

## VI College of Arts and Sciences

Paul J. Morman, Dean

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The College of Arts and Sciences is a distinctive learning community that forms the vital center of the University of Dayton. In the finest tradition of liberal education, the College is committed to excellence in the discovery, integration, dissemination, and application of knowledge. The College delivers the University general education program and helps students to develop their competencies in written and oral communication, quantitative reasoning, and information literacy. Academic programs provide instruction in critical thinking and expression, social and cultural criticism, computation, scientific reasoning, the creative and performing arts, historical analysis, and religious and moral awareness. The College of Arts and Sciences takes as its mission the Marianist principle of educating the whole person and enabling all members of our learning community to fulfill their potential.

The faculty of the College of Arts and Sciences demonstrate connected learning and scholarship by integrating teaching, research, and service. They engage students from across the University in this process through traditional and innovative approaches to learning. The faculty understand that the principles of liberal education emerge not only from the classroom, studio, and laboratory, but also from the many resources the students have within their reach: advisement, mentoring; the campus ministry; social and professional clubs and societies; campus media and publications; fine arts events; and membership on departmental and campus-wide committees where students gain experience in working with others and contribute to the wider University community. Taken together, these dimensions of liberal education form the basis for lifelong intellectual, professional, and personal growth.

The College of Arts and Sciences affirms its commitment to the Catholic and Marianist tradition. In humanities and social science programs, in the physical and life sciences, in the creative and performing arts, the College strives to ensure that its graduates are distinguished by their discernment and intellectual rigor, their broad base of learning, and their sense of moral responsibility. And through their participation in a vital learning community, the College ensures the graduates will be distinguished by their appreciation and respect for diversity, their commitment to service, and their ability to affect positively individual lives and the common good.

## 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. Transfer students are required to take a minimum of 12 upper-level semester hours in the major at The University of Dayton. Some departments may have additional requirements for transfer students. These additional requirements are defined specifically in the departmental listings.

Single discipline and interdisciplinary minors are defined in the departmental listings. Transfer students must take a minimum of 6 upper-level semester hours in the minor at The University of Dayton. Some departments may have additional requirements for transfer students. These additional requirements are defined specifically in the departmental listings.

The Bachelor of Arts is offered in the following areas:

American Studies	Geology	Political Science
Art History	History	Psychology
Chemistry	International Studies	Religious Studies
Communication	Languages	Sociology
Criminal Justice Studies	Mathematics	Theatre
Economics	Music	Visual Communication
English	Philosophy*	Design
Fine Arts	Photography	

\* The philosophy major program is also offered in India in conjunction with the Marianists.

The Bachelor of Science is offered in the following areas:

Applied Mathematical	Computer Science	Physical Science
Economics	Environmental Biology	Physics
Biochemistry	Environmental Geology	Physics-Comp. Sci.
Biology	Geology	Prendentistry
Chemistry	Mathematics	Premedicine
Computer Information	Nuclear Medicine	Psychology
Systems	Technology	

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 Composition (B.Mus.)	Photography (B.F.A.)
Music Education (B.Mus.)	Visual Communication Design (B.F.A.)

### Established Interdisciplinary Majors

American Studies, Criminal Justice Studies, International Studies, and Premedicine-Prendentistry 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. Students carry

the responsibility to find a faculty mentor or advisor for such majors. All University and College requirements for the Bachelor of Arts or Bachelor of Science degree must be fulfilled. The degree received will be a Bachelor of Arts or Science in Interdisciplinary Studies. Candidacy for the Bachelor of Arts or Science in Interdisciplinary Studies must be declared no later than the last semester of the junior year. Long-range plans for such majors must be submitted to the appropriate chairpersons and the dean for final approval. Plans may be altered with appropriate supporting rationale and the approval of the chairperson and dean.

## FOREIGN LANGUAGE ENTRANCE 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 deficit may be made up by successful completion of one of the following courses or the equivalent: FRN 102 or 121; GER 102 or 121; LAT 102 or 121; SPN 102 or 121; ITA 141; RUS 141.

## PROFICIENCY IN A FOREIGN LANGUAGE

The College of Arts and Sciences strongly encourages its students to acquire the highest level of foreign language proficiency. Students may show proficiency by demonstration of basic practical communicative competence in a foreign language. Proficiency for modern languages includes the following four skills:

- **Listening:** comprehension of main idea and some supporting detail in passages of up to 250 words of everyday speech on familiar topics in a context that provides significant support for the message.
- **Reading:** comprehension of main idea and supporting detail in contextualized written passages of up to 600 words in which a generally familiar, everyday topic is discussed.
- **Speaking:** ability to indicate interests and needs, ask and answer questions, communicate personal information, and obtain essential services. Speech is sufficiently accurate to be understood by native speakers.
- **Writing:** ability to write messages and simple descriptions on familiar topics, to provide biographical information, and to express interests and preferences. Native speakers can understand the message with little difficulty.

Students entering the University have the opportunity to demonstrate the defined levels of proficiency by passing a University placement/proficiency examination. Any student who has not achieved proficiency as determined by this examination upon entry can choose from the following options to reach proficiency:

- course work at the University of Dayton
- course work elsewhere
- an individual study program
- study abroad
- an immersion experience

At the conclusion of one of these options, the student must pass the proficiency examination to satisfy the Foreign Language option within the Humanities and Fine



Arts component of the Liberal Studies Curriculum (see General Requirements for the B.A. Degree, p. 85. The department of languages offers the following possible sequence of foreign language courses:

*Beginner sequence:* For students who have never studied the language previously or who demonstrate no functional ability: 101-102-141 (9 sem. hrs.) in French, German, Latin, and Spanish; 101-141 (8 sem. hrs.) in Italian and Russian.

*Intensive beginner sequence:* For experienced language learners who wish to learn a new language: 111-141 (9 sem. hrs.) available only in French, German and Spanish.

*Accelerated sequence:* For students with previous language study or experience who demonstrate some functional ability on the placement/proficiency examination: 121-141 (7 sem. hrs.) available in French, German, Latin and Spanish.

*Capstone course:* For students with significant language study or experience: (3 sem. hrs.) available in all languages.

Students choosing to complete the Liberal Studies Curriculum using Latin as their language will be required to demonstrate proficiency in reading and translation only.

Students whose first language is not English demonstrate foreign language proficiency by satisfying the University General Competencies requirements in writing and oral communication. These Students may satisfy the Foreign Language option in the Humanities and Fine Arts components of the Liberal Studies Curriculum for the B. A. degree by demonstrating proficiency in another foreign language or by taking courses in the humanities and/or arts areas.



## GENERAL REQUIREMENTS FOR ALL BACHELOR OF ARTS PROGRAMS

A minimum of 124 semester hours of approved coursework must be presented for the B.A. At least 48 semester hours must be completed at the 300-400 level. For limitations on credit and restrictions on courses, consult the chairperson and the dean. No more than 45 hours of the minimum 124 hours may be completed in a student's major discipline.

### *Introduction to the University*

In the first semester, students take a course that introduces them to the University and to their major field of study. Undeclared students take specific sections of this course.

### *Major Concentration*

Most major programs require between 30 and 45 semester hours. For department or program requirements, consult program schedules or the department chairperson or program director.

### *Liberal Studies Curriculum*

Every student will complete the Liberal Studies Curriculum. This Curriculum provides students with a breadth of study and experiences in the humanities, the creative and performing arts, the social sciences, and the natural sciences. It complements specialized study in a major, presupposes the University General Competencies and Basic Skills Requirements,<sup>1</sup> and ensures completion of the Humanities Base and a Thematic Cluster through completion of the General Education Requirements.<sup>1</sup> Where appropriate, credits in the Liberal Studies Curriculum may apply to other requirements but no more than six hours may be in the departmental major concentration. The Liberal Studies Curriculum includes:

*Philosophy and Religious Studies:* Students complete 12 semester hours including a Humanities Base course in Philosophy, a Humanities Base course in Religious Studies and two additional General Education approved courses in philosophy and/or religious studies.<sup>2</sup>

*History:* Students complete 6 semester hours including a Humanities Base course and one additional General Education approved course in historical study.<sup>2</sup>

*English or Foreign Language Literature:* Students complete 3 semester hours in English literature or foreign language literature selected from a list of approved courses.<sup>2</sup>

*Creative and Performing Arts:* Students complete 3 semester hours in theory, appreciation, or history of visual arts, music, or theater selected from a list of approved courses; or complete 3 semester hours in production and performance selected from a list of approved courses.<sup>2</sup>

### *Foreign Language and/or Additional Arts and/or Humanities:*

Students may choose to demonstrate proficiency by examination of basic practical communication proficiency in one foreign language. Specific options for demonstrating proficiency are outlined on page 77.

Students who meet language proficiency without taking College courses in language must complete at least 3 additional semester hours of study in the arts and/or humanities beyond basic skills. Students who demonstrate language proficiency by taking 3 to 9 semester hours of language study take no additional hours in the arts and humanities.

Students who choose not to demonstrate language proficiency select 8-9 semester hours in the arts and/or humanities beyond basic skills including courses in any of the preceding categories or any other arts or humanities area, in consultation with their academic advisor. Individual departments may specify how these hours are to be used for those students who do not choose the language proficiency option.

*Social Sciences:* Students complete 12 semester hours including two courses at the introductory level from at least two different traditional disciplines (ANT 150, ECO 203, POL 101 or 201, PSY 101, and SOC 101), one course at the 300-400 level in one of the disciplines in which an introductory course was taken, and one additional course from any of the traditional disciplines or from the list of courses approved for General Education social science. (Students in the E-11 program may take two approved courses in the School of Education).<sup>2</sup>

*Mathematics:* Students complete 3 semester hours selected from courses in the Department of Mathematics (MTH 102, 204, 205 excluded).

*Natural Sciences:* Students complete a sequence of 3 lecture courses with 2 accompanying laboratories in the Integrated Natural Science Sequence for a total of 11 semester hours. Students who wish to do more advanced study in science may complete 9 semester hours in science courses approved for majors in the departments of biology, chemistry, geology, and physics and 2 sem. hrs. of accompanying laboratories in lieu of the Integrated Natural Science Sequence.

#### SUMMARY OF REQUIREMENTS FOR THE B.A.

Major	33-45 sem. hrs.
Liberal Studies Curriculum (53-59 sem. hrs.)	
Humanities and Fine Arts	
Philosophy and Religious Studies	12 sem. hrs.
History	6 sem. hrs.
English or Foreign Language Literature	3 sem. hrs.
Creative and Performing Arts	3 sem. hrs.
Foreign Language and/or Additional Arts and/or Humanities	3-9 sem. hrs.
Social Sciences	12 sem. hrs.
Mathematics	3 sem. hrs.
Natural Sciences	11 sem. hrs.
General Competencies and Basic Skills <sup>1</sup>	0-12 sem. hrs.
Introduction to the University	0-1 sem. hr.
Electives to total 124 hours	7-38 sem. hrs.

<sup>1</sup>University requirements are outlined in Chapter V. The General Competency program is being phased in. Beginning Fall 2001, competence in reading, writing, and oral communication will be demonstrated by attaining a minimum grade of "C" in ENG 101-102, 114, or 198; and a minimum grade of "C" in each of the communication modules CMM 110, 111 or 112, 113. Advanced standing may satisfy the ENG requirement. Quantitative Reasoning general competency begins Fall 2002; until that time, the Basic Skills mathematics requirement is MTH 102. Information Literacy general competency begins Fall 2003.

<sup>2</sup>Students should consider using this area of study to help fulfill the general education Thematic Cluster requirement. A Thematic Cluster includes a minimum of three courses, each course selected from a separate area (Philosophy, Religious Studies, Historical Studies, Arts Studies, Social Science, and Natural Science).

<sup>3</sup> Courses for English and Foreign Language Literature are as follows:

CLA 350

ENG 151, 203, 204, 205, 210, 230, 301, 302, 305, 306, 317, 319, 320, 322, 323, 324, 325, 327, 329, 330, 332, 333, 334, 335, 336, 337, 338, 339, 340, 345, 348, 350, 351, 353, 354, 355, 356, 357, 358, 362, 380, 383, 384, 405, 407, 410, 414, 431, 433, 438, 444, 448, 451, 453, 455, 482

FRN 350, 352, 360, 361, 362, 381, 450, 452

GER 350, 361, 362, 450

ITA 361, 362

SPN 350, 361, 362, 363, 364, 450, 451, 471, 472

Courses for Creative and Performing Arts are as follows:

ASI 214

CMM 311, 331, 332, 333, 341, 342, 343, 344, 351, 442, 444, 449

ENG 282, 284, 286, 308, 310, 312, 331, 382

MUS 110, 111, 112, 113, 114, 191, 195, 196, 201, 203, 205, 295, 301, 302, 303, 304, 305, 306, 307, 309, 310, 328, 390, 395, 399, 491, 492, 493, 499

THR 100, 105, 201, 202, 203, 261, 271, 300, 301, 303, 305, 307, 310, 312, 323, 324, 325, 326, 330, 361, 371

VAF 104, 112, 117, 204, 226, 228, 232, 240, 253, 304, 325, 326, 328, 332, 340, 353

VAH 101, 201, 202, 203, 350, 360, 370, 382, 383

VAP 101, 201

## 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 or the department chairperson or program director.

	<i>Semester Hours</i>
<i>Major Concentration</i> (with at least 24 semester hours at 300-400 level). . . . .	30-60
<i>Breadth Requirement</i> (See Distribution Table below.) . . . . .	41-50
<i>General Education Requirements:</i> These courses may also be counted for other requirements where applicable. (See Chapter V.) . . . . .	30
<i>Program Requirements and General Electives:</i> Electives should be approved by the chairperson or dean since some restrictions exist. . . . .	10-40

### Distribution Table for Breadth Requirements

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 Sciences:</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 Studies, Education, Human Ecology, Management, Marketing, Military Science, Social Work, and appropriate courses in ASI, AMS, and CMS. . . . .	6
<i>Humanities:</i> American Studies, Communication, English, History, Humanities Studies, Languages, Music, Philosophy, Religious Studies, Visual Arts, and, with the approval of the chairperson of the major department or director of the program, appropriate courses in ASI. (The basic Philosophy, Religious Studies, and communication skills courses do not fulfill this requirement.) . . . . .	9
<i>Philosophy and Religious Studies</i> . . . . .	12
<i>Communication Competencies</i> (ENG 101-102 or 114 or 198; CMM 110, 111 or 112, 113): Each student should demonstrate competence in written and oral communication before the completion of the first year. This competence may be demonstrated through coursework, proficiency examinations, or advanced standing. Information on this matter should be sought in the office of the dean . . . . .	0-9

## DEGREE REQUIREMENTS

For the bachelor's degree, it is necessary to complete all the requirements listed in one of the programs in this chapter. A maximum of four semester hours of general activities courses, a maximum of two semester hours of physical education activities courses, a maximum of ten semester hours of MIL courses, and a maximum of six hours of applied 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. Furthermore, a minimum of 12 semester hours of course work at the 300 and 400 level in the major must be completed at the University.

## GRADUATION REQUIREMENTS

1. It is the responsibility of the student to file his or her Candidate for Graduation card.

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.

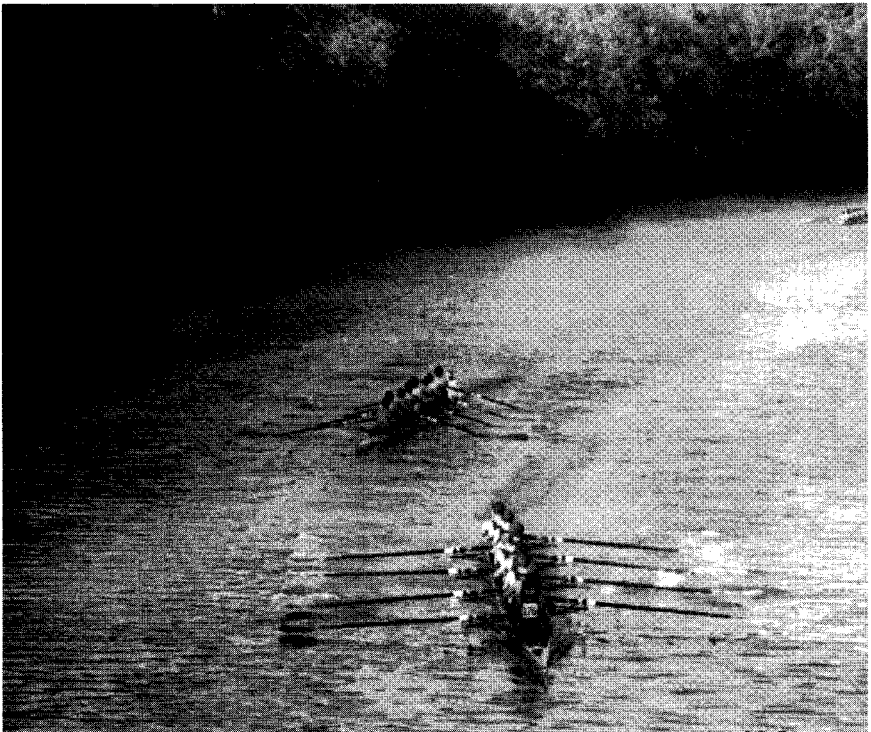
Interested students should see the internship directors in their respective departments for further details.

## MINI COURSES

Minicourses are special, short-term, interdisciplinary credit courses developed by University faculty, (or sometimes by students with the advice and consent of a faculty member), to meet specific, highly current needs or interests not covered in the regular curricula. They are free of charge to all full-time students, even if the course puts them over the full-time limit, and are open to part-time and non-UD students for credit or audit. The typical minicourse carries one semester hour of credit, or fifteen class hours. Classes can be in various sequences, extending over several weeks or concentrated within a few days. Some minicourses take the form of workshops. Occurring at various times in the year, minicourses are publicized throughout campus. They can be added to students' schedules during the term. For a sample listing of minicourses, see University Interdisciplinary Studies (UDI).

## SPECIAL PROGRAMS

To serve adults in the Dayton community, the College provides a variety of noncredit courses, many in the form of workshops, seminars, study tours, conferences, and teleconferences. These are planned to meet the educational and training needs of organizations and of the community and are held both on and off campus. This office also administers Elderhostel, the Institute for Learning in Retirement, and Senior Fellows, for persons sixty and over. Continuing Education Units (CEU) are awarded for a fee for some offerings.



## AMERICAN STUDIES (AMS)

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

### BACHELOR OF ARTS WITH A MAJOR IN AMERICAN STUDIES (AMS)<sup>1</sup>

	<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

#### *Group A*

ENG	305, 317 <sup>2</sup> , 319 <sup>2</sup> , 320 <sup>2</sup> , 325, 327, 329 <sup>2</sup> , 331 <sup>2</sup> , 332 <sup>2</sup> , 335, 337, 339, 380 <sup>2</sup> , 383 <sup>2</sup> , 451, 453, 455, 468, 490 <sup>2</sup>
MUS	304, 305, 306, 307, 328, 404 <sup>2</sup>
VAH	370, 480, 482, 483, 490 <sup>2</sup>

#### *Group B*

HST	342, 344, 346, 348, 351, 352, 355, 360, 361, 365, 369, 370, 372, 373, 374, 375, 376, 377, 380, 385, 391, 398, 399, 490, 495, 499 <sup>2</sup>
PHL	307, 310, 311, 314, 317, 318, 320, 323, 331, 332, 340 <sup>2</sup> , 361
REL	326, 327, 328, 364, 367, 372, 373, 375, 376, 485

#### *Group C*

ECO	310, 346, 347, 390, 430, 441, 442, 445, 450, 460, 461, 471, 485
POL	301, 303, 310, 311, 313, 335, 350, 360, 408, 411, 413, 450, 471, 475
PSY	334, 341, 351, 361, 363, 443, 461, 462, 471
SOC	321, 328, 337, 339, 341, 343, 351, 352, 435
ANT	315, 335, 353, 406, 449

#### Liberal Studies Curriculum<sup>1</sup>

Humanities and Fine Arts	
Philosophy and Religious Studies .....	12
History .....	6
Literature: English or Foreign Language .....	3
Creative and Performing Arts .....	3
Foreign Lang. and/or Arts and/or Humanities (may include courses from Group A & Group B) .....	3-9
Social Sciences .....	12
Mathematics (MTH 102, 204, 205 excluded) .....	3
Natural Sciences .....	11
Communication Competencies .....	0-9
Introduction to the University: ASI 150 .....	0-1
General Education courses and academic electives to total at least .....	124

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

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



## AMERICAN STUDIES COMMITTEE

Una M. Cadegan (History), *Director, American Studies Program*  
Durham (English), Kimble (Psychology), Moore (Religious Studies),  
Ruggiero (Economics), Street (Music)

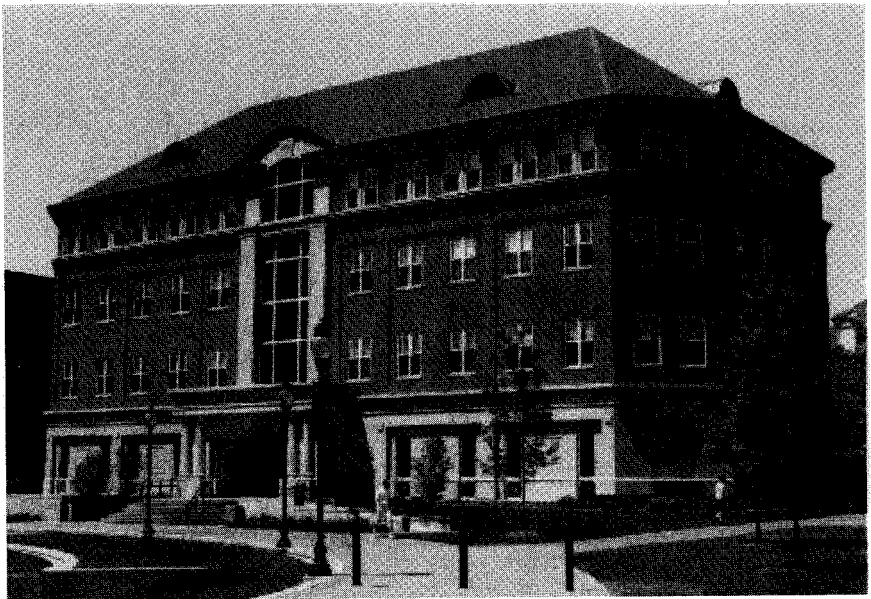
## COURSES OF INSTRUCTION

\*AMS 300. AMERICAN CULTURES: Study of American artifacts to discern how they indicate the periods in the life of the civilization and how like artifacts can be used to determine the stages of development of various peoples. (Will not satisfy humanities breadth requirement.) 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.

\*General Education course. See Chapter V.



## ANTHROPOLOGY (ANT)

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

### COURSES OF INSTRUCTION

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

3 sem. hrs.

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

3 sem. hrs.

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

3 sem. hrs.

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

3 sem. hrs.

ANT 335. URBAN ANTHROPOLOGY: Survey of anthropology research on urban issues. Considers how cities arose and how urban people make a living, organize, and think. Considers urban futures.

3 sem. hrs.

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

3 sem. hrs.

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

3 sem. hrs.

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

3 sem. hrs.

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

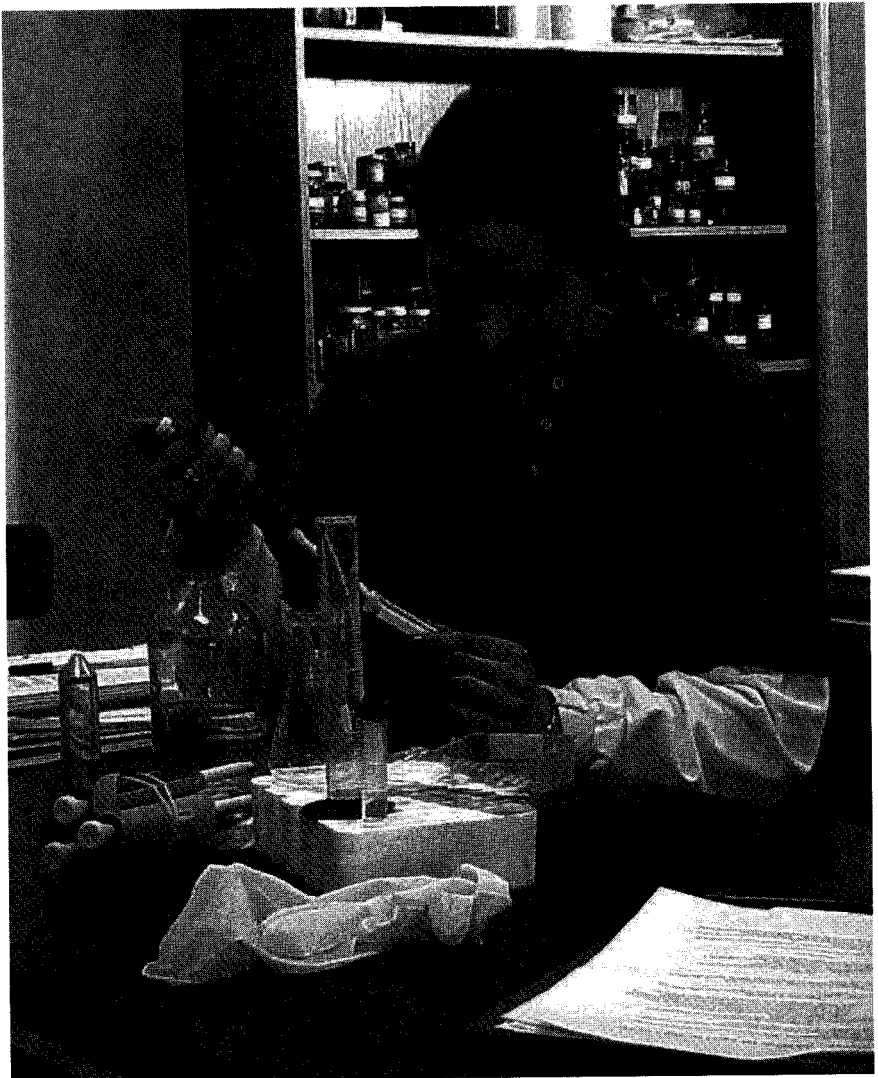
3 sem. hrs.

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

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

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\*General Education course. See Chapter V



# BIOLOGY (BIO)

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

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

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

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

The department also offers a combined Bachelor and Master of Science degree in Biology. This accelerated program is designed for students who display strong potential for research in biology. It provides a liberal arts education, a broad background in biology, the development of expertise in a biological subfield, and a thorough introduction to research instrumentation and techniques. Graduates from the program are prepared for either direct entry into the job market or continuation toward the Ph.D. A detailed description of the B.S.-M.S. program may be obtained from the departmental office. A minor in biology consists of 20 semester hours: BIO 151, 151L, BIO 152, 152L, BIO 312 and nine hour at the 300-400 level.

