

VI College of Arts and Sciences

Charles J. Chantell, Interim Dean

Richard E. Peterson, Assistant Dean

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

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

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

MAJORS AND MINORS

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

The Bachelor of Arts is offered in the following areas:

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

The Bachelor of Science is offered in the following areas:

Biology	Geology	Physics
Chemistry	Human Ecology	Pre dentistry
Computer Information Systems	Mathematics	Premedicine
Computer Science	Medical Technology	Psychology
Computer Science-Physics	Nuclear Medicine	Social Work
Criminal Justice	Technology	
	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-A21 or the department chairperson or program director.

Semester Hours

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

Distribution Table for Breadth Requirement

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

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

GENERAL REQUIREMENTS FOR ALL BACHELOR OF SCIENCE PROGRAMS

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

Semester Hours

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

Distribution Table for Breadth Requirement

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

<i>Natural Science:</i> Selected from Biology, Chemistry, Geology, and Physics courses with accompanying laboratories.	8
<i>Mathematics, Computer Science:</i> At least 3 semester hours must be in Mathematics, the 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, Performing and Visual Arts, Philosophy, Religious Studies, and, with the approval of the chairperson of the major department or director of the program, appropriate courses in ASI. (The basic Philosophy, Religious Studies, and communication skills courses do not fulfill this requirement.)	9
<i>Philosophy and/or Religious Studies</i>	12
<i>Communication Skills</i> (ENG 101, 102, SPE 101): Each student must demonstrate competence in written and oral communication before the completion of the 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.	3-9

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 and a maximum of two semester hours of physical education activities 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 and coordinating and making connections. The program, one of four hundred nationwide, is most appropriate for those whose interests encompass several traditional majors.

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

	<i>Semester Hours</i>
AMS 300, 301, 400	9
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
<i>Group A</i>	
ENG 305, 317 ² , 319 ² , 320 ² , 325, 327, 329 ² , 331 ² , 332 ² , 335, 337, 339, 380 ² , 451, 453, 455, 468, 490 ²	
ART 376, 472, 490 ²	
MUS 304, 306, 307, 344	
<i>Group B</i>	
HST 351, 352, 355, 365, 370, 371, 375, 376, 380, 390, 391, 398, 399, 417, 450, 454, 456, 460, 461, 466, 470, 473, 476, 477, 490, 491 ² , 492 ² , 493, 495, 499 ²	
PHL 304, 310, 311, 314, 317, 318, 320, 323, 330, 331, 340 ² , 361	
REL 326, 327, 328, 364, 367, 371, 372, 373, 376, 385, 477	
<i>Group C</i>	
ECO 346, 347, 430, 442, 445, 471, 485, 490	
POL 301, 303, 310, 311, 313, 360, 408, 411, 450, 475	
PSY 334, 341, 351, 361, 363, 443, 461, 462, 471	
SOC 321, 328, 333, 336, 337, 339, 341, 343, 351, 352, 439	
ANT 310, 315, 353, 406, 449	
SWK 337	
Natural science	7
Mathematics	3
Social and behavioral sciences	12
Humanities	18
Philosophy and/or religious studies	12
Communication skills	0-9
General education courses and academic electives to total at least	120

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

²This course can be counted only when the material is appropriate to American Studies. Consult program director.

AMERICAN STUDIES COMMITTEE

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

FACULTY

Assistant Professor: Cadegan

COURSES OF INSTRUCTION

AMS 300. AMERICAN CULTURES: A 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 and Anthropology offers a minor in anthropology. Students intending to minor in anthropology should consult with the department chairperson to plan their selection of courses, which must include ANT 150 and four courses at the 300-400 level. See also SOC.

COURSES OF INSTRUCTION

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

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

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

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

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

ANT 351. CULTURES OF THE CARIBBEAN: Variety of African- and Old World-derived cultures in the Caribbean and on its borders. Social-scientific topics such as effects of mother-centered families on personality, importance of verbal behavior in these cultures, problems of I.Q. testing in cultures other than where the tests originate, economic adaptations, political movements, religious practices. *3 sem. hrs.*

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

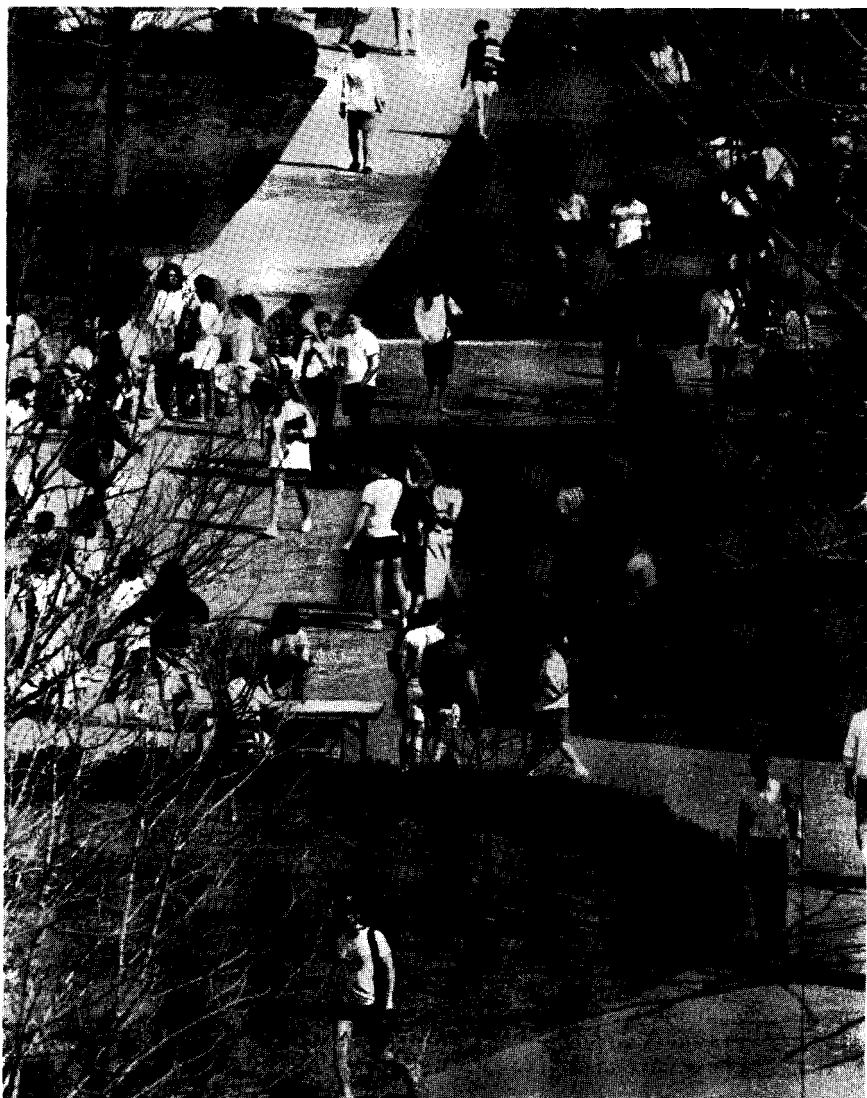
ANT 353. NATIVE CULTURES OF NORTH AMERICA: Consideration of the origins and diversity of American Indian cultures north of the Rio Grande, with attention to language, cultural adaptation to environment, and acculturation without assimilation. The present situation of the Indian in relation to the surrounding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

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

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

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

*General education course. See Chapter V.



BIO

BIOLOGY (BIO)

PROGRAM—S1: BACHELOR OF SCIENCE WITH A MAJOR IN BIOLOGY (BIO)¹

	<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
Group A—Select one: BIO 314-314L, 430-430L, 452-452L, 461-461L	4
Group B—Select one: BIO 403-403L, 411-411L, 440-440L, 442-442L	4
Electives: Six courses, two with accompanying laboratories, from Groups A and B above and/or Group C (all other BIO courses) ²	20
Supporting sciences	30-31
CHM 123, 123L, 124, 124L, 313, 313L, 314, 314L	16
MTH 112, 113 or 101, 112 (by placement)	6-7
PHY 201, 201L, 202, 202L	8
Communication skills	12
SPE 101	3
ENG 101, 102	6
Select one: ENG 272, 316, 370, 378	3
Philosophy and/or religious studies	12
Humanities	12
Arts study	3
HST 101 or 102; 340 or 341	6
Elective	3
Social and behavioral sciences	12
General electives	6
	<hr/> 125-126

¹Consult General Requirements for All Bachelor of Science Programs and Chapter V for General Education Requirements.

²Non-BIO science courses may be included with approval.

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

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

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

way during the fourth year, it can ideally be finished by the end of the fifth year. The master's degree is awarded upon the successful defense of the M.S. thesis.

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

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

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

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

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

Admissions criteria include the following:

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

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

FACULTY

Kenneth J. McDougall, *Chairperson*

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

Associate Professors: Burky, Chantell, Laufersweiler, Rowe, Ventullo,

Vesper, Williams

Clinical Associate Professors: Moss, Stull, Taylor

Assistant Professors: Breitwisch, Giffin, Kearns

COURSES OF INSTRUCTION

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

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

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

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

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

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

BIO 151. CONCEPTS OF BIOLOGY I: Study of the physico-chemical organization, the regulatory mechanisms, and the energy relations of living things. Core biology course (for majors in biology, medical technology, premedicine, etc.). *3 sem. hrs.*

***BIO 152. CONCEPTS OF BIOLOGY II:** Continuation of BIO 151. Homeostatic mechanism. Reproduction in organisms and its relationship with genes, growth and development, population concepts, environment, and evolution. Core biology course. *3 sem. hrs.*

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

***BIO 390. PHYSIOLOGY OF SEX AND FERTILITY REGULATION:** Introduction to the role of hormones, glands, organs, and devices in the regulation of sexual functions and fertility. No science credit for biological science majors. Prerequisite: Introductory biology. *3 sem. hrs.*

***BIO 395. BIOLOGY AND SOCIAL ISSUES:** Presentation of the biological principles needed for critical discussion and evaluation of current societal issues including food production, biomass for energy, medicine, biotechnology, and conservation of agricultural, recreational, and forest resources. No science credit for biological science majors. Prerequisite: Introductory biology. *3 sem. hrs.*

***BIO 398. HEREDITY AND SOCIETY:** Survey of the fundamental principles of inheritance and the application of genetics to contemporary problems of society. 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: A physico-chemical examination of the physiological events occurring in a living system with emphasis on mammalian systems. Prerequisites: BIO 101-102 or 151-152; CHM 313-314. *3 sem. hrs.*

BIO 403L. PHYSIOLOGY LABORATORY: Course to accompany BIO 403. Systematic approach to the acquisition and interpretation of information about the physiology of living systems. *1 sem. hr.*

BIO 407. EMBRYOLOGY: Analysis of vertebrate development with emphasis on morphogenesis, especially organogenesis. Topics include congenital defects. Prerequisites: BIO 101-102 or 151-152; 309 recommended. *3 sem. hrs.*

BIO 407L. EMBRYOLOGY LABORATORY: Course to accompany BIO 407. *2 sem. hrs.*

BIO 410. RADIATION BIOLOGY: Principles concerning the nature of ionizing radiation, its use in studying biological systems, and its effects on organisms. Two hours lecture and two 2-hour laboratory periods per week. Prerequisites: Junior-senior standing. *4 sem. hrs.*

BIO 411. GENERAL MICROBIOLOGY: Rigorous introductory course stressing the physiology, cultivation, and classification of microbial organisms; their role in medicine, agriculture, and industry. Prerequisites: BIO 101-102 or 151-152; CHM 313-314. *3 sem. hrs.*

BIO 411L. GENERAL MICROBIOLOGY LABORATORY: Course to accompany BIO 411. Two 2-hour periods per week. *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 concurrent with or following the lecture course. *1 sem. hr.*

BIO 417. ENDOCRINOLOGY: Discussion of hormonal regulation of metabolism, growth, and reproduction in the higher vertebrates. Prerequisite: BIO 403. *3 sem. hrs.*

BIO 417L. ENDOCRINOLOGY LABORATORY: Laboratory dealing with the functional analysis of mechanisms and the activity of the endocrine system. *1 sem. hr.*

BIO 420. SEMINAR: Practice in development, presentation, and discussion of papers dealing with biological research problems. Prerequisite: Junior or senior standing. *1 sem. hr.*

BIO 421. BIOLOGICAL PROBLEMS: Laboratory research problems. Topics arranged with faculty advisors. Prerequisite: Chairperson's permission. *1-2 sem. hrs.*

BIO 422. BIOLOGICAL PROBLEMS: Library research problems. Topics arranged with faculty advisors. Prerequisite: Chairperson's permission. *1-2 sem. hrs.*

BIO 423. ADVANCED MICROBIOLOGY: Lectures, readings, and discussions on modern concepts in basic and applied microbiology, with emphasis on modern methods of microbial taxonomy, major groups of bacteria, microbial ecology, and industrial fermentation. Prerequisite: BIO 411. *3 sem. hrs.*

BIO 424. ADVANCED CELL BIOLOGY: The molecular basis for structure, function, and energy transduction in animal and plant cells as well as the organization, function, and development of membrane and subcellular organelles. Prerequisite: BIO 440. *3 sem. hrs.*

BIO 424L. ADVANCED CELL BIOLOGY LABORATORY: Isolation and chemical characterization of cellular organelles; study of cell structure by light microscopy. *1 sem. hr.*

BIO 425. PARASITOLOGY: Introduction to the morphology, life history, and clinical significance of parasites and other symbionts. Prerequisite: BIO 101-102 or 151-152. *3 sem. hrs.*

BIO 425L. PARASITOLOGY LABORATORY: Course to accompany BIO 425. Recognition of common human parasites. Study of both living and preserved forms. One 3-hour period per week. *1 sem. hr.*

BIO 427. IMMUNOLOGY: Discussions of antigens, antibodies, antigenicity, immunogenicity, and antigen-antibody reactions including hypersensitivity, immune tolerance, and transplants. Prerequisite: CHM 420. *3 sem. hrs.*

BIO 430. ECOLOGY: Interrelationship of plants, animals, and microorganisms with the physical-chemical environment: nutrient cycles, energy flow, ecosystems, and factors affecting distribution and abundance of organisms. Prerequisite: One year of biology. *3 sem. hrs.*

BIO 430L. ECOLOGY LABORATORY: Field and laboratory exercises to accompany BIO 430. May be taken concurrently with or following BIO 430. *1 sem. hr.*

BIO 431. EXPERIMENTAL EMBRYOLOGY: Morphological and physiological aspects of development including an introduction to teratology. Prerequisite: BIO 407. *3 sem. hrs.*

BIO 431L. EXPERIMENTAL EMBRYOLOGY LABORATORY: Course to accompany BIO 431. *1 sem. hr.*

BIO 435. MICROBIAL ECOLOGY: Study of the diversity and activity of microorganisms and the interrelationships between microorganisms and their environments with emphasis on aquatic ecosystems. Prerequisites: BIO 411; CHM 313-314. *3 sem. hrs.*

BIO 435L. MICROBIAL ECOLOGY LABORATORY: Examination of the methods of isolation and enumeration of microorganisms and techniques for determining their activities in the field and laboratory. *1 sem. hr.*

BIO 440. CELL BIOLOGY: Function, structure, composition, heredity, and growth of cells. Analysis of cell concept in biochemical terms. Prerequisites: BIO 101-102 or 151-152; CHM 313-314. *3 sem. hrs.*

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

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

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

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

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

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

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

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

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

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

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

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

BIO 461. INVERTEBRATE ZOOLOGY: Survey of the structure, activities, life histories, and relationships of the invertebrate animals, with some emphasis on their origin and development. Prerequisites: BIO 101-102 or 151-152. *3 sem. hrs.*

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

BIO 462. 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. Prerequisite: Junior-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. Prerequisites: 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 per week. *1 sem. hr.*

*General education course. See Chapter V.

CHEMISTRY (CHM)

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

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

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

PROGRAM—A2: BACHELOR OF ARTS WITH A MAJOR IN CHEMISTRY (CHA)¹

<i>Summary of Requirements²</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 404, 412, 415, 417, 418L, 420, 490L, 498, 499, 551, 552	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 112, 113, 215; or 118, 119	8-9
PHY 201, 201L, 202, 202L	8
Communication skills	3-9
SPE 101	0-3
ENG 101-102 or elective	3-6

Philosophy and/or religious studies	12
General education	12
Historical study	6
Arts study	3
Social science	3
Additional breadth requirements	21
Social and behavioral sciences	9
Humanities	12
General electives	18-25
Required for graduation	120

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

²Advanced placement is permitted.

PROGRAM—S2: BACHELOR OF SCIENCE WITH A MAJOR IN CHEMISTRY (CHM)¹

<i>Summary of Requirements²</i>	<i>Semester Hours</i>
Chemistry	48
Required courses	
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, 316L, 417, 418L, 495	13
Year 4: CHM 415, 415L, 496, 497, 498	9
Chemistry electives	
Choose from the following: CHM 404, 412, 420, 490L, 499, 551, 552	6
(May substitute one approved science course.)	
Supporting science requirements (Complete during first two years.)	
MTH 118, 119, 218; CPS 132	15
PHY 206, 207, 208, 210L, 211L	11
Communication skills	3-9
SPE 101	0-3
ENG 101-102 or elective	3-6
Foreign language	6-8
Philosophy and/or religious studies	12
General education	12
Historical study	6
Arts study	3
Social science	3
Additional breadth requirements	6
Social and behavioral sciences	3
Humanities	3
General electives	6
Required for graduation	120

¹Consult General Requirements for All Bachelor of Science Programs and Chapter V for General Education Requirements.

²Advanced placement is permitted.

FACULTY

R. Gerald Keil, *Chairperson*

Distinguished Service Professor: Lucier

Professor Emeritus: Michaelis

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

Assistant Professors: Johnson, Morrow

Instructors: Geary, P. Keil, Nelson, Schwendeman, Tabesh

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, pre dental, 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 316L. ORGANIC CHEMISTRY LABORATORY: Emphasis on separation and identification of organic compounds. Required of all B.S. chemistry majors. Prerequisites: CHM 314, 314L. *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: A 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 490L. SCIENTIFIC GLASSBLOWING: The theory and practice of glass working. Under the supervision of a professional glassblower, students learn to make several standard seals and fabricate pieces of glass apparatus. Enrollment limited. One 3-hour laboratory each week. Prerequisite: Permission of the chairperson.

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, resumés, 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 Co-op) 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.

The following graduate courses are available to undergraduate students with the permission of the chairperson of the Department of Chemistry.

CHM 551. 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 552. 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 551.

3 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 cultures of the Minoan Bronze Age, the Mycenaean Bronze Age, and the Classical Age. *3 sem. hrs.*

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



COMMUNICATION (COM)

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 SPE 101 and 12 semester hours of upper-level courses selected through consultation with the department chairperson.

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

PROGRAM—A3: BACHELOR OF ARTS WITH A MAJOR IN COMMUNICATION¹

	<i>Semester Hours</i>
English 101 and 102	6
Natural science	7
Mathematics	3
Philosophy and/or religious studies	12
Major program	36
General Major in Communication (COM)	
SPE 101, COM 120, and 30 sem. hrs. of COM, SPE, and JRN courses	
Broadcasting concentration (RTV)	
COM 120; SPE 101, 206, 316, 329, 412	
One of the following: SPE 314, 410, 414, 416, 418, 420, 450	
Six sem. hrs. of COM courses; 6 sem. hrs. of JRN courses	
Any course in COM, JRN, or SPE	
Communication Management concentration (CMT)	
SPE 101, 312; COM 308, 309, 310, 313, 330	
Fifteen sem. hrs. of any COM, JRN, and SPE courses	
Journalism concentration (JRN)	
SPE 101; COM 120, 440; JRN 206, 301, 400	
One JRN elective	
Six sem. hrs. of COM courses; 6 sem. hrs. of SPE courses	
Any course in COM, JRN, or SPE	
Public Relations concentration (PUB)	
SPE 101; COM 120, 301, 402, 455; JRN 206	
Six sem. hrs. of JRN courses; 6 sem. hrs. of SPE courses	
Six sem. hrs. of any COM, JRN, and SPE courses	
Two units of 12 sem. hrs. each selected from anthropology, economics, political science, psychology, sociology, management, criminal justice, education, marketing, military science, human ecology, social work, and ASI. (At least 6 sem. hrs. in each unit must be 300-400 level.)	24
Anthropology, economics, political science, psychology, sociology if none of these is chosen as one of the 12-sem.-hr. units above	6
Two units of 9 sem. hrs. each selected from English, languages, history, philosophy, religious studies, performing and visual arts. (In English,	

philosophy, and religious studies, at least 6 sem. hrs. must be 300-400 level.)	18
General education courses and academic electives to total at least	120

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

FACULTY

Don B. Morlan, Chairperson

Professor Emerita: Wolff

Professors: Morlan, J. Rang

Associate Professors: Blatt, Cusella, Harwood, Lain, Robinson, Skill, Thompson, Yoder

Assistant Professors: Schiff, Taylor, Wallace, Watters, Weatherly

Instructor: Weinberg

Lecturers: Carter, M. Rang

COURSES OF INSTRUCTION

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

COM 301. PUBLICITY AND PUBLIC RELATIONS: Introduction to public relations. Familiarization with the public relations environment and process. Emphasis on the practitioner's role as agent for change and adaptation. Prerequisite: JRN 206. 3 sem. hrs.

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

COM 304. ADVERTISING: Nature and functions of advertising; preparation of layouts, writing of copy; selection and evaluation of media. Coordination of advertising with other marketing efforts. Social implications of advertising. (See MKT 421.) 3 sem. hrs.

COM 305. PROPAGANDA ANALYSIS: Use and abuse of propaganda. Editorial persuasion. Propaganda devices and techniques. An application of the principles of Aristotelian logic to the field of mass communication. 3 sem. hrs.

COM 308. INTERPERSONAL COMMUNICATION: Study of the student's own communication behavior through face-to-face spontaneous interaction with others. 3 sem. hrs.

COM 309. COMMUNICATION AND CONFLICT 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.

COM 310. COMMUNICATION IN ORGANIZATIONS: Analysis of message initiation, diffusion, and reception in organizations; study of various methodological approaches for the purpose of conducting a communication audit within an organization. 3 sem. hrs.

COM 313. SMALL GROUP COMMUNICATION: Guiding principles used by participants and leaders in preparing and conducting small group conferences and discussions; policy-making conferences staged. 3 sem. hrs.

COM 314. POLITICAL CAMPAIGN COMMUNICATION: Analysis of the nature and functions of selected communication variables within political election campaigns. 3 sem. hrs.

COM 315. 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.

COM 325. NONVERBAL COMMUNICATION: Survey of theory and research, and experiential learning in nonverbal communication. Examination of the influence of environmental factors, physical behavior, and vocal cues on human communication. 3 sem. hrs.

COM 330. INTERVIEWING FOR COMMUNICATION AND BUSINESS: Analysis of communication in structured dyadic interaction. Emphasis on the following types of interviews: information-gathering, employment, appraisal, and persuasive. Application through role playing and feedback systems. 3 sem. hrs.

COM 391. INDEPENDENT STUDY: Supervised study involving directed readings, individual research (library, field, or experimental), or projects in the specialized areas of communication. May be repeated once. Prerequisite: Permission of department chairperson. 3 sem. hrs.

COM 397. COMMUNICATION PRACTICUM: Contracted participation in an approved communication organization. One sem. hr. per term to a maximum of 6. (Only 3 sem. hrs. may be applied to communication major.) Grade option 2 only. 1-6 sem. hrs.

COM 398. COMMUNICATION INTERNSHIP: Communication work experience in an approved organization. Prerequisites: 24 sem. hrs. and 3.0 average in the major; 75 total sem. hrs. and 2.75 cum. average; permission of department chairperson. 3 or 6 sem. hrs.

COM 402. PRACTICAL METHODS FOR PUBLIC RELATIONS: Procedures and methods of putting the public relations process into effect. Emphasis on specific writing skills and problem-solving techniques. Prerequisite: COM 301. 3 sem. hrs.

COM 404. SPECIAL TOPICS IN COMMUNICATION: Concentrated study in specific areas of speech communication. May be repeated once with change of topic. 3-6 sem. hrs.

COM 410. FAMILY COMMUNICATION: Study of the family from a communication perspective, considering the communication processes within the family and the extent to which communication affects and is affected by the family. 3 sem. hrs.

COM 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.*

COM 420. 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.*

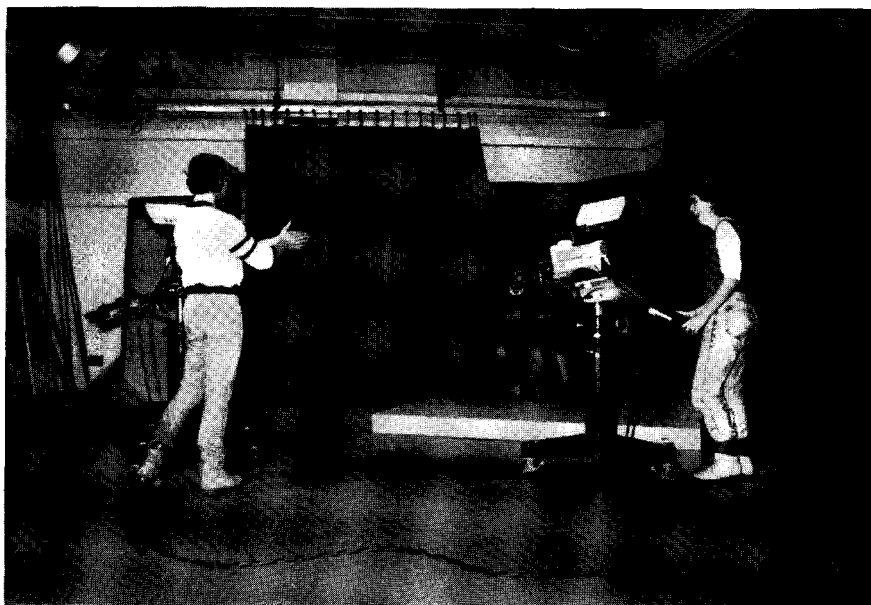
*COM 430. DEVELOPMENT OF MASS MEDIA: History and analysis of the development and interdependence of mass media, print and electronic. Emphasis on its role in political and economic progress of U.S. and attendant responsibility. *3 sem. hrs.*

COM 440. THE LAW AND NEWS MEDIA: Limitations of freedom of the press. The right of the people to know and the news media to report, within the limits of decency, fair comment, and privacy. Censorship. Off-the-record material. Libel laws, copyright restrictions. Postal regulations. *3 sem. hrs.*

COM 455. PUBLIC RELATIONS WORKSHOP: Application of policy objectives to public relations program development. Students plan and carry out a public relations program for an established organization, working out solutions to communication and public relations problems. Prerequisite: JRN 206 or COM 402. *3 sem. hrs.*

COM 491. PUBLIC RELATIONS INTERNSHIP: Practical public relations participation in an approved organization. Prerequisites: 24 sem. hrs. and 3.0 average in the major; 75 total sem. hrs. and 2.75 cum. average; permission of department chairperson. *3 or 6 sem. hrs.*

*General education course. See Chapter V.



