point of view and illustration style. Prerequisite: VAD 398. Studio fee. 3 sem. hrs.

VAD 411. GRAPHIC DESIGN I: Study, design, and application of marks, logos, and symbols in visual communication. Attention to effective visual relationships between typographic elements and images. Prerequisites: VAD 315, 350. Studio fee. 3 sem. hrs.

VAD 412. GRAPHIC DESIGN II: Continued study of effective visual relationships between typographic elements and images. Emphasis on sequential page design. Prerequisite: VAD 411 or permission. Studio fee. 3 sem. hrs.

VAD 415. GRAPHIC DESIGN III: The study and design of identification and image systems for products, organizations, institutions, or corporations. Emphasis on continuity in the application of visual communication factors. Prerequisites: VAD 411. Studio fee. 3 sem. hrs.

VAD 480. VISUAL COMMUNICATION DESIGN INTERNSHIP: Opportunities for advanced development and practical experience in professional working environments. Prerequisite: second semester junior status or permission. Repeatable up to 12 sem. hrs.  
3 sem. hrs.

VAD 490. SPECIAL PROBLEMS: A course for advanced individual work in design or illustration. Approval based on academic standing and permission of instructor. Repeatable up to 15 sem. hrs. Studio fee.  
1-3 sem. hrs.

VAD 498. PROFESSIONAL SEMINAR: Information and study of the visual communications profession: the business aspects, job-searching skills. Grade option 2.  
1 sem. hr.

VAD 499. GRADUATION PORTFOLIO IN VISUAL COMMUNICATION DESIGN: Criteria for and assistance with selection, preparation, and presentation of a body of work of professional quality. Résumé writing. Approval of the portfolio and résumé are required for graduation. Grade option 2. Studio fee.  
2 sem. hrs.

## ART EDUCATION

VAE 101. FUNDAMENTALS AND MATERIALS OF ART: Acquaints 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. Studio fee.  
2 sem. hrs.

VAE 483. TEACHING ART IN ELEMENTARY AND SECONDARY SCHOOLS: Philosophy, curriculum, planning, diagnosis, instructional methods, materials, safety, and evaluation techniques for teaching art to students with varied needs and abilities. Art education majors only. Studio fee. First term.  
4 sem. hrs.

VAE 483W. ELEMENTARY AND SECONDARY SCHOOL ART: Workshop to give the student of elementary and secondary education new approaches to teaching studio arts, art criticism, art history, and aesthetics. Studio fee.  
3 sem. hrs.

VAE 490. SPECIAL PROBLEMS: A course for advanced individual work in art education. Approval based on academic standing and permission of instructor. Repeatable up to 15 sem. hrs. Studio fee.  
1-5 sem. hrs.

## PHOTOGRAPHY

VAP 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.

VAP 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: VAP 101 or equivalent. Studio fee.  
3 sem. hrs.

VAP 240. INTRODUCTION TO DIGITAL IMAGERY: Introduction to the theory and practice of computer digitizing techniques employing the use of pre-existing images for enhancement and manipulation. No prior knowledge of computers is required. Studio fee.  
3 sem. hrs.

VAP 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.

VAP 302. COLOR PHOTOGRAPHY I: Introduction to theory and techniques of color transparency, color negative, and color printing. Practice in lighting, color emulsions, filtration, and corrections. Prerequisite: VAP 101. Studio fee.

3 sem. hrs.

VAP 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 slide tape shows using projectors, dissolve units, and audio equipment. Prerequisite: VAP 101 or permission. Studio fee.

3 sem. hrs.

VAP 320. STUDIO LIGHTING: Extensive practical experience in both tungsten and electronic flash lighting techniques. Still-life and portrait photography. Prerequisite: VAP 201. Studio fee.

3 sem. hrs.

VAP 321. STILL-LIFE PHOTOGRAPHY: Tungsten and electronic flash lighting techniques in the studio. Large and medium format cameras; primarily black and white films. Prerequisite: VAP 201. Studio fee.

3 sem. hrs.

VAP 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: VAP 201. Studio fee.

3 sem. hrs.

VAP 330. PHOTOGRAPHIC TECHNIQUES: Advanced and specialized darkroom techniques including alternative processes. Graphic arts materials and variations of silver processes utilized to create and manipulate imagery. Prerequisite: VAP 101. Studio fee.

3 sem. hrs.