## BACHELOR OF SCIENCE WITH A MAJOR IN BIOLOGY (BIO)<sup>1, 2</sup>

	<i>Semester Hours</i>
Biology (including at least 24 sem. hrs. at 300-400 level) .....	44
Core courses: BIO 151, 151L, 152, 152L, 299, 312, 420 .....	13
Environmental/Ecological-Select two <sup>3</sup> : BIO 301, 314-314L, 320-320L, 330-330L, 370, 402-402L, 430-430L, 435-435L, 441, 444-444L, 450-450L, 452-452L, 459-459L, 461-461L .....	7
Basic Biomedical-Select two <sup>4</sup> : BIO 309, 309L, 312L <sup>5</sup> , 403-403L, 404, 411-411L, 425-425L, 427, 440-440L, 442-442L, 462, 466-466L, 480-480L .....	7
Electives: Four courses, two with accompanying laboratories, from the above groups <sup>6</sup> .....	17

Supporting sciences .....	30-32
CHM 123-123L, 124-124L, 313-313L, 314-314L .....	16
MTH 137-138 or 148-149 (by placement) .....	6-8
PHY 201-201L, 202-202L .....	8
Communication Competencies .....	0-9
CMM 110, 111 or 112, 113 .....	0-3
ENG 101,102 or 114 or 198 .....	0-6
Philosophy and Religious Studies .....	12
Humanities .....	9
Arts study .....	3
HST 101 or 102 or 198 .....	3
HST Elective <sup>7</sup> .....	3
Social and behavioral sciences .....	6
First-year experience:	
ASI 150 .....	0-1
General electives to total .....	120

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

<sup>2</sup>The Department of Biology supports national standards established by the National Institutes of Health for the responsible, humane treatment and housing of animals. The biology curriculum contains some laboratory courses in which dissection and vivisection are necessary and required in order to convey an understanding of certain biological concepts. All students are expected to participate in such laboratory exercises in the introductory biology sequence, BIO 151L and BIO 152L which involve dissection and/or vivisection. In other elective formal laboratory courses in which dissection and vivisection occur, it is expected that students will participate in all aspects of the laboratory. No alternatives to dissection or vivisection will be offered in these courses. It is ultimately the responsibility of students to make certain that they enroll in courses in which they are able to participate in all required exercises, and to obtain information from each instructor as to the specific laboratory course content and requirements. The Biology Department maintains an updated list of laboratory courses in which dissection and/or vivisection is required in order to assist students in the selection of course work.

<sup>3</sup>One with accompanying laboratory. BIO 430 strongly recommended as one of two courses.

<sup>4</sup>One with accompanying laboratory. BIO 462 strongly recommended as one of two courses.

<sup>5</sup>Qualifies as a laboratory elective for any category.

<sup>6</sup>One of the following Non-BIO science courses, including but not limited to: CHM 201/201L; CHM 420; MTH 367; CPS 111, CPS 132; GEO 208; GEO 308 (may be included). Other Non-BIO science courses may be included with the approval of the chairperson.

<sup>7</sup>HST 340, 341 or 342 are highly recommended.

## ENVIRONMENTAL BIOLOGY (EVB)

Environmental Biology is a science specialization based upon the fundamentals of biology and ecology, applying interdisciplinary skills, knowledge and principles to the environmental problems facing society today. Students entering this dynamic field could become directly involved in addressing some of the significant global problems related to human impact on the environment. In addition to the standard

base of courses required of most biology majors, the curriculum also requires a challenging core of environmentally related science courses and course work drawn from a multidisciplinary elective pool that includes offerings in the humanities and social sciences.

**Internship Program:** Majors who achieve certain minimum academic standards can apply for the opportunity to participate in the program's internship opportunities (BIO 499, see course prerequisites), where they will have the unique opportunity to obtain valuable training and experience under the mentorship of established scientists and other environmental professionals.

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## BACHELOR OF SCIENCE WITH A MAJOR IN ENVIRONMENTAL BIOLOGY (EVB)<sup>1</sup>

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	<i>Semester Hours</i>
Requirements for the major .....	46
Core Courses: BIO 151-151L, 152-152L, 299, 312, 420, 430-430L, 459-459L, 479L, 499 .....	25
Field Oriented Courses-Select three <sup>2</sup> : BIO 301, 312L <sup>3</sup> , 320-320L, 330-330L, 350-350L, 370, 402-402L, 421, 435-435L, 441, 444-444L, 452-452L, 480-480L, 499 .....	11
Laboratory Oriented Courses-Select three <sup>4</sup> : BIO 309-309L, 312L <sup>3</sup> , 314-314L, 403-403L, 404, 411-411L, 421, 440-440L, 442-442L, 450-450L, 461-461L, 462, 499 .....	10
Supporting sciences .....	44-46
CHM 123-123L, 124-124L, 313-313L, 314-314L .....	16
GEO 115-115L, 116-116L and 307 <sup>5</sup> , 308 or 309 .....	11
PHY 201-201L, 202-202L .....	8
MTH 137-138, 148-149 or 168-169 (by placement) .....	6-8
and	
MTH 367 <sup>6</sup> .....	3
Communication Competencies .....	0-9
CMM 110, 111 or 112, 113 .....	0-3
ENG 101-102 or 114 or 198 <sup>7</sup> .....	0-6
Philosophy and Religious Studies .....	12
PHL 103 and REL 103 .....	6
Select one: PHL 321, 331; REL 472, 477 .....	3
PHL or REL elective .....	3
Humanities .....	9
Arts study .....	3
HST 101 or 102 .....	3
HST electives .....	3
Social and behavioral sciences .....	6
ANT 150 or PSY 101 .....	3
Elective .....	3
Other non-science elective <sup>7</sup> .....	0-3
Introduction to the University: ASI 150 .....	0-1
General Education courses and academic electives to total .....	120-129 <sup>1</sup>

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

<sup>2</sup>At least two courses with accompanying laboratory. One non-BIO science course approved for science majors may be included in this section with permission. BIO 499 requires the permission of the EVB Program Director.

<sup>3</sup>Qualifies only as a laboratory elective; satisfies either BIO laboratory elective area.

<sup>4</sup>At least one course with accompanying laboratory. One non-BIO science course approved for science majors may be included in this section with permission. BIO 499 requires the permission of the EVB Program Director.

<sup>5</sup>Students electing GEO 307 as their upper-level geology course are strongly recommended to consider GEO 307L as an optional laboratory elective.

<sup>6</sup>Other appropriate statistics courses may be substituted with the approval of the Department Chairperson.

<sup>7</sup>If composition requirement is waived, student should select another elective from the Liberal Studies Curriculum. ENG 378 strongly recommended for students whose background is weak in this area.

## FACULTY

John J. Rowe, *Chairperson*

*Distinguished Service Professor:* Noland

*Professors Emeriti:* Laufersweiler, McDougall, Ramsey

*Professors:* Burky, Geiger, Kearns, Rowe, Tsonis, Vesper, Williams

*Associate Professors:* Breitwisch, Friese, Hofmann, Robinson, S. Wright

*Clinical Adjunct Associate Professors:* Stull, Taylor

*Assistant Professors:* C. Krane, D. Wright

## 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 is designed for students not following the biology core curriculum. 3 sem. hrs.

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

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

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

BIO 104. INTRODUCTORY BIOLOGY FIELD COURSE: An introduction to the ecology, behavior, morphology, taxonomy, and life history of plants and animals. One week on campus; three weeks in the Rocky Mountains near Denver, Colorado; one week of travel to and from the field site. For non-biological science majors only. Third term only. Corequisites: GEO 104; BIO 104L or GEO 104L. 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 molecular and cellular organization of organisms. Topics also include bioenergetics, genetics, and evolution. Core biology course for majors in sciences such as biology, premedicine, and others. *3 sem. hrs.*

BIO 151L. BIOLOGY LABORATORY INVESTIGATIONS I: An introduction to biological laboratory procedures and instrumentation through a series of observational and experimental exercises at the cellular level. Core biology course. Corequisite or prerequisite: BIO 151. *1 sem. hr.*

- \* BIO 152. CONCEPTS OF BIOLOGY II: Continuation of BIO 151. Study of taxonomic diversity, plant and animal organismal physiology, and ecology and animal behavior. Core biology course. Prerequisite: BIO 151. *3 sem. hrs.*

BIO 152L. BIOLOGY LABORATORY INVESTIGATIONS II: Biological laboratory exercises at the organism and system level. Emphasis on both plant and animal studies. Core biology course. Corequisite or prerequisite: BIO 152. *1 sem. hr.*

BIO 299. BIOLOGY SEMINAR: Introduction to biological journals and abstracting materials. Practice in reviewing, abstracting, and presenting biological information. Primarily for sophomores. *1 sem. hr.*

- \* BIO 301. EVOLUTION: Theory and evidence of organic evolution, with emphasis on microevolutionary change and population genetics. Prerequisites: BIO 101-102 or 151-152; BIO 312 recommended. *3 sem. hrs.*

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

BIO 309L. COMPARATIVE ANATOMY LABORATORY: Dissection and study of the anatomical structure of representative vertebrate animals. Course to accompany BIO 309 lecture. *1 sem. hr.*

BIO 312. GENERAL GENETICS: Study of the principles of variation and heredity covering both Mendelian and molecular genetics. Core biology course. *3 sem. hrs.*

BIO 312L. GENETICS LABORATORY: Laboratory exercises to accompany BIO 312. May be taken concurrently with or following the lecture course. *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 each week. *1 sem. hr.*



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

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

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

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

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

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

BIO 370. CONSERVATION BIOLOGY: An ecosystem approach to the study of and threat to local, regional, and global biodiversity. Application of ecological principles of conservation of species and habitats. Prerequisites: BIO 101-102 or BIO 151-152. *3 sem. hrs.*

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

\*BIO 395. GLOBAL ENVIRONMENTAL BIOLOGY: Presentation of the biological and ecological principles needed for critical discussion and evaluation of current global environmental issues including food production, human population growth, role of humans and pollution in environmental degradation, and conservation of agricultural, forest and other natural resources. No science credit for biology majors. Prerequisites: An introductory course in the natural sciences. *3 sem. hrs.*

\*BIO 398. HEREDITY AND SOCIETY: Survey of the fundamental principles of inheritance and the application of genetics to contemporary problems of society. No science credit for biological science majors. Prerequisite: Introductory biology. *3 sem. hrs.*

BIO 402. VERTEBRATE ZOOLOGY: The morphology, physiology, ecology, and distribution of representative vertebrate groups. Prerequisite: Junior or senior standing. *3 sem. hrs.*

BIO 402L. VERTEBRATE ZOOLOGY LABORATORY: Course to accompany BIO 402. A laboratory focused on the diversity, systematics and ecology of vertebrates. One 3-hour period each week. *1 sem. hr.*

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

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

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

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

BIO 411L. GENERAL MICROBIOLOGY LABORATORY: Course to accompany BIO 411. Two 2-hour periods each week. *1 sem. hr.*

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

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

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

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

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

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

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

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

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

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

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

**BIO 441. ENVIRONMENTAL PLANT BIOLOGY:** Study of the physiological basis for environmental effects on plant metabolism, structure, growth and development, including plant responses to elevated carbon dioxide, acid deposition, and to water stress. Prerequisites: BIO 101-102 or BIO 151-152. *3 sem. hrs.*

**BIO 442. DEVELOPMENTAL BIOLOGY:** Study of animal development, including morphological patterns of development, mechanisms of cellular differentiation, cell-cell interactions during development, and mechanisms of differential gene expression. Emphasis on understanding development at the cellular and molecular levels. Prerequisites: BIO 101-102 or 151-152; CHM 313-314. *3 sem. hrs.*

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

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

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

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

**BIO450L. COMPARATIVE ANIMAL PHYSIOLOGY LABORATORY:** Laboratory to accompany BIO 450. Must be taken concurrently with BIO 450. *1 sem. hr.*

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

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

**BIO 459. ENVIRONMENTAL ECOLOGY:** The application of current ecological knowledge and principles toward the study of human impact on the environment. Emphasis on ecosystem dynamics, applied ecology, disturbance ecology, and approaches to solving global environmental problems. Prerequisite: BIO 430 or permission of instructor. *3 sem. hrs.*

**BIO 459L. ENVIRONMENTAL ECOLOGY LABORATORY:** Analytical approach to studying applied ecology and human impact on the environment. Emphasis on laboratory and field approaches to solving environmental problems through the use of ecological principles. Prerequisite or corequisite: BIO 459. *1 sem. hr.*

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

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

**BIO 462. MOLECULAR BIOLOGY:** Analysis of the nature of the gene and gene action. Particular attention to genetic regulation and to recent advances in molecular genetics. Prerequisites: BIO 312; CHM 314. *3 sem. hrs.*

**BIO 466. BIOLOGY OF INFECTIOUS DISEASE:** The nature of infectious diseases, host-parasite relationships in resistance and infection, defense mechanism (antigen-antibody response); survey of the bacteria causing disease in humans. Prerequisite: BIO 411. *3 sem. hrs.*

**BIO 466L. BIOLOGY OF INFECTIOUS DISEASE LABORATORY:** Laboratory experiments to demonstrate immunological, serological, determinative, and medical bacteriology. Two 2-hour laboratory periods each week. *1 sem. hr.*

**BIO 479L. ENVIRONMENTAL INSTRUMENTATION LABORATORY:** The understanding and use of field and laboratory based equipment to study current environmental issues. Emphasis on team-centered approaches to investigating environmental problems. Same as GEO 479L. Prerequisites: BIO 151, 152; GEO 115, 116; or permission of instructor. *2 sem. hrs.*

**BIO 480. PRINCIPLES OF MICROSCOPY:** Focus on basic principles and theory of light and electron microscopy, and how these techniques address fundamental questions in science. Prerequisites: BIO 151, 152; or permission of instructor. *3 sem. hrs.*

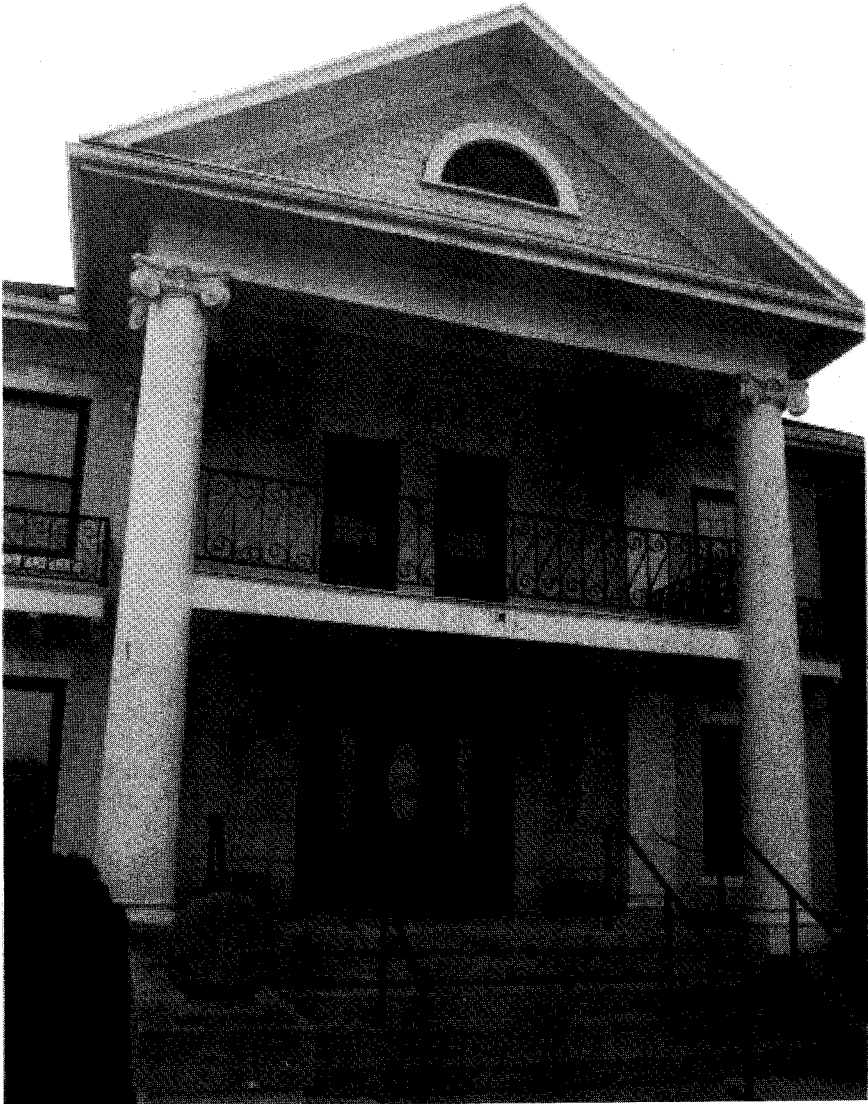
**BIO 480L. PRINCIPLES OF MICROSCOPY LABORATORY:** Application and practice of light and electron microscopy. Prerequisites: BIO 151, 152, with junior or senior standing; or permission of instructor. Corequisite or prerequisite: BIO 480. *1 sem. hr.*

BIO 499. ENVIRONMENTAL BIOLOGY INTERNSHIP: Majors will have the opportunity to obtain valuable training and experience under the mentorship of established scientists and professionals. Emphasis on approaches to solving environmental problems including such research areas as bioremediation, risk assessment, and ecological restoration. May be repeated up to 6 sem. hrs. Prerequisites: Junior or senior standing; permission of the program director.

*3 sem. hrs.*

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\*General Education course. See Chapter V.



## CHEMISTRY

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

The B.S. program in chemistry is approved by the American Chemical Society for the training of professional chemists.

Students in the B.S. program in chemistry are required to conduct an original research project. Satisfaction of this requirement normally begins with enrollment in CHM 495 and selection of a research professor and project during the second term of the junior year. The research project, conducted during the entire senior year, normally requires two work periods of 3 to 4 hours each a week. The project culminates in the final term of the senior year with enrollment in CHM 498, the submission of an acceptable thesis, and the presentation of a seminar in CHM 497. Additional research work to a maximum total of 6 semester hours may be elected provided that the work extends beyond two semesters. Cooperative education students may substitute work experience for research with the prior approval of the department chairperson.

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

A minor in chemistry consists of 20 semester hours: CHM 123 and 124 with labs; CHM 302 or 303; 9 hours of 300-400 level courses (except CHM 490L) in consultation with the chairperson.

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## BACHELOR OF ARTS WITH A MAJOR IN CHEMISTRY (CHA)<sup>1</sup>

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<i>Summary of Requirements<sup>2</sup></i>	<i>Semester Hours</i>
Chemistry .....	36
CHM 123, 123L, 124, 124L, 201, 201L 313, 313L, 314, 314L, 302 or 303-304, 496.	
The remaining 10-13 sem. hrs. are chemistry electives chosen from CHM 317, 341, 404, 412, 415, 415L, 417, 418L, 420, 427, 451, 452, 462L, 490L, 498, 499 (may substitute two upper level courses from other science departments with permission of chairperson.)	
Liberal Studies Curriculum	
Humanities and Fine Arts	
Philosophy and Religious Studies .....	12
History .....	6
Literature: English or Foreign Language .....	3
Creative and Performing Arts .....	3
Foreign Language and/or Arts and/or Humanities .....	3-9
Social Sciences .....	12
Mathematics .....	8-9
Natural Sciences (PHY 201, 201L, 202, 202L) .....	8
Communication Competencies .....	3-9
Introduction to the University: ASI 150 .....	0-1
General Education courses and academic electives to total at least .....	124

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

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

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

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

<i>Summary of Requirements<sup>2</sup></i>	<i>Semester Hours</i>
Chemistry .....	37
Year 1: CHM 123, 123L, 124, 124L .....	8
Year 2: CHM 201, 201L, 313, 313L, 314, 314L .....	12
Year 3: CHM 303, 303L, 304, 451, 452, 462L, 495, 498 .....	17
Year 4: CHM 496, 497 .....	2
Biology .....	11
Year 1: BIO 151, 152, 152L .....	7
Year 2: BIO elective and laboratory .....	4
Science breadth requirements .....	10
Choose from the following: CHM 404, 412, 415, 415L, 417, 427, 418L, 499; BIO 312, 314, 403, 404, 411, 440, 462, 466	
Supporting science requirements	
MTH 168, 169, 218; CPS 132 .....	15
PHY 206, 207, 210L .....	7
Communication Competencies .....	3-9
CMM 110, 111 or 112, 113 .....	0-3
ENG 101-102 or 114 or 198 <sup>3</sup> .....	3-6
Foreign language .....	6-8
Philosophy and religious studies .....	12
Social and behavioral sciences .....	6
Humanities .....	9
First-year experience: ASI 150 .....	0-1
General Education courses and academic electives to total .....	120-127

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

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

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

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

<i>Summary of Requirements<sup>2</sup></i>	<i>Semester Hours</i>
Chemistry .....	49-52
Year 1: CHM 123, 123L, 124, 124L .....	8
Year 2: CHM 201, 201L, 313, 313L, 314, 314L .....	12
Year 3: CHM 303, 303L, 304, 304L, 317, 417, 418L, 495 .....	13
Year 4: CHM 415, 415L, 420 or 451-452, 496, 497, 498 .....	10-13
Chemistry electives	
Choose from the following: CHM 404, 412, 427, 462L, 490L, 499 .....	6
(May substitute one approved science course from another department.)	
Supporting science (Complete during first two years.)	
MTH 168, 169, 218; CPS 132 .....	15
PHY 206, 207, 208, 210L, 211L .....	11
Communication Competencies .....	3-9

CMM 110, 111 or 112, 113 .....	0-3	
ENG 101-102 or 114 or 198 <sup>3</sup> .....	3-6	
Foreign language .....		6-8
Philosophy and religious studies .....		12
Social and behavioral sciences .....		6
Humanities .....		9
First-year experience: ASI 150 .....	0-1	
General Education courses and academic electives to total at least .....		120

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

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

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

## FACULTY

Gary W. Morrow, *Chairperson*

*Distinguished Service Professor:* Lucier

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

*Associate Professors:* Church, Johnson, Morrow

*Assistant Professors:* Benin, Greer

*Lecturer:* Trick

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

## COURSES OF INSTRUCTION

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

CHM 115L. COLLEGE PREPARATORY CHEMISTRY LABORATORY: Course to accompany CHM 115 or to be elected by students in CHM 200 who lack previous chemistry laboratory experience. One 3-hour laboratory each week. 1 sem. hr.

CHM 123-124. GENERAL CHEMISTRY: Comprehensive treatment of the fundamentals of general chemistry. Prerequisite: Competence in high school chemistry or successful completion of CHM 115. A placement examination is available for students whose background is doubtful. CHM 123 is a prerequisite for CHM 124. 3 sem. hrs. each

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

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



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

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

CHM 302. PHYSICAL CHEMISTRY: Essential elements of thermodynamics, chemical kinetics, equilibria, and electrochemistry for those with a primary interest in the life sciences. For B.A. chemistry majors and premedical, 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 and biochemistry majors and chemical engineers. Prerequisites: CHM 201 or equivalent, CHM 303. Corequisite: MTH 218. *3 sem. hrs. each*

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

CHM 313-314. ORGANIC CHEMISTRY: Major topics in organic chemistry including synthesis, mechanisms, stereochemistry, and spectroscopy. Required of all chemistry majors and students in the life sciences. Prerequisite: CHM 124. CHM 313 is a prerequisite for CHM 314. *3 sem. hrs. each*

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

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

CHM 341. ENVIRONMENTAL CHEMISTRY: An introduction to the chemical processes in the environment. Topics include chemical equilibrium in aqueous solution, reaction mechanisms as applied to atmospheric chemistry, and analytical methods commonly applied to environmental samples. Prerequisite: CHM 314 or permission of instructor. *3 sem. hrs.*

CHM 341L. ENVIRONMENTAL CHEMISTRY LABORATORY: A laboratory course to accompany CHM 341. Corequisite: CHM 341. *1 sem. hr.*

CHM 404. SPECIAL TOPICS IN PHYSICAL CHEMISTRY: Thorough treatment of topics such as electrochemistry, macromolecules, photochemistry, or spectroscopy. May be repeated as topics change. Prerequisite: CHM 302 or 303. *3 sem. hrs.*

CHM 412. INTERMEDIATE ORGANIC CHEMISTRY: Modern theory and practice of organic chemistry. May include structure-reactivity relationships, reaction

mechanism, and synthetic topics not normally treated in introductory courses. Prerequisites: CHM 302 or equivalent, CHM 313-314, and senior standing.

*3 sem. hrs.*

CHM 415. ANALYTICAL CHEMISTRY: Chemical analysis based on modern instrumentation. Chromatographic, electrochemical, and spectroscopic methods.

Prerequisites: CHM 201, 201L, 302 or 304.

*2 sem. hrs.*

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

*2 sem. hrs.*

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

*3 sem. hrs.*

CHM 418L. INORGANIC CHEMISTRY LABORATORY: Laboratory course dealing with the synthesis and characterization of inorganic and organometallic compounds. Topics include vacuum and inert atmosphere techniques, separation and purification, spectroscopic characterization, X-ray diffraction, magnetic moment, and conductance measurements. Prerequisites: CHM 201L, 314L. 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. Acceptable preparation for medical school; Prerequisite: CHM 314.

*3 sem. hrs.*

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

*3 sem. hrs.*

CHM 451. GENERAL BIOCHEMISTRY I: Discussion of the chemistry and biochemistry of carbohydrates, amino acids, proteins, and nucleic acids, including health-science and methodologic aspects. Descriptions of enzymology, protein purification, and carbohydrate metabolism related to such topics as bioenergetics, membranes, and disease processes. Recommended for students desiring entry into graduate and professional schools. Prerequisites: CHM 201, 314.

*3 sem. hrs.*

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

*3 sem. hrs.*

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

CHM 490L. SCIENTIFIC GLASSBLOWING: Theory and practice of glass working. Under the supervision of a professional glassblower, students learn to make several standard seals and fabricate pieces of glass apparatus. Enrollment limited. One 3-hour laboratory each week. Grading Option 2. 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 and biochemistry majors in the B.S. programs. Grading Option 2. *No credit*

\*CHM 496. PROFESSIONAL PRACTICES SEMINAR: After discussions of the chemical literature and information retrieval, resumes, graduate education, and career opportunities, students present technical talks on topics with social, ethical, or historical implications. Required of all chemistry and biochemistry majors, both B.S. and B.A. *No credit*

CHM 497. RESEARCH SEMINAR: A series of seminars as described under CHM 495. Required of all senior chemistry and biochemistry majors in the B.S. programs. *No credit*

CHM 498-499. RESEARCH AND THESIS: All students in the B.S. programs including 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. With the prior approval of the department chairperson, B.S. Co-op students may substitute work experience for research. Prerequisite: Permission of the chairperson. *3-6 sem. hrs.*

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\*General Education course. See Chapter V.

## CLASSICS (CLA)

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

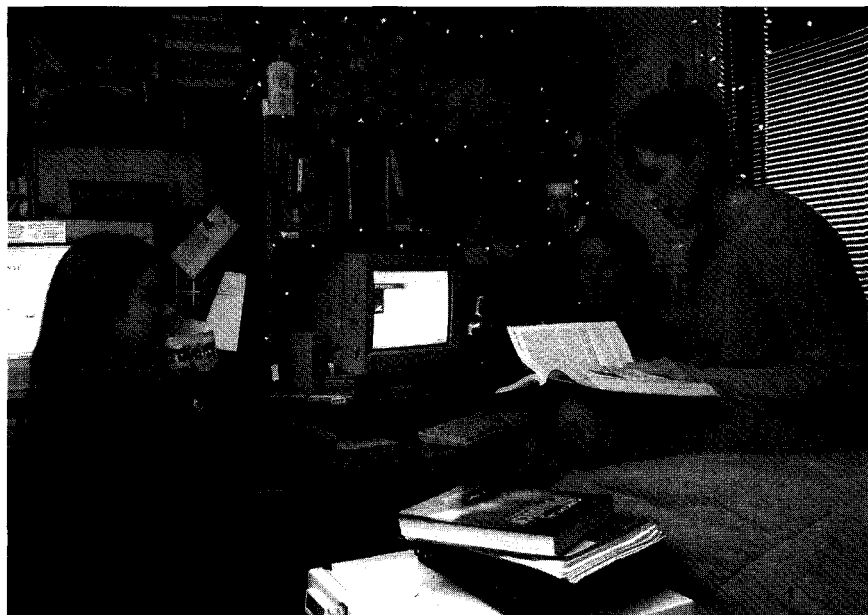
### COURSES OF INSTRUCTION

CLA 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. *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.*



# CMM

## COMMUNICATION (CMM)

The course requirements for communication majors are 39 semester hours. Teacher certification through the E11A program is an option for communication majors. Consult department chairperson for details.