COMPUTER SCIENCE (CPS)

The Department of Computer Science offers three programs leading to the Bachelor of Science: Program S3, in computer science; Program S3C, in computer information systems; and Program S3P, in computer science-physics. The main differences in the programs are in the mathematics and science requirements and in the application emphases. All of them have the same introductory core sequence of computer science courses.

S3—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.

S3C—Computer Information Systems: This program emphasizes computer science concepts with particular attention to systems analysis and design, computer communications, and applications to business and commercial data management.

S3P—Computer Science-Physics: This program emphasizes computer science concepts with particular attention to computer software and its application to physics.

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.

PROGRAM-S3: BACHELOR OF SCIENCE WITH A MAJOR IN COMPUTER SCIENCE (CPS)¹

	<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	
Mathematics: MTH 118, 119, 218, 302 ² , 367	18
Natural science: PHY 206, 207, 210L, 211L, and 2 additional courses	14
Communication skills	0-9
Humanities	9
Social and behavioral sciences	6
Philosophy and/or religious studies, including PHL 319	12
General education courses and academic electives ³ to total at least	120

¹See General Requirements for All Bachelor of Science Programs and Chapter V for General Education Requirements.

²CPS 353 may be substituted for MTH 302.

³A concentration or a minor in a specific discipline is recommended.

**PROGRAM—S3C: BACHELOR OF SCIENCE WITH A MAJOR IN
COMPUTER INFORMATION SYSTEMS (CIS)¹**

Semester Hours

Computer science	39
Introductory core sequence: CPS 150, 151, 242, 250	
Further core requirements: CPS 310, 312, 346, 350	
Four additional upper-level courses	
Mathematics: Calculus and statistics (e.g., MTH 112, 113; MTH 367, 368)	12
Natural science	8
Business ² : ACC 207, 208; ECO 203, 204; MGT 305; MKT 305	18
Communication skills	0-9
Humanities	9
Social and behavioral sciences	6
Philosophy and/or religious studies, including PHL 319	12
General education courses and academic electives to total at least	120

¹See General Requirements for All Bachelor of Science Programs and Chapter V for General Education Requirements.

²A minor in one of the business areas may be substituted for this block of six courses.

**PROGRAM—S3P: BACHELOR OF SCIENCE WITH A MAJOR IN
COMPUTER SCIENCE-PHYSICS (CSP)¹**

Semester Hours

Computer science	39
Introductory core sequence: CPS 150, 151, 242, 250	
Further core requirements: CPS 341, 353, 346, 350	
Four additional upper-level courses	
Mathematics: MTH 118, 119, 218, 219, 302, and one additional upper-level course	18
Physics: PHY 206, 207, 208, 210L, 211L, 214, 314, and four additional upper-level courses	24-27
Communication skills	0-9
Humanities	9
Social and behavioral sciences	6
Philosophy and/or religious studies	12
General education courses and academic electives to total at least	120

¹See General Requirements for All Bachelor of Science Programs and Chapter V for General Education Requirements.

FACULTY

Jack E. Kester, *Chairperson*

Professor Emeritus: Jehn

Professor: Winslow

Associate Professors: Kester, Lang, Neuendorf, Schoen

Assistant Professors: Gowda, Maruyama, Ola, Shah, Smith

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 CSP 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 118. 3 sem. hrs.

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

CPS 145. **COBOL PROGRAMMING:** Basic programming theory and practice using the COBOL language for business-oriented problems. Not open to CPS, CIS, or CSP 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. Introduction to computer system architecture. Computer solutions to numeric and non-numeric problems using a compiler language. 4 sem. hrs.

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

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

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

CPS 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 CSP majors. 3 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 242. 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 119; 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: Design of combinatorial and sequential logic circuits using current integrated circuit devices. Discussion of encoders, decoders, registers, counters, etc. as applied to design and use of arithmetic, logic, and storage units. Laboratory experiments with these devices. Prerequisites: CPS 250, PHY 207. 3 sem. hrs.

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

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

CPS 418. SOFTWARE 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 312. 3 sem. hrs.

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

CPS 430. 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 242. 3 sem. hrs.

CPS 435. MANAGEMENT OF DATABASES: Emphasis on the technology of database management systems (DBMS) and the management of data in a business environment. Data resource management stressing objectives, types of users, and models of comprehensive database systems on the market; the role and function of the database administrator. Not open to CPS, CIS, or CSP majors or minors. Prerequisite: CPS 310. 3 sem. hrs.

CPS 437. SURVEY OF DATA COMMUNICATIONS: Concepts of data communications hardware and software; analysis of network management, security, and control; fundamentals of business network design. Not open to CPS, CIS, or CSP 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. Prerequisites: CPS 346, 350. *3 sem. hrs.*

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

CPS 480. ARTIFICIAL INTELLIGENCE: Basic concepts and techniques of intelligent systems. Emphasis on representations, strategies, expert systems, logic systems, perception, applications, natural languages. 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 S4, leading to the Bachelor of Science with a Major in Criminal Justice, offers three tracks of study. The student is to select one of the following tracks:

1. *General (CRJ)*: This track prepares students for graduate or professional studies or, with appropriate minors, for specialized careers in criminal justice.
2. *Law Enforcement (CRL)*: This track prepares students for careers in law enforcement 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 in order that it can be determined whether scheduling a proficiency examination during that term is warranted.

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

PROGRAM—S4: BACHELOR OF SCIENCE WITH A MAJOR IN CRIMINAL JUSTICE¹

OPTION A: TOTAL PROGRAM¹

<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	27
POL 201, 301, 306; POL 413 or SOC 336	12
PSY 101; PSY 341 or SOC 341	6

PSY 363 or SOC 325	3	
SOC 327, 328	6	
Humanities ¹		9
Arts study	3	
HST 102; 355 or 376 or 460	6	
Philosophy and/or religious studies ¹		12
PHL 103; 310 or 312; 314	9	
PHL or REL elective	3	
Communication skills		12
ENG 101, 102; 272 or 316 or 474	9	
SPE 101	3	
Natural sciences (2 courses—lectures with laboratories) ¹		8
Quantitative studies		9
ACC 301	3	
CPS 144	3	
MTH 207	3	
General education courses and upper-divisional electives to total at least		122

¹Consult General Requirements for All Bachelor of Science Programs and Chapter V for General Education Requirements.

<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 ¹		9
Arts study	3	
HST 102, 460	6	
Philosophy and/or religious studies ¹		12
PHL 103, 314; 310 or 312	9	
PHL or REL elective	3	
Communication skills		15
ENG 101, 102, 370; 272 or 316 or 474	12	
SPE 101	3	
Natural sciences (2 courses—lectures with laboratories) ¹		8
Quantitative studies		9
ACC 301	3	
CPS 144	3	
MTH 207	3	
General education courses and upper-divisional electives to total at least		122

¹Consult General Requirements for All Bachelor of Science Programs and Chapter V for General Education Requirements.

<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
Humanities¹	9
Arts study	3
HST 102, 460	6
Philosophy and/or religious studies¹	12
PHL 103, 314; 310 or 312	9
PHL or REL elective	3
Communication skills	15
ENG 101, 102, 370; 272 or 316 or 474	12
SPE 101	3
Natural sciences (2 courses—lectures with laboratories)¹	8
Quantitative studies	9
ACC 301	3
CPS 144	3
MTH 207	3
General education courses and upper-divisional electives to total at least	122

¹Consult General Requirements for All Bachelor of Science Programs and Chapter V for General Education Requirements.

OPTION B: TRANSFER PROGRAM

To be admitted as a major in the S4 program under Option B, a transfer student must have received an accredited associate degree in corrections, law enforcement, police administration, police science, or a similar field of criminal justice and must have a 2.5 cumulative grade-point average on a 4.0 grading system. The transfer program offers three areas of study, of which the student is to choose one and formally register the selection with the 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.

		Semester Hours
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 ¹	(MTH 207)	3
Introduction to Criminal Justice	(CRJ 205)	3
Research in Criminal Justice	(CRJ 320)	3

¹Prerequisite for MTH 207 as well as CRJ 320 is two years of high school algebra. Students who have not had two years of high school algebra should first take MTH 107.

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	18
POL 301, 306	6
POL 413 or SOC 336	3
PSY 341 or SOC 341	3
PSY 363 or SOC 325	3
SOC 328	3
Humanities ¹	6
Arts study	3
HST 355 or 376 or 460	3
Philosophy and/or religious studies ¹	12
PHL 103, 314	6
PHL 310 or 312	3
PHL or REL elective	3
Communication skills	6
ENG 272 or 316 or 474	3
SPE 101	3
Quantitative studies: CPS 144	3
General education courses and upper-divisional electives to total at least.....	66

¹Consult General Requirements for All Bachelor of Science Programs and Chapter V for General Education Requirements.

<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
POL 413 or SOC 336 or SOC 328	3
PSY 341 or SOC 341	3
PSY 363	3
SOC 323	3
Humanities ¹	6
Arts study	3
HST 460	3
Philosophy and/or religious studies ¹	12
PHL 103, 314	6
PHL 310 or 312	3
PHL or REL elective	3
Communication skills	9
ENG 272 or 316 or 474	3
ENG 370	3
SPE 101	3
Quantitative studies: CPS 144	3
General education courses and upper-divisional electives to total at least	66

¹Consult General Requirements for All Bachelor of Science Programs and Chapter V for General Education Requirements.

<i>Corrections Track (CRC)</i>	<i>Semester Hours</i>
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 ¹	6
Arts study	3
HST 460	3
Philosophy and/or religious studies ¹	12
PHL 103, 314	6
PHL 310 or 312	3
PHL or REL elective	3
Communication skills	9
ENG 272 or 316 or 474	3
ENG 370	3
SPE 101	3
Quantitative studies: CPS 144	3
General education courses and upper-divisional electives to total at least	66

¹Consult General Requirements for All Bachelor of Science Programs and Chapter V for General Education Requirements.

FACULTY

James A. Adamitis, *Director*

Associate Professors: Adamitis, Ingram

Assistant Professor: Haghighi

Adjunct Assistant Professor: Heffernan

Adjunct Instructors: Apolito, Frapwell, Kelly, Koerner

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

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

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

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

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

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

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

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

CRJ 333. FOUNDATIONS OF CRIMINAL HOMICIDE: Theories and concepts pertinent to the various classes of homicide and the effects certain heinous crimes have

had on the regulatory aspects of the legal system. Emphasis on distinguishing characteristics historically pertaining to culpable, justifiable, and excusable homicide.

3 sem. hrs.

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

3 sem. hrs.

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

3 sem. hrs.

CRJ 401. POLITICAL VIOLENCE: 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. (Same as SOC 436.) 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 Office of Cooperative Education. Students who enroll for cooperative education credit are not permitted to register for CRJ 495 or 496. Credit granted only under grade option 2. Prerequisites: Sophomore status, 2.5 cumulative grade-point average, and permission from the director of cooperative education and the director of criminal justice. 3 sem. hrs.

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

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.

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

	<i>Semester Hours</i>
Economics	30
ECO 203, 204, 346, 347, and 18 sem. hrs. of upper-division electives.	
Mathematics	6-9
MTH 112, 207 required; MTH 113 strongly recommended.	
Natural science	7
Social and behavioral science	12
Humanities	18
Philosophy and/or religious studies	12
Communication skills	0-9
General education courses and academic electives to total at least	120

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



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, 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 E11 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.

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

	<i>Semester Hours</i>
English	36
First-year composition: ENG 101-102 or 114 or 198	0-6
One 200-level literature course	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
SPE 101	3
Natural science	7
Mathematics	3
Social and behavioral science	12
Humanities	18
Philosophy and/or religious studies	12
General education courses and academic electives to total at least	120

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

FACULTY

James P. Farrelly, *Chairperson*

Sara G. Wieland, *Coordinator of Composition*

Professors Emeriti: McCarthy, Murphy, Palumbo

Professors: August, Bedard, Cochran, Farrelly, Henninger, Kimbrough,
K. Marre, Martin, Patrouch, Pici

Associate Professors: Arons, Cameron, Labadie, Macklin, L. Marre, Means,
Ruff, Stockum

Assistant Professors: Durham, Shereen, Wilhoit

Instructors: Fenno, Johnson

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. LITERARY FORMS: 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.*

*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:

Semester Hours

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
COM 410 Family Communication	
PHL 318 Family Ethics	
REL 344 Christian Marriage	
ASI 448 Seminar in Family Development (required)	1
Electives (Choose two.)	6
BIO 390 Physiology of Sex and Fertility Regulation	
HEC 306 Family Management	
HEC 325 Child Development	
HEC 329 Child Development Practicum	
PSY 351 Child Psychology	
PSY 355 Psychology of the Exceptional Child	
PSY 462 Human Sexual Behavior	
REL 362 Christian Family Values and Television	
REL 466 Theology of Sexuality	
SWK 301 Perspectives on Aging	
SWK 339 Child Abuse	
SWK 422 Parenting: Social Welfare Role	
SWK 443 Death, Dying, and Suicide	
SOC 322 Sex Roles and Society	
SOC 323 Juvenile Delinquency	

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

FAMILY DEVELOPMENT COMMITTEE

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

ART

FINE ARTS (ART)

The purpose of the programs in fine arts is to prepare students for life-long careers in art and for living as fully developed persons capable of informed and sensitive responses to a changing world.

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

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

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

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

Bachelor of Fine Arts with a Major in Visual Communication Design (A7A)

Bachelor of Fine Arts with Teacher Certification (A7B)

A minor in fine arts requires 21 semester hours: ART 104, 112, 273 or 274 or 275, and 12 additional semester hours of ART electives. Visual communication design courses are excluded.

A minor in visual communication design requires 24 semester hours. Students should consult with the program director for specific information concerning requirements.

PROGRAM—A6: BACHELOR OF ARTS WITH A MAJOR IN FINE ARTS (ART)¹

The Bachelor of Arts with a Major in Fine Arts offers the broadest and most flexible of all programs of study in the Fine Arts Division. Through this program, the fine arts student may combine the richness of a liberal arts education with a possible career direction in the arts.

	<i>Semester Hours</i>
Major program requirements	44
ART 104, 112, 206, 216, 226, 231, 240, 253, 274, 275, 362 or 364	
PHO 101	
ART electives	
Communication skills: SPE 101, ENG 101-102 or 114 or 198	0-9
General education and breadth requirements	52
Natural science	7
Mathematics	3
Social and behavioral sciences	12
Humanities	18
Philosophy and/or religious studies	12
General electives to total at least	120

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

PROGRAM—A6A: BACHELOR OF ARTS WITH A MAJOR IN
INTERIOR DESIGN (IDE)¹

	<i>Semester Hours</i>
Major program requirements	43
ART 104, 112, 216, 231, 274, 275, 297, 308, 470 or 471 or 472	
HEC 314, 320, 330, 340, 350, 395, 396	
Communication skills: SPE 101, ENG 101-102 or 114 or 198	0-9
General education and breadth requirements	52
Natural science	7
Mathematics	3
Social and behavioral sciences	12
Humanities	18
Philosophy and/or religious studies	12
General electives to total at least	120

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

PROGRAM—A7: BACHELOR OF FINE ARTS WITH A MAJOR
IN STUDIO ART (STA)¹

The studio arts program provides a balance of academic discipline and sound visual schooling. Traditional images, as well as the current experimental cross-fertilization of styles, are thoroughly investigated and become the essential basis for the future demands of a career in visual arts.

	<i>Semester Hours</i>
Major program requirements	77
ART 104, 112, 206, 207, 216, 226, 231, 253, 274, 275, 306,	
332, 495-496	38
Studio concentration	15
Studio electives	15
Art history	6
PHO 101	3
Communication skills: SPE 101, ENG 101-102 or 114 or 198	0-9
General education courses and academic electives to total at least	43
Natural science	7
Mathematics	3
Social and behavioral sciences	9
Humanities	12
Philosophy and/or religious studies	12
Total	129

¹See Chapter V for General Education Requirements.

PROGRAM—A7A: BACHELOR OF FINE ARTS WITH A MAJOR IN VISUAL COMMUNICATION DESIGN (VCD)¹

The visual communication design program prepares students for the immediate goal of entry into the fields of graphic and advertising design while educating them for future leadership within the profession and society. Attention to fundamental skills and ideas combined with conceptual and visual problem solving provides an excellent base for career growth or graduate school. Program options include (1) graphic and advertising design and (2) illustration and design.

Semester Hours

Major program requirements	79
Graphic and Advertising Design option: ART 104, 112, 206, 216, 226, 295, 298, 307, 312, 318, 345, 349, 395, 411, 412, 414, 415, 498, 499	52
Illustration and Design option: ART 104, 112, 206, 207, 216, 226, 227, 296, 298, 303, 312, 317, 345, 349, 397, 398, 404, 498, 499	52
ART electives	12
PHO 101, PHO elective	6
Art history: ART 274, 275, 372	9
Communication skills: SPE 101, ENG 101-102 or 114 or 198	0-9
General education and breadth requirements	40
Natural science	7
Mathematics	3
Social and behavioral sciences	3
Humanities	9
Philosophy and/or religious studies	12
Marketing or communication	6
General electives to total at least	125

¹See Chapter V for General Education Requirements.

PROGRAM—A7B: BACHELOR OF FINE ARTS WITH TEACHER CERTIFICATION (E11) (FAE)¹

Semester Hours

Art requirements and electives	62
ART 104, 112, 206, 207, 216, 226, 231, 240, 253 or 254, 274, 275, 340 or 341, 362 or 364 or 366, 483, 495, 496	43
Art history: 273, 470 or 471 or 472	6
ART electives	10
PHO 101	3
Education requirements: EDT 110, 207, 208, 318, 351, 419, 421, 469	28
Communication skills: ENG 101-102; SPE 101	0-9
Natural science	7
Mathematics	3
Social and behavioral sciences	3
Humanities	9
Philosophy and/or religious studies	9-12
General education courses and academic electives to total at least	134

¹See Chapter V for General Education Requirements.

FACULTY

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

Louis Weber, *Head of Fine Arts Division*

Professor: Weber

Assistant Professors: Edwards, Gooch, Hitt, Niles, Richardson, Sparks, Swanson, Zahner

Part-time Instructors: Baker, Fuller, Holihan, Jones, Koeller, Martino, Rudegeair, Shank, Tuss

COURSES OF INSTRUCTION

ART 101. FUNDAMENTALS AND MATERIALS OF ART: Course to acquaint beginners with the principles and concepts of art and with the various kinds of materials and techniques used in artistic expression. Open to all students. Studio fee. 2 sem. hrs.

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

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

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

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

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

ART 206. FIGURE DRAWING I: Studies of the nude model, the skeleton, anatomical diagrams, and drawings of the masters. 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: ART 104. Model fee. 3 sem. hrs.

ART 207. FIGURE DRAWING II: Emphasis on integrating work done in ART 206 with composition. Development of finished drawings with convincing volume and space. Continued study of the nude figure, introduction of clothing structure and volume. Prerequisite: ART 206. Model fee. 3 sem. hrs.

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

ART 226. INTRODUCTORY PAINTING: Painting with oils and acrylics; introduction to basic painting principles, techniques, and materials; still life, landscape, figure, and abstraction. Prerequisites: ART 104, 112, 216, or permission. 3 sem. hrs.

ART 228. INTRODUCTORY WATERCOLOR: Principles and techniques of transparent watercolor. Emphasis on technical mastery. Prerequisites: ART 104, 112, 216, or permission. 3 sem. hrs.

- ART 231. **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 plaster and clay, with emphasis on integrating the material with the impression. Studio fee. *3 sem. hrs.*
- ART 240. **INTRODUCTORY CERAMICS, HAND BUILDING:** Introduction to basic methods of working in clay by way of coil and slab. Emphasis on originality and proper methods. Studio fee. *3 sem. hrs.*
- ART 253. **PRINTMAKING I:** Introduction to the classic printmaking methods of woodcut, intaglio, and lithography. Instruction on edition-printing techniques and curating of prints. Prerequisites: ART 104, 112, or permission. Studio fee. *3 sem. hrs.*
- *ART 273. **SURVEY OF ART I:** Survey of Western art and significant historical and cultural influences from prehistory through the medieval and Gothic periods. Open to all University students. Fee. *3 sem. hrs.*
- *ART 274. **SURVEY OF ART II:** Continuation of ART 273, beginning with the Renaissance and continuing through the Baroque and Rococo periods. Open to all University students. Fee. *3 sem. hrs.*
- *ART 275. **SURVEY OF ART III:** Survey of art history from transformations in late 18th-century art through 20th-century contemporary art. Open to all University students. Fee. *3 sem. hrs.*
- ART 295. **DESIGN AND LAYOUT:** Introduction to layout formats, styles, systems, and presentation techniques. Exploration of options for effective single and sequential page design. Prerequisite: ART 216 or permission. Studio fee. *3 sem. hrs.*
- ART 296. **ILLUSTRATION—MEDIA AND METHODS:** Exploration of media and techniques employed by the illustrator. Emphasis on marker techniques. Prerequisite: ART 104. Studio fee. *2 sem. hrs.*
- ART 297. **MARKER RENDERING:** Drill and practice in the marker medium. Emphasis on technique and control. Prerequisite: ART 104. Studio fee. *2 sem. hrs.*
- ART 298. **STUDIO SKILLS:** Development of fundamental mechanical skills necessary for preparing camera-ready art, keylines, and paste-ups. Emphasis on mastering the tools and learning the terminology of the trade. Studio fee. *2 sem. hrs.*
- ART 303. **ADVANCED DRAWING:** Observational and expressive drawing. Use of accumulated knowledge from previous drawing experiences to develop individual creativity and original style. Prerequisites: ART 206-207 or permission. Model fee. *3 sem. hrs.*
- ART 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: ART 226 or 228 or permission. Studio fee. *3 sem. hrs.*
- ART 307. **DRAWING FOR GRAPHIC DESIGN:** Exploration of materials, procedures, and drawing techniques for design presentations. Emphasis on marker rendering. Prerequisite: ART 104 or permission. Studio fee. *2 sem. hrs.*
- ART 308. **DRAWING FOR INTERIOR DESIGN:** Use of markers in rendering sketches that enable a client to visualize the designer's ideas. Prerequisite: HEC 395. Studio fee. *2 sem. hrs.*
- ART 309. **INTERMEDIATE WATERCOLOR:** Continuing investigation of watercolor techniques, both traditional and experimental. Still life, figure, landscape, and abstraction. Prerequisite: ART 228 or permission. *3 sem. hrs.*

ART 312. VISUAL FORM: Investigation of the perceptual and psychological effect of the visual elements—line, shape, value, volume, texture, and color—in graphic and spatial environments. Attention to contemporary and historical stylistic concerns. Prerequisite: ART 216. Studio fee. 3 sem. hrs.

ART 316. LIFE STUDIES: Studies in drawing from the live model, both nude and clothed, for practice and refinement of technique. Variety of media permitted. Prerequisites: ART 104, 206, 207; junior or senior status. Repeatable up to 4 sem. hrs. Model fee. 1 sem. hr.

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

ART 318. GRAPHIC DESIGN FOR THREE DIMENSIONS: Investigation of materials, processes, and three-dimensional aesthetic principles applicable to packaging, product, exhibition, and environmental design. Prerequisite: ART 216 or permission. Studio fee. 3 sem. hrs.

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

ART 320. COMPUTER-AIDED GRAPHIC DESIGN: An exploration of the use of the computer as a tool for the graphic designer. Prerequisites: ART 295, 345, keyboarding (typing) competence. 3 sem. hrs.

ART 325. FIGURE PAINTING: Painting from the model, all painting media. Traditional and contemporary approaches to the figure. Repeatable. Prerequisite: ART 206 or 207 or permission. Model fee. 3 sem. hrs.

ART 331. INTERMEDIATE CERAMICS, WHEEL THROWING: Introduction to basic methods of working clay by way of the wheel. Emphasis on originality and proper methods. Prerequisite: ART 240. Studio fee. 3 sem. hrs.

ART 332. INTERMEDIATE SCULPTURE: Introduction to the sculpture of wood, stone, and metal. Prerequisite: ART 231 or permission. Studio fee. 3 sem. hrs.

ART 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.

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

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

ART 345. TYPOGRAPHY: The fundamentals of typography and typographic design. Investigation of typography as a functional and expressive communication vehicle. Prerequisite: ART 312 or permission. Studio fee. 3 sem. hrs.