VAP 331. ALTERNATIVE PHOTOGRAPHIC PROCESSES: More complex and challenging photographic processes and mixed media. Contemporary and traditional alternative techniques for manipulating imagery in both two and three dimensions. Prerequisite: VAP 330. Studio fee.

3 sem. hrs.

VAP 340. INTERMEDIATE DIGITAL IMAGERY: Continuation of the theory and practice of computer digitizing techniques; the incorporation of digital images into other media. Emphasis on videographic imaging and the role of digital images in art and society. Prerequisite: VAP 240. Studio fee.

3 sem. hrs.

VAP 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: VAP 201. Studio fee.

3 sem. hrs.

VAP 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 VAP 480. Prerequisites: VAP 201, 302, 320, 410, 420, and permission. Studio fee.

3 sem. hrs.

VAP 390. SPECIAL PROBLEMS IN PHOTOGRAPHY: Series of assignments to guide independent study in photography, formulated to meet individual needs of the student. Prerequisites: VAP 201 and permission. Studio fee.

1-5 sem. hrs.

VAP 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: VAP 302. Studio fee. *3 sem. hrs.*

VAP 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: VAP 201, 302, 315. Studio fee. *3 sem. hrs.*

VAP 412. ADVANCED AUDIO-VISUAL PRODUCTION: Techniques and methods in the production of professional-quality slide and tape presentations. Advanced skill development and theory. Prerequisite: VAP 310. Studio fee. *3 sem. hrs.*

VAP 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: VAP 201. Studio fee. *3 sem. hrs.*

VAP 425. ADVANCED PHOTOJOURNALISM: Continued study of photography in the printed news media. Assignments based on actual working situations; emphasis on professional capabilities. Prerequisite: VAP 420. Studio fee. *3 sem. hrs.*

VAP 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: VAP 320 and permission. Studio fee. *3 sem. hrs.*

VAP 435. ADVANCED COMMERCIAL PHOTOGRAPHY: Further development of skills and content introduced in VAP 430. More detailed and sophisticated aspects of photographic illustration and commercial photography. Prerequisite: VAP 430. Studio fee. *3 sem. hrs.*

VAP 440. COMPUTER MODELING AND ANIMATION II: Detailed study of spline-based modeling, surface rendering and mapping, editing complex animation sequences, motion control, and other topics. Prerequisite: VAP 345. Studio fee. *3 sem. hrs.*

VAP 445. COMPUTER MODELING AND ANIMATION III: Individual projects in conceptualization and production of animated or high-resolution sequence from storyboard to final presentation. Prerequisite: VAP 440. Studio fee. *3 sem. hrs.*

VAP 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. Prerequisite: Permission. *1-3 sem. hrs.*

VAP 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*

VAP 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 VAP 380. Prerequisites: VAP 380, 420, and permission. Studio fee. *3 sem. hrs.*

Photography studio fees—\$50-\$80

Film rental fees—\$15

## ART HISTORY

\* VAH 101. INTRODUCTION TO THE VISUAL ARTS: Introduction to the media of painting, sculpture, and architecture in the history of art. Emphasis on understanding the technical, formal, and expressive aspects of the visual arts and the nature of the creative process. Open to all students. Fee. *3 sem. hrs.*

\*VAH 201. SURVEY OF ART I: Survey of Western art from prehistory through the medieval period. Open to all students. Fee. *3 sem. hrs.*

\* VAH 202. SURVEY OF ART II: Survey of Western art from the late medieval period through the Baroque. Open to all students. Fee. *3 sem. hrs.*

\* VAH 203. SURVEY OF ART III: Survey of Western art from the eighteenth through the twentieth centuries. Open to all students. Fee. *3 sem. hrs.*

\* VAH 350. HISTORY OF WESTERN ARCHITECTURE: Introduction to the history, theory, and practice of western architecture from prehistory to the contemporary period. Open to all students. Fee. *3 sem. hrs.*

VAH 360. WOMEN ARTISTS—A HISTORICAL SURVEY: Survey of women artists from the medieval to the contemporary period with particular emphasis on current revisionist literature and exhibitions. Open to all students. Fee. *3 sem. hrs.*

VAH370. AMERICAN PAINTING: Survey of major American artists from the colonial period to World War II with emphasis on problems of function and patronage. Prerequisite: One Survey of Art course. Fee. *3 sem. hrs.*