Minors in communication must have CMM 110, CMM 111 or CMM 112, and CMM 113 plus 12 semester hours of upper-level courses selected through consultation with the department chairperson.

A minor in political journalism is available for political science majors. The political journalism minor consists of CMM 201, CMM 330, and four of the following five courses: CMM 331; CMM 354; CMM 355; CMM 431; CMM 432.

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

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## BACHELOR OF ARTS WITH A MAJOR IN COMMUNICATION (CMM)<sup>1</sup>

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	<i>Semester Hours</i>
Major program <sup>2</sup> .....	39
Foundation (required of all CMM majors) .....	12
CMM 110; CMM 111 or CMM 112; CMM 113; CMM 201; CMM 202; CMM 330.	
Concentration Requirements and Electives .....	27

### CONCENTRATIONS

#### Communication Management (CMT)

Foundation .....	12
CMM 320; CMM 321; CMM 412; CMM 421 .....	12
Two courses from the following:	
CMM 322; CMM 351; CMM 352; CMM 413; CMM 420;	
CMM 498 .....	6
Any courses in CMM or THR <sup>3</sup> .....	9

#### Journalism (JRN)

Foundation .....	12
CMM 331; CMM 430; CMM 431; CMM 432 .....	12
Two courses from the following:	
CMM 332; CMM 333; CMM 334; CMM 412; CMS 414;	
CMM 416; CMM 439; CMM 498 .....	6
Any courses in CMM or THR <sup>3</sup> .....	9

#### Public Relations (PUB)

Foundation .....	12
CMM 360; CMM 412; CMM 460; CMM 461 .....	12
Two courses from the following:	
CMM 331; CMM 332; CMM 421; CMM 430; CMM 469;	
CMM 498 .....	6
Any courses in CMM or THR <sup>3</sup> .....	9

#### Electronic Media (RTV)

Foundation .....	12
CMM 340; CMM 343. ....	6
CMM 397 (Flyer TV or WDCR) .....	3
One course of the following:	
CMM 341; CMM 342; CMM 344. ....	3
Two courses from the following:	
CMM 345; CMS 414; CMM 440; CMM 442, CMM 444; CMM 446,	
CMM 449; CMM 498 .....	6
Any courses in CMM or THR <sup>3</sup> .....	9

CMM 449; CMM 498 .....	6
Any courses in CMM or THR <sup>3</sup> .....	9
Communican Studies (CSS)	
Foundation .....	12
Approved program of study by advisor and department chair must be submitted prior to completion of 18 sem. hrs. of CMM or THR. <sup>3</sup> .....	27
Theatre (CTR)	
Foundation .....	12
THR 203; THR 310; THR 340; THR 415 .....	12
Two courses from the following: THR 305; THR 307; THR 323; THR 325; THR 326; THR 330; THR 424 .....	6
Any courses in CMM or THR <sup>3</sup> .....	9
One unit of 12 sem. hrs. in a single academic discipline selected from business, education or the social sciences (beyond the Liberal Studies requirements)(6 sem. hrs. must be 300-400 level) .....	12
Liberal Studies Curriculum <sup>1</sup>	
Humanities and Fine Arts	
Philosophy and Religious Studies .....	12
History .....	6
Literature: English or Foreign Language .....	3
Creative and Performing Arts .....	3
Foreign Lang. and/or Arts and/or Humanities (excludes CMM courses) .....	3-9
Social Sciences .....	12
Mathematics (MTH 102, 204, 205 excluded) .....	3
Natural Sciences .....	11
Communication Competencies (English 101-102 or ENG 114 or ENG 198) .....	3-6
Introduction to the University: ASI 150 .....	0-1
General Education courses and academic electives to total at least .....	124

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

<sup>2</sup>At least 24 of the required 39 sem. hrs. in all communication concentrations must be 300-400 level. No more than 6 total sem. hrs. of CMM 390, CMM 397 and CMM 498 may be applied toward the 39 sem. hrs.

<sup>3</sup>Dance courses in the theatre program (THR 201, 261, 271, 301, 361, 371) do not count toward the 39 sem. hrs. requirement.

FACULTY

Kathleen B. Watters, *Chairperson*  
*Professors Emeriti:* Gilvary, Morlan, Rang, Wolff  
*Professors:* Cusella, Lain, Robinson, Skill, Thompson  
*Associate Professors:* Anderson, Blatt, Griffin, Harwood, Wallace, Watters, Yoder  
*Assistant Professors:* Dunlevy-Shackleford, Kenny, Langhorne, Taylor  
*Media Executive in Residence:* Glenn Walters  
*Lecturers:* Angel, Juniewicz-Fogle

## COURSES OF INSTRUCTION

CMM 110. GROUP DECISION MAKING: Communication processes for small decision-making groups. Focus is on the development of general competencies in leadership, group roles, conflict management, agenda setting, problem analysis and research, decision making, and critical thinking. *1 sem. hr.*

CMM 111. INFORMATIVE PUBLIC SPEAKING: Communication processes for presenting information in a public speaking context. Focus is on the development of general competencies in development and organization of ideas, research, adaptation to an audience, use of PowerPoint, and delivery. *1 sem. hr.*

CMM 112. PERSUASIVE PUBLIC SPEAKING: Communication processes for persuading listeners in a public speaking context. Focus is on the development of general competencies in the construction and organization of persuasive strategies, critical evaluation of arguments and evidence, research, adaptation to an audience, use of PowerPoint, and delivery. *1 sem. hr.*

CMM 113. INTERVIEWING: Communication processes for information gathering and employment interviewing. Focus is on the development of general competencies in the conduct and organization of interviews, preparation of resumes, evaluation of questions and responses, research, listening, and nonverbal communication. *1 sem. hr.*

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

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

CMM 310. VOICE AND DICTION: The four phases of speech production: proper breathing, phonation, resonance, and articulation. Emphasis on projection, quality and clarity of speech. Analysis of students' voices through tape recordings. *3 sem. hrs.*

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

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

CMM 313. NONVERBAL COMMUNICATION: Survey of theory and research in nonverbal behavior. Examination of the influence of environmental factors, physical behavior, and vocal cues on human communication. *3 sem. hrs.*

**CMM 314. DIMENSIONS OF BRITISH COMMUNICATION:** Exploration of mass media, public relations, interpersonal communication, political communication, theatre and other communication subfields in the British context. This course will be offered only through a UD study abroad program. *3 sem. hrs.*

**CMM 315. INTERNATIONAL MASS MEDIA:** Focus on the mass media of a particular foreign country or region of the world. Topics may include media content, use, societal effects and ownership. *3 sem. hrs.*

**CMM 316. INTERCULTURAL COMMUNICATION:** Study of interpersonal communication with emphasis on people from different countries and with different cultural backgrounds. Focus on the influence of culture on communication and language, verbal and non-verbal communication similarities and differences from culture to culture, and challenges of successful intercultural communication. *3 sem. hr.*

**CMM 320. INTERPERSONAL COMMUNICATION:** Study of communication behavior in a variety of dyadic relationships including acquaintance, friendship, work, romantic, and family. Focus on communicative behavior and communicative processes in relationship development including building trust, managing conflict, negotiating power, and listening empathetically. *3 sem. hrs.*

**CMM 321. SMALL GROUP COMMUNICATION:** Examination of theory and research related to communicative processes in small, task-oriented groups. Applications include a focus upon decision-making strategies, leadership, conflict management, and cohesion. *3 sem. hrs.*

**CMM 322. INTERVIEWING FOR COMMUNICATION AND BUSINESS:** Analysis of communication in structured dyadic interaction. Emphasis on the following types of interviews: information-gathering, employment, appraisal, and persuasive. Application through role-playing and feedback systems. *3 sem. hrs.*

**CMM 330. MEDIA WRITING:** Developing and practicing writing skills for journalism, public relations, and electronic media. Study and practice of ethics in determining news values, gathering information, and communicating clearly and accurately for mass audiences. AP style emphasized. Studio fee. *3 sem. hrs.*

**CMM 331. FEATURE WRITING:** Developing and writing nonfiction stories for newspapers and magazines. Story types include personality profile, color, background, consumer, and commentary. Study and practice in journalistic reporting skills and literary writing techniques. Emphasis on content, organization, style, and accuracy. Strong command of AP style necessary. Studio fee. Prerequisite: CMM 330. *3 sem. hrs.*

**CMM 332. PUBLICATION DESIGN:** Layout and design of print and electronic publications, including newsletters, brochures, and web-based publications. Instruction in desktop and web publishing software, use of type and illustration, cost appraisal, printing methods. Studio fee. *3 sem. hrs.*

**CMM 333. FREE-LANCE WRITING:** Steps of free-lance publication, from market analysis to query letters to writing and rewriting. Mostly nonfiction, magazine markets, some newspaper and nonfiction book markets. *3 sem. hrs.*



CMM 334. SPORTSWRITING: In addition to game stories, attention is also paid to writing about personalities, legal issues, and financial issues on the interscholastic, intercollegiate, amateur, and professional levels. Strong writing skills and knowledge of journalistic style expected. Prerequisite: CMM 330. *3 sem. hrs.*

CMM 340. FUNDAMENTALS OF BROADCASTING: Survey of broadcasting, with emphasis on television and radio networks, programming, regulation, audience measurement, audience effects, and technology. Although attention is given both to the origins and future of the field, contemporary broadcasting is emphasized. *3 sem. hrs.*

CMM 341. AUDIO PRODUCTION: Study of the theories, processes, and technologies of audio production practices that can be applied in radio, television, and multimedia production. Exercises in recording of voice, music, and special effects. Course includes the operation of basic studio and field equipment, including analog and basic digital recording and editing. Studio fee. *3 sem. hrs.*

CMM 342. FUNDAMENTALS OF VIDEO PRODUCTION: Explores the techniques of studio and remote video production. Includes the technical and creative aspects of planning and script preparation, producing, directing, technical directing, graphics, editing, camera, lighting, and sound for a variety of video programs. Studio fee. *3 sem. hrs.*

CMM 343. SCRIPTWRITING 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 including corporate media writing. Prerequisite: CMM 330 or permission of instructor. *3 sem. hrs.*

CMM 344. MULTIMEDIA DESIGN AND PRODUCTION I: Introduction to producing in the interactive media of CD-ROM and other digital formats. Reviews basic object-linking-and-embedding in familiar computer programs such as Word, PowerPoint, and Freelance Graphics. Students build skills in multimedia authoring, using all the fundamental tools of graphics, text, audio, and video. Studio fee. *3 sem. hrs.*

CMM 345. CLASSIC AMERICAN FILM: A survey of the artistic evolution of American film, including the analysis of styles of producing, scripting, acting, directing, lighting, sound, cinematography, set design and editing through viewing of classic American films and selected international films that have influenced the art of American filmmaking. *3 sem. hrs.*

\* CMM 350. PROPAGANDA ANALYSIS: Examination of major propaganda campaigns in history beginning with Greek democracy. Emphasis on 20th century propaganda as psychological warfare. Principles of Aristotelean rhetorical theory applied to propaganda analysis. *3 sem. hrs.*

CMM 351. PUBLIC SPEAKING: Oral communication in professional situations. Adaptation of principles of effective speaking to specific audiences and occasions. Delivery of informational, problem-solving, and special-occasion speeches. *3 sem. hrs.*

CMM 352. PERSUASION: Study of the use of communication to form attitudes. Examination of attitudes and social influence and their effects on human behavior.

Topics include selected theories of persuasion, argument construction, and practical application. *3 sem. hrs.*

CMM 353. SPEECH WRITING: Study of speech structure and composition. Critical analysis of model speech, in conjunction with the preparation and presentation of original speeches on current public questions. *3 sem. hrs.*

CMM 354. POLITICAL CAMPAIGN COMMUNICATION: Examination of theory and research on the role, processes and effects of communication in political campaigns with emphasis on mass media, public speaking, debates, advertising, and interpersonal communications. *3 sem. hrs.*

\* CMM 355. RHETORIC OF SOCIAL MOVEMENTS: Study of rhetorical communication in American social movements through examination of the strategies, themes and tactics used by agitators and the institutional responses to discourse aimed at social change. *3 sem. hrs.*

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

CMM 390. INDEPENDENT STUDY: Supervised study involving directed readings, individual research (library, field, or experimental), or projects in the specialized areas of communication. May be repeated for up to 6 semester hours. Prerequisite: Permission of the department chairperson. *1-3 sem. hrs.*

CMM 397. COMMUNICATION PRACTICUM: Contracted participation in an approved on-campus communication organization. One sem. hr. per term to a maximum of 3. Grade option 2 only. *1-3 sem. hrs.*

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

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

CMM 412. STATISTICAL METHODS IN COMMUNICATION: Study of data gathering methods in communication. Practice in sampling, survey methods, questionnaire development, and experimental design. Emphasis on the use of logic to interpret data and to support claims. *3 sem. hrs.*

CMM 413. COMMUNICATION IN THE INFORMATION AGE: Examination of issues related to development, economics, programming, and the future of new mass communication technologies. Prerequisite: CMM 201 or permission of instructor. *3 sem. hrs.*

\* CMS 414. GLOBAL COMMUNICATION: Introduction to the main topics in the field of global communication. Emphasis on comparative mass media and current issues in global communication. (Will not satisfy humanities requirement.) *3 sem. hrs.*

\* CMS 415. WOMEN AND COMMUNICATION: Seminar focusing on gender differences in communication, unique aspects to women's communication, and women's rhetoric. Current theory and research examined. (Will not satisfy humanities requirement.) 3 sem. hrs.

\* CMM 416. DEVELOPMENT OF MASS MEDIA: History and analysis of the development and interdependence of mass media, print and electronic. Emphasis on its role in political and economic progress of U.S. and attendant responsibility. 3 sem. hrs.

CMM 420. COMMUNICATION AND CONFLICT MANAGEMENT: Examination of the functions of communication in interpersonal conflict such as marital conflict, role conflict, and organizational conflict. Communicative strategies and tactics for managing conflict. 3 sem. hrs.

CMM 421. COMMUNICATION IN ORGANIZATIONS: Analysis of message initiation, diffusion, and reception in organizations; analysis of the role of communication in developing productive work relationships, management practices, and organizational cultures. 3 sem. hrs.

CMM 430. COPYEDITING: Editing, particularly news copy editing and headline writing. Emphasis on clear and concise wording; proper spelling, grammar, and punctuation; and accuracy. Strong command of AP style necessary. Studio fee. Prerequisite: CMM 330. 3 sem. hrs.

CMM 431. PUBLIC AFFAIRS REPORTING: Investigative and specialized reporting on matters of public concern. Practice in gathering information from primary and secondary sources, and writing about complex subjects for mass audiences. Studio fee. Prerequisite: CMM 330. 3 sem. hrs.

CMM 432. THE LAW AND NEWS MEDIA: Exploration of the free press clause of the First Amendment, as defined by the courts and media practice. Study of First Amendment core values and theories. Investigation into law on libel, privacy, censorship, access to information, and copyright, as well as regulation of broadcast, cable and new electronic media. Prerequisite: Junior standing. 3 sem. hrs.

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

CMM 440. BROADCAST NEWS: Study of the process and practice of news gathering and writing for radio and television. Course includes research, analysis, writing, and editing news and features, as well as legal, and ethical concerns of broadcast news. Studio fee. Prerequisite: CMM 330. 3 sem. hrs.

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

CMM 444. MULTIMEDIA DESIGN AND PRODUCTION II: Advanced level multimedia production emphasizing client-based project generation through a design/production-team approach. Focus is on interface design; project planning, script writing, story boarding; digital image, sound and video editing; and the use of authoring software. Studio fee. Prerequisite: CMM 344. 3 sem. hrs.

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

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

CMM 452. PUBLIC DISCOURSE AND CRITICISM: Examination of the foundations of the field of communication. Major focus on the development of rhetorical theory with attention to rhetorical analysis and criticism. *3 sem. hrs.*

CMM 460. ADVANCED PUBLIC RELATIONS: Study, development and application of public relations strategies. Emphasis on strategically effective, factually accurate and grammatically sound written communications for organizational and mass audiences. Prerequisites: CMM 330, 360. *3 sem. hrs.*

CMM 461. PUBLIC RELATIONS CAMPAIGNS: Students plan and carry out a public relations program for an established professional organization, work out solutions to communication and public relations problems, and prepare written campaign materials and handbooks. Prerequisites: CMM 330, 360, 460, and senior standing. *3 sem. hrs.*

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

CMM 498. COMMUNICATION INTERNSHIP: Communication work experience in an approved organization. Prerequisites: Student must be in good academic standing and must have completed CMM 101, 201, 202, 330. Students are normally limited to a maximum of 3 sem. hrs. Under exceptional circumstances, students may petition the department chair for an additional 3 sem. hrs., if the second internship is at a different organization and the student can demonstrate that the position offers a unique and significant educational opportunity not available through the first internship. Permission of department chair. Option 2 Grading only. *1-6 sem. hrs.*

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

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\*General Education course. See Chapter V.

## COMPUTER SCIENCE (CPS)

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

*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 the core subject areas of data structures, software design, programming language concepts and architecture as arranged with the advisor and department chair.

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

Computer science and computer information systems majors are required to attain grades of C or better in CPS 150, 151 and 350.

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

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

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	<i>Semester Hours</i>
Computer science .....	45
Introductory core sequence: CPS 150, 151, 242, 250, 341	
Further core requirements: CPS 346, 350, 387	
Six additional upper-level courses, numbered 310 or above	
Mathematics: MTH 168, 169, 219, 302 <sup>2</sup> , 367 .....	18
Natural sciences: PHY 206, 207, 210L, 211L, or CHM 123, 124, 123L, 124L or BIO 151, 151L, 152, 152L or GEO 115, 116, 115L, 116L-and 2 additional courses acceptable for Science or Engineering majors .....	14
Communication competencies .....	0-9
Humanities .....	9
Social and behavioral sciences .....	6
Philosophy and religious studies, including PHL 319 .....	12
First-year experience: ASI 150 .....	0-1
General Education courses and academic electives <sup>3</sup> to total at least .....	120

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

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

	Semester Hours
Computer science .....	42
Introductory core sequence: CPS 150, 151, 242, 250, 341	
Further core requirements: CPS 310, 312, 346, 350	
Four additional upper-level courses, numbered 320 or above	
Concentration: A minor in one of the following areas: anthropology, biology, chemistry, communication, criminal justice, economics, English, family development, geology, history, human rights, languages, mathematics, music, philosophy, physics, political science, psychology, social work, sociology, religious studies, women's studies, accounting, finance, international business, management, marketing; or the following block of courses: ACC 207, 208; ECO 203, 204; MGT 301; MKT 200; MKT 300 or 301 .....	15-27
Communication competencies .....	0-9
Humanities <sup>2</sup> .....	9
Mathematics: Calculus and statistics, (e.g., MTH 148, 149, 367) <sup>2</sup> .....	9
Natural sciences <sup>2</sup> .....	8
Social and behavioral sciences <sup>2</sup> .....	6
Philosophy and religious studies, including PHL 319 <sup>2</sup> .....	12
First-year experience: ASI 150 .....	0-1
General Education courses and academic electives to total at least .....	120

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

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

FACULTY

James P. Buckley, *Chairperson*  
*Professors Emeriti:* Jehn, Kester, Winslow  
*Associate Professors:* Buckley, Gowda, Lang, Pan, Schoen, Smith  
*Assistant Professors:* Seitzer, Sritharan  
*Lecturers:* Lamb, Reynolds, Starkey  
*Adjunct Associate Professor:* Lokai

COURSES OF INSTRUCTION

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

CPS 111. INTRODUCTION TO PERSONAL COMPUTERS: Emphasis on use of operating system, particularly file organization, and applications: word processor, spreadsheet, database and presentation software. 3 sem. hrs.

CPS 130. INTRODUCTION TO ENGINEERING PROGRAMMING: Introduction to fundamentals of programming using the language C, including algorithms and control structures, with applications drawn from engineering. Intended for students in electrical engineering. Prerequisite: EGR 101. 1 sem. hr.

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 C. Corequisite: MTH 168. 3 sem. hrs.

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

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

CPS 151. ALGORITHMS AND PROGRAMMING II: Continuation of CPS 150. Emphasis on program design, development and style, string processing, data structures, program modularity, and abstract data type, using a compiler language. Prerequisite: CPS 150. 4 sem. hrs.

CPS 225. PROGRAMING FOR BUSINESS SYSTEMS: Process of software development for business system implementation. Fundamental programming concepts including program design, documentation, development and testing of computer solutions of business problems using C++. Intended for students majoring in MIS. Prerequisite: MIS 175. 4 sem. hrs.

CPS 242. INTRODUCTION TO FILE PROCESSING: The file processing environment, blocking and buffering, secondary storage devices, sequential file organization, relative file organization, and various indexed file organizations using a suitable compiler language such as COBOL. Prerequisite: CPS 150. Corequisite: CPS 151. 3 sem. hrs.

CPS 250. ALGORITHMS AND PROGRAMMING III: Study of computer organization and architecture by developing basic programming skills in an assembler language (currently IBM Mainframe) and in C. Prerequisite: CPS 151. 4 sem. hrs.

CPS 309. TOPICS IN COMPUTER SCIENCE: Lectures or laboratory work in areas of current interest. May be taken more than once. Does not count as upper level credit for major/minors. 1-4 sem. hrs.

CPS 310. SYSTEMS ANALYSIS: Methodologies for producing software, software development life cycles, top-down approach, data flow diagram, data dictionary, mini-specifications, in/output design, E-R diagrams, normalization, introduction to object oriented analysis. Prerequisite: CPS 151 or CPS 225. 3 sem. hrs.

CPS 312. SYSTEMS DESIGN: Structured design, tools of structured design, coupling and cohesion of modules, transform and transaction analyses, packaging, optimization, data-oriented and object oriented design methodologies, automated design tools. Prerequisite: CPS 310. *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: Language design issues, formal syntax specification, data types and storage methods, activation records and procedural object oriented, functional, and logic programming paradigms. 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: Advanced concepts of linear data structures, stacks, queues, and abstract data types. Basic and advanced concepts of trees, graphs, hash tables, heaps, algorithm design and analysis techniques. Prerequisite: CPS 250. *3 sem. hrs.*

CPS 353. NUMERICAL METHODS I: Study of the algorithms of numerical mathematics with emphasis on interpolation, the solution of nonlinear equations, and linear systems of equations including matrix methods; analysis of errors associated with the algorithms. Prerequisites: MTH 169; CPS 132 or 150. *3 sem. hrs.*

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

CPS 387. COMPUTER SYSTEM DESIGN I: Study of the elements of computer design. Design of combinatorial and sequential logic circuits using current integrated circuit devices. Discussion of encoders, decoders, registers, counters, etc. as applied to design and use of control, arithmetic, logic, and storage units. Instruction set, addressing modes and CPU design. Laboratory experiments with these devices. Prerequisites: CPS 250, 341. *3 sem. hrs.*

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

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



CPS 418. SOFTWARE ENGINEERING: A thorough examination of modern software methodologies, of the managerial and technological skills essential to the design and construction of high-quality software, and of the productivity and human factors in software development. Prerequisite: CPS 350. 3 sem. hrs.

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

CPS 430. DATABASE MANAGEMENT SYSTEMS: Physical and logical organization of databases: the entity-relationship model; relational database model; the data definition and data manipulation language of a commercial database management system; integrity constraints; conceptual database design. Prerequisite: CPS 350. 3 sem. hrs.

CPS 432. DATABASE MANAGEMENT SYSTEMS II: Study of query execution and optimization, transaction management, concurrency control, recovery and security techniques. Advanced data models and emerging trends in database systems, like object oriented database systems, distributed database systems, the client-server architecture, multidatabase and heterogeneous systems. Other current database topics and emerging technologies will be discussed. Prerequisite: CPS 430. 3 sem hrs.

CPS 437. SYSTEM ARCHITECTURES AND NETWORKING: Issues and techniques used in the physical design of computer-based information systems. Basic operating systems, hardware architecture and networking principles. Intended for students majoring in MIS; not open to students majoring in CPS, CIS, or PCS. Prerequisites: MIS 380, 385. 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. Prerequisite: CPS 350.

*3 sem. hrs.*

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

*3 sem. hrs.*

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

*3 sem. hrs.*

CPS 480. ARTIFICIAL INTELLIGENCE: Basic concepts and techniques of intelligent systems. Emphasis on representations, problem solving, search strategies, expert systems, mVgic systems, and AI programming. Design and implementation of AI applications. Prerequisite: CPS 350.

*3 sem. hrs.*

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

*3 sem. hrs.*

CPS 496. COOPERATIVE EDUCATION: Computer science cooperative education work experience in an approved organization. Prerequisite: 12 hours of upper-level CPS courses with a GPA of 3.0; total 90 semester hours with a GPA of 2.75. Permission of the department in advance of the work. Not open to students with credit in CPS 497. Credit does not apply to major requirements. Repeat to a maximum of 3 semester hours.

*1-3 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 in advance of the work. Not open to students with CPS 496 credit. Credit does not apply to major requirements. Repeat to a maximum of 3 semester hours.

*1-3 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 advanced artificial intelligence, computer architecture, information retrieval, microprogramming, mulitprogramming techniques, numerical analysis, graphics, data communications, parallel processing, software development, distributed computing, multimedia computing. By arrangement May be taken more than once. Prerequisite: Permission of the department.

*1-4 sem. hrs.*

## CRIMINAL JUSTICE STUDIES (CJS)

The Bachelor of Arts with a major in criminal justice studies, is a broadly structured interdisciplinary curriculum designed to introduce students to 1) a critical theory of criminal justice/criminology and 2) requisite knowledge for advanced study or public service, e.g. law enforcement and/or investigative services at the local, state and national levels; line entry careers in the correctional field—probation and parole counseling, community programs, and other rehabilitative services, as well as staff positions in the judiciary.

Those who enter the University of Dayton as first-year students, or as transfers without associate degrees, will be classified under Option A, a total program sequence. Students who transfer here with acceptable associate degrees in specific fields similar or closely related to criminal justice will be classified under Option B, a transfer program sequence.

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

The minor in criminal justice studies requires 18 semester hours to include CJS 101, Introduction to Criminal Justice Studies, SOC 305, Criminological Theory, and 12 upper-divisional semester hours of course work, i.e., one course in each of the four areas involving behavior, institutions, law, and social structure.

Proficiency examinations for limited CJS credit are available only to majors who are in-service personnel, i.e., law enforcement officers, probation and parole officials, or judicial personnel. Under Option A, students are limited to only 6 semester hours of proficiency examination credit, and under Option B, only 3 semester hours. In-service students should make their formal appeals to the director's office at the beginning of each term, so that it can be determined by the Criminal Justice Studies Advisory Committee 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 studies program.