ART 349. GRAPHIC PRODUCTION: Survey of the equipment, processes, and preparation of art for reproduction purposes. Preparation of design ideas as camera-ready art. Prerequisite: ART 298. Studio fee. 2 sem. hrs.

ART 354. PRINTMAKING II: 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: ART 253 or permission. Studio fee. 3 sem. hrs.

ART 355-356. **SERIGRAPHY-SILK SCREEN:** Advanced silk screen production. Prerequisite: ART 354. Studio fee. *3 sem. hrs. each*

ART 357. **LITHOGRAPHY:** Investigation of lithographic printing techniques. Emphasis on metal plate technology and production of print edition. Prerequisite: ART 253 or permission. Studio fee. *3 sem. hrs.*

ART 358. **INTAGLIO PRINTING:** Advanced work in intaglio printing, including dry-point, color etching, aquatint, sugar-lift, and experimental etching methods. Prerequisite: ART 253 or permission. Studio fee. *3 sem. hrs.*

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

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

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

ART 367. **STAINED GLASS:** Introduction 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.*

ART 372. **HISTORY OF VISUAL COMMUNICATION DESIGN:** Study of significant developments, movements, and figures in visual communication from prehistoric times to the present. Emphasis on modern period. *3 sem. hrs.*

ART 376. **AMERICAN PAINTING:** Survey of major American artists from the colonial period to World War II, with emphasis on problems of function and patronage. Prerequisite: One survey of art course. Fee. *3 sem. hrs.*

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

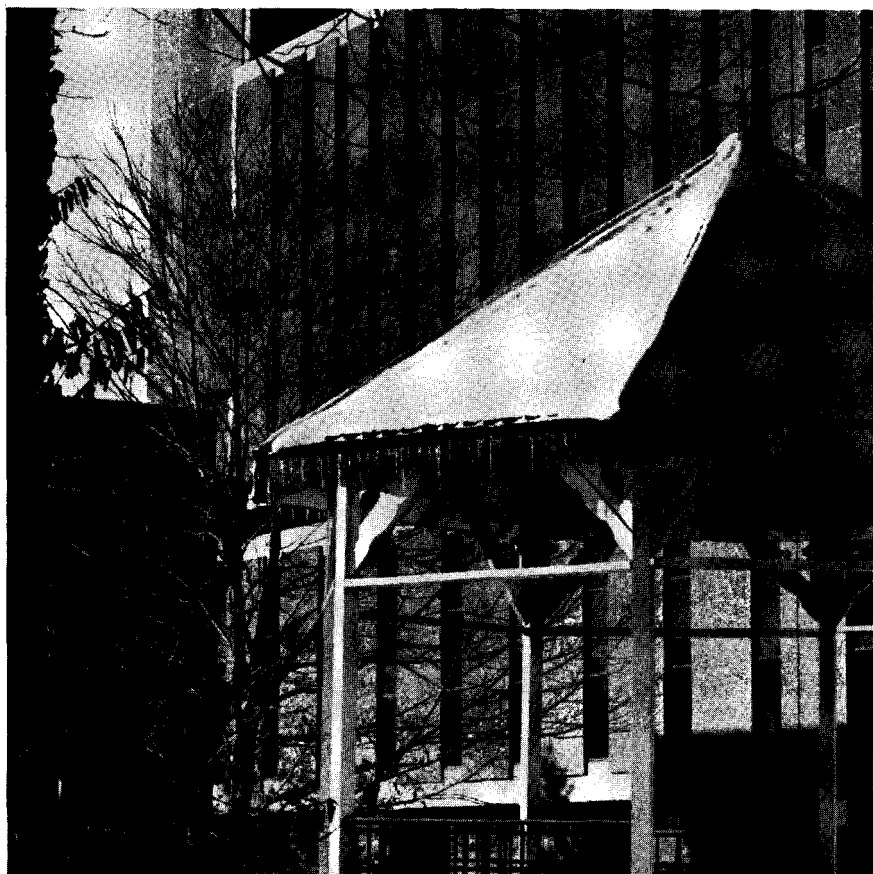
ART 392. **CALLIGRAPHY:** Principles of lettering; study of vertical and slant script styles. Applications in finished pieces of work. *3 sem. hrs.*

ART 395. **ADVERTISING DESIGN:** Emphasis on print advertising, its creation and presentation; developing concepts and creating designs that provide motivating messages to consumers about products and services. Prerequisite: ART 295. *3 sem. hrs.*

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

ART 404. **ADVANCED ILLUSTRATION:** Major problems in illustration. Focus on individual development and style. Both full color and pen and ink. Prerequisite: ART 398. Studio fee. *3 sem. hrs.*

ART 411. **VISUAL COMMUNICATION DESIGN I:** An introduction to applications, methods, and problems in the design of messages for informational and per-



suasive purposes. Emphasis on effective visual applications for print, retail, and promotional advertising; collateral materials; and publication design. Prerequisites: ART 295, 345. Studio fee. *3 sem. hrs.*

ART 412. VISUAL COMMUNICATION DESIGN II: A continuation of ART 411 with emphasis on publication design. Prerequisite: ART 411 or permission. Studio fee. *3 sem. hrs.*

ART 414. TRADEMARK DESIGN: Advanced study of marks, logos, and symbols as communication tools. Emphasis on designing effective identification marks for business or service organizations, institutions, corporations. Prerequisite: ART 345. *3 sem. hrs.*

ART 415. DESIGN SYSTEMS: The study and design of identification and image programs of organizations, institutions, or corporations. Emphasis on continuity in the application of visual communication factors. Prerequisites: ART 295, 414. Studio fee. *3 sem. hrs.*

ART 436. ADVANCED PAINTING: Directed advanced studio problems; contemporary issues in painting. Prerequisites: ART 306, 325, or permission. Studio fee. *3 sem. hrs.*

- *ART 470. NINETEENTH-CENTURY ART I: Study of major artists and movements in European art from Neo-Classicism in the late 18th century to the beginnings of Realism in the middle of the 19th century. Prerequisite: One art history course or permission. Fee. *3 sem. hrs.*
- *ART 471. NINETEENTH-CENTURY ART II: Study of major artists and movements in European art from Realism at mid-century through Symbolism and Art Nouveau. Prerequisite: One art history course or permission. Fee. *3 sem. hrs.*
- *ART 472. ART IN THE TWENTIETH CENTURY: The development of 20th-century art, covering the early cubist movement, abstract expressionism, and various aspects of other major movements to the end of World War II. Prerequisite: One survey of art course. Fee. *3 sem. hrs.*
- ART 474. CONTEMPORARY TRENDS IN THE VISUAL ARTS: A course treating only post-1950s trends in painting, sculpture, and architecture, new methods and materials in graphics, and theories in current art criticism. Prerequisite: One survey of art course. Fee. *3 sem. hrs.*
- ART 480. VISUAL COMMUNICATION DESIGN INTERNSHIP: Practical application of visual communication design skills. Opportunities for advanced development and practical experience in professional working environments. Prerequisites: ART 298, junior status. Repeatable up to 12 sem. hrs. *3 sem. hrs.*
- ART 483. CREATIVE ART TEACHING IN ELEMENTARY AND SECONDARY SCHOOLS: The philosophy of art education, creative teaching, use and care of tools and equipment, class management, art therapy, curriculum planning, art media; actual teaching experience in children's classes. Art education majors only. Studio fee. *4 sem. hrs.*
- ART 483W. ELEMENTARY SCHOOL ART: Workshop to give the regular elementary classroom teacher new and practical ideas on the employment of art materials and techniques in relation to seasonal interests of pupils and to holiday observances. Studio fee. *3 sem. hrs.*
- ART 490. SPECIAL PROBLEMS: A course reserved for art students devoted to advanced individual work in the following designated art fields: airbrush, drawing, enameling, graphics, art history, jewelry, lettering and calligraphy, ceramics, design, painting, lithography, sculpture, general fine arts. Approval based on academic standing and permission of instructor or division head. Repeatable up to 15 semester hours. Studio fee. *1-5 sem. hrs.*
- ART 495-496. GRADUATION PORTFOLIO: Required of all B.F.A. candidates except those in visual communication design. The course deals with criteria, schedule, selection of work, presentation, and exhibition in constructing a portfolio. Approval of the portfolio is required for graduation. Grade option 2. *1 sem. hr. each*
- ART 498. PROFESSIONAL SEMINAR: Information and study of the visual communications profession: the business aspects, job-searching skills. Grade option 2. *1 sem. hr.*
- ART 499. GRADUATION PORTFOLIO IN VISUAL COMMUNICATION DESIGN: Criteria for and assistance with selection, preparation, and presentation of a body of work of professional quality. Resumé writing. Approval of the portfolio and resumé are required for graduation. Grade option 2. Studio fee. *3 sem. hrs.*

*General education course. See Chapter V.

GENERAL STUDIES (GEN)

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

BACHELOR OF GENERAL STUDIES PROGRAM (GEN)

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

Candidacy for the Bachelor of General Studies may be declared in the 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 elections under the direction of the appropriate official of the College of Arts and Sciences. Thereafter, the student will be required to plan an academic program satisfying requirements for graduation in consultation with the program director, Sister Ellen Murphy. The usual policy on prerequisites remains in effect in this program.

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

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



GEO

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.

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

	<i>Semester Hours</i>
Geology	38
Mathematics 118-119 ²	8
Chemistry 123-124	8
Physics 206-207 ³	6
Science electives ⁴	16
Philosophy and/or religious studies	12
Communication skills: ENG 101-102, SPE 101	0-9
Social and behavioral sciences	6
Humanities	9
General education requirements and academic electives to total at least	120

¹See General Requirements for All Bachelor of Science Programs and Chapter V for General Education Requirements.

²May substitute MTH 112-113 with permission of department.

³May substitute PHY 201-202 with permission of department.

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

FACULTY

Charles J. Ritter, *Chairperson*

Distinguished Service Professor: Springer

Professor: Ritter

Assistant Professors: Clinch, Sandy

COURSES OF INSTRUCTION

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

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

- GEO 104L. INTRODUCTORY GEOLOGY FIELD LABORATORY: Course to accompany GEO 104. Third term each year. *1 sem. hr.*
- *GEO 109. GENERAL GEOLOGY: Introduction to the earth as a planet, its composition, structure, and evolutionary development; a brief consideration of the life of the past. For the nonscience major. May be taken without laboratory. *3 sem. hrs.*
- GEO 109L. GENERAL GEOLOGY LABORATORY: Course to accompany GEO 109. Two hours per week. *1 sem. hr.*
- *GEO 115. PHYSICAL GEOLOGY: Introductory course in geologic principles; the composition and structure of the earth, its land forms, and the agencies active in their production. Laboratory optional for nonmajors. *3 sem. hrs.*
- GEO 115L. PHYSICAL GEOLOGY LABORATORY: Course to accompany GEO 115. Two hours per week. *1 sem. hr.*
- *GEO 116. HISTORICAL GEOLOGY: A comprehensive study of earth history as interpreted from the rocks of the crust. Prerequisite: GEO 109 or 115, permission of instructor. *3 sem. hrs.*
- GEO 116L. HISTORICAL GEOLOGY LABORATORY: Course to accompany GEO 116. Two hours per week. *1 sem. hr.*
- GEO 201. MINERALOGY: Introduction to the study of minerals, their chemical and physical properties, associations and occurrences. First term, each year. *3 sem. hrs.*
- GEO 201L. MINERALOGY LABORATORY: Course to accompany GEO 201. Three hours per week. First term, each year. *1 sem. hr.*
- GEO 204. OPTICAL MINERALOGY: Mineral determination through the use of the petrographic microscope employing crushed grains and thin sections. Prerequisite: GEO 201. Second term, each year. *2 sem. hrs.*
- GEO 204L. OPTICAL MINERALOGY LABORATORY: Course to accompany GEO 204. Four hours per week. Second term, each year. *2 sem. hrs.*
- *GEO 208. ENVIRONMENTAL GEOLOGY: Study of the relationship of geologic factors to the problems of water supply, pollution, erosion, land use, and earth resources. Laboratory optional. 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 per week. *1 sem. hr.*
- *GEO 218. ENGINEERING GEOLOGY: A comprehensive study of geologic principles applicable to civil engineering practices. Second term, each year. *3 sem. hrs.*
- GEO 301. STRUCTURAL GEOLOGY: The origin and development of structural features of the earth's crust; folding, faulting, volcanism, mountain building, and metamorphism. Prerequisites: GEO 115, 116, 201, 204. First term, alternate years. *3 sem. hrs.*
- GEO 301L. STRUCTURAL GEOLOGY LABORATORY: Course to accompany GEO 301. Two hours per week. First term, alternate years. *1 sem. hr.*
- GEO 302. GLACIAL GEOLOGY: The origin of mountain and continental glaciers; their depositional features and erosive activity; history of glaciation in geologic past with special emphasis on North American Quaternary ice advances. Prerequisites: GEO 115, 116. Second term, alternate years. *3 sem. hrs.*

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

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

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

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

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

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

GEO 401. PALEONTOLOGY: 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 per 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 per week. First term, alternate years. *1 sem. hr.*

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

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

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

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

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

*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. Those who have studied history do not believe everything they read, become cautious skeptics, and learn to recognize that events occur sequentially and that the sequence matters. 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 either of this society or of 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; 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.

PROGRAM—A8: BACHELOR OF ARTS WITH A MAJOR IN HISTORY (HST)¹

	<i>Semester Hours</i>
History	36
HST 101, 102, 251, 252	12
HST 301	3
HST seminar: HST 490, 491, 492, or 493	3
HST electives	18
These electives should be distributed fairly evenly between American and non-American history.	
Natural science	7
Mathematics	3
Social and behavioral science	12
Humanities	18
Philosophy and/or religious studies	12
Communication skills	0-9

Quantification skills or foreign language ²	6-8
General education courses ² and academic electives to total at least	120

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

²Either 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

Roberta S. Alexander, *Chairperson*

Distinguished Service Professor: Donatelli

Professors Emeriti: King, Maras, Mathias

Professors: Alexander, Beauregard, Eid, Palermo, Rhee, Steiner

Associate Professors: Heitmann, Schweikart, Taylor, Vines

Assistant Professors: Amin, Bannan, Flockerzie, Hitchner, Lynn, Sanders, Smither, Vieson

COURSES OF INSTRUCTION

NOTE: HST 101 or HST 102 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 with ancient civilizations and concluding with the Age of Absolutism, emphasizing the impact of social forces, institutions, and values on the development of Western societies.

3 sem. hrs.

*HST 102. HISTORY OF WESTERN CIVILIZATION SINCE 1715: Survey of European civilization from the Enlightenment to the present, emphasizing the impact of social forces, institutions, and values on the development of Western societies.

3 sem. hrs.

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

3 sem. hrs.

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

3 sem. hrs.

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

3 sem. hrs.

HST 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: Development of the Russian state from earliest times to the Revolution, including Kievan society, the rise of Muscovy, and Imperial Russia. *3 sem. hrs.*

HST 326. HISTORY OF THE SOVIET UNION: Historical survey of the development of the Soviet Union from the roots of the Revolution in 1905 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 335. HISTORY OF AFRICA: Survey of Africa from early times to the present, focusing on political grandeur, commercial ingenuity, intellectual ferment, and religious revolutions. *3 sem. hrs.*

***HST 340. HISTORY OF SCIENCE:** Survey of the development of science from its origins in the ancient world to the present. *3 sem. hrs.*

- *HST 341. HISTORICAL PERSPECTIVES ON SCIENCE, TECHNOLOGY, AND SOCIETY: Historical examination of the interaction of science, technology, and society from the Middle Ages to the present. 3 sem. hrs.
- HST 345. IRELAND AND AMERICA: Study of the cultural-historical background of both Scotch-Irish and Celtic Irish immigrants to America and how that influenced their varying reactions to the dominant Anglo-Saxon Protestantism of America. 3 sem. hrs.
- HST 348. UNITED STATES AND THIRD-WORLD CRISES—HISTORICAL PERSPECTIVES: Analysis of the history of U.S. policies and responses toward major crises in Africa, Asia, Latin America, and the Middle East. 3 sem. hrs.
- *HST 351. 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 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 365. AMERICAN FILMS AS HISTORY: Study of the development of American values, myths, institutions, and perspectives through the use of films as a primary source. 3 sem. hrs.
- *HST 370. ECONOMIC HISTORY OF THE UNITED STATES: Survey of the economic theories and institutions peculiar to the United States with special reference to their influence on social and political development. 3 sem. hrs.
- *HST 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 390. THE WESTWARD MOVEMENT: A history of the expansion of settlement in the U.S. since 1783: explorations, Indian relations, land policy, transportation, types of frontier settlements, and western influence on American ideals and institutions. 3 sem. hrs.
- HST 391. AMERICAN ARCHITECTURAL HISTORY AND PRESERVATION: A career-oriented course offering a theoretical background in historical preservation and techniques used in identification, research, and recording of historic landmarks worthy of preservation as part of the community heritage. 3 sem. hrs.

- HST 398. HISTORY OF BLACKS IN THE UNITED STATES, 1526-1900: Study of the saga of black people in the U.S. from 1526 until 1900. 3 sem. hrs.
- HST 399. HISTORY OF BLACKS IN THE UNITED STATES SINCE 1900: Study of the saga of black people in the U.S. from 1900 to the present. 3 sem. hrs.
- HST 402. MAIN CURRENTS IN ANCIENT HISTORY: Aspects of the civilizations of the ancient Near East, Greece, and Rome, emphasizing the Hebrew world view and value system, Greek democracy, Roman political and social institutions. 3 sem. hrs.
- HST 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 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 430. RUSSIAN SOCIO-ECONOMIC HISTORY: Historical study of the development of the economy and of the major social groupings in Russia. 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 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 482. THE HISTORY OF MEXICO: Mexican History since 1820. Origins of the revolution of 1910 and its developments to the present; Mexico's struggle for democracy; diplomatic and cultural relations between Mexico and the U.S. 3 sem. hrs.

HST 484. CARIBBEAN SINCE 1801: Study of the cultural, social, economic, and political history of the islands and the northern shore of South America in modern times, stressing areas that have gained independence or autonomy. 3 sem hrs.

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

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

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

HST 493. HISTORY, TIME, AND PROGRESS: Seminar examining the Western idea of time, the concept of progress, and the nature of historical knowledge. 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.

*General education course. See Chapter V.

HEC

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 Economics: HEC 321, 331, 341, elective

Human Ecology—Child Development: HEC 310, 318, 325, 429

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
- II. Consumer Science
- III. Family and Child Development
(For pre-kindergarten certification, consult with the chairperson.)
- IV. Interior Design

PROGRAM—S6: BACHELOR OF SCIENCE WITH A MAJOR IN HUMAN ECOLOGY (GENERAL) (HEG)¹

	<i>Semester Hours</i>
Human ecology	39-40
HEC 103, 105, 303, 306 or 321, 318, 320, 323, 360, elective	23
Concentration requirements	
I. HEC 314, 341, 362, 404, 436 and/or 470	16
(A minor in MKT is required.)	
II. HEC 331, 341, 362, 436 and/or 470, elective	16
(Support courses in CRJ, ECO, MKT, POL, SOC are required.)	
III. HEC 310, 325, 329, 417, 429, 436 and/or 470	16
(Support courses in EDT, PSY, SWK are required.)	
IV. HEC 314, 330, 340, 350, 395, 396, 470	17
(Support courses in ART are required: 103, 111, 216, 274, 275, 297, 308.)	
Mathematics-computer science-management information systems:	
MTH 207, elective	6

Natural science: 2 courses—lectures with laboratories ¹	8
Social and behavioral sciences	6
Philosophy and/or religious studies	12
Humanities	9
Communication skills: ENG 101-102, ENG elective, SPE 101.....	12
General education courses and academic electives to total at least.....	120

¹Consult 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 three areas of concentration:

- Program S7: Bachelor of Science with a Major in Human Ecology (Food and Nutrition—ADA Plan IV/V) (HEA)
- Program S7A: Bachelor of Science with a Major in Human Ecology (Food and Nutrition—Food Systems) (HEF)
- Program S7B: Bachelor of Science with a Major in Human Ecology (Food and Nutrition—Nutrition) (HEN)

PROGRAM—S7: BACHELOR OF SCIENCE WITH A MAJOR IN HUMAN ECOLOGY (FOOD AND NUTRITION— ADA PLAN IV/V) (HEA)¹

Program S7: Plan IV/V of the American Dietetic Association (ADA) meets the standards of the ADA for entrance to a fifth year of study in a dietetic internship program.

	<i>Semester Hours</i>
Human ecology	36
HEC 200, 303, 304, 308, 318, 323, 357, 401, 402, 405, 407, elective	
Natural science: BIO 151, 152, 152L, 403, 411L; CHM 123-124, 313-314, 420.....	30
Mathematics-computer science-management information systems:	
MTH 207, elective	6
ACC 301	3
MGT 305, 314	6
Social and behavioral sciences	9
Philosophy and/or religious studies	12
Humanities	9
Communication skills: ENG 101-102, 370 or 272 or 372; SPE 101	12
General education courses and academic electives to total at least.....	120

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

**PROGRAM—S7A: BACHELOR OF SCIENCE WITH A MAJOR IN
HUMAN ECOLOGY (FOOD AND NUTRITION—
FOOD SYSTEMS) (HEF)¹**

Program S7A: The food systems program covers the commercial aspect of food management.

	<i>Semester Hours</i>
Human ecology	30
HEC 200, 303, 304, 308, 318, 321, 323, 327, 357, 407	
Natural science: BIO 151, 152, 152L, 411L; CHM 123-124	16
MTH 110, 111, 207	9
ACC 207, 208	6
FIN 301	3
MGT 305, elective	6
MKT 305	3
Social and behavioral sciences	9
Philosophy and/or religious studies	12
Humanities	9
Communication skills: ENG 101-102, 370 or 372, SPE 101	12
General education courses and academic electives to total at least	120

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

**PROGRAM—S7B: BACHELOR OF SCIENCE WITH A MAJOR IN
HUMAN ECOLOGY (FOOD AND NUTRITION—
NUTRITION) (HEN)¹**

Program S7B: The nutrition program is a preparatory study of nutrition for graduate work and research.

	<i>Semester Hours</i>
Human ecology	32
HEC 200, 303, 318, 323, 327, 357, 401, 403, 410, 436, 451, 460	
Natural science: BIO 151, 152, 152L, 403, 411L; CHM 123-124, 313-314, 420	30
Mathematics-computer science-management information systems:	
MTH 207, elective	6
Social and behavioral sciences	6
Philosophy and/or religious studies	12
Humanities	9
Communication skills: ENG 101-102, 370 or 372, SPE 101	12
General education courses and academic electives to total at least	120

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

FACULTY

Julia A. Palmert, *Chairperson*

Professor Emerita: Schroeder

Associate Professor: Lefler

Assistant Professors: De Luca, Palmert, Slonaker

Part-time Instructors: Butler, Ellis, Freeman, Jefferis, Jeffries, Leakas,

Messersmith, Poirier, Seifer, Stoia, VeZolles-Pope

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. 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 per week. Corequisite: HEC 200. 2 sem. hrs.

HEC 202. INTRODUCTION TO HOSPITAL DIETETICS: To acquaint the student interested in a career in dietetics with the profession of dietetics and the role and responsibilities of the dietitian. Primary emphasis on dietetics as practiced in hospitals. 1 sem. hr.

HEC 203. ELEMENTARY NUTRITION: Course for the nonmajor interested in food and nutrition. Emphasis on basic nutrition as it applies to the individual. Contemporary issues pertaining to nutrition. 2 sem. hrs.

HEC 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. Prerequisite: HEC 200. 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. Prerequisite: HEC 200 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, socio-economic, 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. Prerequisite: HEC 200. Corequisite: HEC 327L. *2 sem. hrs.*

HEC 327L. **EXPERIMENTAL FOODS LABORATORY:** Course to accompany HEC 327 lecture. One 3-hour laboratory period each week. Corequisite: HEC 327. *1 sem. hr.*

HEC 329. **CHILD DEVELOPMENT PRACTICUM:** Supervised experience in working with preschool children and their parents. Case study and nursery school participation arranged. Two hours of lecture and 3 hours of work experience each week. Prerequisite: HEC 325. *3 sem. hrs.*

HEC 330. **INTERIOR DESIGN I:** Fundamentals of interior design, furniture, and style. *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:** History of interior design, furniture, and architecture and its influence today. *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: Practical application of interior design principles and the business of being an interior designer. Prerequisites: HEC 330, 340; ART 308. *3 sem. hrs.*

HEC 357. FOOD MICROBIOLOGY: Study of microorganisms that are related to food-borne illnesses, food preservation, and food sanitation. Prerequisites: BIO 101-102. Corequisite: BIO 411L. *3 sem. hrs.*

HEC 360. CLOTHING SELECTION AND CONSUMPTION: Study of clothing with emphasis on social, psychological, and economic relationships. Open to the University. *3 sem. hrs.*

HEC 362. TEXTILE AND APPAREL INDUSTRIES: Study of domestic and international textile and apparel industries from a historical perspective; cultural and economic influences; current issues. *3 sem. hrs.*

HEC 395. BASIC DRAFTING: Study and application of basic principles and techniques in visualization of objects by orthographic projection; development of lettering and drafting 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. *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, CHM 420. *3 sem. hrs.*

HEC 402. NUTRITIONAL THERAPY: Study of human pathophysiology and nutritional modification in relation to the effective prevention and treatment of disease. Prerequisites: Biochemistry, HEC 303, or permission of instructor. *3 sem. hrs.*

HEC 403. COMMUNITY NUTRITION: Study of public health nutrition programs and their services to the community. An opportunity to explore alternate methods of health care delivery and preventive measures. *2 sem. hrs.*

HEC 404. FASHION MERCHANDISING: Study of the movement of fashion, the promotion of fashion; advertising and display, trends in retail fashion distribution. *3 sem. hrs.*

HEC 405. INSTRUCTIONAL METHODS FOR HUMAN ECOLOGY: Instructional planning and developing media, methods, and materials for teaching human ecology subject matter. *3 sem. hrs.*

HEC 406. FAMILY MANAGEMENT PRACTICUM: Integration of managerial concepts with real life situations of families and individuals with varying life styles, functioning under various constraints. Prerequisite: HEC 306. *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. hrs.