\* VAH 382. HISTORY OF PHOTOGRAPHY I: History of the cultural, social, and aesthetic roles of photography from the camera obscura through the 1930s. Emphasis on the changing practice and perception of the medium as an art form, as social document, and as popular culture. Open to all students. Fee. *3 sem. hrs.*

VAH 390. HISTORY OF VISUAL COMMUNICATION DESIGN: Study of the significant developments, movements, and figures in the history of visual communication with an emphasis on the modern period. Open to all students. Fee. *3 sem. hrs.*

VAH 450. ITALIAN RENAISSANCE ART: Introduction to the painting, sculpture, and architecture of Italy between c. 1300 and c. 1550. Prerequisite: VAH 202 or permission. Fee. *3 sem. hrs.*

VAH 460. BAROQUE ART: Study of the major painters, sculptors, and architects of the seventeenth century. Prerequisite: VAH 202 or permission. Fee. *3 sem. hrs.*



- \* VAH 470. NINETEENTH-CENTURY ART I: Study of the major artists and movements in European art from Neo-Classicism in the late eighteenth century to the beginnings of Realism in the middle of the nineteenth century. Prerequisite: VAH 203 or permission. Fee. *3 sem. hrs.*
- \* VAH 471. NINETEENTH-CENTURY ART II: Study of the major artists and movements in European art from Realism at mid-century through Symbolism and Art Nouveau. Prerequisite: VAH 470 or permission. Fee. *3 sem. hrs.*
- \* VAH 480. TWENTIETH-CENTURY ART: Study of the major movements and artists in the painting, sculpture, and architecture of the twentieth century. Prerequisite: VAH 203 or permission. Fee. *3 sem. hrs.*
- VAH 481. CONTEMPORARY TRENDS IN THE VISUAL ARTS: Study of the major movements and artists in painting, sculpture, architecture, and other media since 1945. Prerequisite: VAH 203, 480, or permission. Fee. *3 sem. hrs.*
- VAH 482. HISTORY OF PHOTOGRAPHY II: Discussion of the many directions in creative, documentary, and illustrative photography from the end of World War II to the present. Prerequisite: VAH 382. *3 sem. hrs.*
- VAH 490. SPECIAL PROBLEMS: Advanced, independent study with faculty direction in art history. Prerequisite: one art history course or permission. *1-5 sem. hrs.*

## VISUAL ARTS

- VAR 200. INTRODUCTION TO VISUAL ARTS COMPUTING: An introduction to the computer as a tool, and the computer lab as an environment, for visual art production. Studio fee. *1 sem. hr.*
- VAR 490. SPECIAL PROBLEMS: Advanced, independent study with faculty direction in a visual arts subject or topic that is not covered in existing, discipline-specific courses. Permission. Studio fee. *1-5 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 requires 13 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) from at least three different disciplines. The following courses are among those offered.

ASI	228	Focus on Women
CMM	415	Women and Communication
HPS	427	Women and Alcohol
HPS	130	Self Defense for Women
HPS	540	Women in Sport (may be taken for undergraduate credit)
ENG	204	Major American Writers: 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*
ENG	380	Studies in Literature: Black Women Authors*
HEC	318	Family Living
HST	351	History of American Women
HST	352	History of the American Family
MGT	440	Women in Management
PHL	307	Philosophy and Women
POL	300	Women and Politics*
PSY	443	Psychology of Women
PSY	462	Human Sexuality
REL	471	Women and Religion
REL	472	Ecology and Religion
SOC	322	Sex Roles and Society
SOC	332	Sociology of Women
VAH	377	Women Artists

In addition, independent study courses and UDI courses may be applicable.

\*Topics courses in various departments may be applicable if they are readily identifiable as pertinent to women's studies. Students who wish to be recorded as minoring in women's studies should notify their respective deans and the director of women's studies.

## WOMEN'S STUDIES COMMITTEE

Judith G. Martin (Religious Studies), *Director of Women's Studies*  
 Benz (Educational Administration), Bowen (School of Education), Courtney (Library), Hirshfield (History), Johnson (Philosophy), Masters (Arts Series), O'Meara (Languages), Pestello (Sociology, Anthropology, and Social Work), Roberson (Psychology), Shereen (English), Edwards (Fine Arts), Vesper (Arts & Sciences), R.M. Bowen (undergrad), K. Kerscher (grad).