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### BACHELOR OF ARTS WITH A MAJOR IN CRIMINAL JUSTICE STUDIES (CJS)<sup>1</sup>

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#### OPTION A

	<i>Semester Hours</i>
Criminal justice studies .....	36
CJS 101, 207, 447 and SOC 305. The remaining 24 semester hours will be taken from the criminal justice studies, political science, psychology, sociology, and social work elective course list for the behavior, institutions, law and social structure areas. A student MUST take at least 2 courses in each area.	
Liberal Studies Curriculum <sup>1</sup>	
Humanities and Fine Arts	
English 272 and 370 or 378 or 474 .....	6
Philosophy and Religious Studies .....	12
History .....	6
Literature: English or Foreign Language .....	3
Creative and Performing Arts .....	3

Foreign Language and/or Arts and/or Humanities .....	3
Social Sciences .....	12
Mathematics (MTH 102, 204, 205 excluded) <sup>2</sup> .....	3
Natural Sciences .....	11
Communication competencies .....	0-9
Introduction to the University: ASI 150 .....	0-1
General Education courses and academic electives to total at least .....	124

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

<sup>2</sup>CJS 207, Research Methods in Criminal Justice Studies, requires as a prerequisite MTH 207 or PSY 216 or SOC 308. Neither PSY 216 nor SOC 308 fills the three semester hours mathematics requirement.

### Core Courses for a CJS Major, Option A

CJS 101	Introduction to Criminal Justice Studies
CJS 207	Research Methods in Criminal Justice Studies
SOC 305	Criminological Theory
CJS 447	Senior Seminar in Criminal Justice Studies

In addition to these four core courses, students are required to take eight additional courses, two from each of the following four areas.<sup>1</sup>

#### Behavior (Must take two courses)

PSY 363	Abnormal Psychology
PSY 461	Current Implications of Drug Dependency
SOC 325	Deviant Behavior
SOC 327	Criminology
SOC 410	Victimology
SWK 325	Child Abuse

#### Institutions (Must take two courses)

CJS 303	Corrections
POL 303	State and Local Government
POL 305	Introduction to Public Administration
POL 360	Urban Politics and Policy
SOC 323	Juvenile Justice

#### Law (Must take two courses)

CJS 305	Criminal Law
CJS 315	Criminal Procedure
POL 301	American Judicial Process
POL 411	Constitutional Law
POL 450	Civil Liberties
SOC 326	Law and Society

#### Social Structure (Must take two courses)

CJS 322	Policing and Society
CJS 336	Comparative Criminal Justice Systems
SOC 328	Racial and Ethnic Minorities
SOC 339	Social Inequality
SOC 351	Urban Sociology

<sup>1</sup>Internships and independent studies may be taken in CJS, POL, PSY, and SOC that have a Criminal justice studies emphasis. No more than 6 semester hours may be taken. Also to be offered is CJS 300 Criminal Justice Studies Career Development, CJS 399, Special Topics in Criminal Justice Studies and CJS 497, Service Learning Experience. This course work is in addition to the 36 hours required for a CJS interdisciplinary major in the Option A, total program sequence. They are not to be used as substitute courses for those listed in the areas of behavior, institutions, law and/or social structure, unless approved in advanced by the director of the Criminal Justice Studies program and the College of Arts and Sciences.

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## BACHELOR OF ARTS WITH A MAJOR IN CRIMINAL JUSTICE STUDIES (CJS)<sup>1</sup>

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### OPTION B

To be admitted as a major in the 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. For criminal justice studies majors who have completed the basic requirements for an accredited two-year criminal justice degree, 60 semester hours beyond the associate degree is suggested, which includes a minimum of 21 semester hours in the program.

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

#### *Semester Hours*

#### Liberal Studies Curriculum<sup>1</sup>

##### Humanities and Fine Arts

English 272 and 370 or 378 or 474 ..... 6

Philosophy and Religious Studies ..... 6

History ..... 6

Literature: English or Foreign Language ..... 3

Foreign Language and/or Arts and/or Humanities ..... 3

Social and Behavioral Sciences ..... 12

Mathematics (MTH 102, 204, 205 excluded)<sup>2</sup> ..... 3

Communication competencies: ENG 101 & 102; CMM 110, 111 or 112, 113 ..... 0-9

General Education courses and academic electives to total at least<sup>3</sup> ..... 60

#### Course requirements:

Criminal Justice Studies ..... 21

CJS 207, 447 and SOC 305. The remaining 12 semester hours will be taken from the criminal justice studies, political science, psychology, sociology, and social work elective course list for the behavior, institutions, law, and social structure areas. A student must take at least one course in each area. Any course that is specifically required of the criminal justice studies 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.

Humanities <sup>1</sup> .....	21
Philosophy and/or religious studies electives .....	6
Mathematics (MTH 102, 204, 205 excluded) <sup>2</sup> .....	3
Social and behavioral sciences .....	12
General Education courses and academic electives to total at least <sup>3</sup> .....	63

<sup>1</sup>Consult General Requirements for all Bachelor of Arts programs and Chapter V for General Education requirements.

<sup>2</sup>CJS 207, Research Methods in Criminal Justice Studies, required as a prerequisite MTH 207 or PSY 216 or SOC 308. Neither PSY 216 nor SOC 308 fills the three semester hours mathematics requirements.

<sup>3</sup>To be considered a viable candidate for graduation, a student must have completed a minimum of 124 semester hours with accepted transfer credits.

### Core Courses for a CJS Major, Option B

CJS 207	Research Methods in Criminal Justice Studies
SOC 305	Criminological Theory
CJS 447	Senior Seminar in Criminal Justice Studies

In addition to these three core courses, students are required to take four additional courses—one from each of the following four areas.<sup>1</sup>

#### Behavior (Must take one course)

PSY 363	Abnormal Psychology
PSY 461	Current Implications of Drug Dependency
SOC 325	Deviant Behavior
SOC 327	Criminology
SOC 410	Victimology
SWK 325	Child Abuse

#### Institutions (Must take one course)

CJS 303	Corrections
POL 303	State and Local Government
POL 305	Introduction to Public Administration
POL 360	Urban Politics and Policy
SOC 323	Juvenile Justice

#### Law (Must take one course)

CJS 305	Criminal Law
CJS 315	Criminal Procedure
POL 301	American Judicial Process
POL 411	Constitutional Law
POL 450	Civil Liberties
SOC 326	Law and Society

#### Social Structure (Must take one course)

CJS 322	Policing and Society
CJS 336	Comparative Criminal Justice Systems
SOC 328	Racial and Ethnic Minorities
SOC 339	Social Inequality
SOC 351	Urban Sociology

<sup>1</sup>Internships and Independent Studies may be taken in CJS, POL, PSY, and SOC that have a criminal justice studies emphasis. No more than 6 semester hours may be taken. Also to be offered is CJS 300 Criminal Justice Studies Career Development, CJS 399, Special Topics in Criminal Justice Studies and CJS 497, Service Learning Experience. This course work is in addition to the 21 hours required for a CJS interdisciplinary major in the Option B, transfer program sequence. They are not to be used as substitute courses for those listed in the areas of behavior, institutions, law and/or social structure, unless approved in advance by the director of the Criminal Justice Studies program and the College of Arts and Sciences.

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## CRIMINAL JUSTICE STUDIES ADVISORY COMMITTEE

The Criminal Justice Studies Advisory Committee consists of James A. Adamitis, *Director, Criminal Justice Studies Program*, Ahern (Political Science), Ghery (Political Science), Apolito (Criminal Justice Studies), Ingram (Criminal Justice Studies), Reeb (Psychology), P. Donnelly (Sociology, Anthropology and Social Work), H. Pestello (Sociology, Anthropology and Social Work).

## FACULTY

James A. Adamitis, *Director*

*Associate Professors:* Adamitis, Ingram

*Coordinator for Community Relations:* Timothy F. Apolito

*Adjunct Instructors:* Abraham

## COURSES OF INSTRUCTION

CJS 101. INTRODUCTION TO CRIMINAL JUSTICE STUDIES: Introduction to the field of criminal justice studies, stressing the theoretical foundations, origin, nature, methods, and limitations of criminal justice studies as a college curriculum.

3 sem. hrs.

CJS 207. RESEARCH METHODS IN CRIMINAL JUSTICE STUDIES: 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 are also examined. Prerequisite: MTH 207 or PSY 216 or SOC 308.

3 sem. hrs.

CJS 300. CRIMINAL JUSTICE STUDIES CAREER DEVELOPMENT: Exploration of career opportunities and the professional career placement process including setting goals and identifying educational objectives, noting professional concerns, the role of a given criminal justice organization, and assessing experiences.

1 sem. hr.

CJS 303. CORRECTIONS: The administration of correctional institutions and other detention facilities with emphasis on probation and parole systems to include the rehabilitation and treatment of the incarcerated with reference to correctional law cases.

3 sem. hrs.

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

CJS 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.*

CJS 322. POLICING AND SOCIETY: Analyzes the history of policing in society and assesses the social and political forces that are correlated with both the rise of formal policing and the variety of structures law enforcement agencies have assumed. Reviews the primary functions of policing in American society and examines those issues affecting federal, state, county, municipal and private policing. *3 sem. hrs.*

CJS 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.*

CJS 399. SPECIAL TOPICS IN CRIMINAL JUSTICE : An extensive examination of a current topic affecting the criminal justice system and its law enforcement, corrections or judicial components. May be repeated to a maximum of 3 semester credits when the topic changes. *1-3 sem. hrs.*

CJS 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 CJS course. *3 sem. hrs.*

CJS 447. SENIOR SEMINAR IN CRIMINAL JUSTICE STUDIES: 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.*

CJS 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 studies majors only; in-service students do not qualify. Students who enroll for internship credit are not given a stipend. Credit granted only under grade option 2. Prerequisites: Sophomore status, 2.5 cumulative grade-point average, and permission of the director of Criminal Justice Studies Program. *3 sem. hrs.*

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

CJS 497. SERVICE LEARNING EXPERIENCE: Supervised community research or service experience that complements a specific upper division course in Criminal Justice Studies. No more than 3 semester hours of Social Science 497 credits can count for graduation. Repeatable up to three semester hours. Prerequisite: Permission of instructor. Corequisite: a 300-400 Criminal Justice Studies course. *1 sem. hr.*



## ECONOMICS (ECA)

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.

Information on a specialized degree, Applied Mathematical Economics, (MTE) can be found in Arts and Sciences under the Mathematics Department.

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

	<i>Semester Hours</i>
Economics .....	30
ECO 203, 204, 346, 347, 490, and 15 sem. hrs. of upper-divisional electives.	
Mathematics .....	6-9
MTH 207 and MTH 138 or MTH 148 <sup>2</sup> required; MTH 149 strongly recommended.	
Natural Sciences .....	11
Liberal Studies Curriculum <sup>1</sup> .....	
Humanities and Fine Arts .....	27-33
Philosophy and Religious Studies .....	12
History .....	6
Literature: English or Foreign Language .....	3
Creative and Performing Arts .....	3
Foreign Language and/or Arts and/or Humanities .....	3-9
Social Sciences (excludes courses in ECO) .....	12
Communication competencies .....	0-9
Introduction to the University: ASI 150 .....	0-1
General Education courses and academic electives to total at least .....	124

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

<sup>2</sup>MTH 168 or MTH 128-129 may be substituted with permission of chairperson.

## ENGLISH (ENG)

The University requirement in English composition is satisfied by the completion of ENG 101-102, ENG 114, or ENG 198. Completing this requirement is a prerequisite for 200- and 300- level English courses. For placement information, see Reading and Writing Skills under Basic Skills and General Competencies 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, 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 E11A program. (See EDT.) For details, consult the department chairperson.

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

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

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	<i>Semester Hours</i>
English .....	36
First-year composition: ENG 101-102 or 114 or 198 .....	0-6
Literary Analysis and Research—Poetry: Eng 300 .....	3
Surveys: ENG 301, 302, and 305 .....	9
Shakespeare: ENG 362 .....	3
Composition Theory or Literary Theory: ENG 476 or 488 .....	3
One 300- or 400-level writing class .....	3
Seminar: ENG 490 .....	3
ENG electives .....	6-12
Liberal Studies Curriculum <sup>1</sup>	
Humanities and Fine Arts	
Philosophy and Religious Studies .....	12
History .....	6
Creative and Performing Arts .....	3
Foreign Language and/or Arts and/or Humanities (excludes ENG courses).....	3-9
Social Sciences .....	12
Mathematics (MTH 102, 204, 205 excluded) .....	3
Natural Sciences .....	11
CMM 110, 111 or 112, 113 .....	3
Introduction to the University: ASI 150 .....	0-1
General Education courses and academic electives to total at least .....	124

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

## FACULTY

Brian P. Conniff, *Chairperson*

Anne S. Pici, *Program Coordinator*

*Professors Emeriti:* August, Cochran, Henninger, Labadie, Martin, Means, Murphy, Palumbo, Patrouch, Ruff, Stockum

*Professors:* Bedard, J. Farrelly, Kimbrough, K. Marre, Pici,

*Associate Professors:* Boehnlein, Cameron, Conniff, Durham, Macklin, L. Marre, Shereen, Tuss, Wilhoit, Youngkin

*Assistant Professors:* Hill-Vasquez, Hughes, McCombe, Strain

*Poet-in-Residence:* Martin

*Lecturer:* B. Farrelly

## 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. Students must pass the course with a grade of "C" or higher to satisfy the University requirement in general reading and writing competencies. *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. Students must pass the course with a grade of "C" or higher to satisfy the University requirement in general reading and writing competencies. *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. Students must pass the course with a grade of "C" or higher to satisfy the University requirement in general reading and writing competencies. *3 sem. hrs.*

\* ENG 151. INTRODUCTION TO LITERATURE: A critical study of literary forms—fiction, drama, and poetry—representative of various eras and cultures. May be taken concurrently with ENG 102. Prerequisite: ENG 101 or equivalent. *3 sem. hrs.*

\* ENG 198. FRESHMAN HONORS SEMINAR: Study and seminar discussion of selected literary masterworks and appropriate criticism thereof, with equal emphasis on composition. Open by permission only to first-year students in the University Honors Program. Students must pass the course with a grade of "C" or higher to satisfy the University requirement in general reading and writing competencies. *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 (chiefly Western world) 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 300. LITERARY ANALYSIS AND RESEARCH—POETRY: Detailed analysis of selected poems, with attention to their use of traditional forms and conventions, combined with training in standard methods of interpretation and research. 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. Not open to students who have taken ENG 322. Prerequisite: ENG 102 or equivalent.

3 sem. hrs.

EN 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 323. LITERATURE OF THE CHRISTIAN TRADITION: Study of literary works that form part of the Christian religious tradition. Prerequisites: ENG 102 or equivalent. 3 sem. hrs.

ENG 324. THE NOVEL: 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 334. MODERN MEN — IMAGES: Critical examination of significant literary works that portray males in traditional and non-traditional roles. 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 336. GENDER IN FICTION: Study of major works of American and British male and female authors from different periods, analyzing the authors, their principal characters, themes, and narrative technique as they reflect different aspects of the issue of gender in literature. 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 338. IMAGES OF BUSINESS: Examination of the modern world of work, the image of the business "professional," and the influence of organization on global society and values as these themes are revealed primarily in modern literature. 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 340. THE PRISON IN LITERATURE: Survey of prison literature from the rise of the modern prison in the late 18th-century through the contemporary period. Prerequisite: ENG 102 or equivalent. 3 sem. hrs.
- \* ENG 345. COLONIAL AND POSTCOLONIAL LITERATURE: Examination of significant literary works that reveal the diversity of human cultures shaped by colonial and postcolonial contexts. 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 382. MOZART'S OPERAS: An interdisciplinary survey of Mozart's operas—German and Italian, serious and comic. Class discussions will be supplemented by extensive listening and/or viewing of recorded performances and, when possible, attendance at live performances. 3 sem. hrs.
- \*ENG 383. THE TRAGIC DILEMMA: Examination of tragedy from ancient times to modern times, with emphasis on both the form(s) of tragedy and the tragic vision of life. Prerequisite: ENG 102 or equivalent. 3 sem. hrs.
- \*ENG 384. CHRISTIANITY AND MODERN POETRY: A study of selected poets from the modern period whose work draws from the major literary, intellectual, cultural, and theological traditions of Christianity. Prerequisite: ENG 102 or equivalent. 3 sem. hrs.

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

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

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

ENG 410. EARLY RENAISSANCE LITERATURE: Survey of the literature of the 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. Prerequisites: 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. May be repeated up to six semester hours. Prerequisite: Permission of supervising instructor. 1-6 sem. hrs.

ENG 488. LITERARY THEORY: Comparative critical reading of classical and modern theoretical texts and analysis of critical methodology. Prerequisite: A 200- or 300-level English course. 3 sem. hrs.

ENG 490. SEMINAR: Concentrated study of a topic designed to integrate selected aspects of literary history, critical approaches, and research skills developed by English majors in previous required courses. May be repeated as topics change. Prerequisites: ENG 300, 301, 302, 305; ENG 476 or 488. 3 sem. hrs.

ENG 495. SENIOR HONORS TUTORIAL: Independent directed study on special topics for selected students. May be repeated as topic or instructor changes. Permission required. 3 sem. hrs.

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\*General Education course. See Chapter V.

## FAMILY DEVELOPMENT (FDV)

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

The minor in family development is earned by taking 16 semester hours of coursework, all of which must be outside one's major discipline. These must be distributed as follows:

	<i>Semester Hours</i>
Basic theory course in family development required. ....	3
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
CMM 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 Sex and Fertility Regulation	SOC 322 Sex Roles and Society
PSY 251 Human Growth and Development	SOC 323 Juvenile Justice
PSY 351 Child Psychology	SOC 330 Perspectives on Aging
PSY 355 Developmental Psychopathology	SWK 325 Child Abuse
PSY 462 Human Sexuality	SWK 327 Parenting: Social Welfare Role
REL 362 Christian Family Values & TV	SWK 330 Perspectives on Aging
	SWK 331 Death, Dying, and Suicide

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

## FAMILY DEVELOPMENT COMMITTEE

Brenda Donnelly, *Minor Coordinator*

(Center for Leadership in Community)

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

## FLM

### FILM STUDIES (FLM)

The interdisciplinary minor in film studies (FLM) provides students an opportunity to explore one of the most popular and influential media of the 20th century. Students study the history, theory, and aesthetics of film and consider film from literary, philosophic, religious, economic, and creative perspectives. The minor complements many of the existing majors in the arts and sciences and enhances the academic preparation of students who are considering graduate school and/or careers in film criticism, screenwriting or film production.

The minor in film studies requires 13 hours, and includes the following courses:

Required: ASI 350 Interdisciplinary Film Study (1) a capstone course taken after all elective courses have been completed.

Select four (4) of the following elective courses (12 hours):

ENG 331 Studies in Film (3)  
ENG 332 Studies in Literature and Film (3)  
PHL 324 Philosophy and Film (3)  
CMM 345 Classic American Film (3)  
REL 372 Religion and Film (3)  
Or other approved substitutes

Students desiring to minor in film studies should notify their respective deans and the coordinator of film studies.

### FILM STUDIES COMMITTEE

James Farrelly (English) *Coordinator of Film Studies*  
Lain (Communication), Fouke (Philosophy), Kimbrough (English),  
Inglis (Philosophy), Zukowski (Religious Studies), A. Smith (Religious Studies),  
Benedum (Music and Humanities Chair)

## GENERAL STUDIES (GEN)

The Bachelor of General Studies program is designed for those students who desire to pursue a non-traditional degree program at the University outside of any departmental major. This degree program permits great latitude in utilizing the academic resources of the University for planning and acquiring an education to meet individual needs. Students may plan their programs to the best advantage of their particular educational objectives. Students build their programs on the foundation of University Basic Skills and General Education requirements.

### BACHELOR OF GENERAL STUDIES PROGRAM (GEN)

Admission requirements for the Bachelor of General Studies are the same as those for any other degree 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. An application for acceptance into the degree program must be completed and approved by the administrator of the program. Any students in good academic standing may request transfer into this program.

The General Studies student is required to plan an academic program to satisfy the requirements for graduation in consultation with the administrator of the program in the College of Arts and Sciences. The usual policy of prerequisites remains in effect in this program. A student cannot earn a double degree with a Bachelor of General Studies.

The candidate for the degree of Bachelor of General Studies must complete 120 semester hours with an overall grade point average of 2.0 or better, including:

1. University General Competencies and Basic Skills and the General Education requirements (see Chapter V),
2. Three semester hours of mathematics selected from courses offered by the Mathematics department (excluding MTH 102, 204, 205),
3. Study of the natural sciences by completing 7 semester hours in approved natural science courses (biology, chemistry, geology, physics), including one course with accompanying laboratory,
4. A minimum of 54 semester hours of courses at the 300-400 level with a grade point average of 2.0 or better, and
5. Not more than 30 semester hours of work from any one academic discipline.

## GEOLOGY (GEO)

Geology is the study of the earth. It incorporates many aspects of our complex planet including its composition, structure, environment, dynamic and hazardous processes, and the development of life, continents and oceans through time. Geology plays a critical role in interpreting the earth's long history of global change, and in predicting future environmental change.

The Geology department offers two programs leading to a Bachelor of Science in geology and environmental geology. The geology (GEO) major provides basic courses in the geological sciences and a range of advanced level courses that allow students to develop courses of study that complement particular interests within the field. The environmental geology (EVG) program is broad in scope, providing a firm grounding in the fundamentals of earth science as well as an interdisciplinary curriculum including Geology, Biology, Chemistry, and other allied science courses, reflecting the interdisciplinary nature of environmental concerns.

The Geology department aims to prepare students for a career in the geological sciences. Graduates of the department are competitive for entry to graduate programs. Geology majors pursue careers in a wide range of settings including: state and federal geological agencies; geological consulting companies; natural resource exploration, development and management; museums; research laboratories; and education. Environmental geologists address critical needs of our society ranging from groundwater protection and water-supply development to the identification and assessment of natural hazards.

A minor in Geology consists of 12 hours at 300-400 level, having completed the appropriate prerequisite for these courses.

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

	<i>Semester Hours</i>
Geology .....	46
Required Courses	
Year 1: GEO 115-115L, 116-116L .....	8
Year 2: GEO 201-201L .....	4
Year 3: GEO 301-301L, 307-307L .....	8
Year 4: GEO 303, 310-310L, 401-401L, 403-403L .....	18
Geology Electives - choose from the following:	
GEO 302-302L, 308-308L, 309-309L, 404, 411-411L, 412-412L, 479L, 498 .....	8
Supporting Sciences .....	22
CHM 123-123L/124-124L .....	8
MTH 168/169 <sup>2</sup> .....	8
PHY 206/207 <sup>3</sup> .....	6
Science electives — choose from the following, with accompanying laboratories where applicable BIO, CHM, CPS, GEO, MTH, PHY, Engineering <sup>4</sup> , .....	8
Philosophy and Religious Studies .....	12
Communication competencies .....	0-9
Social and behavioral sciences .....	6

Humanities .....	9
Introduction to the University: ASI 150 .....	0-1
General Education requirements and academic electives to total at least .....	120

<sup>1</sup>See General Requirements for all Bachelor of Science programs and Chapter V for General Education requirements.

<sup>2</sup>May substitute MTH 148-149 or MTH 137, 138 & 149 with permission.

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

<sup>4</sup>With permission.

## ENVIRONMENTAL GEOLOGY (EVG)

The following program, leading to the Bachelor of Science with a major in environmental geology, is designed to present students with the basic courses in the geological sciences as well as provide specific environmental geology courses. The program also requires additional related science courses.

### BACHELOR OF SCIENCE WITH A MAJOR IN ENVIRONMENTAL GEOLOGY (EVG)<sup>1</sup>

	<i>Semester Hours</i>
Geology .....	65
Required courses	
Year 1: GEO 115-115L, 116-116L .....	8
Year 2: GEO 201-201L, 208 .....	7
Year 3: GEO 301-301L, 307-307L, 310-310L .....	12
Year 4: GEO 308-308L, 309-309L, 479L .....	10
Geology electives — choose from the following:	
GEO 302-302L, 303, 401-401L	
403-403L, 404, 411-411L, 412-412L, 498 .....	8
Supporting Sciences .....	28
BIO 101/102, or 151/152 .....	6
CHM 123-123L/124-124L .....	8
MTH 168/169 <sup>2</sup> .....	8
PHY 206/207 <sup>3</sup> .....	6
Science electives - choose from the following .....	17
BIO 350-350L, 430-430L, 452-452L, 459-459L, 480-480L	
CHM 201-201L, 302, 313-313L, 341-341L	
CPS 132, 144	
Engineering CIE 312-312L, 390, 434, 580, 595	
MTH 218, 219, 367, 368	
Philosophy and Religious Studies .....	12
Communication competencies .....	0-9
Social and behavioral sciences .....	6
Humanities .....	9
Introduction to the University: ASI 150 .....	1
General Education requirements and academic electives to total .....	120-127

<sup>1</sup>See General Requirements for all Bachelor of Science programs and Chapter V for General Education requirements.

<sup>2</sup>May substitute MTH 148-149 or MTH 137, 138 & 149 with permission of department.

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

## FACULTY

Michael R. Sandy, *Chairperson*

*Professor Emeritus: Ritter*

*Professor: Sandy*

*Associate Professors: Koziol, A. McGrew, Pair*

*Lecturer: Goldman*

## COURSES OF INSTRUCTION

GEO 103. PRINCIPLES OF PHYSICAL 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. 3 sem. hrs.

GEO 104L. INTRODUCTORY GEOLOGY FIELD LABORATORY: Course to accompany GEO 104. 1 sem. hr.

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

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

\* GEO 115. PHYSICAL GEOLOGY: Introductory course in geologic principles; the composition and structure of the earth, its land forms, and the agencies active in their production. Laboratory optional for nonmajors. 3 sem. hrs.

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

\* GEO 116. GEOLOGICAL HISTORY OF THE EARTH: A comprehensive study of earth history from its origins to the present. Prerequisites: GEO 109 or 115; permission of instructor. 3 sem. hrs.

GEO 116L GEOLOGICAL HISTORY OF THE EARTH LABORATORY: Course to accompany GEO 116. Two hours each week. 1 sem. hr.

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

GEO 201. MINERALOGY: Introduction to crystallography, crystal chemistry and crystal structure. Study of the major groups of rock-forming minerals, their association and occurrence with emphasis on identification by physical properties and optical techniques. Prerequisite: GEO 109 or 115 or permission of instructor. 3 sem. hrs.

GEO 201L. MINERALOGY LABORATORY: Course to accompany GEO 201. Three hours per week. 1 sem. hr.

\* 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. Prerequisites: GEO 109 or 115, permission of instructor. 3 sem. hrs.

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

\* GEO 218. ENGINEERING GEOLOGY: A comprehensive study of geologic principles applicable to civil engineering practices. 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. 3 sem. hrs.

GEO 301L. STRUCTURAL GEOLOGY LABORATORY: Course to accompany GEO 301. Two hours each week. 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. 3 sem. hrs.

GEO 302L. GLACIAL GEOLOGY LABORATORY: Course to accompany GEO 302. Two hours each week. 1 sem. hr.

GEO 303. FIELD GEOLOGY: Study of field relationships in an area containing abundant igneous, metamorphic, and sedimentary rocks. Prerequisites: GEO 115, 116. 6 sem. hrs.

GEO 307. GEOMORPHOLOGY: Detailed study of landforms and the erosional processes that develop them. Prerequisites: GEO 115, 116. 3 sem. hrs.