HEC 410L. **NUTRITIONAL BIOCHEMISTRY LABORATORY:** Course to accompany HEC 410 lecture. One 3-hour period each week. Corequisite: HEC 410. 1 sem. hrs.

HEC 417. **INFANT AND TODDLER PROGRAM MANAGEMENT:** Study of program design, implementation, and management that is developmentally age-appropriate for children from birth to thirty months. 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. hrs.

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. hrs.

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.

*General education course. See Chapter V.

HUMANITIES STUDIES (HMS)

No major or minor concentration is available. See also Classics (CLA).

INTERDEPARTMENTAL COMMITTEE

Gordon A. Neufang (Languages), *Committee Chairperson*
 K. Marre (English), Conard (Languages), Gilvary (Performing and Visual Arts),
 Zembaty (Philosophy), Vines (History), Martin (Religious Studies)

COURSES OF INSTRUCTION

HMS 201. THE GREEK EXPERIENCE: The development of Greek ideas and ideals in the literature, art, and archaeology of ancient Greece. Readings (in English translation) in Homer, the lyric poets, Aeschylus, Sophocles, Euripides, Aristophanes, Herodotus, Thucydides, and Plato. *3 sem. hrs.*

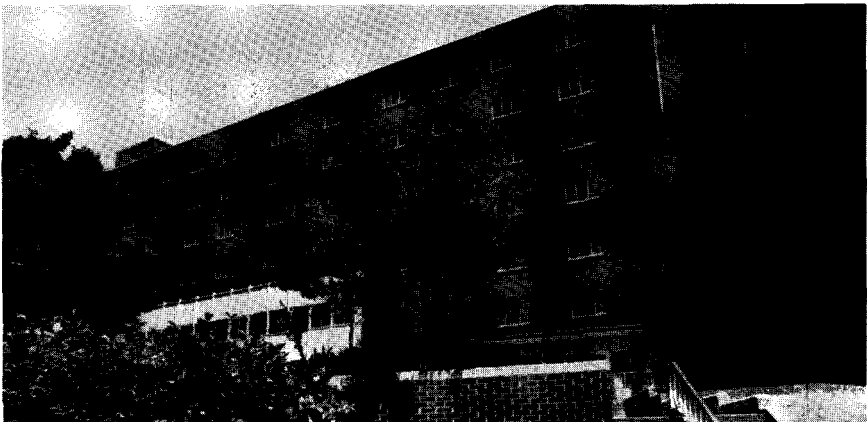
HMS 202. OUR ROMAN HERITAGE: Study of Roman contributions to the modern world as evidenced in the literature, art, and archaeology of ancient Rome. Readings (in English translation) in Plautus, Lucretius, Catullus, Cicero, Vergil, Horace, Livy, Ovid, and Seneca. *3 sem. hrs.*

HMS 301. CIVILIZATION: Interdisciplinary course using Sir Kenneth Clark's Civilization film series as the basis for exploring Western thought and culture from the early Middle Ages to the present; readings pertinent to Western civilization. Team-taught. *3 sem. hrs.*

HMS 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: Multi-disciplinary course in art, film, literature, music, and philosophy, concentrating on the post-World War II period. *6 sem. hrs.*



ASI

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 the CORE program. (Completion of both courses fulfills the PHL 103 requirement.) Required of and restricted to students in the CORE program.
3 sem. hrs. each

ASI 198. HONORS SOCIAL SCIENCE SEMINAR: Interdisciplinary study of a contemporary topic that has been the focus of considerable investigation by at least two social science disciplines. Required of and restricted to first-year students enrolled in the University Honors Program. Prerequisite: Permission of program director.
3 sem. hrs.

ASI 201. PERSONAL VALUE DEVELOPMENT: Exploration of the conceptual framework of value development. Application of concepts in such personal decision making as educational and career planning, developing satisfying personal relationships, and using time productively.
2 sem. hrs.

ASI 214. DRAMATIC KINESICS IN A FOREIGN LANGUAGE: Corrective work in foreign language sound and gesticulatory patterns accomplished by enacting scenes from a play in the language. May be repeated in one language in successive stages of difficulty up to 3 sem. hrs. Registration may be retroactive. Prerequisites: Basic instruction in the language; permission of instructor.
1 sem. hr.

ASI 228. FOCUS ON WOMEN: Interdisciplinary seminar on the changing roles and status of women. Requirement for women's studies minors. May be repeated since topics change yearly.
1 sem. hr.

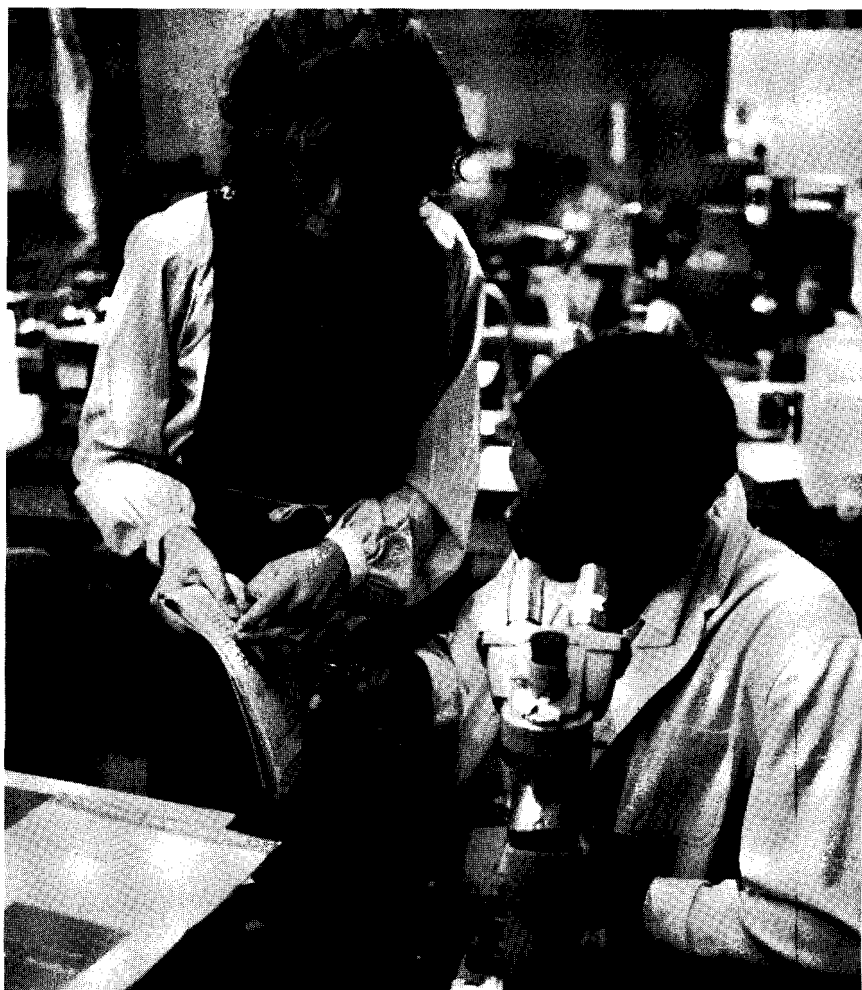
ASI 299. HONORS SCIENCE SEMINAR: Examination of the nature of scientific thought, research, and experimentation in one or more of the physical and biological sciences; the relationship between society and scientific inquiry. Required of and restricted to sophomores in the University Honors Program. Prerequisite: Permission of program director.
3 sem. hrs.

ASI 305. APPALACHIAN STUDIES: Appalachian history and its influence on the present; problems of recent events; influence of local government and federal programs on the people; economic problems of underprivileged people and the future of industrial development; ecology of the region; literature, art, and music; psychology of social change and community development in the underdeveloped regions; health and mental health; problems of the Appalachian migrant.
3 sem. hrs.

ASI 398. SPECIAL TOPICS IN INTERNATIONAL DEVELOPMENT: Study of political, philosophical, historical, and economic questions associated with developing countries. Topics determined by an interdisciplinary team. Required for the minor in international development. Second term. *3 sem. hrs.*

ASI 448. SEMINAR IN FAMILY DEVELOPMENT: Interdisciplinary examination of issues relating to family relationships, changes in family life, and the social context of family life. Required of family development minors. Prerequisite: 12 sem. hrs. completed in the minor. *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.*



IND

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 432 North Africa in Modern Times	
HST 436 South Africa in Modern Times	
HST 443 Modern China	
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 and Anthropology), 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 government service, international business, foreign area studies, international law, secondary school teaching, and self-enrichment. The curriculum includes a core of required courses, a concentration (East Asia, Latin America, USSR-Eastern Europe, Western Europe, global development), a foreign language requirement, and additional hours of course work drawn from the multidisciplinary elective pool.

Majors are strongly encouraged to participate in the Interdepartmental Summer Study Abroad Program or the Department of Languages' Summer Program or other accredited study abroad programs.

No minor in international studies is available.

PROGRAM—A9: BACHELOR OF ARTS WITH A MAJOR IN INTERNATIONAL STUDIES (INS)¹

	<i>Semester Hours</i>
Requirements for the major	69
Humanities	18
Natural science	7
Mathematics	3
Philosophy and/or religious studies	12
Communication skills: ENG 101, 102; SPE 101	0-9
Social and behavioral science	12
General education and academic electives to total at least	120

¹See also Distribution Table for Bachelor of Arts Programs and Chapter V for General Education Requirements.

The major in international studies consists of a minimum of 69 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; ECO 460; HST 357, 482; POL 323, 457; SPN 342

USSR-Eastern Europe: HST 314, 315, 326, 328, 4xx; POL 321, 409

Western Europe: HST 314, 315; HST 419, 421, 428 (choose two); HMS 395; POL 320

Global Development: ANT 150, 406, SOC 328 (choose one); ASI 398; BIO 395; ECO 460; PHL 332; POL 457; REL 201, 202, 376, 438, 463 (choose one)

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 150, 315, 351, 406
 ART 472, 473
 BAI 301
 CRJ 336, 436
 ECO 461
 ENG 205, 306, 356, 357, 358
 FIN 450
 HST 101, 311, 312, 313, 322, 325, 330, 335, 348, 375, 406, 408, 412, 416, 420, 423, 424, 430, 438, 440, 470, 482, 484
 INS 495
 MGT 430
 MKT 440, 445
 PHL 317, 320, 323, 350, 351, 352, 353, 358, 359, 360
 POL 325, 327, 335, 406, 408, 437
 REL 146, 201, 202, 374, 406, 438, 463
 SOC 350, 436

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

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

Language (6-20 semester hours)

A student majoring in international studies must complete at least 6 semester hours of upper-level foreign language instruction in one of the following languages: Chinese, 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.

UNDERGRADUATE CURRICULUM POLICY COMMITTEE

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

Aaron (Strategies for Responsible Development), Bregenzer (Sociology and Anthropology), Chiodo (Languages), Colón (Economics and Finance), Kunkel (Philosophy), Lapitan (Political Science), Patrouch (English), Ritter (Geology), Taylor (History)

COURSE OF INSTRUCTION

INS 495. INTERNATIONAL STUDIES INTERNSHIP: Practical, supervised experience with Dayton Council on World Affairs or other approved organization dealing with international affairs. Prerequisite: Permission of director. 3 sem. hrs.

JOURNALISM (JRN)

Journalism is an area of concentration in the Department of Communication. See requirements under COM.

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

COURSES OF INSTRUCTION

JRN 206. **NEWSWRITING:** Writing for the news media, concentrating on determining news values, developing newsgathering and newswriting techniques, and improving writing skills. Prerequisites: COM 120, typing skills. Studio fee. *3 sem. hrs.*

JRN 301. **PUBLIC AFFAIRS REPORTING:** Advanced reporting and newswriting. Analysis and structure of stories on all government areas. Information-gathering techniques and specialized reporting. Prerequisite: JRN 206. *3 sem. hrs.*

JRN 303. **INTERPRETATIVE AND FEATURE WRITING:** Writing non-news materials: features, personality stories, columns, reviews, consumer information. New journalism. Contents and organization of feature sections. *3 sem. hrs.*

JRN 400. **EDITING AND COPYREADING:** Newspaper copy editing, with emphasis on language usage, editing symbols, newspaper style, headline and caption writing. Extensive work on computerized editing system. Prerequisites: JRN 206, typing skills. Studio fee. *3 sem. hrs.*

JRN 404. **NEWSPAPER MANAGEMENT PROBLEMS:** Noneditorial operations—problems of business, circulation, advertising, and printing departments as they affect operations of the news department. Special emphasis on small dailies and weeklies. *3 sem. hrs.*

JRN 410. **PUBLICATION DESIGN:** Layout and design of newspapers, newsletters, brochures, and magazines. Type selection, copy preparation, cost appraisal, printing methods. Studio fee. *3 sem. hrs.*

JRN 420. **SPECIAL TOPICS IN JOURNALISM:** Concentrated study in specialized areas of journalism. May be repeated with change of topic. *3-6 sem. hrs.*

LANGUAGES (LNG)

The Department of Languages offers courses in modern languages—Chinese, French, German, Italian, Russian, and Spanish—as well as in classical languages—Greek and 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 Madrid, Marburg, and Paris. 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, Italian, Latin, Spanish) or a composite major in two languages.

PROGRAM—A10: BACHELOR OF ARTS WITH A MAJOR IN
LANGUAGES (LNG)¹

	<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 ² , and at least two courses, including at least one in literature, from the following: 341, 342, 360, 361, 362, 381, 450, 451, 471, 472. A major in Latin must take LAT 321.	
<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/or religious studies	12
Natural science	7
Mathematics	3
Social and behavioral sciences	12
General education courses and academic electives to total at least	120

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

²In Italian take ITA 313 and 314.

FACULTY

Andria Chiodo, *Chairperson*

Professors: Conard, McKenzie

Associate Professors: Neufang, Romaguera

Assistant Professors: Castello-Lamas, Chiodo, Galeano, Krugh, O'Meara

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

CHINESE (CHI)

COURSES OF INSTRUCTION

CHI 103-104. ELEMENTARY CHINESE I, II: Basic elements of the Chinese language with emphasis on pronunciation, speaking, reading, and grammar. Language laboratory required. No prerequisite for CHI 103. *4 sem. hrs. each*

CHI 201-202. INTERMEDIATE CHINESE I, II: Development of listening and speaking skills in Chinese along with intensive study of grammar and structure. Continued practice in reading and writing Chinese characters. Prerequisite: CHI 104. *3 sem. hrs. each*

CHI 313-314. COMMUNICATING IN CHINESE I, II: Advanced course emphasizing reading and writing. Readings to broaden students' understanding of modern Chinese culture. Oral practice and structural drills to improve pronunciation and master grammatical concepts. *3 sem. hrs. each*

FRENCH (FRN)

COURSES OF INSTRUCTION

FRN 202 or the equivalent is prerequisite for all 300-400-level courses except FRN 350. FRN 311 or 312 or the equivalent is also prerequisite for all other 300-400-level courses except FRN 350 and FRN 370.

FRN 103-104. ELEMENTARY FRENCH I, II: Basic elements of the French language with emphasis on audio-oral skills. Language laboratory required. No prerequisite for FRN 103. *4 sem. hrs. each*

FRN 201-202. INTERMEDIATE FRENCH I, II: Development of listening, speaking, reading, and writing skills. Language laboratory required. Prerequisite: FRN 104 or equivalent. *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. *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. *3 sem. hrs.*

FRN 311-312. FRENCH CONVERSATION I, II: Intensive practice in listening to and speaking French to develop 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. One term is required for majors and minors. *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. *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. *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. Prerequisite: FRN 226. *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. *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. *3 sem. hrs.*

FRN 350. FRENCH LITERATURE IN TRANSLATION: Course to acquaint non-majors and nonminors with major French writers and literary movements. Conducted in English. Repeatable when subtitle and content change. *3 sem. hrs.*

FRN 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. *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. *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. *3 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. *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 or equivalent. *3 sem. hrs.*

FRN 450. FRENCH LITERATURE: Lectures and discussion concentrating on specialized genres, periods, or authors. Repeatable when subtitle and content change. *3 sem. hrs.*

FRN 491. INDEPENDENT STUDY: Independent research project under the guidance of an instructor. Admission to project and number of semester hours require approval of the chairperson. *1-3 sem. hrs.*

GERMAN (GER)

COURSES OF INSTRUCTION

GER 202 or the equivalent is prerequisite for all upper-level German courses.

GER 100-101. GUTEN TAG I, II: Beginning conversational German based on a 26-film motion picture series. Basic vocabulary and expressions through dialogues and drills in the language of everyday situations. Grammar instruction minimal; no reading taught. GER 100-101 is not a substitute for GER 103-104 and does not permit one to enter GER 201. *2 sem. hrs. each*

GER 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. No prerequisite for GER 103. GER 102 or 103 is prerequisite for GER 104. *4 sem. hrs. each*

GER 201. INTERMEDIATE GERMAN I: Systematic grammar review. Increased use of the language in written exercises and classroom discussions based on readings. Prerequisite: GER 104 or equivalent. *3 sem. hrs.*

GER 202. INTERMEDIATE GERMAN II: Continuation of GER 201. Exposure to the development of German civilization and culture. Reading, conversation, and composition. Prerequisite: GER 201 or equivalent. *3 sem. hrs.*

GER 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. *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. *3 sem. hrs. each*

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. *3 sem. hrs.*

GER 350. GERMAN LITERATURE IN TRANSLATION: Course to acquaint non-majors and nonminors with major German writers and literary movements. Conducted in English. Repeatable when subtitle and content change. *3 sem. hrs.*

GER 361. SURVEY OF GERMAN LITERATURE I: German literature and its development from 750 A.D. to the end of the 17th century. Study of exemplary works and literary movements. *3 sem. hrs.*

GER 362. SURVEY OF GERMAN LITERATURE II: German literature from the 18th century to the present. Study of exemplary literary works and movements. *3 sem. hrs.*

GER 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. *3 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. *3 sem. hrs.*

GER 491. INDEPENDENT STUDY: Independent research project under the guidance of an instructor. Admission to project and number of sem. hrs. require approval of chairperson. *1-3 sem. hrs.*

GREEK (GRK)

COURSES OF INSTRUCTION

GRK 103-104. ELEMENTARY GREEK I, II: Development of a foundation for reading classical Greek. No prerequisite for GRK 103. *4 sem. hrs. each*

GRK 201. INTERMEDIATE GREEK: Readings from Plato, Homer, and Euripides selected both for their literary merit and for their value in improving reading skills. Prerequisite: GRK 104. *3 sem. hrs.*

GRK 350. GREEK LITERATURE: Advanced readings in a particular author or genre (epic, drama, history, philosophy). Repeatable when subtitle and content change. Prerequisite: GRK 201. *3 sem. hrs.*

ITALIAN (ITA)

COURSES OF INSTRUCTION

ITA 202 or the equivalent is prerequisite for all upper-level Italian courses.

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. No prerequisite for ITA 103. *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. Prerequisite: ITA 104. *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. *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. *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. *3 sem. hrs. each*

ITA 491. INDEPENDENT STUDY: Independent research project under the guidance of an instructor. Admission to project and number of sem. hrs. require approval of chairperson. *1-3 sem. hrs.*

LATIN (LAT)

COURSES OF INSTRUCTION

LAT 202 or the equivalent is prerequisite for all upper-level Latin courses.

LAT 103-104. ELEMENTARY LATIN I, II: Development of a foundation for reading classical Latin. No prerequisite for LAT 103. *4 sem. hrs. each*

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

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

LAT 350. LATIN LITERATURE: Advanced readings in a particular author or genre (epic, drama, history, philosophy). Repeatable when subtitle and content change. *3 sem. hrs.*

LAT 491. INDEPENDENT STUDY: Independent research project under the guidance of an instructor. Admission to project and number of semester hours require approval of chairperson. *1-3 sem hrs.*

RUSSIAN (RUS)

COURSES OF INSTRUCTION

RUS 202 or the equivalent is prerequisite for all upper-level Russian courses.

RUS 103-104. ELEMENTARY RUSSIAN I, II: Familiarization of the beginner with the essentials of the spoken and written language. Vocabulary practice, simple sentence structure, conversational drills, and reading; stress on pronunciation and handwriting. No prerequisite for RUS 103. *4 sem. hrs. each*

RUS 201-202. INTERMEDIATE RUSSIAN I, II: Review of the essentials of grammar, intensive conversation and comprehension exercises, reading of graded modern and contemporary prose and poetry. Prerequisite: RUS 104 or equivalent. *3 sem. hrs. each*

RUS 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. *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. *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. *3 sem. hrs.*

RUS 491. INDEPENDENT STUDY: Independent study under the guidance of an instructor. Admission to course and number of sem. hrs. require approval of chairperson. Repeatable when content changes. Maximum total 6 sem. hrs. *1-6 sem. hrs.*

SPANISH (SPN)

COURSES OF INSTRUCTION

SPN 202 or the equivalent is prerequisite for all 300-400-level courses except SPN 350. SPN 311 or 312 or the equivalent is also prerequisite for all other 300-400-level courses except SPN 350 and SPN 370.

SPN 103-104. ELEMENTARY SPANISH I, II: Development of a foundation for understanding, speaking, reading, and writing Spanish. Language laboratory required. No prerequisite for SPN 103. *4 sem. hrs. each*

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

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.

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. SPN 321 or equivalent is prerequisite for SPN 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.

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.

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.

3 sem. hrs.

SPN 350. HISPANIC LITERATURE IN TRANSLATION: Course to acquaint non-majors and nonminors with major Spanish and Spanish-American writers and literary movements. Conducted in English. Repeatable when subtitle and content change.

3 sem. hrs.

SPN 360. EXPLICACION DE TEXTOS: Introduction to the methods of analyzing literary texts by observing and analyzing Spanish prose and poetry. Elements of Spanish versification. Recommended for Spanish majors and prospective teachers. Conducted in Spanish.

3 sem. hrs.

SPN 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.

3 sem. hrs. each

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

3 sem. hrs.

SPN 450. SPANISH LITERATURE: Lectures and discussions in Spanish in such specialized areas as Medieval Spanish literature, Spanish drama of the Golden Age, Cervantes, 19th-century Spanish novel, contemporary Spanish drama. Repeatable when subtitle and content change.

3 sem. hrs.

SPN 451. SPANISH-AMERICAN LITERATURE: Lectures and discussions in Spanish in such specialized areas as Spanish-American colonial literature, contemporary Spanish-American novel, Spanish-American poetry, Spanish-American prose. Repeatable when subtitle and content change.

3 sem. hrs.

SPN 471-472. SPANISH LITERATURE OF THE 20TH CENTURY I, II: Study of the principal Spanish and Spanish-American authors and works of the present century. Lectures, discussions, and reports on assigned readings. Conducted in Spanish.

3 sem. hrs. each

SPN 491. INDEPENDENT STUDY: Independent research project under the guidance of an instructor. Admission to project and number of semester hours require approval of chairperson.

1-3 sem. hrs.

MATHEMATICS (MTH)

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.