GEO 307L. GEOMORPHOLOGY LABORATORY: Course to accompany GEO 307. Two hours each week. 1 sem. hr.

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



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

GEO 309. SURFACE AND GROUNDWATER HYDROLOGY: This course is designed to provide a science or engineering student with the fundamental concepts and principles central to the study of water as a resource. This will include an examination of all components of the hydrologic cycle including surface-water hydrology and management, groundwater hydrogeology, and water resource management. Prerequisite: GEO 109 or GEO 218 or permission of instructor. *3 sem. hrs.*

GEO 309L. SURFACE AND GROUNDWATER HYDROLOGY LABORATORY: Laboratory exercises to accompany GEO 309. Three hours per week. *1 sem. hr.*

GEO 310. STRATIGRAPHY: The interpretation of specific lithotypes and the synthesis of the stratigraphic record. Prerequisite: GEO 116. *3 sem. hrs.*

GEO 310L. STRATIGRAPHY LABORATORY: Course to accompany GEO 310. Two hours each week. *1 sem. hr.*

GEO 401. PALEONTOLOGY: The study of ancient life. The morphology, ecology, evolution, and stratigraphic distributions of selected invertebrates, vertebrates, and plants. *3 sem. hrs.*

GEO 401L. PALEONTOLOGY LABORATORY: Course to accompany GEO 401. Two hours each week. *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. Prerequisite: GEO 201. *3 sem. hrs.*

GEO 403L. SEDIMENTOLOGY LABORATORY: Course to accompany GEO 403. Two hours each week. *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. *1-4 sem. hrs.*

GEO 411. IGNEOUS PETROLOGY: Study of the formation of igneous rocks. Prerequisite: GEO 201. *3 sem. hrs.*

GEO 411L. IGNEOUS PETROLOGY LABORATORY: Course to accompany GEO 411. Two hours each week. *1 sem. hr.*

GEO 412. INTRODUCTORY GEOCHEMISTRY: Study of elementary thermodynamics, aqueous geochemistry, and principles governing the distribution of trace elements, radioisotopes and stable isotopes in igneous, metamorphic and sedimentary rocks. Emphasis on applications and solution of geological problems. Prerequisite: GEO 201, or permission of instructor. *3 sem. hrs.*

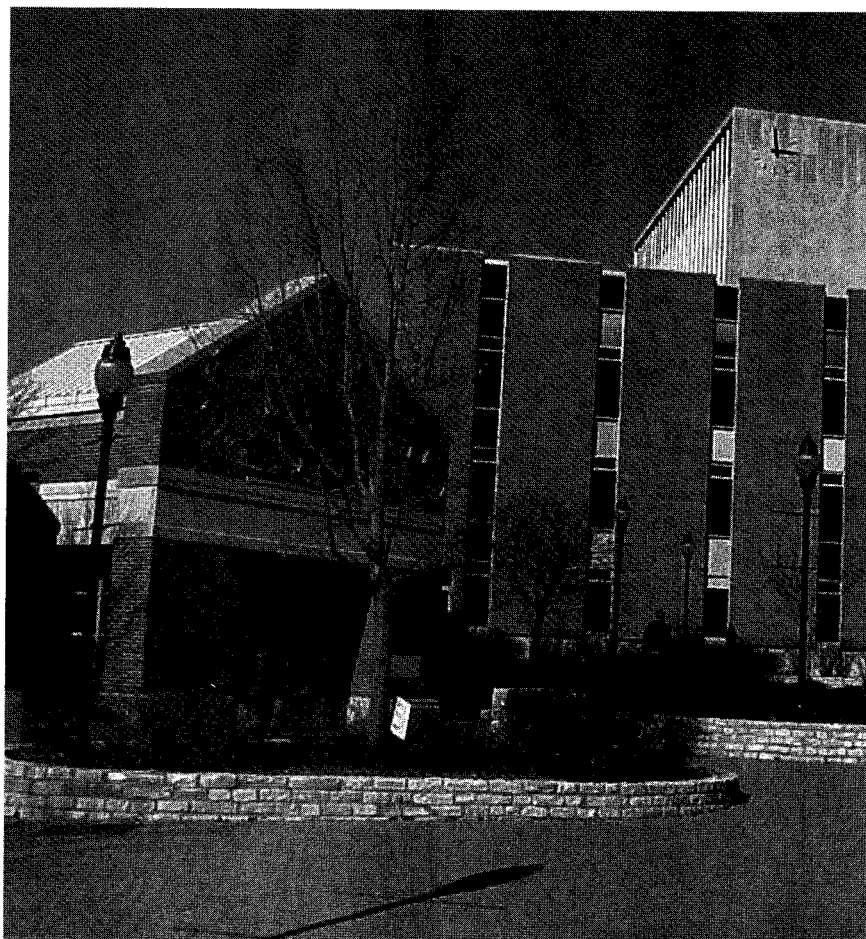
GEO 412L. INTRODUCTORY GEOCHEMISTRY LABORATORY: Course to accompany GEO 412. Three hours each week.. *1 sem. hr.*

GEO 479L. ENVIRONMENTAL INSTRUMENTATION LABORATORY: The understanding and use of field and laboratory based equipment to study acurrent environmental issues. Emphasis on team-centered approaches to investigating environmental problems. Same as BIO 479L. Prerequisites: BIO 151, 152; GEO 115, 116; or permission of instructor. *2 sem. hrs.*

GEO 498. GEOLOGICAL RESEARCH AND THESIS: Research project within an area of the geological sciences, including, but not limited to, environmental geology, geochemistry, geomorphology, or paleontology. The results are to be presented in a written thesis. Prerequisite: Permission of instructor. *4 sem. hrs.*

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\* General Education course. See Chapter V.



# HST

## HISTORY (HST)

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

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

Students in B.A. programs can acquire teacher licensure through the E11A program (See EDT). For details, consult the department chairperson.

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

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### BACHELOR OF ARTS WITH A MAJOR IN HISTORY (HST)

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	<i>Semester Hours</i>
History .....	36
HST 101 .....	3
HST 102 OR HST 198 .....	3
HST 251 .....	3
HST 252 .....	3
HST 301 .....	3
HST 301L .....	0
Two 400-level HST seminars <sup>1</sup> .....	6
HST electives at 300 level <sup>2</sup> .....	15
Liberal Studies Curriculum <sup>3</sup>	
Humanities and Fine Arts	
Philosophy and Religious Studies .....	12
Literature: English or Foreign Language .....	3
Creative and Performing Arts .....	3
Foreign Language and/or Arts and/or Humanities .....	3-9
Social Sciences .....	12

Mathematics (MTH 102, 204, 205 excluded) .....	3
Natural Sciences .....	11
Communication competencies .....	0-9
Introduction to the University: ASI 150 .....	0-1
General Education courses and academic electives to total at least <sup>1</sup> .....	124

<sup>1</sup>Three credits of the seminar requirement may be achieved through the fulfillment of an experiential component earned through completion of three credits of HST 495 Internship.

<sup>2</sup>These electives should be distributed so that the student will have taken history (HST) electives in three geographical areas: United States, Europe, and at least one of the following: Africa, Asia, Latin America, Middle East.

<sup>3</sup>See also Distribution Table for Bachelor of Arts programs and Chapter V for General Education requirements.

<sup>4</sup>For History majors, this total should include either 6-8 sem. hrs. in a foreign language or 6 sem. hrs. in quantitative skills courses (e.g., computer science, statistics, or mathematics) beyond the Basic Skills mathematics requirement. Where appropriate, this credit may apply to other requirements as well.

## FACULTY

Janet R. Bednarek, *Chairperson*

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

*Professors:* Alexander, Amin, Eid, Heitmann, Hitchner, Morman,

Palermo, Schweikart

*Associate Professors:* Bednarek, Cadegan, Carlson, Flockerzie, Trollinger, Yungblut

*Assistant Professors:* Darrow, Fleischmann, Little, Santamarina

*Adjunct Professor:* Gannon

*Lecturer:* Hume

## COURSES OF INSTRUCTION

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

\* HST 101. HISTORY OF WESTERN CIVILIZATION FROM ITS CLASSICAL ROOTS TO 1715: Survey of Western civilization beginning in Antiquity and concluding with the Enlightenment. The course will investigate the social, economic, cultural, political, and environmental forces that shaped the Ancient, Medieval, and Early Modern eras. 3 sem. hrs.

\* HST 102. HISTORY OF WESTERN CIVILIZATION SINCE 1715: Survey of Western civilization from the 18th century to the present. The course will investigate the social, economic, cultural, political, and environmental forces that shaped European society and the world in the modern period. 3 sem. hrs.

\* HST 198. HISTORY HONORS SEMINAR: Study and seminar discussion of selected historical documents dealing with major events and trends in Western civilization since 1715. Open by permission only to first-year students in the University Honors Program. 3 sem. hrs.

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

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

3 sem. hrs.

HST 300. CAREER DEVELOPMENT IN HISTORY: Exploration of career opportunities open to History majors, with special emphasis on strategic planning for a career, creating a job portfolio, and mastering the practical mechanics of job searching. Prerequisite or Corequisite: HST 301.

1 sem hr.

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

3 sem. hrs.

HST 301L. RESEARCH PAPER: Requires the satisfactory completion of a research paper of 10-15 pages in length based on original historical research. The paper may be written in a History (HST) course on the 300/400 levels or, with prior permission of the chair, in conjunction with a course in another department or as an Honors Thesis. Required for all History majors. Prerequisite or Corequisite: HST 301.

No Credit

- \* 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. OLD REGIME EUROPE: 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. AGE OF DEMOCRATIC REVOLUTIONS: Historical analysis of the ideological, political, social and economic changes of the late 18th and early 19th centuries, emphasizing developments in France and Europe.

3 sem. hrs.

- \* HST 313. THE DUAL REVOLUTION AND ITS CONSEQUENCES - EUROPE 1815-1914: Historical analysis of nineteenth century Europe emphasizing the ideological, political, economic and social consequences of the Industrial and French revolutions, commonly known as the Dual Revolution.

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 319. 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 320. 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 321. MODERN FRANCE: French history from the Bourbon Restoration to the present. Emphasis on political, socio-economic, and cultural factors. 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 323. 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 324. COMPARATIVE NATIONALISM: Comparative study of the origins and consequences of national movements throughout the world. Attention given to the historiography of nationalism and the fate of the nation-state idea in a number of temporal, geographic, political and cultural settings. 3 sem. hrs.

HST 325. HISTORY OF RUSSIA TO 1860: History of Kievan Russia and Orthodox Christianity, the Mongol Conquest, the rise of autocracy, reforms and rebellions, revolutionary movements, and the rise of the Empire to the Crimean War. 3 sem. hrs.

HST 326. HISTORY OF THE SOVIET UNION AND ITS SUCCESSOR STATES, 1860 TO THE PRESENT: Social, political, and cultural history of Russia from the great reforms of the late empire, through the wars, revolutions, and reconstructions of the Soviet Period, to the present. 3 sem. hrs.

- \* HST 327. NATIONAL CULTURES OF THE SOVIET UNION AND ITS SUCCESSOR STATES: The history of the formation of the Soviet Union and of national and cultural relations between the Russians and their Slavic, Baltic, Caucasus, Central Asian, and Siberian neighbors. 3 sem. hrs.

- \* HST 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 331. HISTORY OF INDIA: Survey of the development of civilization on the Indian subcontinent from the first extant records (c. 2500 BCE) to post-Independence modern India in connection with the B.A. Program in Philosophy.

3 sem. hrs.

HST 332. 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 333. 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 334. HISTORY OF THE PALESTINIAN-ISRAELI CONFLICT: Study of the history of the Palestinian-Israeli conflict from its beginnings in the late nineteenth century up to the present, with emphasis on a variety of interpretations of the actions and perspectives of the different parties involved.

3 sem. hrs.

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

3 sem. hrs.

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

3 sem. hrs.

HST 339. HISTORY OF SOUTH AFRICA: Study of South African society with emphasis on historical interpretations of the origins of segregation, economic growth, nationalism, Apartheid, Bantusans, and other issues of contemporary significance.

3 sem. hrs.

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

3 sem. hrs.

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

3 sem. hrs.

\* HST 342. ENVIRONMENTAL HISTORY OF THE AMERICAS: A comparison and contrast of the histories of conservationism and environmentalism in the United States, Canada and Latin America.

3 sem. hrs.

\* HST 343. HISTORY OF CIVIL ENGINEERING: Historical study of the development of civil engineering from the origins in the ancient world to the present.

3 sem. hrs.

\* HST 344. HISTORY OF SCIENCE, TECHNOLOGY, AND THE MODERN CORPORATION: Historical study of the emergence of 20th-century science-based industry.

3 sem. hrs.

\* HST 346. HISTORY OF AMERICAN AVIATION: This course will examine the influence of aviation on the American culture, economy, and military. It will also highlight the development of aviation/aerospace technology.

3 sem. hrs.

- \*HST 349. TECHNOLOGY AND THE CULTURE OF WAR: Investigation of the role of invention and engineering as it has been related to defense and war throughout the ages, focusing on the interrelationship of policy, strategy, organization, and technology from a global perspective. *3 sem. hrs.*
- \*HST 351. AMERICAN WOMEN'S AND GENDER HISTORY: Historical study of the changing roles of women in American society, including examination of men's and women's gender roles and the ways in which social, cultural, economic, legal, and political factors shape and change genders roles. *3 sem. hrs.*
- \*HST 352. HISTORY OF THE AMERICAN FAMILY: Survey of the historical development of American family life from the colonial period to the present. *3 sem. hrs.*
- \*HST 353. HISTORY OF WOMEN IN EUROPEAN SOCIETIES: Study of the changing roles of women in European societies from the roots of industrialization to the present. *3 sem. hrs.*
- \*HST 354. HISTORY OF WOMEN AND GENDER IN THE MIDDLE EAST: Study of the history of the evolving roles and status of women in Middle Eastern societies, from the early modern 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 356. COMPARATIVE HISTORY OF WOMEN IN THE THIRD WORLD: Study of the comparative histories of women in Third World societies from a global perspective, using specific case studies of women in different societies around the world. *3 sem. hrs.*
- \*HST 357. LATIN AMERICA IN THE TWENTIETH CENTURY: Intensive examination of revolution and reaction in today's Latin America and the implications for those who formulate U.S. foreign policy. *3 sem. hrs.*
- \*HST 358. SOCIAL AND CULTURAL HISTORY OF LATIN AMERICA: Survey of social and cultural history of Latin America and the Caribbean from pre-Columbian times to the present. Emphasis on the interaction between the European colonizer and the Amerindian and African peoples of the hemisphere. *3 sem. hrs.*
- \*HST 360. U.S. LEGAL AND CONSTITUTIONAL HISTORY I: An analysis of the major developments in American legal and constitutional history from colonial beginnings through the Civil War. Emphasis on the relationship between the Constitution, the law, and lawyers, on the one hand, and America's economic, social and political developments, on the other. *3 sem. hrs.*
- \*HST 361. U.S. LEGAL AND CONSTITUTIONAL HISTORY II: An analysis of the major developments in American legal and constitutional history from the Reconstruction era to the present. Emphasis on the relationship between the Constitution, the law, and lawyers, on the one hand, and America's economic, social, and political developments, on the other. *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 369. 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 370. ECONOMIC AND BUSINESS HISTORY OF THE UNITED STATES: Survey and analysis of American economic history, 1600-present, primarily through a study of American business institutions and leaders. Includes analysis of major economic theories of history as well as case studies of entrepreneurs. 3 sem. hrs.

\* HST 372. HISTORY OF RELIGION IN THE UNITED STATES: Survey of religion in the United States from the colonial era to the present. Particular attention to the interaction of religion with other aspects of American society and culture. 3 sem. hrs.

HST 373. AMERICAN MILITARY HISTORY: Survey of American military affairs, including military, naval, and air campaigns, from early settlement to the present. 3 sem. hrs.

HST 374. IRELAND AND AMERICA: Study of the cultural-historical background of both Scotch-Irish and Celtic Irish immigrants to America and how they influenced the varying reactions of the dominant Anglo-Saxon Protestantism of America. 3 sem. hrs.

HST 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 377. CONTEMPORARY AMERICAN HISTORY: The immediate background of contemporary political, social, and economic problems, beginning with the impact of World War II on the United States. Prerequisite: HST 101 or 102 or equivalent. 3 sem. hrs.

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

\* HST 382. HISTORY OF MEXICO: A survey of Mexican History from pre-Columbian civilization to the present. 3 sem. hrs.

HST 383. HISTORY OF THE CARIBBEAN: 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 385. THE ATLANTIC WORLD, 1492-1800: A comparative look at the people and cultures of Europe, Africa, and the Americas who collaborated in the colonization of the Americas. Topics to be covered will include: slavery, missionary work, virgin soil epidemics, frontier wars, gender, and the invention of racial categories. 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 485. SEMINAR IN AMERICAN HISTORY: A reading seminar concentrating on one historical topic in American History for detailed analysis. May be repeated as topics change. Prerequisite: HST 301 or permission of department chairperson. *3 sem. hrs.*

HST 486. SEMINAR IN EUROPEAN HISTORY: A reading seminar concentrating on one historical topic in European History for detailed analysis. May be repeated as topics change. Prerequisite: HST 301 or permission of department chairperson. *3 sem. hrs.*

HST 487. SEMINAR IN LATIN AMERICAN HISTORY: A reading seminar concentrating on one historical topic in Latin American History for detailed analysis. May be repeated as topics change. Prerequisite: HST 301 or permission of department chairperson. *3 sem. hrs.*

HST 488. SEMINAR IN AFRICAN HISTORY: A reading seminar concentrating on one historical topic in African History for detailed analysis. May be repeated as topics change. Prerequisite: HST 301 or permission of department chairperson. *3 sem. hrs.*

HST 490. SEMINAR IN HISTORIOGRAPHY: A reading seminar concentrating on the various techniques and philosophies of history by which historians have done historical research. May be repeated as topics change. Prerequisite: HST 301 or permission of department chairperson. *3 sem. hrs.*

HST 493. SEMINAR IN MIDDLE EASTERN HISTORY: A reading seminar concentrating on one historical topic in Middle Eastern History for detailed analysis. May be repeated as topics change. Prerequisite: HST 301 or permission of department chairperson. *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. May be repeated once. Prerequisite: Permission of chairperson. *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.

# HMS

## HUMANITIES STUDIES (HMS)

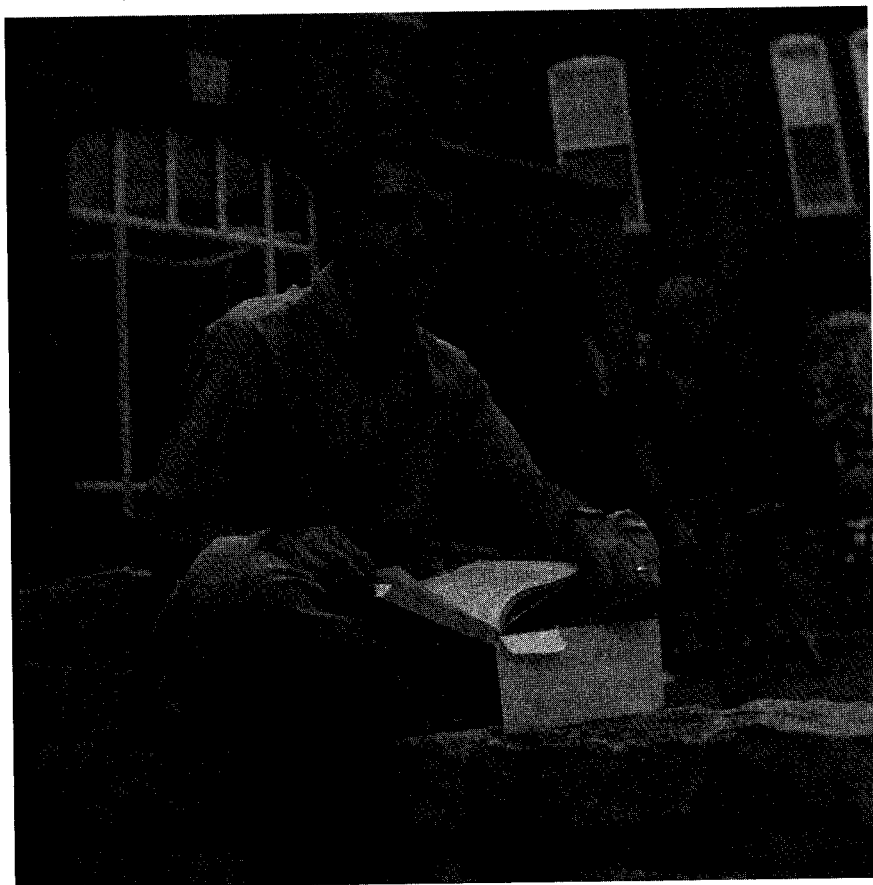
No major or minor concentration is available. See also Classics (CLA).

Richard P. Benedum (Alumni Chair in the Humanities), *Committee Chairperson*

### COURSES OF INSTRUCTION

- \* 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 410. INTERDISCIPLINARY TOPICS IN THE HUMANITIES: An examination of varying topics in the Humanities from an interdisciplinary perspective. Course may be repeated when contents vary. *1-3 sem. hrs.*



## HUMAN RIGHTS STUDIES (HRS)

The interdisciplinary minor in human rights provides students an opportunity to address issues related to human rights from various disciplinary approaches. The universal nature of human rights issues may directly relate to a major, while in other cases will provide an opportunity for broadening one's exposure to these important topics.

The human rights minor requires at least 19 credit hours to be taken from at least three different disciplines. **At least 12 of these hours are to be taken outside the major(s).** No more than 6 semester hours from any one department may be chosen from the elective pool. It is highly recommended that the required POL 333 be taken in the sophomore year. Students should consult with the Director of International Studies to ensure that the courses selected from the elective pool display a significant degree of coherence. Courses taken from this minor may be applied to other minors and to breadth and general education requirements.

### Required Courses:

### Semester Hours

PHL 371	Philosophy and Human Rights .....	3
POL 333	Politics of Human Rights .....	3
INS 433	Seminar on Human Rights Service .....	1

Select at least 4 courses from this list:

ASI 390	Social Justice in Latin America .....	3
ASI 398	Special Topics in International Development .....	3
ECO 450	Comparative Economic Systems .....	3
ECO 460	Economic Development and Growth .....	3
ENG 340	Prison Literature .....	3
GER 350/450	German Literature in Translation/German Literature* .....	3
HST 337	History of Africa .....	3
HST 358	Social & Cultural History of Latin America .....	3
HST 398-99	Blacks in the United States .....	3
PHL 307	Philosophy of Women .....	3
PHL 314	Philosophy of Law .....	3
PHL 317	Ethics and Modern War .....	3
PHL 363	African Philosophy .....	3
PHL 370	Political Philosophy .....	3
POL 101	Global Politics .....	3
POL 202	Comparative Politics .....	3
POL 214	International Politics .....	3
POL 450	Civil Liberties .....	3
POL 495	Political Science Internship* .....	3
REL 363	Faith and Justice .....	3
REL 367	Christian Ethics and Healthcare Issues .....	3
REL 471	Women & Religion .....	3
REL 474	Women & the Global Church .....	3
SOC 328	Racial & Ethnic Minorities .....	3
SOC 339	Social Inequality .....	3
SOC 342	Collective Behavior .....	3
SOC 368	Immigration & Immigrants .....	3
SWK 325	Child Abuse .....	3
SWK 392	Special Topics* .....	3
SPN 342	Ibero-American Culture and Civilization .....	3
SPN 472	Topics in Spanish-American Literature of the 20th Century .....	3

\*This course can be counted only when the material is appropriate to Human Rights.

## 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. 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 111-112. CORE INTEGRATED STUDIES: THE ROOTS AND DEVELOPMENT OF MODERN CULTURES AND VALUES: Two integrated history, philosophy, and religious studies introductory courses especially designed for the CORE Program, parallel with first-year CORE courses in English. The first six-hour segment (ASI 111) covers ancient civilizations through early modern civilization. The second six-hour segment (ASI 112) continues from the Enlightenment to the contemporary period. (Completion of ASI 111 counts as completion of HST 101 and REL 103; completion of ASI 112 counts as completion of HST 102 and PHL 103.) Prerequisites: Admission to the CORE Program for ASI 111; completion of ASI 111 for ASI 112. *6 sem. hrs. each*

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

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

ASI 203. THE DAYTON COMMUNITY: An interdisciplinary social science course describing and analyzing the nature of community issues and problems of the Dayton area; various approaches to addressing local concerns including public, private and citizens initiatives are explored. *3 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 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 350. INTERDISCIPLINARY FILM STUDY: A capstone course in the film studies minor. Interdisciplinary study of film from religious, philosophical, literary, creative, technological and institutional perspectives. Requirement for film studies minors. Prerequisites: Any combination of four (12 sem. hrs.): REL 372, PHL 324, ENG 331, ENG 332, CMM 345, or other approved substitutes. *1 sem. hr.*

ASI 390. SOCIAL JUSTICE IN LATIN AMERICA: This course adopts an interdisciplinary, highly experiential approach to the topic of social justice in Latin America by focusing on the social, theological and ethical dimensions of justice. Taught on-site in Latin America. Prerequisite: SPN 201 or equivalent, or permission of the instructor. *3 sem hrs.*

ASI 395. INTERNSHIP IN SCIENCE: Application of scientific knowledge to specific projects in an approved organization. Applied-knowledge experience open to juniors and seniors as a supplement to their science curriculum. Permission of the internship director in the student's major department is required. *1-3 sem. hrs.*

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

ASI 399. INTERDISCIPLINARY TOPICS: Study of special topics or themes of an interdisciplinary nature. Specific subtitles announced in composite. May be repeated as topics change. *3 sem. hrs.*

ASI 404. APPLIED STUDY IN COMMUNITY ISSUES: An advanced seminar that generates applied social science research related to contemporary social problems and public policy-making in the Dayton area. Students participate in research teams to assist government agencies in defining and analyzing critical social conditions (under supervision of faculty from various disciplines). Prerequisite: Instructor permission required. *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. Prerequisite or corequisite: ASI 498 for ASI 499.

*3 sem. hrs. each*

\*General Education course. See Chapter V.



## INTEGRATED NATURAL SCIENCE (SCI)

Integrated Natural Science is a sequence of General Education science courses aimed at achieving scientific literacy for those students not majoring in science or engineering. It is an integrated sequence with each course building on the previous course(s). The courses are arranged in two tracks and the student may choose between the two tracks. Each track contains fundamental knowledge from the natural sciences, but each has a different emphasis. The first course (SCI 190: The Physical Universe, taught by the Physics Department) is a foundation course for both tracks and it covers the basic principles of physical science. After taking SCI 190, the student has a choice of whether to proceed along Track I (The Human Environment Track), which consists of chemistry (SCI 220: The Chemical World) and biology (SCI 240: Organisms, Evolution & Health), or along Track II (The Global Environment Track), which consists of geology (SCI 210: The Dynamic Earth) and biology (SCI 230: Organisms, Evolution & Environment). After SCI 190, the Human Environmental Track features the molecular foundations of chemistry and biology, starting with the molecular view of matter and the chemistry of life processes, SCI 220. The third course in this track SCI 240, emphasizes molecular biology and health related biological issues. After SCI 190, the Global Environmental Track goes into SCI 210, which considers the evolution of the earth, chemical evolution on the early earth, the origin of life, and environmental earth issues. The third course is SCI 230, which emphasizes ecology and environmental biological issues. Each course in this integrated science sequence has an associated laboratory course. Students may choose any two laboratory courses from the three offered in the selected track.

### COURSES OF INSTRUCTION

SCI 190. THE PHYSICAL UNIVERSE: An introduction to physical science which uses cosmological evolution as a unifying theme. Emphasis will be on concepts and scientific thought processes in dealing with the fundamental principles in physics involved in the Big Bang to planetary evolution. *3 sem. hrs.*

SCI 190L. THE PHYSICAL UNIVERSE LABORATORY: A laboratory to accompany SCI 190. Exercises chosen to correlate with the material in SCI 190. One 2-hour laboratory per week. *1 sem. hr.*

\* SCI 210. THE DYNAMIC EARTH: A course providing an introduction to the Earth, with an emphasis on fundamental concepts in geology and the interdisciplinary nature of geology. For the non-science major. Prerequisite: SCI 190. *3 sem. hrs.*

SCI 210L. THE DYNAMIC EARTH LABORATORY: Laboratory to accompany SCI 210. For the non-science major. Prerequisite or corequisite: SCI 210. *1 sem. hr.*

\* SCI 220. THE CHEMICAL WORLD: Introduction to the experimental nature of chemistry. Attention is focused on the microscopic view of matter, addressing topics that lead into the study of biological chemistry. Prerequisite: SCI 190. *3 sem. hrs.*



SCI 220L. THE CHEMICAL WORLD LABORATORY: A laboratory course to accompany SCI 220. One 2-hour laboratory per week. Prerequisite or corequisite: SCI 220. *1 sem. hr.*

- \* SCI 230. ORGANISMS, EVOLUTION & ENVIRONMENT: An evolutionary approach to the relationship between living organisms and their environments. This survey of basic concepts in biology continues the evolutionary theme of the two prerequisite courses. Prerequisites: SCI 190, 210 or permission of instructor. *3 sem. hrs.*

SCI 230L. ORGANISMS, EVOLUTION & ENVIRONMENT LABORATORY: Laboratory exercises to accompany SCI 230. One 2-hour laboratory per week. Prerequisite or corequisite: SCI 230. *1 sem. hr.*

- \* SCI 240. BIOLOGY AND HUMAN HEALTH: A chemical and molecular approach to biology with emphasis on biomedical science and a focus on human health and disease. Prerequisites: SCI 190, 220 or permission of instructor. *3 sem. hrs.*

SCI 240L. BIOLOGY AND HUMAN HEALTH LABORATORY: Laboratory exercises to accompany SCI 240. One 2-hour laboratory per week. Prerequisite or corequisite: SCI 240. *1 sem. hr.*

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\*General Education course. See Chapter V.



## INTERNATIONAL DEVELOPMENT STUDIES (IND)

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

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

These are distributed as follows:

	<i>Semester Hours</i>
Required courses.....	6
ASI 398 Special Topics in International Development	
ANT 150 Cultural Anthropology	
Anthropology elective (Choose one).....	3
ANT 310 Culture and Personality	
ANT 315 Language and Culture	
ANT 352 Cultures of Latin America	
ANT 406 Cultural Change	
History elective (Choose one).....	3
HST 356 Comparative History of Women in the Third World	
HST 357 Latin America in the Twentieth Century	
HST 382 History of Mexico	
HST 383 History of the Caribbean	
Political science elective .....	3
POL 323 Comparative Politics: Latin America	

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*

Geiger (Biology), Karns (Political Science), Ensalcado (International Studies),  
Payne (Philosophy)

## INTERNATIONAL STUDIES (INS)

International studies is a multidisciplinary major designed to meet the needs of students interested in acquiring a broadly based international perspective for eventual careers in fields such as government service, international law, teaching, and social service. The curriculum includes a core of required courses, a concentration (Europe, Latin America, Global Development, and Human Rights), a foreign language requirement, and additional hours of course work drawn from the multidisciplinary elective pool.

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

For a minor in International Studies, 21 semester hours are required. The minor consists of POL 214, ECO 204, a 202 or higher language course, and 12 additional hours of upper-level courses in at least 3 different disciplines, taken from International Studies concentrations or electives.

## BACHELOR OF ARTS WITH A MAJOR IN INTERNATIONAL STUDIES (INS)<sup>1</sup>

	<i>Semester Hours</i>
Requirements for the major .....	55
Liberal Studies Curriculum (53 semester hours)	
Humanities and Fine Arts	
Philosophy and Religious Studies .....	12
History .....	6
English or Foreign Language Literature .....	3
Creative and Performing Arts .....	3
Foreign Language and/or Additional Arts and Humanities .....	3
Social Sciences .....	12
Mathematics (MTH 102, 204, 205 excluded) .....	3
Natural Sciences .....	11
Communication competencies .....	0-9
Introduction to the University: ASI 150 .....	0-1
Electives to total at least .....	124

<sup>1</sup>See also Distribution Table for Bachelor of Arts programs and Chapter V for General Education requirements. Appropriate courses required for this multidisciplinary major may also be used to complete the Liberal Studies Curriculum.

The major in international studies consists of a minimum of 55 semester hours of coursework distributed as follows:

### *Required courses*

ECO 203, ECO 204, POL 202, POL 214, HST 102 or 198, INS 395 or 495. And two of the following courses: ECO 450, ECO 460, ECO 461, POL 410, POL 455.

### *Concentration (18 -19 semester hours)*

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

*Latin America:* The following four courses: HST 357; POL 323; POL 404; SPN 342;

One of the following: ASI 398, ECO 460, POL 457, REL 358;

One of the following: HST 358, HST 382, HST 384.

*Europe: HST 315 and POL 321;*

One of the following: HST 313, HST 314, HST 353;

One of the following: HST 321, HST 322, HST 323, POL 320, POL 327;

One of the following: HST 326, POL 409;

One of the following: ENG 357, ENG 358, PHL 353, PHL 354, PHL 358, PHL 359, PHL 360, VAH 203, FRN 362, ITA 362, GER 362, SPN 362.

*Global Development:*

Three of the following: ASI 398, BIO 395, ECO 460, POL 471;

One of the following: HST 337, HST 339, HST 357, HST 358;

One of the following: ANT 406, POL 457, SOC 328, ECO 461;

One of the following: REL 300, REL 358, REL 376, REL 472

PHL 355, PHL 356, PHL 363, PHL 372.

*Human Rights:*

Take: POL 333, PHL 371, and INS 433;

Two of the following: REL 363, SOC 339, SOC 368, and POL 450;

One of the following: ENG 340, GER 350/450\*, HST 358, HST 398/99, SPN 342, SPN 472\*;

One of the following: ASI 390, ASI 398, SOC 328, SOC 342, SWK 325, SWK392\*;

One of the following: REL 367, REL 471, REL 474, PHL 370.

*Language (6 semester hours)*

A student majoring in international studies must complete at least 6 semester hours of upper-level foreign language instruction in one of the following languages: French, German, Italian, Russian, Spanish. Foreign language literature in translation courses do not fulfill this requirement. Also, these 6 semester hours may not duplicate upper-level foreign language courses taken to fulfill the requirement of 9 semester hours drawn from the elective pool.

*Experiential Requirement (1-4 semester hours)*

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

*Electives (9 semester hours)*

The remaining 9 semester hours are to be chosen from the concentrations or from the following elective pool:

ANT 315, 351, 352

BAI 301

CMM 324

CMS 414

CJS 336

ECO 450, 460, 461

ENG 205, 306, 322, 356

FIN 450

HST 311, 312, 319, 320, 322, 327, 348, 349, 375

INS 390, 395, 399, 495

MGT 401, 430

MKT 440, 445

PHL 307, 310, 311, 317, 320, 321, 323, 324, 325, 327, 332, 334, 350, 351, 352, 353, 354, 355, 358, 363, 364, 370, 371

POL	331, 335, 406, 408, 410
PSY	445
REL	363, 374, 406, 471, 474
SOC	332
VAH	201, 202, 350, 360, 382, 450, 460, 470, 471, 480

Any upper-level foreign language course (French, German, Italian, Russian, Spanish). With permission, other courses including special topics courses and independent study.

## INTERNATIONAL STUDIES POLICY COMMITTEE

Mark Ensalaco, *Director, International Studies*

Aaron (International Studies), Bilocerkowycz (Political Science), Carlson (History), Huff (Arts & Sciences), Karns (Political Science), Krugh (Languages), O'Meara (Languages)

## COURSES OF INSTRUCTION

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

1 sem. hr.

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

1 sem. hr.

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

3 sem. hrs.

INS 433. SEMINAR ON HUMAN RIGHTS SERVICE: An integrating seminar to guide reflection on the learning experience, future human rights and humanitarian challenges, and opportunities for service. Required for human rights minor and for INS human rights concentration. Prerequisites: POL 333 or PHL 371; junior standing.

1 sem. hr.

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

1-6 sem. hrs.

## LANGUAGES

The Department of Languages offers courses in modern languages, French, German, Italian, Russian, and Spanish, as well as in Latin. The language programs include instruction in the communicative skills, literature, linguistics, 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 Canada, Germany, Mexico, and Spain. Language courses may also be offered through the Interdepartmental Summer Study Abroad Program. (ISSAP) (See Chapter X.)

Students in B.A. programs can acquire teacher certification in French, German, or Spanish through the E11A program. (See EDT.) For details, consult the department chairperson.

Advanced placement based on high school study or study in foreign countries is regularly awarded. New students with previous language learning experience are placed into the appropriate course by the results of the departmental placement/proficiency examination.

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

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

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### BACHELOR OF ARTS WITH A MAJOR IN LANGUAGES (LNG)<sup>1</sup>

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	<i>Semester Hours</i>
Languages.....	24-39
Basic proficiency: 101-102 or 121 or 111; and 141 .....	0-9
Intermediate level proficiency: 201-202 .....	0-6
(Students with background in the major language(s) will waive those lower-level courses not required because of advanced placement.)	
<i>Major in a Single Language</i>	
Upper-level courses to total 24 semester hours:	
311 or 312 and 321 or 322; or 313 and 314 .....	6
Two courses, including at least one in literature,	
from the following: 341, 342, 360, 361, 362, 363, 364,	
381, 450, 451, 452, 471, 472 .....	6
Upper-level electives in the major .....	12
(Only one literature in translation course may count toward the major) <sup>1</sup>	
<i>Composite Major in Languages</i>	
Upper-level courses to total 24 semester hours distributed between two languages.	
Courses must include at least one three-semester-hour literature course, not including literature in translation. (Only one literature in translation course may count toward the major.)	
<i>Liberal Studies Curriculum<sup>2</sup></i>	
Humanities and Fine Arts	
Philosophy and Religious Studies .....	12
History .....	6
Creative and Performing Arts .....	3
Foreign Language, or Arts, or Humanities .....	3

Social Sciences .....	12
Mathematics (MTH 102, 204, 205 excluded) .....	3
Natural Sciences .....	11
Communication competencies .....	0-9
Introduction to the University: ASI 150 .....	0-1
General Education courses and academic electives to total at least .....	124

<sup>1</sup>Students in the E11A program should note that courses in translation do not count toward the 45 semester hours of a foreign language required for teacher certification.

<sup>2</sup>See also Distribution Table for Bachelor of Arts programs and Chapter V for General Education requirements.

## FACULTY

Arthur D. Mosher, *Chairperson*

*Professor Emeritus:* Conard

*Associate Professors:* Castro, Cavour, Krugh, Mosher, O'Meara, Peñas-Bermejo, Romaguera

*Assistant Professor:* Chiodo

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

## COURSES OF INSTRUCTION

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

LNG 330. PRE-SECONDARY FOREIGN LANGUAGE EDUCATION: An introduction to the pedagogical, philosophical, and psychological aspects of teaching foreign languages, with emphasis on pre-secondary students. Topics: technology, national and state standards, learners with special needs, reading in the foreign language, and professional associations. Fee. Prerequisite: at least one 300-level course in the language to be taught, EDT 110, 100. *3 sem. hrs.*

LNG 468. INTRODUCTION TO LINGUISTICS: Survey of the various aspects of a scientific description of human language: phonetics, phonology, morphology, syntax, semantics, and pragmatics. Interdisciplinary exploration of the reciprocal impact of linguistics on psychology, sociology, and language acquisition theory. Prerequisites: ENG 102; CMM 101 or equivalent. *3 sem. hrs.*

## FRENCH

FRN 101-102. BEGINNING FRENCH I, II: Development of fundamental communication skills in reading, listening, writing, and speaking through extensive practice in language use. Admission to 101 restricted to those who have not studied French or have placed into that course by examination; 102 is open only to those who have successfully completed 101 at the University of Dayton. Credit is for only ONE of the following: 101-102 OR 111 OR 121. Prerequisites: none for 101; 101 is required for 102. *3 sem. hrs. each.*

FRN 101C. BEGINNING CONVERSATION PRACTICE IN FRENCH I: Practice in speaking French on the most basic level. Corequisite: FRN 101 or permission. 1 sem. hr.

FRN 102C. BEGINNING CONVERSATION PRACTICE IN FRENCH II: Practice in speaking French in everyday situations. Corequisite: FRN 102 or permission. 1 sem. hr.

FRN 111. INTENSIVE BEGINNING FRENCH: Intensive development of fundamental communication skills in reading, listening, writing, and speaking through extensive practice in language use. Admission restricted to those who have not studied French. Recommended for those who have had successful experience learning another language. Credit granted for only ONE of the following: 101-102 OR 111 OR 121. 6 sem. hrs.

FRN 120. INTENSIVE ELEMENTARY FRENCH: Basic elements of the French language with emphasis on development of essential linguistic survival skills in a French-speaking country. Offered only in connection with ISSAP or another UD study abroad program. 3 sem. hrs.

FRN 121. ELEMENTARY FRENCH: Review and further development of fundamental communication skills in reading, listening, writing, and speaking. Admission restricted to those who have studied the language for at least two years in high school or the equivalent and place into the course by examination. Credit granted for only ONE of the following: 101-102 OR 111 OR 121. 4 sem. hrs.

FRN 141. BASIC PROFICIENCY IN FRENCH: Further development of communication skills in reading, listening, writing, and speaking. Admission by examination or successful completion of 102 or 111 or 121. Successful completion of this course includes the demonstration of the minimal level of proficiency required for the College of Arts and Sciences' Liberal Studies Curriculum. 3 sem. hrs.

FRN 141C. BASIC SPEAKING PROFICIENCY IN FRENCH: Further development of speaking skills. Corequisite: FRN 141 or permission. 1 sem. hr.

FRN 201-202. INTERMEDIATE FRENCH I, II: Development of listening, speaking, reading, and writing skills. Language laboratory required. Prerequisites: FRN 141 for 201; FRN 201 for 202. 3 sem. hrs. each

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

FRN 270. INTERMEDIATE STUDY ABROAD: Intermediate intensive study in a foreign country/region whose everyday language is French. Instruction in language, culture and civilization. Conducted in French. Available only during the summer session. Repeatable when subtitle and content change. Prerequisite: FRN 141 or equivalent. 1-7 sem. hrs.

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



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

*3 sem. hrs. each*

FRN 321-322. FRENCH COMPOSITION I, II: Practice in composition on topics dealing with French life and culture. Systematic vocabulary enrichment, refinement of grammar, and assimilation of stylistic patterns. Emphasis on correct writing and creativity. Initiation into the concept of style in French prose. May be taken in either sequence. Prerequisite: FRN 311 or 312.

*3 sem. hrs. each*

FRN 325. INTRODUCTION TO COMMERCIAL FRENCH: Introduction to French business and the French position in international trade. Basic vocabulary of the office and the world of trade, introduction to formal correspondence and transactions. Prerequisite: FRN 311 or 312.

*3 sem. hrs.*

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

*1 sem. hr.*

FRN 331. FRENCH PHONETICS AND DICTION: Formation of the sounds of French, rules of pronunciation, use of phonetic transcription, practical exercises in interpretive reading. Recommended for French majors and required for prospective teachers. Prerequisite: FRN 311 or 312.

*3 sem. hrs.*

FRN 341. FRENCH CULTURE AND CIVILIZATION: Introduction to the history of French civilization with emphasis on the arts and life in each major cultural period. Recommended for all French majors and minors. Prerequisite: FRN 311 or 312.

*3 sem. hrs.*

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

*3 sem. hrs.*

\*FRN 352. OLD WORLD AND NEW (ENG): Readings of (1) non-fictional narratives regarding French encounters with American Indians in the 16th and 17th centuries and (2) literary and philosophical works on this topic. Conducted in English. No prerequisite.

*3 sem. hrs.*

FRN 360. EXPLICATION DE TEXTES: Introduction to method of analyzing literary texts, both prose and poetry. Elements of French versification. Recommended for all French majors and prospective teachers. Prerequisite: FRN 311 or 312.

*3 sem. hrs.*

\*FRN 361-362. SURVEY OF FRENCH LITERATURE I, II: Major texts, trends, authors from the Middle Ages to the present, showing influences and continuity. Lectures, discussions, oral and written reports. Recommended for all French majors and prospective teachers. May be taken in either sequence. Prerequisite: FRN 311 or 312.

*3 sem. hrs. each*

FRN 370. ADVANCED STUDY ABROAD: Advanced intensive study in a foreign country/region whose everyday language is French, treating its language, culture, and civilization. Conducted in French. Available only during the summer session. Repeatable when subtitle and content change. Prerequisite: FRN 202 or equivalent.

*1-7 sem. hrs.*

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

*3 sem. hrs.*

FRN 425. ADVANCED COMMERCIAL FRENCH: Intensive study of business in France. Emphasis on specialized vocabulary, style, and syntax in commercial correspondence and accurate translation of current documents related to business and publicity. Prerequisites: FRN 321 or 322; 325.

*3 sem. hrs.*

FRN 450. FRENCH LITERATURE: Lectures and discussion concentrating on specialized genres, periods, or authors. Repeatable when subtitle and content change. Prerequisite: FRN 311 or 312.

*3 sem. hrs.*

\* FRN 452. OLD WORLD MEETS NEW: Readings of (1) non-fictional narratives regarding French encounters with American Indians in the 16th and 17th centuries and (2) literary and philosophical works on this topic. Conducted in French. Prerequisite: FRN 311 or 312.

*3 sem. hrs.*

FRN 469. FRENCH LINGUISTICS: A synchronic analysis of modern French language, including a contrast of the French sound system, morphology, and syntax with English structures; the historical derivation of French, creolization, and approaches to teaching French to English-speakers. Conducted in French. Prerequisites: LNG 468 and FRN 311 or 312.

*3 sem. hrs.*

FRN 491. INDEPENDENT STUDY: Independent research project under the guidance of an instructor. Admission to project and number of semester hours require approval of the chairperson. Prerequisites: FRN 202 and permission.

*1-3 sem. hrs.*

## GERMAN

GER 101-102. BEGINNING GERMAN I, II: Development of fundamental communication skills in reading, listening, writing, and speaking through extensive practice in language use. Admission to 101 restricted to those who have not studied German or have placed into that course by examination; 102 is open only to those who have successfully completed 101 at the University of Dayton. Credit is for only ONE of the following: 101-102 OR 111 OR 121. Prerequisites: none for 101; 101 is required for 102.

*3 sem hrs. each*

GER 101C. BEGINNING CONVERSATION PRACTICE IN GERMAN I: Practice in speaking German on the most basic level. Corequisite: GER 101 or permission.

*1 sem. hr.*

GER 102C. BEGINNING CONVERSATION PRACTICE IN GERMAN II: Practice in speaking German in everyday situations. Corequisite: GER 102 or permission.

*1 sem. hr.*

GER 111. INTENSIVE BEGINNING GERMAN: Intensive development of fundamental communication skills in reading, listening, writing, and speaking through extensive practice in language use. Admission restricted to those who have not studied German. Recommended for those who have had successful experience learning another language. Credit granted for only ONE of the following: 101-102 OR 111 OR 121. *6 sem. hrs.*

GER 120. INTENSIVE ELEMENTARY GERMAN: Basic elements of the German language with emphasis on development of essential linguistic survival skills in a German-speaking country. Offered only in connection with ISSAP or another UD study abroad program. *3 sem. hrs.*

GER 121. ELEMENTARY GERMAN: Review and further development of fundamental communication skills in reading, listening, writing, and speaking. Admission restricted to those who have studied the language for at least two years in high school or the equivalent and place into the course by examination. Credit granted for only ONE of the following: 101-102 OR 111 OR 121. *4 sem. hrs.*

GER 141. BASIC PROFICIENCY IN GERMAN: Further development of communication skills in reading, listening, writing, and speaking. Admission by examination or successful completion of 102 or 111 or 121. Successful completion of this course includes the demonstration of the minimal level of proficiency required for the College of Arts and Sciences' Liberal Studies Curriculum. *3 sem. hrs.*

GER 141C. BASIC SPEAKING PROFICIENCY IN GERMAN: Further development of speaking skills. Corequisite: GER 141 or permission. *1 sem. hr.*

GER 201-202. INTERMEDIATE GERMAN I, II: Systematic grammar review. Increased use of the language in written exercises and classroom discussions based on readings. Exposure to the development of German civilization and culture. Prerequisites: GER 141 for 201; GER 201 for 202. *3 sem. hrs. each*

GER 311-312. GERMAN CONVERSATION: Intensive drill to develop communication skills: vocabulary development, pattern drills, and use of idioms in discussions and oral reports centered on German daily life and culture. May be taken in either sequence. Prerequisite: GER 202. *3 sem. hrs. each*

GER 321-322. GERMAN COMPOSITION I, II: Practice in writing German on a variety of topics. Systematic grammar review and vocabulary enrichment. Short stories and periodicals are read and discussed to provide models, topics, and information. May be taken in either sequence. Prerequisite: GER 311 or 312. *3 sem. hrs. each*

GER 325. COMMERCIAL GERMAN: Introduction to the business language and customs and the economic profile of the German-speaking countries. Basic vocabulary of the office and the world of trade, introduction to formal business correspondence and transactions. Prerequisite: GER 311 or 312 or the equivalent. *3 sem. hrs.*

\*GER 341. GERMAN CULTURE AND CIVILIZATION: Introduction to German culture and civilization with emphasis on the arts, intellectual developments, and life in various periods of German history. Conducted in German. Prerequisite: GER 311 or 312. *3 sem. hrs.*

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

- \* GER 361-362. SURVEY OF GERMAN LITERATURE I, II: German literature and its development from 1750 A.D. to the present. Study of exemplary works and literary movements. May be taken in either sequence. Prerequisite: GER 311 or 312. *3 sem. hrs. each*

GER 370. STUDY ABROAD: Intensive study in a foreign country whose every-day language is German, treating the culture and civilization of the country. Conducted in German. Available only during the summer session. Repeatable when subtitle and content change. Prerequisite: GER 202. *1-6 sem. hrs.*

GER 450. GERMAN LITERATURE: Lectures and discussions in German in such specialized areas as Medieval lyric, Romanticism, 20th-century novel, modern drama, and individual authors. Repeatable when subtitle and content change. Prerequisite: GER 311 or 312. *3 sem. hrs.*

GER 469. GERMAN LINGUISTICS: A synchronic analysis of modern German language, including a contrast of the German sound system, morphology, and syntax with English structures; the historical derivation of German, the modern German dialects, and approaches to teaching German to English-speakers. Conducted in German. Prerequisites: LNG 468 and GER 311 or GER 312. *3 sem. hrs.*

GER 491. INDEPENDENT STUDY: Independent research project under the guidance of an instructor. Admission to project and number of sem. hrs. require approval of chairperson. Prerequisites: GER 202 and permission. *1-3 sem. hrs.*

## HINDI

HND 101-102. BEGINNING HINDI I, II: Development of fundamental communication skills in reading, listening, writing, and speaking through extensive practice in language use. Admission to 101 restricted to those who have not studied Hindi or have placed into that course by examination; 102 is open only to those who have successfully completed 101. Offered only in India in connection with the B.A. Program in Philosophy. Credit is granted for only ONE of the following: HND 101-102 OR HND 121. *3 sem hrs. each*

HND 121. ELEMENTARY HINDI: Review and further development of fundamental communication skills in reading, listening, writing, and speaking. Admission restricted to those who have studied the language for at least two years and place into the course by examination. Offered only in India in connection with the B.A. Program in Philosophy. Credit granted for only ONE of the following: HND 101-102 OR HND 121. *4 sem. hrs.*

HND 141. BASIC PROFICIENCY IN HINDI: Further development of communication skills in reading, listening, writing, and speaking. Admission by examination or successful completion of HND 102 or HND 121. Successful completion of this course includes the demonstration of the minimal level of proficiency required for the College of Arts and Sciences' Liberal Studies Curriculum. Offered only in India in connection with the B.A. Program in Philosophy. *3 sem. hrs.*

HND 201-202. INTERMEDIATE HINDI I, II. Review of the essentials of grammar, intensive conversation and comprehension exercises, reading of graded modern prose and poetry; brief essays in Hindi. Offered only in India in connection with the

B.A.. Program in Philosophy. Prerequisite: Previous study of elementary Hindi in school or elsewhere; ability to speak, read, understand and write simple Hindi; HND 141 for 201; HND 201 for 202. *3 sem. hrs. each*

## ITALIAN

ITA 101. BEGINNING ITALIAN: Development of fundamental communication skills in reading, listening, writing, and speaking through extensive practice in language use. No previous study of Italian is presupposed. *4 sem. hrs.*

ITA 101A-101B. BEGINNING ITALIAN I & II: Development of fundamental communication skills in reading, listening, writing, and speaking through extensive practice in language use. Prerequisites: None for ITA 101A; ITA 101A or the equivalent for ITA 101B. *2 sem hrs. each*

ITA 120. INTENSIVE ELEMENTARY ITALIAN: Basic elements of the Italian language with emphasis on listening, speaking, reading, and writing skills. Practice in using the language in everyday situations. Introduction to grammatical structures. Offered only in Italy through ISSAP. No prerequisite. *3 sem. hrs.*

ITA 141. BASIC PROFICIENCY IN ITALIAN: Further development of communication skills in reading, listening, writing, and speaking. Admission by the successful completion of 101 or permission. Successful completion of this course includes demonstration of the minimal level of proficiency required for the College of Arts and Sciences' Liberal Studies Curriculum. Prerequisites: successful completion of ITA 101 or permission: *4 sem. hrs.*

ITA 201-202. INTERMEDIATE ITALIAN I, II: Development of listening, speaking, reading, and writing skills. Conversation practice, oral reports, reading assignments, composition assignments, and grammar exercises. The class is conducted in Italian. Prerequisites: ITA 141 for 201; ITA 201 for 202. *3 sem. hrs. each*

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

ITA 341-342. ITALIAN CULTURE AND CIVILIZATION I, II: Survey of the major historical and cultural events in Italy from the Middle Ages to the present. All readings, lectures, discussions, reports, and tests are in Italian. May be taken in either sequence. Prerequisite: ITA 202. *3 sem. hrs. each*

ITA 361-362. SURVEY OF ITALIAN LITERATURE I, II: Italian literature from its beginnings in the 13th century to the present. Principal writers and literary trends; the techniques of literary analysis. Lectures, discussions, readings, and papers are in Italian. May be taken in either sequence. Prerequisite: ITA 202. *3 sem. hrs. each*

ITA 491. INDEPENDENT STUDY: Independent research project under the guidance of an instructor. Admission to project and number of sem. hrs. require approval of chairperson. Prerequisites: ITA 202 and permission. *1-3 sem. hrs.*