PROGRAM—A11: BACHELOR OF ARTS WITH A MAJOR IN MATHEMATICS (MTA)¹

	<i>Semester Hours</i>
Mathematics	39
Basic calculus: MTH 118, 119, 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/or religious studies	12
Communication skills: SPE 101; ENG 101, 102	0-9
General education courses and academic electives to total at least	120

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

PROGRAM—S8: BACHELOR OF SCIENCE WITH A MAJOR IN MATHEMATICS (MTH)¹

	<i>Semester Hours</i>
Mathematics	39
Basic calculus: MTH 118, 119, 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.)	16
Computer science	3
Social and behavioral sciences	6
Humanities	9
Philosophy and/or religious studies	12
Communication skills: SPE 101; ENG 101, 102	0-9
General education courses and academic electives to total at least	120

¹Consult 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: McCloskey, Peterson, Rice, Stander, Steinlage

Associate Professors: Back, Eloë, Gantner, Gorton, Mushenheim, Shaughnessy

Assistant Professors: Friel, Higgins, Islam, Kauflin, Mashburn

Lecturer: Saintignon

COURSES OF INSTRUCTION

MTH 101. PRECALCULUS MATHEMATICS: A review of topics from algebra and trigonometry including polynomials, functions and graphs, exponential and logarithmic functions, trigonometric functions and identities. *4 sem. hrs.*

MTH 103. MATHEMATICS AND ITS CULTURAL ASPECTS: Introduction to basic concepts of algebra, geometry, probability and statistics. Also, depending on the needs and interests of the class, such topics as logic, set theory, abstract mathematical systems, and intuitive topology. Prerequisite: One year of high school mathematics. *3 sem. hrs.*

MTH 107. FUNDAMENTALS OF MATHEMATICS: Sets, functions and graphs, exponents, polynomials and algebraic equations, systems of equations. Prerequisite: One year of high school algebra. *3 sem. hrs.*

MTH 110. QUANTITATIVE ANALYSIS FOR BUSINESS I: Topics from mathematics used in business, including systems of equations, inequalities, matrix algebra, linear programming, logarithms. Prerequisite: MTH 107 or sufficient college preparatory mathematics. *3 sem. hrs.*

MTH 111. QUANTITATIVE ANALYSIS FOR BUSINESS II: Continuation of MTH 110. Compound interest and annuities, fundamental concepts and applications of differential and integral calculus. Prerequisite: MTH 110 or sufficient college preparatory mathematics. *3 sem. hrs.*

MTH 112. INTRODUCTORY CALCULUS I: Basic coordinate geometry, differentiation of algebraic functions with applications to geometry. Indefinite and definite integrals with applications to the life and physical sciences. Prerequisite: MTH 101 or equivalent. Intended for students in the life and social sciences. *3 sem. hrs.*

MTH 113. INTRODUCTORY CALCULUS II: Differentiation and integration of exponential and logarithmic functions with applications to life sciences and to solution of applied differential equations with variables separable. Differentiation and integration of trigonometric functions with applications. Use of tables of integrals. Introduction to vector algebra, vector calculus, partial derivatives, and multiple integrals. Prerequisite: MTH 112. *3 sem. hrs.*

MTH 118. ANALYTIC GEOMETRY AND CALCULUS I: Introduction to the differential and integral calculus; differentiation and integration of algebraic and transcendental functions with applications to science and engineering. Prerequisite: MTH 101 or equivalent. *4 sem. hrs.*

MTH 119. ANALYTIC GEOMETRY AND CALCULUS II: Continuation of MTH 118. Conic sections, techniques of integration with applications to science and engineering, infinite series, indeterminate forms, Taylor's theorem. Prerequisite: MTH 118. *4 sem. hrs.*

MTH 192. APPLICATIONS IN QUANTITATIVE ANALYSIS FOR BUSINESS I: Independent study of business applications covered in MTH 110 for students who have already received college credit for a college algebra course. Prerequisite: Permission of chairperson. *1 sem. hr.*

MTH 193. APPLICATIONS IN QUANTITATIVE ANALYSIS FOR BUSINESS II: Independent study of business applications covered in MTH 111 for students who have already received college credit for a calculus course. Prerequisite: Permission of chairperson. *1 sem. hr.*

MTH 204. MATHEMATICAL CONCEPTS I: Concepts necessary for an understanding of the structure of arithmetic and its algorithms. Prerequisites: One year of high school algebra and one year of high school geometry. *3 sem. hrs.*

MTH 205. MATHEMATICAL CONCEPTS II: Recommended for students in elementary education who seek a strong background in the mathematical concepts discussed in grades 4-8. Topics include the metric system, probability and statistics, the use of calculators, and elementary geometry. *3 sem. hrs.*

MTH 207. STATISTICAL METHODS FOR THE BEHAVIORAL SCIENCES: Measures of central tendency and variability, frequency distributions, probability, the binomial distribution, normal distribution, inferences from sample means, curve fitting, correlation and regression. Prerequisite: Two years of high school algebra. *3 sem. hrs.*

MTH 215. BASIC STATISTICS FOR THE BIOMEDICAL SCIENCES: Probability, the binomial distribution, normal distribution, confidence intervals, tests of hypotheses, proportions, Chi-square test, F-distribution, regression and correlation. Prerequisite: MTH 113 or consent of instructor. *3 sem. hrs.*

MTH 218. ANALYTIC GEOMETRY AND CALCULUS III: Continuation of MTH 119. Solid analytic geometry, vectors and vector functions, multivariable calculus, partial derivatives, multiple integrals. Prerequisite: MTH 119. *4 sem. hrs.*

MTH 219. APPLIED DIFFERENTIAL EQUATIONS: First order equations, linear equations with constant coefficients, systems of equations, the Laplace transform, power series solutions, numerical methods, applications. Prerequisite: MTH 218. Credit will not be given for both MTH 219 and MTH 319. Mathematics majors are expected to take MTH 319. *3 sem. hrs.*

MTH 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 covered in one extra hour per 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 MTH 319. Mathematics majors take MTH 319. First term each year. *3 sem. hrs.*

MTH 342. SET THEORY: Elementary set theory including relations, functions, indexed families, denumerable and nondenumerable sets, cardinal and ordinal arithmetic, Zorn's Lemma, the well-ordering principle and transfinite induction. Prerequisite: MTH 218 or permission of instructor. Second term, alternate years. 3 sem. hrs.

MTH 361. INTRODUCTION TO ABSTRACT ALGEBRA: Fundamental concepts of groups, rings, integral domains and fields. Prerequisite: MTH 218. First and second terms each year. 3 sem. hrs.

MTH 361H. HONORS ABSTRACT ALGEBRA: Same material as MTH 361, with additional topics for enrichment covered in one extra hour per week. Prerequisites: MTH 218 and permission of 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 113 or 218. Mathematics majors enroll in MTH 411 instead of MTH 367. 3 sem. hrs.

MTH 368. STATISTICAL METHODS II: Distribution-free methods including rank tests, sign tests, and Kolmogorov-Smirnov test. Method of least squares, correlation, linear regression, analysis of variance. Design of experiments and computer applications. Prerequisite: MTH 367. Mathematics majors enroll in MTH 412 instead of MTH 368. 3 sem. hrs.

MTH 370. INTRODUCTION TO HIGHER GEOMETRY: Projective, affine, and hyperbolic geometries using synthetic and/or analytic techniques. Prerequisite: MTH 218 or permission of instructor. Second term, alternate years. 3 sem. hrs.

MTH 376. NUMBER THEORY: Topics include Diophantine equations, Chinese Remainder theorem, Mobius inversion formula, quadratic residues and the Law of Quadratic Reciprocity, Gaussian integers, and integral quaternions. Prerequisite: MTH 218. First term, alternate years. 3 sem. hrs.

MTH 395. DEVELOPMENT OF MATHEMATICAL IDEAS: The evolution of mathematical ideas and techniques from ancient times to the present with emphasis on the Greek era. Famous men and famous problems. Chronological outline of mathematics in each of its branches along with applications. Prerequisite: MTH 112 or MTH 118 or permission of instructor. First term, alternate years. 3 sem. hrs.

MTH 403. BOUNDARY VALUE PROBLEMS: Introduction to the Sturm Liouville problem. Fourier trigonometric series, Fourier integrals, Bessel functions, and Legendre polynomials. The heat equation, wave equation, and Laplace's equation with applications. Solutions by the product method. Prerequisite: MTH 219 or 319. First term each year. 3 sem. hrs.

MTH 404. APPLIED COMPLEX VARIABLES: Functions of a complex variable, conformal mapping, integration in the complex plane. Laurent series and residue theory. Prerequisite: MTH 219 or 319. Mathematics majors enroll in MTH 431 instead of MTH 404. Second term each year. 3 sem. hrs.

MTH 411. PROBABILITY AND STATISTICS I: Mathematical probability, combinatorial methods, random variables, Bayes theorem, moments, Chebyshev's inequality, binomial, Poisson, and normal probability laws, moment-generating functions, limit theorems. Prerequisite: MTH 218. Second term each year. 3 sem. hrs.

MTH 412. PROBABILITY AND STATISTICS II: Distribution theory, central limit theorem, random sampling, estimation of parameters including maximum likelihood, confidence intervals, the Neyman-Pearson lemma, tests of hypotheses, likelihood ratio tests, sampling from a normal population. Prerequisite: MTH 411. First term each year. 3 sem. hrs.

MTH 413. PROBABILITY AND STATISTICS III: Statistical decision theory, partitioning of sums and squares, analysis of variance, regression on several independent variables, multiple regression approach to analysis of variance, design of experiments. Prerequisite: MTH 412. Second term each year. *3 sem. hrs.*

MTH 430. REAL ANALYSIS: Fundamental concepts of analysis: metric completeness, uniform continuity and uniform convergence; power series and interchange of limits. Prerequisite: MTH 302. First term each year. *3 sem. hrs.*

MTH 430H. HONORS REAL ANALYSIS: Same material as MTH 430, with additional topics for enrichment covered in one extra hour per week. Prerequisites: MTH 302 and permission of instructor. First term each year. *4 sem. hrs.*

MTH 431. COMPLEX ANALYSIS: Introduction to complex analysis: analytic functions and the Cauchy integral theory; Laurent series and the calculus of residues. Optional topics may include applications of the residue theory. Prerequisite: MTH 302. Second term each year. *3 sem. hrs.*

MTH 431H. HONORS COMPLEX ANALYSIS: Same material as MTH 431, with additional topics for enrichment covered in one extra hour per week. Prerequisites: MTH 302 and permission of instructor. Second term each year. *4 sem. hrs.*

MTH 440. INTRODUCTION TO MATHEMATICAL MODELING: Introduction to the use of mathematical techniques and results in constructing and modifying models designed to solve problems encountered in everyday life. Computer simulation and limitations thereon, dimensional analysis, scaling, and approximations at various levels. Prerequisites: MTH 219 (or 319), MTH 302, and permission of 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 for additional credit. 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 for additional credit. Prerequisite: Permission of chairperson. *1-3 sem. hrs.*

MET

MEDICAL TECHNOLOGY (MET)

The program leading to a Bachelor of Science with a Major in Medical Technology consists of four years of preclinical and clinical instruction at the University of Dayton. The program has an integrated structure (MET courses are scheduled from the third semester through the eighth) and is University-based. (The University holds accreditation for the program.) Laboratory rotations at Dayton-area clinical affiliates occur during the third term of the junior year and the second term of the senior year. In course content, the medical technology program is basically a liberal arts major with a general emphasis in biology and chemistry and a specific emphasis in the clinical medical sciences. The MET curriculum is planned to meet all the requirements of the University and of the National Accrediting Agency for Clinical Laboratory Sciences (NAACLS). Successful completion of the program qualifies the student to take a national examination so as to become a certified medical technologist.

Students take all of the didactic MET courses (lectures with accompanying laboratories) at the University from the second term of the sophomore year through the last term of the senior year. An evaluation of student academic progress (for approval to continue in the program) is made at the end of the second term in the sophomore year. Total GPA and grades in chemistry courses are used as markers in this evaluation. In order that the entire program be completed within four academic years, the curriculum requires that some clinical and preclinical courses be taken during the third term (first session) of the sophomore year and the third term (first and second sessions) of the junior year. The clinical laboratory rotations at hospital affiliates in the Dayton area occur only during the third term (second session) of the junior year and the second term of the senior year. Upon completion of the senior year, students are granted the Bachelor of Science with a Major in Medical Technology at the University's spring commencement exercises.

PROGRAM—S9: BACHELOR OF SCIENCE WITH A MAJOR IN MEDICAL TECHNOLOGY (MET)¹

	<i>Semester Hours</i>
Required science courses	51
BIO 151, 152, 411, 425, 466 (all with laboratories)	20
CHM 123, 124, 313, 314, 420 (all with laboratories) ²	19
CPS or MIS computer course	3
MTH 207	3
PHY 201, 202	6
Medical technology courses	47
MET 431, 431L, 432, 432L, 433, 433L, 434, 434L, 435, 435L, 437, 437L, 438, 439, 440	
Communication skills	12
SPE 101	3
ENG 101, 102; ENG elective	9
Philosophy and/or religious studies	12
Humanities electives	9

Social and behavioral sciences (including MGT 305)	9
Total semester hours	140

¹Consult General Requirements for All Bachelor of Science Programs and Chapter V for General Education Requirements.

²Begin in CHM 115 if background is insufficient for CHM 123.

FACULTY

Suzanne L. Columbus, *Program Director*

Clinical Professor: Bylsma

Assistant Professors: Columbus, Schieltz

COURSES OF INSTRUCTION

MET 431. INTRODUCTION TO CLINICAL LABORATORY SCIENCE: Study of advanced methodology and instrumentation, which may include computer applications, data management, research data collection, and statistical analysis. 3 sem. hrs.

MET 431L. ADVANCED CLINICAL LABORATORY: Laboratory manipulations to accompany MET 431. 1 sem. hr.

MET 432. CLINICAL CHEMISTRY: Human physiological chemistry with application of analytical techniques to the examination of body fluids and tissues. 5 sem. hrs.

MET 432L. CLINICAL CHEMISTRY LABORATORY: Laboratory manipulations to accompany MET 432. 2 sem. hrs.

MET 433. MICROBIOLOGY: Study of microorganisms found in human infection, their isolation/identification and prophylaxis. Included are bacteria, fungi, parasites, and viruses. 4 sem. hrs.

MET 433L. MICROBIOLOGY LABORATORY: Laboratory manipulations to accompany MET 433. 2 sem. hrs.

MET 434. HEMATOLOGY: Instruction in the morphology of the blood and blood-forming tissues. 4 sem. hrs.

MET 434L. HEMATOLOGY LABORATORY: Laboratory manipulations to accompany MET 434. 3 sem. hrs.

MET 435. IMMUNOLOGY: Study of the immune system, in particular antigen-antibody reaction in vitro. 1 sem. hr.

MET 435L. IMMUNOLOGY LABORATORY: Laboratory manipulations to accompany MET 435. 2 sem. hrs.

MET 437. IMMUNOHEMATOLOGY: Study of the principles of blood banking, transplantation immunity, and autoimmunity. 1 sem. hr.

MET 437L. IMMUNOHEMATOLOGY LABORATORY: Laboratory manipulations to accompany MET 437. 2 sem. hrs.

MET 438. CLINICAL PATHOLOGY: Lecture stressing the correlation of physiological changes in diseased states and laboratory procedures. 2 sem. hrs.

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

MET 440. BODY FLUIDS ANALYSIS: The study of body fluids. Pathophysiology of the formation and nature of all the body fluids; techniques of examination for diagnostic information. 3 sem. hrs.

MIL

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 salary or about \$600.

The ROTC program is also available to students with three or two years remaining on campus, including graduate students. Special programs, such as Basic Camp, have been established to allow second-semester sophomores and juniors or seniors who will be going on to graduate school to participate in the military science program.

There is also a special program whereby veterans and JROTC students can receive advanced placement credit in Army ROTC. Veterans and students with high school JROTC training, with the approval of the chairperson of the Department of Military Science, may receive placement credit for part or all of the basic course. Each case will be judged individually so that the best interests of both the student and the military may be served.

Army ROTC scholarships are available to students. These scholarships cover three- and two-year periods and provide for tuition, books, fees, special equipment, and \$100 a month for up to ten months of each school year. Scholarships, which are highly competitive, are awarded to those who demonstrate outstanding academic and leadership ability.

FACULTY

Lt. Col. Charles R. Cassell, U.S. Army, *Chairperson*

Professor: Cassell

Assistant Professors: Kirkwood, Mundell

Instructors: Ball, Coyne

COURSES OF INSTRUCTION¹

MIL 099 (UD). LEADERSHIP SKILL COURSES: Rappelling, Marksmanship (pistol and rifle), and Physical Training. Subjects determined by student interest and instructor availability. Emphasis on practical experience in each skill. *No credit*

MIL 100 (UD). LEADERSHIP LABORATORY: Practical training in military courtesy, drill and ceremony, military skills, map reading, marksmanship, and tactics. *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 105 (UD). U.S. MILITARY TODAY: Roles, missions, organizational structure, tactical employment, equipment, and future trends of the armed services. Incorporates the background experience of resident instructors and presentations by visiting service representatives. *1 sem. hr.*

MIL 106 (UD). U.S. MILITARY IN CURRENT WORLD AFFAIRS: Seminar on the contemporary role of the military, the role of military power, the relationship of natural resources to national power. *1 sem. hr.*

MIL 121 (SCC). Same as MIL 101 (UD). *0.7 sem. hr.*

MIL 122-123 (SCC). Combination of these two courses completes all requirements of MIL 102 (UD). *0.7 sem. hr. each*

MIL 201 (UD). MAP READING AND TACTICS: Study of 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). Same as MIL 201 (UD). *1.4 sem. hrs.*

MIL 222-223 (SCC). Combination of these two courses completes all requirements of MIL 202 (UD). *1.4 sem. hrs. each*

MIL 301 (UD). LEADERSHIP IN TACTICS AND EVALUATION TECHNIQUES: Study of military weapons systems, land navigation-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.*

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

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 303 (UD). LEADERSHIP INTERNSHIP I: Application of the leadership principles and techniques taught in MIL 301 and 302. Prerequisites: MIL 301, 302, or approval of department chairperson. *4 sem. hrs.*

MIL 304 (UD). LEADERSHIP INTERNSHIP II: Application of the leadership principles and techniques taught in MIL 301 and 302. Prerequisites: MIL 301, 302, 303, or approval of department chairperson. *2 sem. hrs.*

MIL 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.*



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 Music Division of the Performing and Visual Arts Department 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 Music Division 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 Music Division has numerous performing ensembles open to all students by audition: The University Chorale, chamber vocal ensembles, University Orchestra, Wind Ensemble, Marching Band and Pep Band, Jazz Ensembles, and chamber instrumental ensembles.

The Music Division offers five degree programs:

A12: Bachelor of Arts with a Major in Music (MUS)

A13: Bachelor of Music with a Major in Music Theory (MTY)
or Composition (MUC)

A13A: Bachelor of Music with a Major in Performance (MUP)

A13B: Bachelor of Music with a Major in Music Therapy (MUT)

A13C: Bachelor of Music with a Major in Music Education (MUE)

All prospective music students must be admitted to the University of Dayton by the Office of Admission. In addition, all prospective students must (1) furnish the Music Division with letters of recommendation from their high school music teachers and/or performance teachers and (2) successfully complete the performance audition, either in person or via tape recording. Specific information regarding audition requirements and dates is available from the Music Division office.

The Music Division offers 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 Music Division office.

PROGRAM—A12: BACHELOR OF ARTS WITH A MAJOR IN MUSIC (MUS)¹

	<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	4
Recital attendance: MUS 200	0
Music electives	2

Communication skills: SPE 101; ENG 101-102 or 114 or 198	0-9
Natural science	7
Mathematics	3
Social and behavioral sciences	12
Humanities	18
Philosophy and/or religious studies	12
General education and academic electives to total at least	120

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

PROGRAM—A13: BACHELOR OF MUSIC WITH A MAJOR IN MUSIC THEORY (MTY) OR COMPOSITION (MUC)¹

	<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 ²	12
Ensemble: MUS 491, 492, or 493	8
Recital attendance: MUS 200	0
Theory and/or composition electives	10
Music electives	10
Additional requirements for MTY ³	
Counterpoint: MUS 311-312	4
Style and design: MUS 413-414	4
Research in music theory: MUS 418-419	4
Additional requirements for MUC ⁴	
Composition: MUS 121-122, 221-222, 421-422	8
Score reading: MUS 314	2
Advanced orchestration: MUS 416	2
Communication skills: SPE 101; ENG 101-102 or 114 or 198	0-9
Philosophy and/or religious studies	12
Natural science	6
Mathematics	3
Social and behavioral sciences	6
Humanities	6
General education courses and academic electives to total	136

¹See Chapter V for General Education Requirements.

²Functional Keyboard Skills or equivalent is required.

³Each theory major must submit a research paper in the senior year.

⁴Each composition major must present 1½ recitals of original work by the senior year.

**PROGRAM—A13A: BACHELOR OF MUSIC WITH A MAJOR
IN PERFORMANCE (MUP)¹**

	<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 ² :	36
Major area of specialization	24-32
Minor area of specialization	4-12
Ensemble: MUS 491, 492, or 493	8
Recital attendance: MUS 200	0
Music electives	14
Communication skills: SPE 101; ENG 101-102 or 114 or 198	0-9
Philosophy and/or religious studies	12
Natural science	6
Mathematics	3
Social and behavioral sciences	6
Humanities	6
General education courses and academic electives to total	136

¹See Chapter V for General Education Requirements.

²Performance study in major instrument or voice must lead to a half junior solo recital and a full senior solo recital.

**PROGRAM—A13B: BACHELOR OF MUSIC WITH A MAJOR
IN MUSIC THERAPY (MUT)¹**

	<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 or voice leading to not less than one-half recital: 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	0
Music therapy internship ² : MUS 489	2
Psychology: 101, 355, 363, and elective	12
Sociology	3
Science, including EDD 305	6
Communication skills: SPE 101; ENG 101-102 or 114 or 198	0-9
Philosophy and/or religious studies	12

Mathematics	3
Humanities	6
General education courses and academic electives to total	135

¹See Chapter V for General Education Requirements.

²This 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.

**PROGRAM—A13C: BACHELOR OF MUSIC WITH A MAJOR IN
MUSIC EDUCATION (MUE)¹**

	<i>Semester Hours</i>
Music requirements ²	66-68
Requirements for all specializations ²	
Music theory: MUS 111-114, 211-214	16
Functional keyboard skills: MUS 296-299	4
Music history and literature: MUS 301-302	6
Arranging: MUS 318	2
Performance studies ³ : 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 ⁴	
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 ⁴	
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 ⁴	
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 ⁴	
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 ² : EDT 110, 207, 208, 318, 351, 419, 422, 469	28
Communication skills: SPE 101; ENG 101-102 or 114 or 198	3-9
Philosophy and/or religious studies	12
Natural science	7
History	3
Mathematics	3

Social and behavioral sciences	3
Humanities	3-6
General education courses and academic electives to total	131-133

¹See Chapter V for General Education Requirements.

²Students 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. At the end of the sophomore year, students will meet with an advisory committee consisting of music education faculty. Continuation in the program will depend upon recommendation of the advisory committee.

³Students will successfully complete a half recital during the senior year.

⁴Students 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)

Dept. No.	Course	Semester Hours
MUS 111-112	Theory of Music I	6
MUS 113-114	Aural Skills I	2
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

FACULTY

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

Linda J. Snyder, *Head of Music Division*

Professor: Benedum

Associate Professors: Letnanova, Magnuson, Sandness, Snyder, Zech

Assistant Professors: Baxter, Chenoweth, Dias, Garcia, Hoffman

Lecturer: Zimmerman

Part-time Instructors: Atsalis, Baker, Brown, Compton, Gilley, Hotopp,
Howard, Mangan, McCutcheon, McMillan, Millat, Paul, Pepitone, Rodgers,
Rupp, Shuffle, Suttman, Vandevander, Varella

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. *3 sem. hrs. each*

MUS 113-114. AURAL SKILLS I: Basic technique of dictation, sight singing, and rhythmic reading. Prerequisite: Placement examination. *1 sem. hr. each*

MUS 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. *3 sem. hrs. each*

MUS 213-214. AURAL SKILLS II: Advanced dictation, sight singing, and rhythmic reading. Prerequisite: MUS 114. *1 sem. hr. 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. Prerequisites: PSY 101, 363.

2 sem. hrs.

MUS 286. INTRODUCTION TO MUSIC THERAPY II: Continuation of MUS 285; orientation to the profession of music therapy through lectures, readings, audiovisual materials, and field trips; emphasis on specific disability areas using music therapy. Prerequisite: MUS 285.

2 sem. hrs.

MUS 287. PRACTICUM IN MUSIC THERAPY I: Pre-internship field experiences with adult mentally ill clients. Corequisite: MUS 286.

1 sem. hr.

MUS 288. PRACTICUM IN MUSIC THERAPY II: Pre-internship field experiences with handicapped children and/or adults. Prerequisite: MUS 280.

1 sem. hr.

MUS 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 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, solfege, 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. VOCAL 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 the teaching of counting, the teaching of breathing and tone production, bowings and articulations, and intonation. 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. MUSIC IN THE ELEMENTARY GRADES: 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.

MUS 390. MARCHING BAND: Plays at all home and some away football games. Its sound finds roots in jazz and rock. All first-year students may participate in any band unit including block, majorettes, and Flyerettes.

0-1 sem. hr.

MUS 390. PEP BAND:

0-1/2 sem. hr.

MUS 390. BRASS CHOIR: Select ensemble of 24 brass and percussion players. Music from Renaissance to present.

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 CHOIR: 0-1 sem. hr.
- MUS 390. JAZZ ENSEMBLE: 0-1 sem. hr.
- MUS 390. JAZZ BAND: 0-1 sem. hr.
- MUS 390. JAZZ COMBO: 0-1/2 sem. hr.
- MUS 390. VOCAL ENSEMBLE: 0-1/2 sem. hr.
- MUS 390. STRING ENSEMBLE: 0-1/2 sem. hr.
- MUS 390. PIANO ENSEMBLE: 0-1/2 sem. hr.
- MUS 390. SMALL BRASS ENSEMBLE: 0-1/2 sem. hr.
- MUS 390. PERCUSSION ENSEMBLE: 0-1/2 sem. hr.
- MUS 390. WOODWIND ENSEMBLE: 0-1/2 sem. hr.
- MUS 390. FLUTE ENSEMBLE: 0-1/2 sem. hr.
- MUS 390. HORN ENSEMBLE: 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 per week) in piano, voice, organ, violin, viola, cello, bass, flute, oboe, clarinet, bassoon, saxophone, trumpet-cornet, French horn, trombone, baritone, tuba, percussion, harp, classical and pick-style guitar, jazz piano improvisation. Prerequisite: Permission of instructor. Fee. 2 sem. hrs.
- MUS 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 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 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 arranging techniques, drill design, the auxiliary units, and the marching band percussion section. 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 season; 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. 1-6 sem. hrs.

MUS 485. PSYCHOLOGICAL FOUNDATIONS OF MUSIC I: Study of the psychosocio-physiological processes involved in responses to music and sound. Acoustical properties of music and physiology of sound perception. Nature of music ability and its measurement. Prerequisites: PSY 101, junior standing in music. 2 sem. hrs.

MUS 486. PSYCHOLOGICAL FOUNDATIONS OF MUSIC II: Introduction to research methods; review of literature on experimental studies. Research project. Prerequisite: MUS 485. 2 sem. hrs.

MUS 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. UNIVERSITY ORCHESTRA: Performing ensemble of string, wind, brass, and percussion players; preparing literature for orchestra and chamber orchestra. Open to all University community members. 0-1 sem. hr.

MUS 492. UNIVERSITY WIND ENSEMBLE: Select band that performs 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.

*General education course. See Chapter V.

MUSIC FEES: The following fees include practice privileges. This fee schedule is subject to change by the Music Division.

	<i>Fee per term</i>
Small group instruction in various instruments (MUS 196-199, 237, 238, 239, 292, 293, 294, 296-299, 336, 337, 338, 339, 392)	\$ 30.00
MUS 399 Performance Studies: One 30-minute lesson weekly	\$ 80.00
MUS 499 Performance Studies: One 60-minute lesson weekly	\$150.00

NMT

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 in the Nuclear Medicine Institute (NMI) at Findlay College, Findlay, OH. The NMI at Findlay College is accredited by the Committee on Allied Health Education and Accreditation (CAHEA). Completion of the fourth-year program qualifies students to take a national examination so as to become certified nuclear medicine technologists (AART—American Registry of Radiologic Technology—and/or NMTCB—Nuclear Medicine Technology Certification Board). The curriculum is planned to meet the requirements of the University of Dayton, the NMI at Findlay College, and the National Accrediting Agency for Clinical Laboratory Sciences (NAACLS). The student must complete the 99 preclinical semester hours before entering a fourth-year program at the NMI.

CLINICAL YEAR

Acceptance into the fourth-year program is competitive. Students make formal applications to the NMI at Findlay College 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, knowledge of the profession, and personal interviews. 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 on the Findlay College campus in Findlay, OH, 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). Thirty or more semester hours of nuclear



medicine courses will be completed in the NMI (at Findlay College and at the hospital affiliate). 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 at Findlay College. 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 and application materials and the Findlay College bulletin.

PROGRAM—S9C: BACHELOR OF SCIENCE WITH A MAJOR IN
NUCLEAR MEDICINE TECHNOLOGY (NMT)¹

<i>Preclinical Years</i>	<i>Semester Hours</i>
Required science courses	54
BIO 151, 152, 309, 403 (with laboratories)	17
CHM 123, 124, 313, 314, 201 (with laboratories) ²	20
MTH 207, 112 ³	6
CPS 144 or equivalent	3
PHY 201, 202 (with laboratories)	8
Communication skills	12
SPE 101	3
ENG 101, 102; ENG elective	9
Philosophy and/or religious studies	12
Humanities electives	9
Social and behavioral sciences (must include MGT 305)	9
General elective	3
Preclinical semester-hour total	99

Clinical Year

NMT semester hours at the NMI and affiliated hospitals 30
(See advisor for term-by-term course listing.)

¹Consult General Requirements for All Bachelor of Science Programs and Chapter V for General Education Requirements.

²Begin in CHM 115 if background is insufficient for CHM 123.

³If background is not suitable for calculus, then substitute MTH 101, Precalculus, for MTH 112.

FACULTY

Charles J. Chantell, *University Program Director*
Clinical Assistant Professors: Bartolomeo, Markon

COURSES OF INSTRUCTION

The courses taken during the first three years at the University of Dayton, listed under Program S9C, are described under the individual departments. The senior year is conducted at affiliated hospitals.

NMT 430. INTRODUCTION TO NUCLEAR MEDICINE TECHNOLOGY SCIENCE: 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, tissue, and organ response 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.*

PERFORMING AND VISUAL ARTS (PVA)

At the University of Dayton, "performing and visual arts" is an umbrella term for music, theatre, fine arts, and photography. The Department of Performing and Visual Arts has four corresponding divisions, operating autonomously and offering major programs in fine arts, visual communication design, interior design, art education, music performance, music theory or composition, music therapy, music education, photography, and theatre. The department also offers a variety of possibilities to students interested in intra-departmental studies.

The Performing and Visual Arts Department holds with a policy of performance and production in all its divisions. Requirements in portfolios, gallery showings, auditions, recitals, large and small ensembles, concerts, and major and experimental productions assure the student of professional as well as academic challenge.

See, elsewhere in this chapter, Fine Arts (ART), Music (MUS), Photography (PHO), and Theatre (THR).



PHILOSOPHY (PHL)

The objective of the philosophy major program is to provide students with the opportunity to understand contemporary philosophy in view of the history of philosophy.

Minor Requirements: Beyond PHL 103, the philosophy minor consists of 15 semester hours of coursework, at least 12 of which must be at the 300-400 level. Of these, at least one course must be at the 400 level in addition to any 490 course that might be taken.

PROGRAM—A14: BACHELOR OF ARTS WITH A MAJOR IN PHILOSOPHY (PHL)¹

	<i>Semester Hours</i>
Philosophy	33
<i>Major Requirements:</i> PHL 103, 201, 431, 432, and choice of 461, 462, 463; one additional 400-level course (may be 490); 15 additional sem. hrs. at the 300-400 level.	
Natural science	7
Mathematics	3
Social and behavioral sciences	12
Humanities	18
Religious studies	9
Foreign language or quantitative skill courses ²	6-8
Communication skills	0-9
General education courses and electives to total at least	120

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

²Either 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.

FACULTY

Lawrence P. Ulrich, *Chairperson*

Distinguished Service Professor: Baker

Professors Emeriti: Dieska, Nersoyan, Rhodes

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

Associate Professors: Johnson, Payne, Quinn, Richards, Vallicella

Assistant Professors: Benson, Butler, Fouke

Instructors: Mullins, Sweet

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 310. SOCIAL PHILOSOPHY: The concepts of liberty, justice, and equality as they relate to social problems such as punishment and rehabilitation, insanity and responsibility, privacy, population regulation, economic injustice, environmental degradation, discrimination, and reverse discrimination. 3 sem. hrs.
- *PHL 311. PHILOSOPHY OF RELIGION: The main issues involved in religious belief and practice, such as the relationship between reason and revelation; critical presentation of views of main writers in the field. 3 sem. hrs.
- *PHL 312. ETHICS: Various types of moral and ethical theory in the Western tradition and major problems such as the extent of human responsibility and the conditions for making ethical judgments. 3 sem. hrs.
- *PHL 313. BUSINESS ETHICS: Review of general ethical theory; ethical assessments of incidents that often occur in commerce affecting employees, employers, consumers, competitors, or the local community. 3 sem. hrs.
- *PHL 314. PHILOSOPHY OF LAW: Major concepts of law to include the nature of law, legal reasoning, liberty, justice, responsibility, punishment. 3 sem. hrs.
- *PHL 315. MEDICAL ETHICS: Introduction to morality in general and inquiry into the major moral problems of medical practice: human life and the preservation of its integrity. 3 sem. hrs.
- *PHL 316. ENGINEERING ETHICS: Introduction to ethical issues in engineering by developing theories of moral justification and codes of ethics for engineers, and by applying these theories and codes to moral issues in engineering. 3 sem. hrs.
- *PHL 317. ETHICS AND NUCLEAR WAR: Study in applied ethics focusing on three aspects of the arms race: declassified data on the reality of the nuclear arms buildup; normative analysis of such themes as war, pacifism, just cause, deterrence, and nuclear proliferation; and moral assessment of alternatives for the future. 3 sem. hrs.
- *PHL 318. FAMILY ETHICS: Introduction to the development of the concept of a family in the tradition of Western philosophy and the philosophic analysis of contemporary ethical problems in marriage and in parenthood. 3 sem. hrs.

- *PHL 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 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 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 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. CLASSICAL ISLAMIC, CHRISTIAN, JEWISH PHILOSOPHY: Major philosophical problems from the 4th through the 16th centuries and their importance in shaping current beliefs and traditions in the Augustinian, Jewish, Islamic, Persian, Thomist, and Oxford cultural settings; human action, conscience, freedom, and law. 3 sem. hrs.
- *PHL 352. MODERN PHILOSOPHY: Development of philosophy in the 17th, 18th and 19th centuries, with emphasis on problems in the theory of knowledge, the philosophy of mind, and the relation between knowledge and human action for their impact on later philosophy. 3 sem. hrs.
- *PHL 353. CONTEMPORARY PHILOSOPHY: A study of some of the major philosophical movements in the 20th century including phenomenology, existentialism, critical theory (Frankfurt School), hermeneutics, and analytic philosophy. 3 sem. hrs.
- *PHL 355. EASTERN PHILOSOPHY: Introduction to the ways of Asian wisdom, considering Oriental philosophy as a specialized learning directed to the attainment of enlightenment and equanimity. 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 431. PLATO AND ARISTOTLE: Study of some philosophical problems raised by Plato and Aristotle and discussed in contemporary philosophy, such as justice and responsibility; certainty and necessity; the cause-reason distinction in explanations; or predication and being. Required of philosophy majors. 3 sem. hrs.
- PHL 432. DESCARTES AND HUME: Study of some philosophical problems raised by Descartes and Hume and discussed in contemporary philosophy, such as origin of ideas, existence of primary and secondary qualities, relationship of mind and body, scientific method, certainty, personal identity, causality. Required of philosophy majors. 3 sem. hrs.
- PHL 440. ADVANCED PROBLEMS IN PHILOSOPHY: Detailed examination of some of the more technical problems of philosophy as well as those problems that arise in interdisciplinary settings upon which philosophers have brought their technical skills to bear. May be repeated when topic varies. 3 sem. hrs.
- PHL 451. SEMINAR IN INDIVIDUAL PHILOSOPHERS: Detailed examination of the thought of an individual philosopher (e.g., Aquinas, Kant, Rawls, Quine) who is of sufficient importance to warrant special study. May be repeated when topic varies. 3 sem. hrs.
- PHL 461. PHILOSOPHICAL SEMINAR — CONTEMPORARY EPISTEMOLOGY: Study of recent philosophical work in the theory of knowledge inclusive of scepticism, knowledge and belief, evidence and justification, theories of perception and knowledge, human interests and valuation. Required of a philosophy major unless PHL 462 or 463 is taken. 3 sem. hrs.
- PHL 462. PHILOSOPHICAL SEMINAR—CONTEMPORARY ETHICS: Study of recent philosophical work in ethics inclusive of an analysis of ethical concepts, theories of normative ethics, theories of human action, and moral justification. Required of a philosophy major unless PHL 461 or 463 is taken. 3 sem. hrs.
- PHL 463. PHILOSOPHICAL SEMINAR — CONTEMPORARY METAPHYSICS: Study of recent work in metaphysics inclusive of the nature of metaphysics, causality, free will and determinism, personal identity and the theory of mind and body. Required of a philosophy major unless PHL 461 or 462 is taken. 3 sem. hrs.
- PHL 490. DIRECTED READINGS: Guided independent study primarily for philosophy majors but open to students who have completed 12 sem. hrs. in philosophy. Normally, 3 sem. hrs., but in certain cases the chairperson may approve 1, 2, or 4 sem. hrs. May be repeated when topic varies. Prerequisite: Permission of the instructor and the chairperson. 3 sem. hrs.

PHOTOGRAPHY (PHO)

The two programs in photography offer many approaches in preparation for careers in art, journalism, advertising, illustration, science, medicine, and many other fields which employ visual communications. Each student, in consultation with photography faculty, selects a program leading to either a Bachelor of Arts or a Bachelor of Fine Arts. The B.A. program emphasizes a traditional liberal arts background. The B.F.A. allows for a higher concentration within photography and related disciplines. Electives allow students to pursue individual interests and goals.

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

PROGRAM—A15: BACHELOR OF ARTS WITH A MAJOR IN PHOTOGRAPHY (PHO)¹

	<i>Semester Hours</i>
Photography requirements and electives	42
PHO 101, 201, 302, 315, 330, 410, 460, 461	24
ART 112	3
Select one: ART 103, 104, 216, 226, 253, 254	3
Program electives	12
Natural science	7
Mathematics	3
Social and behavioral sciences	12
Humanities	18
Philosophy and/or religious studies	12
Communication skills: SPE 101; ENG 101-102 or 114 or 198	0-9
General education courses and academic electives to total at least	120

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

PROGRAM—A16: BACHELOR OF FINE ARTS WITH A MAJOR IN PHOTOGRAPHY (PTY)¹

	<i>Semester Hours</i>
Photography requirements and electives	78
PHO 101, 201, 302, 310, 315, 330, 402, 410, 415, 460, 461	33
Select one: PHO 320, 321, 322	3
ART 112, 472	6
Select one: ART 103, 104	2-3
Select one: ART 216, 226, 253, 254	3
Program electives	30-31
Natural science	7
Mathematics	3
Social and behavioral sciences	6
Humanities	15
Philosophy and/or religious studies	12

Communication skills: SPE 101; ENG 101-102 or 114 or 198	0-9
General education courses and academic electives to total at least	130

¹See Chapter V for General Education Requirements.

FACULTY

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

Sean Wilkinson, *Head of Photography Division*

Professor: Wilkinson

Associate Professor: Teemer

Assistant Professor: Wilbers

Part-time Instructors: Grant, Peterson, Witt

COURSES OF INSTRUCTION

PHO 101. BASIC PHOTOGRAPHY: Fundamentals of black-and-white still photography: camera function, exposure, film processing, and printing. Emphasis on gaining sound technical and creative control of the medium. No previous experience required. Studio fee. *3 sem. hrs.*

PHO 201. INTERMEDIATE PHOTOGRAPHY: Specific projects to increase technical competence and expand visual awareness. Exposure, film processing and printing variables, basic lighting, and view camera controls. Prerequisite: PHO 101 or equivalent. Studio fee. *3 sem. hrs.*

PHO 240. INTRODUCTION TO DIGITAL IMAGERY: Theory and practice of computer videographic digitizing techniques using pre-existing images for enhancement and manipulation. No prior knowledge of computers is required. Studio fee. *3 sem. hrs.*

PHO 250. CREATIVE PHOTOGRAPHY GALLERY: First-hand experience in operating a photography gallery of sound reputation. Selecting and hanging exhibits, correspondence with photographers represented, production of publicity material. *2 sem. hrs.*

PHO 302. COLOR PHOTOGRAPHY I: Introduction to theory and techniques of color transparency, color negative, and color printing. Individual practice in lighting, color emulsions, filtration, and corrections. Prerequisite: PHO 201. Studio fee. *3 sem. hrs.*

PHO 310. SLIDE-TAPE PRODUCTION: Use of black-and-white or color transparencies, theory, copy techniques, masking, mounting, titling, storyboard techniques, and sound recording and editing techniques. Students produce slide tape shows using projectors, dissolve units, and audio equipment. Prerequisite: PHO 101 or permission. Studio fee. *3 sem. hrs.*

PHO 315. HISTORY OF PHOTOGRAPHY: The cultural, social, and aesthetic history of photography, from the camera obscura through the 1930s; changing perception of the medium and its development as an art form and as social document. Film rental fee. *3 sem. hrs.*

PHO 320. STUDIO LIGHTING: Extensive practical experience in both tungsten and electronic flash lighting techniques. Still-life and portrait photography. Prerequisite: PHO 201. Studio fee. *3 sem. hrs.*

PHO 321. STILL-LIFE PHOTOGRAPHY: Tungsten and electronic flash lighting techniques in the studio. Large and medium format cameras; primarily black and white films. Prerequisite: PHO 201. Studio fee. *3 sem. hrs.*

PHO 322. PORTRAIT PHOTOGRAPHY: Studio and outdoor portrait and fashion techniques with natural, tungsten, and electronic flash lighting; all camera formats; personal and formal approaches. Prerequisite: PHO 201. Studio fee. *3 sem. hrs.*

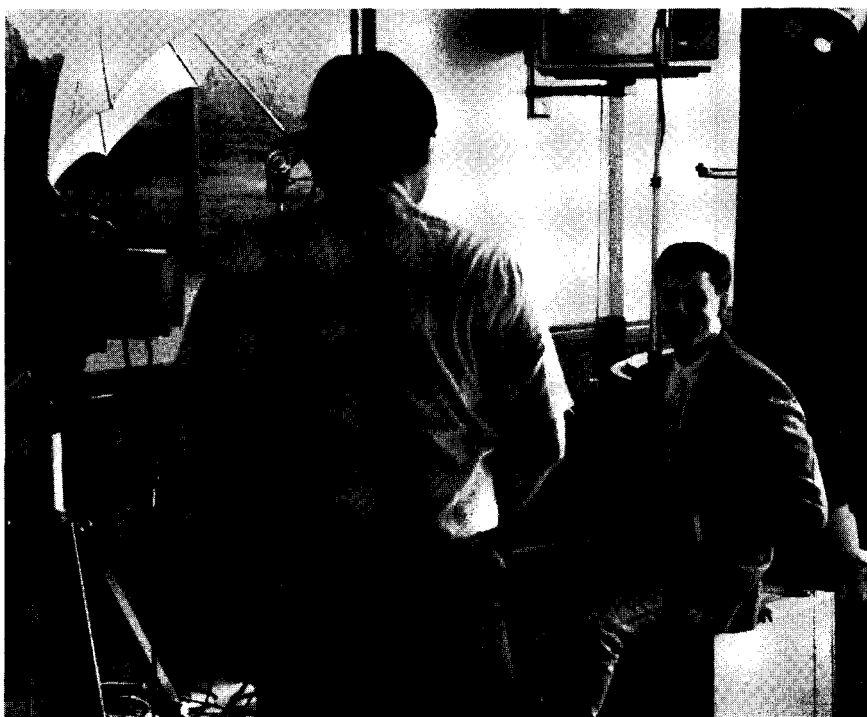
PHO 330. PHOTOGRAPHIC TECHNIQUES: Advanced and specialized darkroom techniques including alternative processes. Graphic arts materials and variations of silver processes utilized to create and manipulate imagery. Prerequisite: PHO 201. Studio fee. *3 sem. hrs.*

PHO 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: PHO 330. Studio fee. *3 sem. hrs.*

PHO 350. VIEW CAMERA AND ZONE SYSTEM: Extensive experience with the view camera, examination of refined techniques, various applications, and concepts of large format photography. Prerequisite: PHO 201. Studio fee. *3 sem. hrs.*

PHO 380. BIO-MEDICAL PHOTOGRAPHY INTERNSHIP I: The first half of a full year's commitment to thorough training in the work of the bio-medical photographer. Practical experience at a local hospital. See also PHO 480. Prerequisites: PHO 201, 302, 320, 410, 420. Studio fee. *3 sem. hrs.*

PHO 390. SPECIAL PROBLEMS IN PHOTOGRAPHY: Series of assignments to guide independent study in photography, formulated to meet individual needs of the student. Prerequisites: PHO 201 and permission. Studio fee. *1-5 sem. hrs.*



PHO 402. **COLOR PHOTOGRAPHY II:** Further study of the techniques and aesthetics peculiar to color photography. Straightforward and manipulated printing methods; masking, color analysis, chemical variations, and alternative processes such as dye transfer. Prerequisite: PHO 302. Studio fee. 3 sem. hrs.

PHO 410. **ADVANCED PHOTOGRAPHY:** Students with a substantial commitment to photography and with demonstrated technical skills work on individual projects and participate in group critiques and discussion. Prerequisites: PHO 201, 302, 315. Studio fee. 3 sem. hrs.

PHO 412. **ADVANCED AUDIO-VISUAL PRODUCTION:** Techniques and methods in the production of professional quality slide and tape presentations. Advanced skill development and theory. Prerequisite: PHO 310. Studio fee. 3 sem. hrs.

PHO 415. **RECENT HISTORY OF PHOTOGRAPHY:** The many directions of creative, documentary, and illustrative photography from the end of World War II to the present. Prerequisite: PHO 315. 3 sem. hrs.

PHO 420. **PHOTOJOURNALISM:** A variety of ways of using photography as documentation, narrative, and propaganda. Editing of work, layout, and image-text relationships. Personal photographic essay required. Prerequisite: PHO 201. Studio fee. 3 sem. hrs.

PHO 425. **ADVANCED PHOTO JOURNALISM:** Continued study of photography in the printed news media. Assignments based on actual working situations; emphasis on professional capabilities. Prerequisite: PHO 420. Studio fee. 3 sem. hrs.

PHO 430. **COMMERCIAL AND ILLUSTRATIVE PHOTOGRAPHY:** Commercial, industrial, architectural, and illustrative photographic work both in the studio and on location. Individual practice in solving problems associated with professional photography. Prerequisites: PHO 320 and permission. Studio fee. 3 sem. hrs.

PHO 435. **ADVANCED COMMERCIAL PHOTOGRAPHY:** Further development of skills and content introduced in PHO 430. More detailed and sophisticated aspects of photographic illustration and commercial photography. Prerequisite: PHO 430. Studio fee. 3 sem. hrs.

PHO 450. **PHOTOGRAPHY INTERNSHIP:** Practical applications of photographic skills. Opportunities for advanced development and practical experience in professional working environments. Repeatable up to 9 sem. hrs. 1-3 sem. hrs.

PHO 460-461. **SENIOR SEMINAR:** Each senior photography major completes a thesis-like body of work. Detailed individual critiques. Requirements include participation in a group exhibition in a recognized gallery and completion of a professional-quality portfolio. Studio fee. 3 sem. hrs. each

PHO 480. **BIO-MEDICAL PHOTOGRAPHY INTERNSHIP II:** The second half of a full year's commitment to thorough training in the work of the bio-medical photographer. Practical experience at a local hospital. See PHO 380. Prerequisites: PHO 201, 302, 320, 380, 410, 420. Studio fee. 3 sem. hrs.

Photography studio fees—\$60-\$80
Film rental fees—\$15

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—S10: BACHELOR OF SCIENCE WITH A MAJOR IN PHYSICAL SCIENCE (PSC)¹

	<i>Semester Hours</i>
Basic physics: PHY 206, 207, 208, 210L, 211L, 214	13
Basic chemistry: CHM 123, 123L, 124, 124L	8
Basic geology: GEO 115, 115L, 116, 116L	8
Basic mathematics: MTH 101, 118, 119, 218, 219	19
Upper-level physical sciences (at least 12 sem. hrs. in physics)	24
Philosophy and/or religious studies	12
Humanities	9
Social and behavioral sciences	6
Communication skills: ENG 101, 102; SPE 101; CPS 132 or 144	3-12
General education courses and academic electives to total at least	120

¹Consult 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.

PROGRAM—S11: BACHELOR OF SCIENCE WITH A MAJOR IN PHYSICS (PHY)¹

	<i>Semester Hours</i>
Physics	37
Basic courses: PHY 206, 207, 208, 210L, 211L, 214	13
PHY 301, 303, 314, 390, 408, 430, 431, and 300-400-level electives	24
Mathematics: MTH 118, 119, 218, 219, 302	18
Chemistry: CHM 123, 124, and associated laboratory	8
Philosophy and/or religious studies	12
Humanities	9
Social and behavioral sciences	6
Communication skills: ENG 101, 102; SPE 101; CPS 132 or 144	3-12
Minor (300-400-level courses) if chosen	12
General education courses and academic electives to total at least	120

¹Consult 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: Erdei, Kangarlu, 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 109. SCIENCE AND UNDERSTANDING: Directed readings, discussions, lectures, and the viewing of *Cosmos*, a film series using astronomy as a unifying theme, to gain insight into the nature of science as a human endeavor. For nonscience students. Prerequisite: None.

3 sem. hrs.

*PHY 151-152. CONCEPTS IN PHYSICS: Basic background and appreciation of physics principles and concepts using a minimum of mathematical formalism; development of skills and knowledge to appreciate the place of science in contemporary society. For nonscience students. Prerequisite: None.

1-4 sem. hrs. each

PHY 150L. PHYSICS LABORATORY: Laboratory experiences to accompany 100-level physics lecture courses. Corequisite: A physics course.

1 sem. hr.

*PHY 201. GENERAL PHYSICS: Topics from mechanics, thermal and mechanical properties of matter, wave motion and sound, and electricity without the formalism of calculus. First term each year.

3 sem. hrs.

PHY 201L. GENERAL PHYSICS LABORATORY: Introductory laboratory appropriate for students of the health sciences. Experimental scientific techniques and the use of standard laboratory equipment. One two-hour period per week. First term each year. Corequisite: PHY 201 or 206.

1 sem. hr.

*PHY 202. GENERAL PHYSICS: Continuation of PHY 201 with a treatment of electricity and magnetism, wave motion and properties of light, atomic and nuclear physics. Prerequisite: PHY 201. Second term each year.

3 sem. hrs.

PHY 202L. GENERAL PHYSICS LABORATORY: Experimental scientific techniques and the use of standard laboratory equipment. One two-hour period per week. Second term each year. Prerequisite: PHY 201L.

1 sem. hr.

*PHY 203. MODERN TECHNICAL PHYSICS: Introduction to selected topics in modern physics without the formalism of calculus. For engineering technology students. Prerequisites: Trigonometry, college algebra, and introductory statics and dynamics.

3 sem. hrs.

PHY 203L. TECHNICAL PHYSICS LABORATORY: Laboratory experiences to accompany PHY 203.

1 sem. hr.