## LATIN

LAT 101-102. BEGINNING LATIN I, II: Development of fundamental reading skills through extensive practice in language use. Admission to 101 restricted to those who have not studied Latin or have placed into that course by examination; 102 is open only to those who have successfully completed 101 at the University of Dayton. Credit is granted for only ONE of the following: 101-102 OR 121. Prerequisites: None for 101; 101 is required for 102. *3 sem. hrs. each*

LAT 121. ELEMENTARY LATIN: Review and further development of the fundamental reading skills. Admission restricted to those who have studied the language for at least two years in high school or the equivalent and place into the course by examination. Credit granted for only ONE of the following: 101-102 OR 121. Prerequisite: Minimum of two years high-school study of specific language and placement by examination. *4 sem. hrs.*

LAT 141. BASIC PROFICIENCY IN LATIN: Further development of reading skills. Admission by examination or successful completion of 102 or 121. Successful completion of this course includes the demonstration of the minimal level of proficiency required for the College of Arts and Sciences' Liberal Studies Curriculum. Prerequisite: Successful completion of 102 or 121; or placement by examination. *3 sem. hrs.*

LAT 201-202. INTERMEDIATE LATIN I, II: Systematic review of grammar, exercises in vocabulary development, readings from Caesar, Cicero, Virgil, or Ovid. Prerequisites: LAT 141 for 201; LAT 201 for 202. *3 sem. hrs. each*

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

LAT 350. LATIN LITERATURE: Advanced readings in a particular author or genre (epic, drama, history, philosophy). Repeatable when subtitle and content change. Prerequisite: LAT 202. *3 sem. hrs.*

LAT 491. INDEPENDENT STUDY: Independent research project under the guidance of an instructor. Admission to project and number of semester hours require approval of chairperson. Prerequisite: LAT 202 or permission. *1-3 sem. hrs*

## RUSSIAN

RUS 101. BEGINNING RUSSIAN: Development of fundamental communication skills in reading, listening, writing, and speaking through extensive practice in language use. No previous study of Russian presupposed. *4 sem. hrs.*

RUS 141. BASIC PROFICIENCY IN RUSSIAN: Further development of communication skills in reading, listening, writing, and speaking. Successful completion of this course includes demonstration of the minimal level of proficiency required for the College of Arts and Sciences' Liberal Studies Curriculum. Prerequisite: Successful completion of 101 or permission. *4 sem. hrs.*

RUS 201-202. INTERMEDIATE RUSSIAN I, II: Review of the essentials of grammar, intensive conversation and comprehension exercises, reading of graded modern and contemporary prose and poetry. Prerequisites: RUS 141 for 201; RUS 201 for 202. *3 sem. hrs. each*

RUS 311-312. RUSSIAN CONVERSATION: Vocabulary development, pattern drills, and the use of idioms in discussion and oral reports centered on Russian life and culture. May be taken in either sequence. Prerequisite: RUS 202. *3 sem. hrs. each*

RUS 321. RUSSIAN COMPOSITION: Practice in composition on topics dealing with Russian life and culture; personal and business letters. Short weekly assignments to build vocabulary and control of idioms. Prerequisite: RUS 202. *3 sem. hrs.*

RUS 361. SURVEY OF RUSSIAN LITERATURE. Russian literature and its development during the 19th and 20th centuries. Study of exemplary works and literary movements. Prerequisite: RUS 202. *3 sem. hrs.*

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

### SPANISH

SPN 101-102. BEGINNING SPANISH I, II: Development of fundamental communication skills in reading, listening, writing, and speaking through extensive practice in language use. Admission to 101 restricted to those who have not studied Spanish or have placed into that course by examination; 102 is open only to those who have successfully completed 101 at the University of Dayton. Credit is for only ONE of the following: 101-102 OR 111 OR 121. Prerequisites: none for 101; 101 is required for 102. *3 sem. hrs. each*

SPN 101 C. BEGINNING CONVERSATION PRACTICE IN SPANISH I: Practice in speaking Spanish on the most basic level. Corequisite: SPN 101 or permission. *1 sem. hr.*

SPN 102 C. BEGINNING CONVERSATION PRACTICE IN SPANISH II: Practice in speaking Spanish in everyday situations. Corequisite: SPN 102 or permission. *1 sem. hr.*

SPN 111. INTENSIVE BEGINNING SPANISH: Intensive development of fundamental communication skills in reading, listening, writing, and speaking through extensive practice in language use. Admission restricted to those who have not studied Spanish. Recommended for those who have had successful experience learning another language. Credit granted for only ONE of the following: 101-102 OR 111 OR 121. *6 sem. hrs.*

SPN 121. ELEMENTARY SPANISH: Review and further development of fundamental communication skills in reading, listening, writing, and speaking. Admission restricted to those who have studied the language for at least two years in high school or the equivalent and place into the course by examination. Credit granted for only ONE of the following: 101-102 -111 OR 121. *4 sem. hrs.*

SPN 141. BASIC PROFICIENCY IN SPANISH: Further development of communication skills in reading, listening, writing, and speaking. Admission by examination or successful completion of 102 OR 111 OR 121. Successful completion of this course includes the demonstration of the minimal level of proficiency required for the College of Arts and Sciences' Liberal Studies Curriculum. *3 sem. hrs.*

SPN 141C. BASIC SPEAKING PROFICIENCY IN SPANISH: Further development of speaking skills. Corequisite: SPN 141 or permission. *1 sem. hr.*

SPN 201-202. INTERMEDIATE SPANISH I, II: Intensive development of the basic principles of Spanish through writing and conversation, stressing fluency. Language laboratory required. Prerequisites: SPN 141 for 201; SPN 201 for 202. *3 sem. hrs. each*

SPN 270. STUDY ABROAD: Intensive study in a foreign country whose everyday language is Spanish, treating the culture and civilization of the country. Conducted in Spanish. Available only during the summer session. Repeatable when subtitle and content change. Prerequisite: SPN 141 or equivalent. *1-6 sem. hrs.*

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

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

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

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

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

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

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

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

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



SPN 370. STUDY ABROAD: Intensive study in a foreign country whose every-day language is Spanish, treating the culture and civilization of the country. Conducted in Spanish. Available only during the summer session. Repeatable when subtitle and content change. Prerequisite: SPN 202. 1-6 sem. hrs.

SPN 380. SPANISH AND IBERO-AMERICAN CINEMA. Introduction to cinematography and culture of Spanish and Ibero-American countries, emphasizing themes related to human rights (Socioeconomic, class, sexuality, gender, ethnicity), as well as critical and theoretical perspectives on films from these regions. Conducted in English. Prerequisite: ENG 102 or equivalent. 3 sem. hrs.

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

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

SPN 469. SPANISH LINGUISTICS: A synchronic analysis of modern Spanish language, including a contrast of the Spanish sound system, morphology, and syntax with English structures; the historical derivation of Spanish, the modern Spanish dialects (Spain and Latin America), and approaches to teaching Spanish to English speakers. Conducted in Spanish. Prerequisites: LNG 468 and SPN 311 or 312. 3 sem. hrs.

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

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

SPN 480. SPANISH AND IBERO-AMERICAN CINEMA. Introduction to cinematography and culture of Spanish and Ibero-American countries, emphasizing themes related to human rights (socioeconomic, class, sexuality, gender, ethnicity), as well as critical and theoretical perspectives on films from these regions. Conducted in Spanish. Prerequisite: SPN 312 or equivalent; SPN 342 recommended. 3 sem. hrs.

SPN 491. INDEPENDENT STUDY: Independent research project under the guidance of an instructor. Admission to project and number of semester hours require approval of chairperson. Prerequisites: SPN 202 and permission. 1-3 sem. hrs.

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\*General Education course. See Chapter V.

## MATHEMATICS (MTH)

The B. A. program in mathematics provides for a breadth of mathematical study within the context of a liberal arts degree. It may be chosen as a preparation for a professional career in business, education, law or social science. It affords the student a significant distribution of courses in the humanities and social sciences so that he or she can develop a concentration in a field other than mathematics. The student's career goals will generally suggest desirable upper level mathematics electives. For example, prospective secondary mathematics teachers should participate in the licensure program and elect courses such as MTH 370, 395, and 466. Students with an interest in business, law or social science should complete the probability and statistics sequence MTH 411-413; also MTH 463 is a good choice for students planning to enter the business world.

The B. S. program in mathematics provides a foundation for students who wish to pursue graduate studies in any area of the mathematical sciences, to enter the actuarial profession, or to enter careers where mathematics is used in an engineering or science setting. A preparation for graduate programs in a mathematical science should include electives such as MTH 342, 404 and 471. A preparation for the actuarial examinations would include the probability and statistics sequence MTH 411-413 and MTH 463; in addition, actuarial preparation should include a year of accounting, a year of economics and a course in numerical methods CPS 353. To prepare for using mathematics in an applied context, some useful elective courses are MTH 403, 404, and the MTH 411-413 sequence.

The basic courses MTH 168, 169, 218, 219, and 302 are offered every term and the required core courses are offered at least once a year. However, most of the other upper-level electives for the major are offered only once every two years; thus careful planning for a student's upper-level electives should be done in consultation with the advisor. In addition, the symbolic logic course, PHL 302, is a recommended General Education course for all mathematics majors.

A minor in mathematics consists of four courses of mathematics at the 300-400 level, plus appropriate prerequisite material which may be one of MTH 218, 219, or 302.

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

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	<i>Semester Hours</i>
Mathematics .....	36
Basic calculus: MTH 168, 169, 218 .....	12
Upper-level requirements: MTH 302, 330, 361, 411 .....	12
Upper-level electives .....	12
Liberal Studies Curriculum <sup>1</sup>	
Humanities and Fine Arts	
Philosophy and Religious Studies .....	12
History .....	6
Literature: English or Foreign Language .....	3
Creative and Performing Arts .....	3
Foreign Language and/or Arts and/or Humanities .....	3-9
Social Sciences .....	12
Natural Sciences .....	11
Communication competencies .....	0-9
Introduction to the University: ASI 150 .....	0-1
General Education courses and academic electives to total at least .....	124

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

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

	<i>Semester Hours</i>
Mathematics .....	42
Basic calculus: MTH 168, 169, 218, 219 .....	15
Upper-level requirements: MTH 302, 330, 361, 430 .....	12
Upper-level electives (Departmental approval required.) .....	15
Minor: 300-400-level courses in chosen area .....	12
Natural Science: PHY 206, 207, 210L, 211L or CHM 123, 124, 123L, 124L or BIO 151, BIO 151L, 152, 152L, or GEO 115, 116, 115L, 116L—and two additional courses acceptable for	
Science majors .....	14
Computer science (e.g. CPS 132 or 150) .....	3-4
Social and behavioral sciences .....	6
Humanities .....	9
Philosophy and religious studies .....	12
Communication competencies .....	0-9
First-year experience: ASI 150 .....	0-1
General Education courses and academic electives to total at least .....	120

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

## APPLIED MATHEMATICAL ECONOMICS (MTE)

The B.S. program in applied mathematical economics provides a foundation in the economics, mathematics and statistics needed for graduate study in economics or applied statistics, or for research and technical careers in business or government service. This degree is offered jointly by the Department of Mathematics and the Department of Economics and Finance in the School of Business Administration.

## BACHELOR OF SCIENCE WITH A MAJOR IN APPLIED MATHEMATICAL ECONOMICS (MTE)<sup>1</sup>

	<i>Semester Hours</i>
Economics .....	18
Introductory-level requirement: ECO 203, 204 .....	6
Upper-level requirement: ECO 346-347, 441 .....	9
Upper-level elective: one ECO 300 or 400 level course .....	3
Mathematics .....	27
Calculus requirement: MTH 168, 169, 218 .....	12
Upper-level requirement: MTH 302, 330, 411, 412 .....	12
Upper-level elective: one MTH 300 or 400 level course .....	3
Computer Science .....	7
Introductory-level requirement: CPS 150 .....	4
Upper level-elective: one CPS 300 or 400 level course .....	3
Natural Sciences: BIO 151, BIO 151L, 152, 152L, CHM 123, 123L, 124, 124L or GEO 115, 115L, 116, 116L or PHY 206, 210L, 207, 211L .....	8

Social and behavioral sciences .....	6
Humanities.....	9
Philosophy and religious studies .....	12
Communication competencies .....	0-9
First-year experience: ASI 150 .....	1
General Education courses and academic electives to total at least .....	120

APPLIED MATHEMATICAL ECONOMICS COMMITTEE:

Committee Chairperson: Elizabeth Gustafson (Economics)  
Eloe (Mathematics), Mashburn (Mathematics), Poitras (Economics)

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

FACULTY

Paul W. Eloe, *Chairperson*  
*Distinguished Service Professors:* Peterson, Stander  
*Professors Emeriti:* Back, Friel, Rice, Strange  
*Professors:* Eloe, Gantner, Higgins, Islam, McCloskey, Steinlage  
*Associate Professors:* Gorton, Mashburn, Mushenheim,  
Schleppi, Shaughnessy  
*Assistant Professors:* Abueida, Diestelkamp, Hontz, Kauflin, Krakowski  
*Lecturers:* Lobo, Ober, Saintignon, Steinlage, L.

COURSES OF INSTRUCTION

- MTH 102. FUNDAMENTALS OF MATHEMATICS: Sets, functions and graphs, exponents, polynomials and algebraic equations, systems of equations. Prerequisite: One year of high school algebra. 3 sem. hrs.
- MTH 106. INTRODUCTORY MATHEMATICS FOR ENGINEERING TECHNOLOGY: Introduction to topics in plane geometry, triangle trigonometry, matrix algebra, and Boolean algebra with an emphasis on applications to real world technical problems. Intended for students in the engineering technology programs. Prerequisite: Two years of high school algebra. 3 sem. hrs.
- MTH 108. INTEGRATED ALGEBRA AND TRIGONOMETRY: Review of the algebraic skills necessary for MTH 168, including properties of order, arithmetic of polynomials, factoring, complex fractions, finding roots of polynomial equations, exponents, functions, domains and ranges, composition, inverses, graphing, and basic properties of trigonometric functions. First term each year. 2 sem. hrs.
- MTH 114. CONTEMPORARY MATHEMATICS: A study of contemporary mathematical topics and their applications. Topics may include management science, statistics, social choice, size and shape, and computer mathematics. Prerequisite: Two years of high school algebra. 3 sem. hrs.

MTH 116. PRECALCULUS MATHEMATICS: A review of topics from algebra and trigonometry including polynomials, functions and graphs, exponential and logarithmic functions, trigonometric functions and identities. *4 sem. hrs.*

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

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

MTH 137-138. CALCULUS I WITH REVIEW: Introduction to the differential and integral calculus with an extensive review of algebra and trigonometry; differentiation and integration of algebraic and transcendental functions with applications. Prerequisite: Two years of high school algebra. MTH 137 is a prerequisite for MTH 138. *4 sem. hrs. each*

MTH 148. INTRODUCTORY CALCULUS I: Introduction to the differential and integral calculus; differentiation and integration of algebraic and transcendental functions with applications to the life and social sciences. Prerequisite: MTH 116 or equivalent. *3 sem. hrs.*

MTH 149. INTRODUCTORY CALCULUS II: Continuation of MTH 148. Techniques of integration and differential equations with applications to the life and social sciences, indeterminate forms, infinite sequences and series. Prerequisite: MTH 138 or 148. *3 sem. hrs.*

MTH 168. ANALYTIC GEOMETRY AND CALCULUS I: Introduction to the differential and integral calculus; differentiation and integration of algebraic and transcendental functions with applications to science and engineering. Prerequisite: MTH 116 or equivalent. *4 sem. hrs.*

MTH 169. ANALYTIC GEOMETRY AND CALCULUS II: Continuation of MTH 168. Conic sections, techniques of integration with applications to science and engineering, infinite series, indeterminate forms, Taylor's theorem. Prerequisite: MTH 138 or 168. *4 sem. hrs.*

MTH 204. MATHEMATICAL CONCEPTS I: First course of a two-semester sequence designed for pre-service teachers. Concepts necessary for an understanding of the structure of arithmetic and its algorithms, number patterns, sets, problem solving, percent, relation and proportion, use of calculators. Prerequisites: One year of high school algebra and one year of high school geometry. *3 sem. hrs.*

MTH 205. MATHEMATICAL CONCEPTS II: Continuation of MTH 204. Topics include probability, representing and interpreting data, the metric system, elementary geometry, geometric patterns, coordinate geometry, algebra and geometry, transformations, computer literacy. Prerequisite: MTH 204. *3 sem. hrs.*

MTH 206. ALGEBRA AND CALCULUS CONCEPTS: Development of the algebra of polynomials and functions; factoring and roots; mathematical induction and the binomial theorem; arithmetic and geometric sums; introduction to limiting processes; slopes and area estimations and computations. Prerequisite: MTH 205. *3 sem. hrs.*

**MTH 207. INTRODUCTION TO STATISTICS:** Introduction to the concepts of statistical thinking for students whose majors do not require calculus. Methods of presenting data, including graphical methods. Using data to make decisions and draw conclusions. Basic ideas of drawing a sample and interpreting the information that it contains. Prerequisite: Two years of high school algebra. 3 sem. hrs.

**MTH 218. ANALYTIC GEOMETRY AND CALCULUS III:** Continuation of MTH 169. Solid analytic geometry, vectors and vector functions, multivariable calculus, partial derivatives, multiple integrals. Prerequisite: MTH 169. 4 sem. hrs.

**MTH 219. APPLIED DIFFERENTIAL EQUATIONS:** First order equations, linear equations with constant coefficients, systems of equations, the Laplace transform, power series solutions, numerical methods, applications. Prerequisite: MTH 218. 3 sem. hrs.

**MTH 290. TOPICS IN (NAMED AREA):** Exploration of varying topics appropriate for the needs of the pre-service training of teachers of mathematics. May be repeated as topics change. Prerequisite: One mathematics course beyond MTH 102 and permission of instructor and/or chairperson. 1-3 sem. hrs.

**MTH 295. HISTORICAL ROOTS OF ELEMENTARY MATHEMATICS:** Fundamental historical development of modern arithmetic, algebra, geometry, and number systems from early Egyptian, Babylonian, and Greek sources. Students may not receive credit for both this course and MTH 395. Prerequisite: MTH 205 or permission of instructor. 3 sem. hrs.

**MTH 301. ESSENTIALS OF MATHEMATICAL REASONING:** Techniques of proof, mathematical induction, recursion, counting methods, symbolic logic. Introduction to algebra of sets, infinities, and axiom systems. Open to students who will enroll in upper-level mathematics courses. Corequisite: MTH 218 or 302. 1 sem. hr.

**MTH 302. LINEAR ALGEBRA AND MATRICES:** Fundamental concepts of vector spaces, determinants, linear transformations, matrices, inner product spaces, and eigen-vectors. Offered each term. Prerequisite: MTH 218. 3 sem. hrs.

**MTH 330. INTERMEDIATE ANALYSIS:** Theoretical development of the calculus of a real-valued function of a real variable. Topics include the algebraic and topological properties of the real line, limits of sequences and functions, continuity, differentiability, and integration. Prerequisite: MTH 302. 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. 3 sem. hrs.

**MTH 361. INTRODUCTION TO ABSTRACT ALGEBRA:** Fundamental concepts of groups, rings, integral domains and fields. Prerequisite: MTH 218. 3 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. Mathematics majors enroll in MTH 411 instead of 367. Prerequisite: MTH 149 or 169. 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. Mathematics majors enroll in MTH 412 instead of 368. Prerequisite: MTH 367. 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. 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. 3 sem. hrs.

MTH 395. DEVELOPMENT OF MATHEMATICAL IDEAS: The evolution of mathematical ideas and techniques from ancient times to the present with emphasis on the Greek era. Famous men and famous problems. Chronological outline of mathematics in each of its branches along with applications. Prerequisite: MTH 148 or 168 or permission of instructor. 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. 3 sem. hrs.

MTH 404. COMPLEX VARIABLES: Functions of a complex variable, conformal mapping, integration in the complex plane. Laurent series and residue theory. Prerequisite: MTH 219. 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. 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. 3 sem. hrs.

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

MTH 430. REAL ANALYSIS: Continuation of MTH 330. Topics include the theory of convergence of sequences and series of functions in the context of metric spaces, uniform continuity, uniform convergence, and integration. Prerequisite: MTH 330. 3 sem. hrs.

**MTH 435. ADVANCED MULTIVARIATE CALCULUS:** Topics include directional derivatives, chain rule, Lagrange multipliers, Taylor's formula, the mean value theorem, inverse mapping theorem, implicit function theorem, integration, Fubini's theorem, change of variables, line integrals, Green's theorem and Stoke's theorem. Prerequisite: MTH 302. *3 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 thereof, dimensional analysis, scaling, and approximations at various levels. Prerequisites: MTH 219, 302, and permission of instructor. *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 445. SPECIAL TOPICS IN (NAMED AREA):** Lectures in specialized areas such as abstract algebra, applied mathematics, complex variables, differential forms, functional analysis, Galois theory, game theory, general topology, normed linear spaces, probability theory, real variables, topological groups. May be taken more than once. Prerequisite: Permission of chairperson. *1-3 sem. hrs.*

**MTH 463. INTRODUCTION TO OPERATIONS RESEARCH:** Topics include linear programming and its applications, game theory, Markov chains or linear codes and their error-correcting capabilities. Prerequisite: MTH 302 *3 sem. hrs.*

**MTH 465. LINEAR ALGEBRA:** Vector spaces, linear transformations and matrices, determinants, inner product spaces, invariant direct-sum decomposition and the Jordan canonical form. Prerequisite: MTH 302. *3 sem. hrs.*

**MTH 466. GRAPH THEORY AND COMBINATORICS:** Graphs as algebraic structures; eulerian, hamiltonian, complete, connected and planar graphs. Applications include scheduling and routing problems. Discussion of algorithms for optimal or near-optimal solutions. Combinatorial topics could include generating functions, recurrence relations, Polya's theorem and Ramsey Theory. Prerequisite: MTH 302. *3 sem. hrs.*

**MTH 471. TOPOLOGY:** Introduction to topological spaces and continuous functions including a study of separation and countability axioms and elementary properties of metric spaces, connected spaces, and compact spaces. Prerequisite: MTH 302 or permission of instructor. *3 sem. hrs.*

**MTH 490. READINGS IN (NAMED AREA):** Individual study in specialized areas carried out under the supervision of a staff member. May be taken more than once. Prerequisite: Permission of chairperson. *1-3 sem. hrs.*



### PREMEDICINE (MED) AND PREDENTISTRY (DEN)

The Bachelor of Science with a major in premedicine (MED) or predentistry (DEN) is an interdisciplinary curriculum of study. It is distinctively designed to provide a science-based, diverse education as a preparation for admission to any of the professional health schools including medical, dental, veterinary, and chiropractic. Courses in biology, chemistry, mathematics, and physics comprise the major. Humanities and social sciences courses are also required. Within this framework the curriculum is flexible and can be tailored to suit personal interests. During the first two years, students enroll in courses appropriate for entry into professional schools while they also fulfill basic University requirements.

Admission to professional schools depends upon many factors in addition to the curriculum or major. Academic standing, performance on standardized examinations, practical experience relevant to the profession of interest, and adherence to application procedures are all important. The University addresses these factors in the following comprehensive manner.

While the Premedical Programs Office administers the DEN and MED majors, this office is also the focal point for all matters related to admission to any of the primary health schools. It is an information clearing house, functions as a liaison with professional schools, and coordinates the application process. Therefore, students in any major who plan to apply to professional schools should maintain a close relationship with this office.

The University automatically enrolls entering premedical or predental majors into special orientation classes, and identifies them to the Premedical Programs Office. Members of the Premedical-Predental Faculty Committee advise these students. However, advising services are available to all pre-professional students regardless of their major. Students in other majors may elect to have committee members serve as their secondary advisors; such students should identify themselves to the Premedical Programs Office.

In addition to providing counseling, the Premedical-Predental Faculty Committee also monitors students' academic progress. Since admission to professional schools is highly selective, premedical or predental students who have non-competitive academic records at the end of the second year of study are advised to transfer to a traditional major. Traditional majors provide students with alternate career paths, and are as acceptable to professional schools as a formal Premedical or Predental major. Transfers to other majors, particularly to science majors, can usually be accommodated during the first two years without affecting normal progress towards graduation.

#### PREMEDICAL-PREDENTAL FACULTY COMMITTEE

John E. Erdei, (Physics) *Committee Chairperson*  
Church (Chemistry), Berney (Physics), Craver (Physics),  
Hofmann (Biology), Kearns (Biology), Lysaught (Religious Studies),  
Singer (Chemistry), S. Wright (Biology)

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**BACHELOR OF SCIENCE WITH A MAJOR IN  
PREMEDICINE (MED) OR PREDENTISTRY (DEN)<sup>1</sup>**


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	<i>Semester Hours</i>
Required science courses .....	45-50
BIO 151, 151L, 152, 152L .....	8
CHM 123, 123L, 124, 124L, 201, 201L, 313, 313L, 314, 314L .....	20
CPS 111 or MTH 367 .....	3
MTH 148-149 or 168-169 <sup>2</sup> .....	6-8
PHY 201, 202, or PHY 206, 207, 208; PHY 201L, 202L <sup>3</sup> .....	8-11
Elective science courses .....	17
Five lecture courses that must be selected from among mathematics, the natural sciences and/or engineering. The elective courses must be directly related to the primary field of interest. Laboratory sections must accompany two of the electives.	
Communication competencies .....	6-12
CMM 110, 111 or 112, 113 .....	3
ENG 101-102 or 114 or 198; ENG elective <sup>4</sup> .....	3-9
Philosophy and religious studies <sup>5</sup> .....	12
History .....	6
Humanities .....	12
A modern foreign language is strongly recommended.	
Social and behavioral sciences .....	12
General electives <sup>6</sup> .....	12
First-year experience: ASI 150 .....	0-1
Total semester hours .....	122-134
(See advisors for term-by-term course listings.)	

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

<sup>2</sup>Students with a weak background should take Math 137 and 138 followed by Math 148. Well qualified students are advised to take Math 168-169.

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

<sup>4</sup>Select ENG elective from among ENG 203, 204, 205, 272, 316, or any 300-level General Education ENG elective.

<sup>5</sup>One PHL or REL elective must be an ethics course. Select from among PHL 312, 315; REL 265, 367.

<sup>6</sup>Only general elective courses can be taken under grading Option 2.

## 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, other than contracted ROTC scholarship 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 \$200 a month during the school year. During the summer between the junior and senior years, cadets attend a five-week ROTC Advanced Camp, which allows them to apply the leadership and technical training learned in the classroom. While at camp, students are paid half a second lieutenant's monthly salary or about \$1000.

In addition to ROTC instruction, a student must attain an equal level of professional military education. Army officers, like other professionals, cannot be satisfied with a collection of knowledge found only in their academic field. In order to be prepared to become officers, students are required to complete courses in military history, written communication skills, oral communication skills, and computer literacy.

The minor in Military Science provides students with the opportunity to study the theory and practice of the military profession. The minor consists of 12 semester hours of upper-level courses. Students must complete MIL 301, 302, 401, and 402. Students desiring to minor in Military Science should notify their respective deans and the Military Science Department.