PHY 204. INTRODUCTION TO MEDICAL ELECTRONIC INSTRUMENTATION: 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 per week. Corequisite: MTH 118 or 112. *3 sem. hrs.*
- *PHY 206H. GENERAL PHYSICS I—MECHANICS (HONORS): Introductory course in mechanics for students with a strong background in physics. Three lectures, one recitation per week. By invitation only. *3 sem. hrs.*
- *PHY 207. GENERAL PHYSICS II—ELECTRICITY AND MAGNETISM: The basic principles of electricity and magnetism. Three lectures, one recitation per week. Prerequisites: PHY 206 or 201, MTH 118 or 113. *3 sem. hrs.*
- *PHY 207H. GENERAL PHYSICS II—ELECTRICITY AND MAGNETISM (HONORS): Basic principles of electricity and magnetism. Three lectures, one recitation per week. By invitation only. *3 sem. hrs.*
- *PHY 208. GENERAL PHYSICS III—MECHANICS OF WAVES: Introduction to wave phenomena (including sound, light, and matter waves) leading to basic concepts in modern physics. Prerequisites: PHY 207, MTH 119; or PHY 202, MTH 113. *3 sem. hrs.*
- *PHY 208H. GENERAL PHYSICS III—MECHANICS OF WAVES (HONORS): Introduction to modern physics through a study of wave phenomena including sound, light, and matter waves. By invitation only. *3 sem. hrs.*
- PHY 210L. GENERAL PHYSICS LABORATORY I: Introduction to laboratory methods, handling of data, and analysis of results. Experiments appropriate to the background of students with an interest in mathematical and physical sciences. Two hours laboratory, one hour recitation per week. Corequisite: PHY 206. *1 sem. hr.*
- PHY 211L. GENERAL PHYSICS LABORATORY II: Laboratory methods, data handling, and analysis of results. Experiments appropriate to the background of students with an interest in mathematical and physical sciences. Two hours laboratory, one hour recitation per week. Prerequisite: PHY 210L. *1 sem. hr.*
- PHY 214. ELECTRONICS FOR SCIENTISTS I: Introduction to electronic circuits with a consideration of D.C. and A.C. circuit analysis, diodes, bipolar and field-effect transistors, and other semiconductor circuit devices. Demonstrations and bench-top experience. Prerequisite: PHY 211L or 202L, or equivalent. *2 sem. hrs.*
- *PHY 250. DESCRIPTIVE ASTRONOMY: Descriptive survey for students who have had little or no previous exposure to astronomy; material from ancient times to present, including pulsars and quasi-stellar objects. Prerequisite: None. *3-4 sem. hrs.*
- PHY 299. SPECIAL PROBLEMS: Special topical courses, laboratory, tutorial, or library work in areas of current interest. Students should consult the composite. *1-4 sem. hrs.*
- PHY 301. THERMAL PHYSICS: Thermodynamical descriptions of many particle systems obtained from microscopic statistical considerations; laws of thermodynamics, kinetic theory of dilute gases, and Fermi-Dirac and Bose-Einstein statistics. Corequisite: MTH 219. Prerequisite: PHY 208. *3 sem. hrs.*
- PHY 303. INTERMEDIATE MECHANICS I: The fundamental concepts of mechanics: virtual work, kinematics, special theory of relativity. Lagrange's equation and central forces, particle dynamics. Corequisite: MTH 219. Prerequisite: PHY 208. *3 sem. hrs.*

PHY 314. ELECTRONICS FOR SCIENTISTS II: Continuation of PHY 214; thyristors such as SCR, linear IC, digital IC, and other discrete and integrated semiconductor circuit devices. Demonstrations and bench-top experience. Prerequisite: PHY 214.

2 sem. hrs.

PHY 321. ATOMIC AND NUCLEAR PHYSICS: Concepts and models of the structure of matter; atoms, ions, electrons and nuclei, radioactivity, interactions of radiation with matter, particle detection, accelerators, nuclear models, nuclear reactions and processes, and fundamental particles. Prerequisite: PHY 208 or consent of instructor.

3 sem. hrs.

PHY 390. INTRODUCTION TO QUANTUM MECHANICS: Basic postulates of quantum mechanics with applications made to atomic physics. Prerequisites: PHY 208, MTH 219, 302.

3 sem. hrs.

PHY 395. RESEARCH PARTICIPATION I: Individual projects conducted as part of the physics Undergraduate Research Participation program to encourage involvement of students with faculty researchers. Projects must be arranged in advance with faculty research directors.

1-6 sem. hrs.

PHY 399. SPECIAL PROBLEMS IN (NAMED AREA): Special topical courses, laboratory, tutorial, or library work in areas of current interest. Students should consult the composite.

1-4 sem. hrs.

PHY 403. INTERMEDIATE MECHANICS II: Emphasis on solving physical problems; noninertial coordinate systems, rigid body motion, rotating systems, coupled systems, introductory fluid statics and dynamics, normal coordinates, and the descriptions of mechanics appropriate for the transition to wave mechanics. Prerequisite: PHY 303.

3 sem. hrs.

PHY 404. PHYSICAL OPTICS: The electromagnetic wave theory of light, propagation of waves, reflection, refraction, dispersion, polarization, dichroism, birefringence, superposition of waves, interference, diffraction, Fourier optics. Prerequisites: PHY 208, MTH 219.

3 sem. hrs.

PHY 408. INTERMEDIATE ELECTRICITY AND MAGNETISM I: Electrostatics, Coulomb's law, Gauss's law, potential, dielectric materials, electrostatic energy, solutions to Laplace's and Poisson's equations, Biot-Savart law, Faraday induction law, magnetization, and Maxwell's equations. Prerequisites: PHY 208, MTH 219.

3 sem. hrs.

PHY 409. INTERMEDIATE ELECTRICITY AND MAGNETISM II: Further study of electric and magnetic fields with emphasis on solving problems; Maxwell's equations, propagation of electromagnetic waves, electromagnetic radiation. Prerequisite: PHY 408.

3 sem. hrs.

PHY 420. INTRODUCTION TO SOLID STATE: Classification of solids, crystals and crystal structures, survey of lattice properties, free electron theory, band theory of solids, semi-conductors, and crystal imperfections. Prerequisites: PHY 208, MTH 219.

3 sem. hrs.

PHY 430-431-432-433. ADVANCED LABORATORY: Experimental investigations based on principles from atomic and nuclear physics, electricity and magnetism, modern and classical optics, mechanics, solid state, cryogenics, x-ray diffraction, surface physics, or electronics. Not all experiments available every semester; consult chairperson for details. Prerequisite: PHY 214. Corequisite: An advanced course in physics.

2 sem. hrs. each

PHY 440. QUANTUM MECHANICS II: Study of selected principles in quantum mechanics. Prerequisite: PHY 390. 3 sem. hrs.

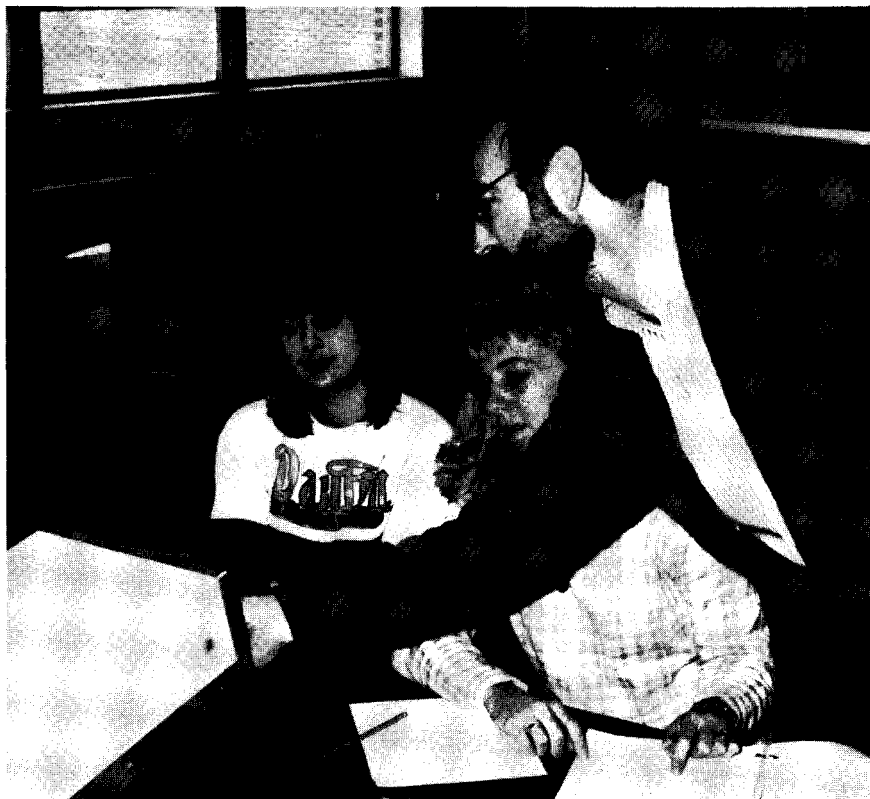
PHY 441. TOPICS IN MODERN PHYSICS: Elements of modern optics, solid state, and other selected subjects. Consult chairperson for details. Prerequisite: PHY 390 or equivalent. 3 sem. hrs.

PHY 460. SEMINAR: Presentation of papers by undergraduate students, faculty, and guest lecturers on topics of concern to the modern physicist. Reviews of books and films appropriate to the group. 1 sem. hr.

PHY 495. RESEARCH PARTICIPATION II: Individual projects conducted as part of the physics Undergraduate Research Participation program to encourage involvement of students with faculty researchers. Projects must be arranged in advance with faculty research directors. 1-6 sem. hrs.

PHY 499. SPECIAL PROBLEMS IN (NAMED AREA) (HONORS): Laboratory, tutorial, or library work in one of such selected topics as solid state physics, polymers, atomic and nuclear physics, modern optics, theoretical physics, surface physics, or general physics. Prerequisite: Permission of department chairperson. 1-6 sem. hrs.

*General education course. See Chapter V.



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.

PROGRAM—A17: BACHELOR OF ARTS WITH A MAJOR IN POLITICAL SCIENCE (POL)¹

	<i>Semester Hours</i>
Political science	36
POL 201, 202 or 214, 207, 317, 421, and 21 additional sem. hrs. including 18 sem. hrs. at the 300-400 level (Students in the pre-law concentration may replace POL 207 with ACC 207-208 or ACC 301-302.)	
Natural science	7
Mathematics	3
Social and behavioral sciences	12
Humanities	18
Philosophy and/or religious studies	12
Communication skills: ENG 101, 102; SPE 101	0-9
General education courses and academic electives to total at least	120

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

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 pre-law, international affairs, public administration and urban affairs, and political journalism developed by the Department of Political Science. A student completing an area concentration will receive a certificate to that effect from the department.

	<i>Semester Hours</i>
1. Pre-Law	
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 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 335; SOC 328; ENG 370 or 372; ECO 445 or 485; POL 495	9

4. Political Journalism

Required: POL 303, 311; JRN 206	9
Choose three: COM 120; SPE 301; JRN 301, 303; POL 360, 450	9

FACULTY

Gerald E. Kerns, *Chairperson*

Professor Emeritus: Patyk

Professors: Kerns, Lapitan

Associate Professors: Ahern, Fogel, Karns

Assistant Professors: Bilocerkowycz, Ensalaco, Ghery, Inscho, Nelson

Adjunct Assistant Professors: Durfee, Hillman, Kappeler

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 GOVERNMENT AND POLITICS: Comparative study of the political institutions, processes, and systems of the fifty states and their effect on the content and administration of selected public policies, programs, and services. 3 sem. hrs.

POL 305. INTRODUCTION TO PUBLIC ADMINISTRATION: Basic principles of organization and management in executive departments of government at all levels; questions of planning, leadership, and control. 3 sem. hrs.

POL 306. PUBLIC POLICY ANALYSIS: Introduction to public policy-making systems and the methodology of policy analysis; theories of policy formulation, the policy-making process, means for measuring policy effectiveness, analysis of proposals for policy change. 3 sem. hrs.

POL 310. PARTIES AND INTEREST GROUPS: Descriptive analysis of the nature and interaction of parties and interest groups, and their role in the American political system. 3 sem. hrs.

POL 311. PUBLIC OPINION AND POLITICAL BEHAVIOR: The formation, maintenance, change, and impact of public opinion in the American political system; the role of theory and analysis of data in understanding public and political behavior. *3 sem. hrs.*

POL 313. THE AMERICAN PRESIDENCY: Study of the American presidency, the development of presidential powers, and its leadership role in the political system. *3 sem. hrs.*

POL 317. DEVELOPMENT OF POLITICAL THEORY: Analysis of selected theorists and political doctrines forming the tradition of Western thought on politics. 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 320-327. COMPARATIVE POLITICS: Analysis of governmental institutions and political processes of selected countries in each of the following areas:

POL 320—Western Europe

POL 326—Africa

POL 321—Soviet Union

POL 327—Southern Europe

POL 323—Latin America

POL 328—China

POL 324—Southern Asia

POL 329—Japan

POL 325—The Middle East

3 sem. hrs. each

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 360. URBAN POLITICS: Study of the nature of urban political systems in the U.S. with emphasis on explanation of differences in their policy responses. *3 sem. hrs.*

POL 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 substances of American foreign policy. *3 sem. hrs.*

POL 409. SOVIET FOREIGN POLICY: Examination of the U.S.S.R.'s relations with the Communist world, the Third World, and the West and of the factors shaping Soviet external behavior. *3 sem. hrs.*

POL 410. COMPARATIVE FOREIGN POLICY: Comparative analysis of the foreign policies of major states with emphasis on the process of policy development and on the national and international determinants of policy behaviors. *3 sem. hrs.*

POL 411. CONSTITUTIONAL LAW: Analysis of the role of the U.S. Supreme Court in its interpretation of the Constitution. Emphasis on the various methods of judicial interpretation as they affect such provisions as the commerce clause, the taxing and spending powers, due process, the dimensions of presidential and congressional authority, and the doctrine of judicial review. *3 sem. hrs.*

POL 413. THE POLITICS OF BUREAUCRACY AND REGULATION: Examination of the nature and meaning of bureaucracy in contemporary American society and the devices for its evaluation and control. *3 sem. hrs.*

POL 414. LEGISLATIVE POLITICS: Study of the U.S. Congress, its organization and procedures, and its powers and influence in the political system. *3 sem. hrs.*

POL 421. SEMINAR IN POLITICAL SCIENCE: Seminar on current problems and issues in political science. May be taken more than once when content changes. Prerequisite: Permission of professor. *3 sem. hrs.*

POL 431. INDEPENDENT STUDY AND RESEARCH: Individual reading and research on selected topics under faculty direction. Recommended for seniors only. Prerequisite: Permission of professor. *3 sem. hrs.*

POL 437. PROBLEMS IN INTERNATIONAL POLITICS: Focus on selected problems in international politics such as the causes of war, negotiation, the Middle East, and the North-South conflict. May be repeated as the topic changes. Prerequisite: POL 214 or permission. *3 sem. hrs.*

POL 450. CIVIL LIBERTIES: Analytical examination of civil liberties in the U.S. with emphasis on the Supreme Court as arbiter in the endless conflict between the demand for individual liberty and the needs of constitutional authority. *3 sem. hrs.*

POL 452. POLITICAL VIOLENCE: Consideration of theoretical approaches to understanding violent change in political institutions; the continuum between violence and nonviolence; 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. THEORY AND PRACTICE OF COMMUNISM: Analysis of the development of Communist theory and practice with emphasis on the Soviet Union, China, and Yugoslavia. *3 sem. hrs.*

POL 456. THEORY AND PRACTICE OF FASCISM: The psychological and attitudinal elements of fascism; its manifestations in Italy, Germany, Spain, France, and Austria; its relevance as a political phenomenon today. *3 sem. hrs.*

POL 457. POLITICAL CHANGE IN THE THIRD WORLD: Analysis of the concepts of development and change within the context of Third World nations; emphasis on the impact of modernization on political processes and change. *3 sem. hrs.*

POL 475. AMERICAN POLITICAL THOUGHT: Ideas that have shaped the American political system: Puritanism, the American Revolution, Hamiltonianism, Jeffersonianism, racism, nativism, social Darwinism, the New Deal, and contemporary liberalism and conservatism. *3 sem. hrs.*

POL 479. SELECTED TOPICS IN PUBLIC POLICY: Intensive examination of policy process, outcomes, and impact in an area or areas of American public policy selected by the instructor; such topics as transportation, education, welfare, national defense, urban and community development, civil rights, and science and technology. May be repeated once when topic changes. *3 sem. hrs.*

POL 495. INTERNSHIP: Supervised experience in government agencies and programs. Pre-law students are assigned to law firms and judicial chambers. Prerequisite: Permission of supervising professor. *3 sem. hrs.*

*General education course. See Chapter V.

PREMEDICINE (MED) AND PREDENTISTRY (DEN)

Students who intend to continue their education at the professional school level (medical, dental, osteopathic) should choose undergraduate majors that hold the greatest interest for them. The minimum academic requirements for admission to professional schools are met by a number of degree programs at the University of Dayton. Students with strong interests in biology or chemistry should enroll in Program S1 (B.S. in Biology) or Program A2 (B.A. in Chemistry) or S2 (B.S. in Chemistry). From an academic standpoint students in these and other science programs are as fully qualified for admission to professional schools as are those students who follow the formal premedicine-predentistry curriculum. These students may utilize all the premedical counseling and advisory facilities available at the University. However, in order to receive adequate counseling, they must declare their professional school intentions to a premedical-predental advisor as early as possible. (See list of advisors below.)

Program S12, the B.S. for premedical and predental students, is recommended for (1) students who have no strong interest in a conventional major and (2) students who wish to follow an abbreviated program before entering schools of allied health. The full four-year program meets the admission criteria (required and recommended courses) of all approved medical and dental schools. In addition to the basic sciences, it includes courses in the humanities and the social sciences. Students contemplating a career in medicine or dentistry should realize that preference is given to candidates who have the most complete education, as well as good scholastic standing. Program S12 offers a maximum choice of science and nonscience electives. Premedical-predental students can change to biology or (B.A.) chemistry majors during the junior year without any loss of semester hours.

The Premedical-Predental Faculty Committee is responsible for curriculum requirements, program changes, course advising, general counseling, and the preparation of recommendation letters that are required of all applicants to the health professional schools.

A chapter of the National Premedical Honor Society, Alpha Epsilon Delta, is established on campus. Both the Medical College Admissions Test and the Dental Aptitude Testing Program are usually administered on campus each spring and fall. All prospective medical, dental, and osteopathic school applicants must take these tests, usually in the spring of the junior year. Information about these tests may be obtained from the premedical-predental office.

The increasingly high admission standards for professional schools make it imperative that the premedical and predental student give full time to study. The undergraduate cumulative grade-point average is an important criterion in gaining admission to a professional school. The minimum acceptable cumulative average for most medical and dental schools is over 3.0. For this reason, the Premedical-Predental Faculty Committee conducts a sophomore evaluation of all students enrolled in Program S12. Any student whose cumulative average after two years is below 2.8 will be advised to consider changing his or her major.

PROGRAM—S12: BACHELOR OF SCIENCE WITH A MAJOR IN
PREMEDICINE (MED) OR PREDENTISTRY (DEN)¹

	<i>Semester Hours</i>
Required science courses	45
BIO 151, 152, 152L, 201L	8
CHM 123, 124, 313, 314, 201 (all with laboratories) ²	20
CPS 144 or equivalent	3
MTH 112, 113 ³	6
PHY 201, 201L, 202, 202L ⁴	8
Elective science courses	15
Five lecture courses chosen from BIO, CHM, CPS, MTH, PHY. These must be directly related to the primary field of interest. Laboratory sections must accompany two of the courses.	
Communication skills	15
SPE 101	3
ENG 101, 102; ENG elective	9
Philosophy and/or religious studies	15
Humanities electives	15
A modern foreign language is strongly recommended.	
Social and behavioral sciences	15
General electives	15
Minimum total semester hours	120
(See advisors for term-by-term course listings.)	

¹Consult General Requirements for all Bachelor of Science Programs and Chapter V for General Education Requirements.

²Begin in CHM 115 if background is insufficient for CHM 123.

³Normal sequence is MTH 112-113. If placement requires precalculus, then sequence will be MTH 101-112. Well qualified students are strongly advised to elect MTH 118-119.

⁴Well qualified students are strongly advised to take PHY 206-207-208 lecture with PHY 201-202 laboratories.

PREMEDICAL-PREDENTAL FACULTY COMMITTEE

Charles J. Chantell (Biology), *Committee Chairperson*
Giffin (Biology), Graham (Physics), Michaelis (Chemistry), Ramsey (Biology)
Schraut (Mathematics), Singer (Chemistry)

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.

PROGRAM—A18: BACHELOR OF ARTS WITH A MAJOR IN PSYCHOLOGY (PSY)¹

	<i>Semester Hours</i>
Psychology requirements and electives	34
PSY 101, 216 ² , 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	3
Social and behavioral sciences	12
Humanities	18
Philosophy and/or religious studies	12
Communication skills: SPE 101; ENG 101-102 or 114 or 198	0-9
General education courses and academic electives to total at least	120

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

²May substitute MTH 207 or 215 for PSY 216.

PROGRAM—S13: BACHELOR OF SCIENCE WITH A MAJOR IN PSYCHOLOGY (PSS)¹

	<i>Semester Hours</i>
Psychology requirements and electives	34
PSY 101, 216 ² , 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 ³	24
MTH 112, 113 ⁴	6
Humanities	9
Social and behavioral sciences	6
Philosophy and/or religious studies	12
Communication skills: SPE 101; ENG 101-102 or 114 or 198	0-9
General education courses and academic electives to total at least	120

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

²May substitute MTH 207 or 215 for PSY 216.

³Two 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.

⁴May substitute MTH 101 for MTH 112 and MTH 112 for MTH 113.

FACULTY

Kenneth J. Kuntz, *Chairperson*

Professors: Butter, DaPolito, Kimble, Polzella

Associate Professors: Allik, Berg, Biers, Bower, Eggemeier, Fine, Katsuyama, Korte, Kuntz

Assistant Professor: Roberson

Adjunct Faculty: Kennedy, Seifer, Mandryk

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 107 or equivalents. 3 sem. hrs.

PSY 217. **EXPERIMENTAL PSYCHOLOGY:** Basic concepts of scientific methods as applied to psychological problems. Experiments to familiarize students with application of scientific methodology to study of human psychological processes. Required of all psychology majors. Prerequisites: PSY 101, 216. 4 sem. hrs.

PSY 251. **HUMAN GROWTH AND DEVELOPMENT:** Focuses on stages of human development from infancy through the aging adult. Emphasis is on various theoretical approaches and the development associated with each stage. Psychology majors may not take for credit toward major. Prerequisite: PSY 101. 3 sem. hrs.

PSY 321. **COGNITIVE PROCESSES:** Information-processing approach to attention, perception, memory, imagery, and thought. Theoretical structures including neuron modeling of higher cognitive and experimental process. Prerequisite: PSY 101. 3 sem. hrs.

PSY 322. **LEARNING:** Foundations of the learning process. Classical 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 nonverbal behavior, social exchange, self-disclosure, and interpersonal attraction and how these are related to developing relationships. Prerequisite: PSY 101. *3 sem. hrs.*

PSY 351. **CHILD PSYCHOLOGY:** Study of psychological processes from the developmental point of view; changes in perception, cognition, emotion, and social behavior from infancy to adolescence. Prerequisite: PSY 101. *3 sem. hrs.*

PSY 352. **FIELD EXPERIENCE IN CHILD PSYCHOLOGY:** Practical experience with a community agency providing instructional, recreational, or therapeutic services. Volunteer 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. *3 sem. hrs.*

PSY 361. **PERSONALITY:** Introduction to the study of personality through theoretical views and clinical and experimental findings. Prerequisite: PSY 101. *3 sem. hrs.*

PSY 363. **ABNORMAL PSYCHOLOGY:** Patterns of disordered behavior; social, psychological, and physiological factors; theoretical explanations of abnormal behavior. Prerequisite: PSY 101. *3 sem. hrs.*

PSY 364. **PSYCHOTHERAPY:** Survey of current types of psychotherapy. Emphasis on similarities and differences in underlying theories of behavioral change and associated techniques. Prerequisite: PSY 101. *3 sem. hrs.*

PSY 367. **BEHAVIOR MODIFICATION:** Description of approaches to the modification of behavior integrating material from learning theory, abnormal behavior, and psychotherapy. Prerequisite: PSY 322 or equivalent. *3 sem. hrs.*

PSY 368. **INTRODUCTION TO HEALTH PSYCHOLOGY:** Psychosocial aspects of health, illness, and medical care. Topics such as stress, lifestyle risk factors, prevention, diseases of adaptation (e.g., cancer, cardiovascular), chronic pain, and psychological interventions for psychological health. Prerequisite: PSY 101. *3 sem. hrs.*

PSY 405. COMPUTER APPLICATION IN PSYCHOLOGY: Review of basic computing concepts and a computer language (BASIC, FORTRAN or Pascal). Use of computers by psychologists in statistical analysis, in everyday work, in the study of psychological principles; application of psychology to the design of computer systems. Prerequisites: PSY 101, CPS 144 or 150; or permission of instructor. Majors only.

3 sem. hrs.

PSY 422. PHYSIOLOGICAL PSYCHOLOGY: Neurophysiological analysis of attention, sensation, perception, emotion, motivation, and learning. Electrophysiological methods are discussed. Prerequisite: PSY 101.

3 sem. hrs.

PSY 423. COGNITIVE NEUROPSYCHOLOGY: Relationship between diseases of the central nervous system and cognitive disorders; aphasic disorders of language and speech; disorders of perception; disorders associated with brain damage. Prerequisite: PSY 101 or permission of instructor.

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 452. COGNITIVE DEVELOPMENT IN CHILDREN: Major approaches to the study of cognitive development; attentional and mediational development in children's learning, memory, and problem solving; language development and Piaget's theory. Prerequisite: PSY 351 or permission of instructor. (Also PSY 574.)

3 sem. hrs.

PSY 457. TELEVISION AND ITS EFFECTS ON CHILDREN: Readings in psychological research on the broad effects of television on children. Emphasis on analyzing and evaluating the research. Prerequisite: PSY 101.

3 sem. hrs.

PSY 461. CURRENT IMPLICATIONS OF DRUG DEPENDENCY: Survey of effects, symptoms, treatment, casualties, and myths associated with drug use and abuse. Emphasis on existing treatment methods and psychological implications of drug dependency. Prerequisite: PSY 101.

3 sem. hrs.

PSY 462. HUMAN SEXUAL BEHAVIOR: Psychological factors in human sexuality 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. *1-3 sem. hrs.*

PSY 493. INDEPENDENT STUDY: Problems of special interest investigated under faculty direction. Area and criteria for evaluation to be specified prior to registration. May be repeated for up to 6 sem. hrs. Prerequisite: Permission of instructor. *1-6 sem. hrs.*

PSY 494. READINGS IN PSYCHOLOGY: Directed reading in a specific area of interest, under faculty supervision. Topic and criteria for evaluation to be specified prior to registration. May be repeated for up to 6 sem. hrs. Prerequisite: Permission of instructor. *1-6 sem. hrs.*

Note: A total of no more than 6 sem. hrs. of PSY 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.



REL

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 itself in interdisciplinary studies.

Students minoring in religious studies must complete 18 semester hours in the Department of Religious Studies. A minimum of 12 semester hours are to be at the 300-400 level. At least 3 semester hours are to be at the 400 level.

PROGRAM—A19: BACHELOR OF ARTS WITH A MAJOR IN RELIGIOUS STUDIES (REL)¹

	<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	3
Social and behavioral sciences	12
Humanities	18
Foreign language ²	6-8
Philosophy	9
Communication skills	0-9
General education courses and academic electives to total at least	120

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

²Where appropriate, this credit may apply to the humanities breadth requirement.

FACULTY

Thomas M. Martin, *Chairperson*

Professors: Anderson, Barnes, Boulet, Branick, Burns, Friedland, Frost, Hater, Heft, Kohmescher, L'Heureux, T. Martin, Roberts

Assistant Professors: Doyle, Kozar, J. Martin, Thimmes, Zukowski

Lecturer: McGrath

COURSES OF INSTRUCTION

- *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 160. RELIGION AND VALUES: A study of the religious experience in various periods and various religious movements. Analysis and evaluation of the ordinary rather than the extraordinary experience of religiousness. *3 sem. hrs.*
- *REL 201. RELIGIONS OF THE WORLD I: Introduction to Far Eastern religious traditions, in particular Hinduism, Buddhism, Confucianism, Taoism, and Shintoism. *3 sem. hrs.*
- *REL 202. RELIGIONS OF THE WORLD II: Introduction to religions originating in the Near East, in particular Zoroastrianism, Judaism, Christianity, and Islam. *3 sem. hrs.*
- *REL 211. THE OLD TESTAMENT IN MODERN STUDY: Introduction to the historical and prophetic literature of the Old Testament, surveyed in the light of contemporary historical, literary, 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: An examination of how other disciplines regard the question of immortality and a theological evaluation of their insights. *3 sem. hrs.*
- *REL 356. THE CHRISTIAN TRADITION OF PRAYER: Study of several types and forms of Christian prayer from various periods in Church history. The meaning of the act of faith expressed in prayer and its relationship to belief. *3 sem. hrs.*
- *REL 362. CHRISTIAN FAMILY VALUES AND TELEVISION: Comparative study of the criteria and rationale for family life in various Christian pronouncements with present values and practices in society as reflected in and promoted by current television programming. *3 sem. hrs.*
- REL 364. CURRENT MORAL ISSUES: An examination of one or more issues (individual and/or social) in contemporary reflection on Christian moral life. May be repeated when topic changes. *3 sem. hrs.*
- *REL 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 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 man and of God in major modern writings, especially those of current collegiate interest. *3 sem. hrs.*
- *REL 374. RELIGION AND ART: Investigation into the relationship between religion and art, treating Renaissance and post-Renaissance painting and sculpture as vehicles

and manifestations of Christian apocalyptic and humanist 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. PROBLEM OF GOD: Study of some recent contributions made by theology, philosophy, psychology, and the humanities to the current discussion of God's existence, nature, and relationship to humanity.

3 sem. hrs.

REL 446. LITURGY: Survey of Roman Catholic liturgy, its history, theology, and practice; study of the nature of sacrament and worship, the Church Year, the rites of each sacrament, and the Liturgy of the Hours.

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 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:** An 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 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.*

*General education course. See Chapter V.



SWK

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. The term "social worker" applies to a graduate of an academic social work program who is employed in the field of social welfare (NASW: 1973).

The undergraduate social work program at the University of Dayton is fully accredited by the Commission on Accreditation of the Council on Social Work Education.

A minor in social work requires 12 semester hours of upper-level social work courses.

PROGRAM—S14: BACHELOR OF SCIENCE WITH A MAJOR IN SOCIAL WORK (SWK)¹

	<i>Semester Hours</i>
Social work requirements and electives	44
SWK 101, 205, 320, 330, 337, 340, 350, 376, 377, 431, 432	38
SWK electives	6
Communication skills: ENG 101-102, SPE 101	0-9
Natural science: BIO 101, 395 or 398 (with laboratories)	8
Mathematics-computer science (See advisor.)	6
Social and behavioral sciences: POL 201; PSY 101, 251; SOC elective	12
Humanities	9
Philosophy and/or religious studies	12
General education courses and electives to total at least.....	120

¹Consult General Requirements for All Bachelor of Science Programs and Chapter V for General Education Requirements.

FACULTY

Sandra K. Moore, *Director*

Assistant Professors: Davis-Berman, Moore

Part-Time Instructors: Axiotes, Nelson

COURSES OF INSTRUCTION

- *SWK 101. SOCIAL WELFARE AND SOCIETY: Study of the emergence of social welfare in contemporary society. Concept, structure, and functions of social welfare with emphasis on interrelationships among social systems; overview of current social welfare programs and a model for analysis of social services. 3 sem. hrs.

SWK 205. INTRODUCTION TO SOCIAL WORK PRACTICE: The knowledge, values, and skills utilized by the social worker. Introduction to a generalist framework of practice with emphasis on self awareness and development of the professional relationship and competence in interviewing and recording. An agency observational experience is required. Prerequisite: SWK 101. *4 sem. hrs.*

SWK 301. PERSPECTIVES ON AGING: Introduction to the bio-psycho-social dynamics of aging in contemporary society, including related issues. Focus on social work techniques for working with older adults. *3 sem. hrs.*

SWK 320. ADVANCED SOCIAL WORK PRACTICE I: A variety of social work processes with opportunity to develop skill in choosing appropriate intervention strategies. Practice in implementing various models for working with client systems (individuals, families, and groups) in an urban setting. Prerequisites: SWK 101, 205. *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 330. SOCIAL WELFARE AND SOCIAL WORK IN A PLURALISTIC SOCIETY: Understanding of and appreciation for ethnic, racial and cultural diversity in a pluralistic society. The commonalities and differences in families and communities with emphasis on the urban community. Prerequisites: SWK 101, 205. *3 sem. hrs.*

SWK 333. LEGAL ASPECTS OF SOCIAL WORK: Orientation to the legal system as it affects the provision of human services and the profession; social legislation and court decisions as they affect child welfare, public assistance, mental health, housing, and probation and parole services. *3 sem. hrs.*

SWK 337. SOCIAL WELFARE POLICY AND SERVICES: Study of how social welfare policies are developed and translated into social services. A framework for analysis applied to specific social policies. The role of the social work practitioner in analyzing and planning for social welfare. Prerequisites: SWK 101, 205. *3 sem. hrs.*

SWK 339. CHILD ABUSE: Comprehensive study of child abuse: its history, scope, causal factors, indicators for detection, treatment resources and modalities, and community responsibility. *3 sem. hrs.*

SWK 340. ADVANCED SOCIAL WORK PRACTICE II: Social work intervention strategies with organizations and communities; emphasis on skills needed for practice in an urban community. Prerequisites: SWK 101, 205, 320. *3 sem. hrs.*

SWK 350. HUMAN BEHAVIOR AND THE SOCIAL ENVIRONMENT: Theory and concepts from the humanities and from the biological, behavioral, and social sciences integrated into the social work systems model. Prerequisites: SWK 320, 340; all program requirements in biology, political science, psychology, and sociology. *3 sem. hrs.*

SWK 376. SOCIAL WORK RESEARCH I: Focus on research designs that address micro- and macro-level social problems. Each student plans and develops a research project. Prerequisites: SWK 101, 205. *3 sem. hrs.*

SWK 377. SOCIAL WORK RESEARCH II: Statistical analysis of data generated from both micro and macro research designs. Focus on use of computers in statistical analysis. Prerequisite: SWK 376. *3 sem. hrs.*

SWK 422. PARENTING: SOCIAL WELFARE ROLE: Comprehensive study of historical and contemporary perspectives on parenting, future of parenting (assessing trends and choices in family structure and function), cross-cultural comparisons, policy and legal aspects of parenting, societal influences on parenting. *3 sem. hrs.*

SWK 431. FIELD EXPERIENCE AND SEMINAR I: Practicum in which senior students engage in experiential learning under professional supervision in selected social service agencies. The seminar is concurrent. Open only to majors. Prerequisite: SWK 350. *5 sem. hrs.*

SWK 432. FIELD EXPERIENCE AND SEMINAR II: Practicum providing further opportunity to apply social work knowledge, values, and skills. Minimum of 200 hours in selected social agency under professional supervision. The final stage in preparation for beginning social work practice. Open only to majors. Prerequisite: SWK 431. *5 sem. hrs.*

SWK 443. DEATH, DYING, AND SUICIDE: Study of the phenomena of death and dying. The role and responsibility of the professional in working with the dying and their survivors. Study of suicide in this society. Open only to third- and fourth-year students. *3 sem. hrs.*

SWK 455. SOCIAL SERVICES IN THE HEALTH FIELD: The role of social services in health care facilities and governmental health programs. U.S. health care policies and programs; methods of social work intervention in medical settings. *3 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 program director. *3 sem. hrs.*

SWK 499. SPECIAL TOPICS: Exploration of special topics related to the field of human services. Assessment of appropriate literature and research. May be repeated as topics change. *1-3 sem. hrs.*

*General education course. See Chapter V.



SOCIOLOGY (SOC)

Sociology is concerned with 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 is concerned with studying 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.

PROGRAM—A20: BACHELOR OF ARTS WITH A MAJOR IN SOCIOLOGY (SOC)¹

	<i>Semester Hours</i>
Sociology requirements and electives	37
SOC 101 or 204 or ANT 150	3
SOC 208, 303, 308, 308L, 409; ANT 300	16
SOC electives	18
Philosophy and/or religious studies	12
Communication skills	0-9
Natural science	7
Mathematics	3
Social and behavioral sciences	12
Humanities	18
General education courses and academic electives to total at least	120

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

FACULTY

Patrick G. Donnelly, *Chairperson, Department of Sociology and Anthropology*
Professor Emeritus: E. Huth

Professor: M. Huth

Associate Professors: Bregenzer, Donnelly, L. Majka, T. Majka, Miller, Saxton

Assistant Professors: Marotto, F. Pestello, H. Pestello

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 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 321. THE SOCIOLOGY OF WORK AND OCCUPATIONS: Survey of the major features of work and occupations in industrial society. The meaning of work, occupational choice and recruitment, occupational socialization, career patterns, and occupational rewards. Unemployment, underemployment, sex-typing, automation and alienation. *3 sem. hrs.*

SOC 322. SEX ROLES AND SOCIETY: Research findings and major analytical approaches to study social and cultural influences on the development of personal sexual identity and relationships between men and women. Major social issues concerning human sexuality. *3 sem. hrs.*

SOC 323. JUVENILE DELINQUENCY: The environmental and internal factors that influence or determine delinquent behavior; roles of individual juvenile offenders, parents/guardians, school, church, police, business community, community agencies, and the juvenile justice and correctional system in preventing/treating delinquent behavior. *3 sem. hrs.*

SOC 325. DEVIANT BEHAVIOR: Description of various types of deviant behavior; for example mental illness, alcoholism, drug addiction, the professional criminal. Study of explanations for the consequences and the role of deviant behavior in modern society. *3 sem. hrs.*

SOC 326. LAW AND SOCIETY: Study of the legal system and practices from a sociological point of view; the historical origin and role of the law in society, issues relating to the law as an instrument of social control and/or social change; analysis of the legal profession. *3 sem. hrs.*

SOC 327. CRIMINOLOGY: Social and cultural nature, origin, and development of law; criminal behavior; crime control. The influence of society in the creation and organization of legal and crime control systems. Biological, psychological, and sociological factors leading to criminal behavior. *3 sem. hrs.*

SOC 328. RACIAL AND ETHNIC MINORITIES: Study of the major immigrant and racial groups in the United States and other countries. Issues and problems related to their minority status in the dominant culture. *3 sem. hrs.*

*SOC 331. MARRIAGE AND THE FAMILY: Historical, cross-cultural, and current study of social relationships during dating and courtship, interpersonal communication in marriage and family life, sexuality in marriage, adjustments in parenthood, divorce and remarriage, alternatives to traditional marriage, and the future of marriage and family life. 3 sem. hrs.

SOC 332. SOCIOLOGY OF WOMEN: Cross-societal analysis of the position of women, with emphasis on industrialized and developing societies. The social positions of women and men in the family, work, politics, and the legal system. Consideration of theories of the biological, psychological, and sociological bases for the behavior and characteristics of women in the context of societal institutions. 3 sem. hrs.

SOC 333. INDUSTRY AND SOCIETY: Social processes of industrialization; structure and characteristics of industrial society in the U.S.; past, present, and futuristic dimensions of industrial society; impact of industrialization on labor, management, government, family, community, and nation. 3 sem. hrs.

SOC 334. RELIGION AND SOCIETY: Definitions of religion and its role in society. Traditional and nontraditional expressions of religious life from the viewpoint of society. Varieties of religious experience and the interrelations between religious phenomena and other social institutions and societal behavior. 3 sem. hrs.

SOC 336. ORGANIZATIONS IN MODERN SOCIETY: Analysis of the dynamics of organizations in modern industrial society. Topics include organizational social psychology, organizational structure and process, and organization-community relations. 3 sem. hrs.

SOC 337. POLITICAL SOCIOLOGY: Analysis of politics and society; social origins of political economic systems; ideology and legitimation; political movements and social change. 3 sem. hrs.

SOC 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: Theoretical and methodological study of micro-sociological processes; socialization, self conceptualization, deviant behavior, mental illness, power and social influence. 3 sem. hrs.

SOC 342. COLLECTIVE BEHAVIOR: Study of social protest, crowds, social movements, revolution, fads, fashion, public opinion processes, propaganda, and political and social responses to these phenomena. 3 sem. hrs.

SOC 343. MASS COMMUNICATION IN MODERN SOCIETY: Social-psychological analysis of the structure and processes of mass communication related to advertising, patterns of social behavior, social change, propaganda, censorship, media control, and social institutions. 3 sem. hrs.

SOC 345. SMALL GROUP DYNAMICS: Study of small group structure and processes from a sociological point of view. Application of theoretical concepts and research findings to friendship groups, work groups, and family interaction. 3 sem. hrs.

SOC 350. NATIONAL AND WORLD POPULATION TRENDS: Causes and consequences of national and world population trends; impact of population change on society; impact of social change on birth rates, death rates, migration, population composition and distribution. 3 sem. hrs.

SOC 351. CITIES: URBAN COMMUNITIES, PROBLEMS, AND PLANNING: Concepts of community; the history of cities; the development and nature of urban-metropolitan society; metropolitan area structure, population characteristics, and life styles; approaches to major urban problems; models of urban planning in the U.S. and Europe. 3 sem. hrs.

*SOC 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 once as topic changes. 3 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 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. (Same as CRJ 436.) 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 439. SOCIAL CLASSES IN MODERN SOCIETY: Study of social classes, social inequality, social mobility, prestige, power, and class conflict in modern industrial societies. 3 sem. hrs.

SOC 444. INTERACTION PROCESSES: Advanced theoretical and methodological study of basic interaction processes that make up social life, including hypnosis, social influence (selling), negotiation, solidarity, competition, and conflict. 3 sem. hrs.

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

*General education course. See Chapter V.

SPEECH (SPE)

Speech courses are offered by the Department of Communication. See requirements and other courses of instruction under COM.

COURSES OF INSTRUCTION

SPE 101. FUNDAMENTALS OF 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.*

SPE 206. FUNDAMENTALS OF BROADCASTING: Lectures dealing with broadcasting as a business and as a cultural influence; broadcast regulation, programming, and organization of typical radio and television stations. *3 sem. hrs.*

SPE 300. VOICE AND DICTION: The four phases of speech production: proper breathing, phonation, resonance, and articulation. Emphasis on projection, quality, and clarity of speech. Analysis of student's voice through tape recordings. *3 sem. hrs.*

SPE 301. SPEECH WRITING: Study of speech structure and composition. Critical analysis of model speeches, in conjunction with the preparation and presentation of original speeches on current public questions. *3 sem. hrs.*

SPE 303. RHETORIC OF SOCIAL MOVEMENTS: Examination of the rhetoric of contemporary advocates through application of the basic elements of argumentation and persuasion. *3 sem. hrs.*

SPE 310. ORAL INTERPRETATION: Oral interpretation of poetry and prose, combining study of vocal modulations, pitch, inflection, and tone color with intellectual and emotional analysis of selections. *3 sem. hrs.*

SPE 311. 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.*

SPE 312. 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.*

SPE 314. SURVEY OF NEW MASS COMMUNICATION TECHNOLOGIES: Examination of issues related to development, economics, programming, and the future of new mass communication technologies. Prerequisite: SPE 206. *3 sem. hrs.*

SPE 316. 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: SPE 206. Studio fee. *3 sem. hrs.*

SPE 320. ADVANCED ORAL INTERPRETATION: A continuation of SPE 310. Additional study in the techniques of group performance. Prerequisite: SPE 310.

3 sem. hrs.

SPE 329. TELEVISION PRODUCTION: Intensive practice in preparation and production of television programs. Camera technique, floor set-ups, and direction of crews and talent demonstrated through participation in television shows. Prerequisite: SPE 316. Studio fee.

3 sem. hrs.

SPE 410. BROADCAST NEWS: Study of the process and practice of news gathering, analysis, rewriting, and editing for the broadcast media. Theoretical background and practical application, including historical, legal, and ethical concerns for broadcast news personnel. Prerequisite: JRN 206. Studio fee.

3 sem. hrs.

SPE 412. BROADCAST COMMERCIAL COPYWRITING: Study and application of principles of the differences between the two media as they affect commercial copy requirements. Prerequisite: SPE 206.

3 sem. hrs.

SPE 414. BROADCAST AND CABLE PROMOTION: Study of cable company-initiated strategies and techniques to promote programs, stations, or networks as a means of building audience or advertisers. Building positive images of cablecasting in communities and markets. Prerequisite: SPE 314.

3 sem. hrs.

SPE 416. BROADCAST PROGRAMMING: Study of the programming strategies and practices used by broadcast management for attracting television and radio audiences. Prerequisite: SPE 206.

3 sem. hrs.

SPE 418. WRITING FOR ELECTRONIC MEDIA: Study of concrete approaches to and practice with the kinds of writing being done professionally in all program types on television and radio. Prerequisite: SPE 206.

3 sem. hrs.

SPE 419. BROADCASTING PERFORMANCE: Participation in a selected series of broadcasting projects, including both radio and television performance. Prerequisites: SPE 316 and either 310 or 329. Studio fee.

3 sem. hrs.

SPE 420. BROADCAST SALES: Examination of the basic aspects of radio and television sales, including agencies, station and network sales, and related problems and careers. Prerequisite: COM 304.

3 sem. hrs.

SPE 429. ADVANCED TELEVISION PRODUCTION AND DIRECTING: Advanced principles and practice in television production and directing. Emphasis on the aesthetics involved in production of a visually appealing broadcast. Communication majors and minors only. Prerequisites: SPE 316, 329. Studio fee.

3 sem. hrs.

SPE 450. RADIO AND TELEVISION STATION MANAGEMENT: Study of the organization and administration of the radio and television staff and station; the manager's role as applied to personnel, programming, sales, engineering, finances, and regulations. Prerequisite: MGT 305.

3 sem. hrs.

TEACHER CERTIFICATION

COLLEGE BACCALAUREATE PROGRAM WITH
TEACHER CERTIFICATION (E11A)

Students enrolled in the College of Arts and Sciences may enroll in the teacher education program (E11A) of the School of Education without transferring to the School of Education. The E11A program is designed for those students in the College of Arts and Sciences who wish to pursue secondary-school teaching certification and a major program of studies concurrently. Students admitted to the program must satisfy all the requirements for the Bachelor of Arts or Bachelor of Science in the College as well as the requirements designated by the School of Education and the State of Ohio for secondary school certification.

Teaching fields represented in the College of Arts and Sciences are Art, Biological Science, Chemistry, 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
EDT 351 School, Self and Society	3
— — Methods course (fall term only)	4
EDT 469 Reading in the Content Areas	2-3
EDT 420 Student Teaching: Secondary	10
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 a cumulative grade point average of at least 2.9 at the time of their application.

Counseling relative to the degree program is given by the student's major department; counseling relative to certification is given by the chairperson of the Department of Teacher Education or a designated advisor.

THR

THEATRE (THR)

The Theatre Division of the Department of Performing and Visual Arts offers a solid academic foundation and an extensive program of theatre productions, including major productions in Boll Theatre and student experimental work in the Studio Theatre. Its purpose is to provide opportunities and facilities for education and training in and understanding of 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, 100 and/or 300, 415 or 425; and 12 additional at the 200 level and above. Courses in dance are not included.

PROGRAM—A21: BACHELOR OF ARTS WITH A MAJOR IN THEATRE (THR)¹

	<i>Semester Hours</i>
Theatre requirements and electives	38
THR 100 and/or 300, 105, 205, 210, 211, 325 or 326, 330, 340, 415 or 425, 440 or 485 or 490	29
THR electives	9
Natural science	7
Mathematics	3
Social and behavioral sciences	12
Humanities	18
Philosophy and/or religious studies	12
Communication skills: SPE 101; ENG 101-102 or 114 or 198	0-9
General education courses and academic electives to total at least	120

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

FACULTY

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

Professor: Gilvary

Assistant Professor: Selka

Part-time Instructors: Anderson, Andre, Engel

COURSES OF INSTRUCTION

THR 100. THEATRE LABORATORY: Credit allowance for role playing and/or play production in major productions. Fifty hours of work minimum for one sem. hr. of credit. Repeatable up to 3 sem. hrs. in 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 205. THEATRE STAGECRAFT: Study and application of scene construction, rigging, backstage organization, production analysis, and technician-designer relationship. Required of all majors. Open to all University students. Studio fee. First term.

3 sem. hrs.

THR 207. THEATRE LIGHTING: Study and application of lighting for the stage: instrument, controls, sources, elements of electricity, and lighting design for all types of theatres, as well as graph representation. Studio fee.

3 sem. hrs.

THR 210. ACTING I: The study and practice of basic techniques in rehearsal and performance. Emphasis on self-analysis and self-awareness. Development of basic skills in vocal, emotional, and mental interpretation of character. Prerequisite: THR 105 or permission. Corequisite: THR 211. Required of all theatre majors. Open to all University students.

3 sem. hrs.

THR 211. THEATRICAL MOVEMENT I: Special attention to the physical requirements of acting for the stage: balance, flexibility, coordination, control, and endurance. The study and practice of nonverbal skills in character portrayal. Corequisite: THR 210. Required of all theatre majors. Open to all University students.

2 sem. hrs.

THR 261. BEGINNING JAZZ DANCE: Beginning course in the theory and practice of jazz dance. No prerequisite.

2 sem. hrs.

THR 271. BEGINNING BALLET: Beginning course in the theory and practice of classical ballet technique. No prerequisite.

2 sem. hrs.

THR 300. THEATRE LABORATORY: The third- and fourth-year level of credit allowance for role playing and/or play production. Requirements and registration same as for THR 100.

1-3 sem. hrs.

THR 301. INTERMEDIATE DANCE FOR THE PERFORMING ARTIST: Intermediate-level course in movement for students interested in further developing dance and performance technique. Prerequisite: THR 201.

2 sem. hrs.

THR 303. SCENE PAINTING: Basic principles of color paint theory and materials. Investigation of various scene-painting techniques. One three-hour class meeting weekly. Studio fee. Prerequisite: Permission.

3 sem. hrs.

THR 323. ACTING II: Further study and practice of techniques introduced in Acting I. Emphasis on interaction, ensemble, group processes, and scene study. Corequisite: THR 324. Prerequisites: THR 105, 210, 211 or permission.

3 sem. hrs.

THR 324. THEATRICAL MOVEMENT II: Continuation of THR 211. Emphasis on interpreting and employing body language. Corequisite: THR 323. Prerequisites: THR 105, 210, 211 or permission.

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, 205, 210, 211, 330. 3 sem. hrs.

THR 350. THEATRE STYLES: Examination of the relationships among playwright, audience, actor, designer, and director in the development of major theatre styles of expression. 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.

*General education course. See Chapter V.

WOMEN'S STUDIES (WST)

The interdisciplinary minor in women's studies provides a timely academic concentration appropriate to many majors and useful in many fields. As an academic pursuit, women's studies attempts to compensate for the traditional omission from many curricula of the historical and contemporary contributions of women. It also looks to the future, intending to enhance the dignity, worth, and effectiveness of all women.

The minor in women's studies consists of 13 to 15 semester hours. It must include the interdisciplinary seminar ASI 228, Focus on Women, and 12 semester hours in upper-division courses (300-level or above). The following courses are among those offered.

ASI 228	Focus on Women
ART 377	Women Artists
COM 404	Women in Communication
EDP 130	Self Defense for Women
EDP 540	Women in Sport (may be taken for undergraduate credit)
ENG 214	Fiction: Women Writers
ENG 319	Contemporary Fiction: Women Writers
ENG 324	The Novel: Contemporary Women Novelists
ENG 329	The Short Story: Women Writers
ENG 333	Images of Women in Literature
ENG 380	Studies in Literature: Modern Women Poets
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
PSY 443	Psychology of Women
REL 471	Women and Religion
SOC 322	Sex Roles and Society
SOC 332	Sociology of Women

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

Patricia A. Johnson (Philosophy), *Director of Women's Studies*
 Bowen (Mores), Courtney (Library), Drees (Physical and Health Education),
 Gustafson (Economics and Finance), J. Martin (Religious Studies), Murphy
 (College of Arts and Sciences), O'Meara (Languages), Pestello (Sociology),
 Roberson (Psychology), Stockum (English), Swanson (Fine Arts), Vesper
 (Biology).