The ROTC program is also available to students with three or two years remaining on campus, including graduate students. Special programs, such as ROTC Summer Leadership Training, 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 \$200 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. Ronald G. Raczak , U.S. Army, *Chairperson*

*Professor:* Raczak

*Assistant Professors:* Forrest, Womack

*Instructor:* Weaver

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

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

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

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

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

MIL 122-123 (SCC).<sup>2</sup> Combination of these two courses completes all requirements of MIL 102 (UD). *0.7 sem. hr. each*

MIL 201 (UD). MAPREADING AND SMALL UNIT TACTICS: Study of basic map reading skills, small unit tactics, movement techniques, weapons marksmanship orientation, and survival skills. Participation in leadership laboratory and two field training exercises. Optional physical training and social events. *2 sem. hrs.*

MIL 202 (UD). MILITARY LEADERSHIP: Interactive study of the fundamentals of military leadership, ethical decision-making, effective counseling techniques, and conflict resolution. Study of the role and branches of the US Army and the role of the commissioned, warrant, and noncommissioned officer. Optional participation in leadership laboratories, field training exercises, physical fitness training, and social events. *2 sem. hrs.*

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

MIL 222-223 (SCC).<sup>2</sup> Combination of these two courses completes all requirements of MIL 202 (UD). *1.4 sem. hrs. each*

MIL 301 (UD). LEADING SMALL ORGANIZATIONS I: Study of the methodology, qualities, and the development of leaders through a series of practical opportunities to lead small groups, receive personal assessments, encouragement, and lead again in situations of increasing complexity. Physical training, leadership laboratory, historical field trip, social events, and field training exercises are mandatory. *3 sem. hrs.*

MIL 302 (UD). LEADING SMALL ORGANIZATIONS II: Study of emplacement of communications equipment and weapons system. Application of small unit tactics, land navigation-terrain association, operations orders and roles of various branches of the Army. Physical training, leadership laboratory, social events, and field training exercises are mandatory. *3 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. *3 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. *3 sem. hrs.*

MIL 411 (UD). LIMITED WAR/LOW INTENSITY CONFLICT: This course will identify and discuss the roles and mission of the branches found within the U.S. Army as they relate to Limited War and Low Intensity Conflicts. Historical examples of leadership in Limited War/Low Intensity Conflicts are identified and discussed. Incorporates the background and experience of resident instructors and presentations by visiting service representatives. *2 sem. hrs.*

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

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

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

## MUSIC (MUS)

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

The Department of Music is a member of the National Association of Schools of Music, which accredits its degree programs and curricula. In addition, the music education degree program is approved by the State of Ohio and the music therapy degree program by the American Music Therapy Association.

The Department of Music has numerous performing ensembles open to all students: the University Chorale, Choral Union, Opera Workshop, Ebony Heritage Singers, and Celebration Vocal Transit; University Orchestra, Symphonic Wind Ensemble, Concert Band, "Pride of Dayton" Marching Band, Pep Band, Jazz ensembles; early music ensembles; and instrumental chamber music ensembles.

The Department of Music offers five degree programs:

- Bachelor of Arts with a major in Music (MUS)
- Bachelor of Music with a major in Music Composition (MUC)
- Bachelor of Music with a major in Performance (MUP)
- Bachelor of Music with a major in Music Therapy (MUT)
- Bachelor of Music with a major in Music Education (MUE)

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

The Department of Music offers a minor in music, consisting of 22 semester hours, including 12 semester hours of upper-division coursework. It also offers a certificate in church music, consisting of 35 semester hours of coursework. Further information is available from the Department office.

Transfer students pursuing a major in MUC, MUP, or MUT must complete at least 24 of the required semester hours in the Department of Music while in residency at the University of Dayton. Transfer students pursuing a major in MUE must complete at least 20 of the required semester hours in the Department of Music while in residency at the University of Dayton. Transfer students pursuing a music minor must complete at least 12 of the required semester hours in the Department of Music while in residency.

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**BACHELOR OF ARTS WITH A MAJOR IN MUSIC (MUS)<sup>1</sup>**


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	<i>Semester Hours</i>
Music requirements .....	42
Music theory: MUS 111-114, 211-214 .....	16
Music history and literature: MUS 301-302 .....	6
Conducting: MUS 240 .....	2
Performance studies, including functional keyboard skills .....	12
Ensemble: MUS 491, 492, 493 or 390 .....	4
Recital attendance: MUS 200 (7 semesters) .....	0
Music electives .....	2
Liberal Studies Curriculum <sup>1</sup>	
Humanities and Fine Arts	
Philosophy and Religious Studies (including PHL 325) .....	12
History .....	6
Literature: English or Foreign Language .....	3
Creative and Performing Arts (including MUS or other arts) .....	3
Foreign Lang. and/or Arts and/or Humanities .....	3-9
Social Sciences .....	12
Mathematics (MTH 102, 204, 205 excluded) .....	3
Natural Sciences .....	11
Communication competencies .....	0-9
Introduction to the University: ASI 150 .....	0-1
General Education courses and academic electives to total at least .....	124

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

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**BACHELOR OF MUSIC WITH A MAJOR IN  
MUSIC COMPOSITION (MUC)<sup>1</sup>**


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	<i>Semester Hours</i>
Music requirements .....	87
Music theory: MUS 111-114, 211-214 .....	16
Composition: MUS 121-122, 221-222, 321-322, 421-422 <sup>2</sup> .....	12
Music history and literature: MUS 301-302, elective .....	9
Score reading: MUS 314 .....	2
Orchestration or arranging: MUS 316 or 318; 416 .....	4
Conducting: MUS 240; 345 or 346 .....	4
Performance studies: MUS 399 and/or 499; 296-299 <sup>3</sup> .....	12
Ensemble: MUS 491, 492, or 493 .....	8
Recital attendance: MUS 200 (7 semesters) .....	0
Theory and/or composition electives .....	10
Music electives .....	10
Communication competencies .....	0-9
Philosophy and Religious Studies (including PHL 325) .....	12
Natural Sciences .....	6
Mathematics (MTH 102, 204, 205 excluded) .....	3
Social and behavioral sciences .....	6

Humanities (includes HST 101, 102, or 198) .....	6
Other non-music electives .....	6
Introduction to the University: ASI 150 .....	0-1
Total semester hours .....	126-136

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

<sup>2</sup>Each composition major must present one and a half recitals of original work by the senior year.

<sup>3</sup>Functional Keyboard Skills or equivalent is required.

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

	<i>Semester Hours</i>
Music requirements .....	87
Music theory: MUS 111-114, 211-214 .....	16
Music history and literature: MUS 301-302, elective .....	9
Conducting and arranging: MUS 240, 318 .....	4
Performance studies <sup>2</sup> .....	36
Major area of specialization .....	24-32
Minor area of specialization <sup>3</sup> .....	4-12
Ensemble: MUS 491, 492, or 493 .....	8
Recital attendance: MUS 200 (7 semesters) .....	0
Music electives <sup>4</sup> .....	14
Communication competencies .....	0-9
Philosophy and Religious Studies (including PHL 325) .....	12
Natural Sciences .....	6
Mathematics (MTH 102, 204, 205 excluded) .....	3
Social and behavioral sciences .....	6
Humanities <sup>5</sup> (includes HST 101, 102, or 198) .....	6
Other non-music electives <sup>5</sup> .....	6
Introduction to the University: ASI 150 .....	0-1
Total semester hours .....	126-136

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

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

<sup>3</sup>Must include MUS 296-299 or MUS 399.

<sup>4</sup>Voice majors must take MUS 235 and MUS 408; piano majors must include MUS 405 and 435; instrumental majors must take a pedagogy course in their area of specialization.

<sup>5</sup>Voice majors must include 2 semesters of foreign language study.

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

	<i>Semester Hours</i>
Music requirements .....	81
Music theory: MUS 111-114, 211-214 .....	16
Music history and literature: MUS 301-302 .....	6
Conducting and arranging: MUS 240, 318 .....	4
Performance studies on the student's principal instrument leading to a	



minimum of a half-recital during the junior or senior year: MUS 399 .....	10
Vocal and instrumental methods, including accompanying instruments of piano and guitar: MUS 195, 235, 295, 296-299, 338, and three credits from the following: 237, 238, 239, 293, 381 .....	11
Music therapy, including core courses and practicum: MUS 280, 285, 286, 287, 288, 385, 386, 387, 388, 485, 486 .....	19
Functional Music Therapy Skills: MUS 282 .....	2
Music and dance electives .....	5
Ensemble .....	6
Recital attendance: MUS 200 (7 semesters) .....	0
Music therapy internship: MUS 489 <sup>2</sup> : .....	2
Psychology: 101, 355, 363, and elective .....	12
Sociology .....	3
Sciences, including HSS 305 .....	6
Communication competencies .....	0-9
Philosophy and Religious Studies (including PHL 325) .....	12
Mathematics (MTH 102, 204, 205 excluded) .....	3
Humanities (includes HST 101, 102, or 198) .....	6
Elective .....	3
Introduction to the University: ASI 150 .....	0-1
Total semester hours .....	126-136

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

<sup>2</sup>This internship of 1,040 hours 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.

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

	<i>Semester Hours</i>
Music requirements <sup>2</sup> .....	81-82.5
Requirements for all specializations <sup>2</sup>	
Music theory: MUS 111-114, 211-214 .....	16
Functional keyboard skills: MUS 296-299 .....	4
Music history and literature: MUS 301-302, 303 .....	9
Arranging: MUS 318 .....	2
Introduction to music education: MUS 231 .....	2
Performance studies on the student's principal instrument leading to a minimum of a half-recital during the junior or senior year: MUS 399 (7 semesters) .....	14
Recital attendance: MUS 200 (7 semesters) .....	0
Ensemble: MUS 491 or 492 or 493 (5 semesters) and 390 (2 semesters) .....	7
Additional requirements for band specialization <sup>3</sup>	
Music education: MUS 195, 235, 331, 332, 335, 336, 337, 338, 339, 430, 431 .....	23.5-24
Conducting: MUS 240, 346 .....	4

### Additional requirements for orchestra specialization<sup>3</sup>

Music education: MUS 195, 235, 331, 332, 335, 336, 337, 338, 339 .....	19.5
Conducting: MUS 240, 346 .....	4
String minor: MUS 399 (2 semesters) .....	4

Additional requirements for choral specialization<sup>3</sup>

Music education: MUS 235, 237, 238, 331, 332, 335, 338, 339 .....	14
Conducting: MUS 240, 345 .....	4
Guitar: MUS 195, 295 .....	1-2
Diction and literature: MUS 408 .....	2
Piano or voice minor: MUS 399 (3 semesters) .....	6

Additional requirements for classroom specialization<sup>3</sup>

Music education: MUS 235, 237, 238, 331, 332, 335, 338, 339 .....	14
Conducting: MUS 240 .....	2
Guitar: MUS 195, 295 .....	1-2
Improvisation: MUS 381 .....	2
Piano minor: MUS 399 (4 semesters) .....	8

Teacher education <sup>2</sup> : EDT 100, 110, 207, 301, 340, 422 .....	30
Communication competencies .....	0-9
Philosophy and Religious Studies (including PHL 325) .....	9
Natural Sciences .....	6
Mathematics (MTH 102, 204, 205 excluded) .....	3
Social and behavioral sciences .....	3
Humanities (HST 101, 102, or 198) .....	3
Introduction to the University: ASI 150 .....	0-1
Total semester hours .....	132-140

<sup>1</sup>See Chapter V for General Education requirements.<sup>2</sup>Students in the music education program are required to maintain a 2.0 cumulative grade point average, and a 2.5 cumulative average in teacher education and music courses.<sup>3</sup>Students will select one of four specialty areas (band, choral, classroom, or orchestra). Upon completion of the degree, candidates will receive a provisional multi-age license from the State of Ohio to teach classroom, instrumental, and vocal music from pre-kindergarten through senior high school.CERTIFICATE IN CHURCH MUSIC (MCH)<sup>1</sup>

	<i>Semester Hours</i>
MUS 111-112 Theory of Music I .....	4
MUS 113-114 Aural Skills I .....	4
MUS 240 Fundamentals of Conducting .....	2
MUS 318 Fundamentals of Arranging <sup>2</sup> .....	2
MUS 345 Choral Conducting .....	2
MUS 350 Sacred Music: Its History and Performance Tradition .....	3
MUS 399 Organ, Voice, or Guitar Performance Studies .....	8
MUS 452 Contemporary Liturgical Music Repertoire .....	3
MUS 459 Church Music Internship .....	2
MUS 493 University Chorale .....	2
REL 446 Christian Liturgy .....	3
Total semester hours .....	35

<sup>1</sup>Students may also register for classes in this certificate program through the Office of Special Programs and Continuing Education. Such students may be required to complete a performance audition.

<sup>2</sup>Or MUS elective to be determined by advisor.

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## FACULTY

Donna M. Cox, *Chairperson*

*Professors Emeriti:* Ridder, Sandness

*Professors:* Benedum, Chenoweth, Magnuson, Snyder, Street

*Associate Professors:* Cox, Hartley, Morris, Reynolds

*Assistant Professors:* Gardstrom, Jones, Ritz

*Artists-in-Residence:* Benjamin, Corrigan, Farris, McCutcheon, Todey, Wright

## COURSES OF INSTRUCTION

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, and small-scale compositions. Some assignments are done with computer notation programs. Portions of the course are Web-based. Prerequisite: MUS 111 for 112. 2 sem. hrs. each

MUS 113-114. AURAL SKILLS I: Basic techniques of listening encompassing specific skills such as interval recognition, sight-singing, performance of rhythms, as well as melodic, rhythmic and harmonic dictation. Aural training is enhanced by computer-assisted instruction. Prerequisite: MUS 113 for 114. 2 sem. hrs. each

MUS 121-122. COMPOSITION I: Supplemental explorations for majors in music composition, to accompany work in MUS 111-112. Basic notational practices and application of traditional techniques to the creative process. Corequisite: MUS 111-112. Prerequisite or corequisites: MUS 111 for 121; MUS 112 and completion of 121 for 122. 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 195. BEGINNING GUITAR CLASS I: Introduction to playing the guitar with emphasis on chord playing and accompaniment, improvisation, and application of the guitar to music teaching. 1 sem. hr.

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. 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 205. MUSIC, INSTRUMENTS, AND TECHNOLOGY: A survey of music literature, styles, and important composers, and the way the development of instruments has influenced changes in musical style. The course will also consider the ways technology has altered our approach and access to music making, listening, and dissemination in the twentieth century. Open to all University students. *3 sem. hrs.*

MUS 211-212. THEORY OF MUSIC II: SATB part-writing, Schenkerian analysis, chromatic procedures, decline of Common Practice Period, basic twentieth-century compositional styles. Some assignments are done with computer notation programs. Portions of the course are Web-based. Prerequisites: MUS 112 with grade of C or better or permission for MUS 211; MUS 211 for 212. *2 sem. hrs. each*

MUS 213-214. AURAL SKILLS II: Advanced techniques of listening encompassing specific skills such as interval recognition, sight-singing, performance of rhythms, as well as melodic, rhythmic and harmonic dictation. Aural training is enhanced by computer-assisted instruction. Prerequisites: MUS 114 with grade of C or better or permission for MUS 213; MUS 213 for 214. *2 sem. hrs. each*

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

MUS 231. INTRODUCTION TO MUSIC EDUCATION: An introduction to a wide variety of pedagogical and philosophical aspects of teaching the arts. Topics will include technology, national and state standards, history, special learners, reading in the content area, and professional organizations. Field experience is required. Prerequisite: EDT 110. *2 sem. hrs.*

MUS 232. INTEGRATING THE ARTS: MUSIC: Primarily for Teacher Education Majors. Development of knowledge, skills, values, and attitudes in music for integration into a classroom setting in which other classroom subjects are taught. Prerequisite: EDT 110. *2 sem. hrs.*

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 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 PERSONS WITH DISABILITIES: Training in the use of music and movement for children with disabilities under the supervision of AIM (Adventures in Movement) for the Handicapped, Inc. Includes observations and practice in the field. Prerequisite: Sophomore standing in music or related fields.

1 sem. hr.

MUS 282. RECREATIONAL MUSIC THERAPY SKILLS: Introduction to melodic and percussive nonsymphonic instruments and voice with particular emphasis on developing a variety of functional clinical skills in both active and receptive music therapy techniques for children and adults.

2 sem. hrs.

MUS 285. INTRODUCTION TO MUSIC THERAPY I: History and development of music therapy; survey of theoretical bases and current trends for the use of music in therapy; disability areas using music therapy. Orientation in the clinical field. Prerequisites: PSY 101, 363.

2 sem. hrs.

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

2 sem. hrs.

MUS 287. PRACTICUM IN MUSIC THERAPY I: Supervised pre-internship field experiences with children and/or adults with special needs. One-hour weekly lab required.

1 sem. hr.

MUS 288. PRACTICUM IN MUSIC THERAPY II: Supervised pre-internship field experiences with children and/or adults with special needs. One-hour weekly lab required.

1 sem. hr.

MUS 293. ORGAN CLASS: Introduction to the organ, including basic performance techniques, registration, beginning literature, and hymn playing. Prerequisite: 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. Fee.

1 sem. hr.

MUS 295. BEGINNING GUITAR CLASS II: Note reading in first position; advanced chord work, introduction to chord solo playing, and improvisation. Prerequisite: MUS 195 or equivalent.

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. Music majors only. Fee.

1 sem. hr.

MUS 297. FUNCTIONAL KEYBOARD SKILLS II: Further development of techniques introduced in MUS 296. Music majors only. Fee. Prerequisite: MUS 296.

1 sem. hr.

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

MUS 299. FUNCTIONAL KEYBOARD SKILLS IV: Continuation of MUS 298 with emphasis on advanced chord work and modulation techniques. Music majors only. Fee. Prerequisite: MUS 298. 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. May be taken in either sequence. 3 sem. hrs. each

\* MUS 303. INTRODUCTION TO MUSICS OF THE WORLD: A survey of music from representative cultures around the world, and its role and function in society. 3 sem. hrs.

\* MUS 304. HISTORY OF AMERICAN MUSIC: Survey of the American musical heritage emphasizing Anglo- and Afro-American folk traditions, early religious music, country music, pioneers in piano, band and concert music, and contemporary popular music. Open to all University students. 3 sem. hrs.

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

\* MUS 306. HISTORY OF AMERICAN JAZZ: Survey of the literature and performance practices from 1890 to the present. Includes blues, Dixieland, ragtime, boogie-woogie, swing, bop, cool, funky, and current techniques. Open to all University students. 3 sem. hrs.

\* MUS 307. DEVELOPMENT OF AMERICAN POPULAR SONG: Survey of American popular music from the days of the colonies, the war years, the ballad opera, minstrel, vaudeville, operetta, early film music, through Tin Pan Alley to Broadway, including European influences. Open to all University students. 3 sem. hrs.

MUS 308. CHAMBER MUSIC AND SYMPHONY: Formal and harmonic analysis of chamber music. Formal analysis of symphonies of classic, romantic, and contemporary composers. Prerequisites: MUS 211, 212. 2 sem. hrs.

\* MUS 309. OPERA HISTORY AND LITERATURE: Survey of the development of the opera and its literature from its 17th-century beginnings to the present. Focus upon major works and composers. Open to all University students. 3 sem. hrs.

\* MUS 310. MOZART'S OPERAS: An interdisciplinary survey of Mozart's operas—German and Italian, serious and comic. Class discussions will be supplemented by extensive listening and/or viewing of recorded performances and, when possible, attendance at live performances. 3 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. *2 sem. hrs.*

MUS 313. ADVANCED AURAL SKILLS: Advanced training in dictation, solfège and aural analysis. Prerequisite: MUS 215. *2 sem. hrs.*

MUS 314. SCORE READING: Training in reading music at the piano from open score. Drill in transposition, improvisation, and reading of various clefs, leading to the realization of full vocal and orchestral scores. *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. *2 sem. hrs.*

MUS 318. FUNDAMENTALS OF ARRANGING: Arranging studies for woodwinds, brass, percussion, strings, and choir. Individual examination of instruments; projects. Prerequisites: MUS 212. *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. Prerequisites: MUS 214 for 321; MUS 321 for 322. *2 sem. hrs. each*

\*MUS 328. HISTORY OF THE AMERICAN MUSICAL: A survey of the history and literature of the American musical from its 19th century predecessors to the present day. The course will focus on major representative works, major composers, and other artistic innovators. Open to all University students. *3 sem. hrs.*

MUS 331. CHORAL MUSIC METHODS: Pedagogical techniques for choral ensembles. Topics include the singing voice, the changing voice, organization, artistic development, literature, and rehearsal techniques. National Standards are emphasized as they relate to specific objectives. Current related practices in technology are incorporated in specific assignments. Field experience required. *3 sem. hrs.*

MUS 332. INSTRUMENTAL MUSIC METHODS: Pedagogical techniques for band and orchestra. Topics include teaching and rehearsal techniques, organization, assessment, learning theories, philosophy, literature, and programming. National Standards are emphasized as they relate to specific objectives. Current related practices in technology are incorporated in specific assignments. Field experience will be required. *3 sem. hrs.*

MUS 335. CLASSROOM MUSIC METHODS: Pedagogical techniques for classroom music grades preK-8. Topics include the pedagogical methods of Orff, Kodaly, Suzuki, and Dalcroze; lesson-plan design, implementation, and assessment. Special emphasis on the exceptional learner. National Standards are emphasized as they relate to specific objectives. Current related practices in technology are incorporated in specific assignments. Field experience required. *3 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 I: Pedagogical techniques for the percussion instruments. Fee. *1 sem. hr.*

MUS 338. PERCUSSION PEDAGOGY II: A continuation of Percussion Pedagogy I. This course will address performance study on the snare drum, mallets, and timpani; b) teaching techniques for the accessory instruments; c) minor repairs; and d) method book analysis. Fee. *1/2 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 350. SACRED MUSIC HISTORY: A survey of the development of Christian Music and its function in worship. The focus will be on historical styles, including both their impact on and their application within liturgical settings, as well as on the religious reflections engendered by specific works. *3 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 381. CLINICAL AND EDUCATIONAL MUSIC IMPROVISATION: Music improvisation techniques and procedures using piano, percussion, voice, guitar and student's major instrument. Emphasis on the acquisition of clinical and educational music improvisational skills to be applied in the medical, rehabilitation, clinical and/or school music education setting. Prerequisites: MUS 112, 114, 297 *2 sem. hrs.*

MUS 385. MUSIC THERAPY PRINCIPLES: Principles and processes underlying the applications of music in therapy, including philosophical approaches, assessment procedures, goals and objectives, evaluation and documentation techniques, and professional ethics and standards of clinical practice. *3 sem. hrs.*

MUS 386. MUSIC THERAPY METHODS AND MATERIALS: Overview of methods and materials used in the clinical practice of music therapy. Review of pertinent clinical and research literature. Exploration of the role of music within various psychotherapeutic models. Development of skills needed for music therapy marketing and professional presentations. *3 sem. hrs.*

MUS 387. PRACTICUM IN MUSIC THERAPY III: Supervised pre-internship experiences with children and/or adults with special needs. One-hour weekly lab required. Corequisite: MUS 385. *1 sem. hr.*



MUS 388. PRACTICUM IN MUSIC THERAPY IV: Supervised pre-internship experiences with children and/or adults with special needs. One-hour weekly lab required. Corequisite: MUS 386. *1 sem. hr.*

MUS 390. CELEBRATION VOCAL TRANSIT: Students will study performance practices associated with American popular music forms (including pop, soul, jazz, gospel, musical theatre) with particular attention paid to improvisation in the various forms. Students will also learn microphone technique and basic use of PA systems. The semester culminates in a performance of solos, duets, and small ensemble selections. *1 sem. hr.*

MUS 390. CHORAL UNION: Mixed vocal ensemble performing music from all style periods in regular concert appearances. Open to all University students without audition. *1 sem. hr.*

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

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

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

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

MUS 390. UNIVERSITY CONCERT BAND: Meeting Winter semester only, University Concert Band is a non-auditioned ensemble and performs two on-campus concerts. A wide variety of repertoire is performed, including marches, show tunes, concert band standards, contemporary band literature, and solo accompaniments. *1 sem. hr.*

MUS 390. BAROQUE ENSEMBLE: Audition required. *1/2 sem. hr.*

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

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

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

MUS 390. INDOOR MARCHING PERCUSSION ENSEMBLE: Study of marching percussion instruments (snare, tenors, melodic bass drums, cymbals, electric bass, electronic keyboards, and "pit" percussion). Preparation of a full indoor show, with music, drill, choreography, and staging. Audition required, and experience necessary for snare drum, tenor sections. Appearances at area exhibitions and competitions. Winter semester only. Audition required. *1/2 sem. hr.*

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

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

MUS 390. OPERA WORKSHOP: Performance techniques for the singer-actor through the study and performance of music from operatic literature. Improvisational exercises are incorporated. Audition required.  
*1/2 sem. hr.*

MUS 390. PERCUSSION ENSEMBLE: Study and performance of concert repertoire for all combinations of percussion instruments, from duets to full percussion ensembles, with occasional piano or string bass accompaniment. Open to majors and non-majors; experience preferred but not required (on one or more of the following: snare drum, tympani, drum set, keyboard percussion, world and ethnic percussion, small accessory instruments). Audition required.  
*1/2 sem. hr.*

MUS 390. PIANO ENSEMBLE: Audition required. *1/2 sem. hr.*

MUS 390. STRING ENSEMBLE: Audition required. *1/2 sem. hr.*

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

MUS 395. SPECIAL TOPICS IN GUITAR: A repeatable guitar class with different topics each term, such as accompaniment, blues, jazz, classical, bluegrass, etc. Prerequisite: MUS 295 or permission of instructor.  
*1 sem. hr.*

MUS 398. INSTRUMENTAL JAZZ IMPROVISATION: Individualized instruction in instrumental jazz improvisation. Study of jazz theory, aural development, stylistic considerations, and repertoire. Corequisite: Participation in Jazz Ensemble and/or Jazz Combo.  
*1 sem. hr.*

MUS 399. PERFORMANCE STUDIES: Private instruction (one 30-45 minute lesson each week) in piano, voice, organ, violin, viola, cello, bass, flute, oboe, clarinet, bassoon, saxophone, trumpet-cornet, French horn, trombone, baritone, tuba, percussion, harp, harpsichord, classical and pick-style guitar, and jazz lessons in piano, guitar, bass, drums, brass, and woodwinds. Prerequisite: Permission of instructor. Fee. *1-2 sem. hrs.*

MUS 401. MEDIEVAL AND RENAISSANCE MUSIC: The development of music from circa 400 to 1600, including plainchant, early polyphony, Ars Nova, and Renaissance music; the relationship of music to other arts and to its historical context. Open to all University students.  
*2 sem. hrs.*

MUS 402. BAROQUE MUSIC: Literature and performing practices from 1600 to 1750; the relationship of music to social and cultural movements. Open to all University students.  
*2 sem. hrs.*

MUS 403. CLASSIC AND ROMANTIC MUSIC: Literature and performing practices from 1750 to 1900; the relationship of music to social and cultural movements. Open to all University students.  
*3 sem. hrs.*

MUS 404. TWENTIETH-CENTURY MUSIC: A study of 20th-century music, its styles, and its cultural contexts, including post-romantic, impressionistic, neo-classic, and avant-garde. Open to all University students.  
*2 sem. hrs.*

MUS 405. PIANO LITERATURE: Comprehensive survey of literature for the piano. Required of piano performance majors. 2 sem. hrs.

MUS 408. DICTION AND LITERATURE FOR SINGERS: A course in foreign language diction with an associated survey of significant and representative works from the vocal solo repertoire. Course alternates its content: German and English; and French and Italian. Course may be repeated as content changes. Prerequisite: MUS 399 or 499 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. 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. 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. Prerequisite: Senior standing in music. 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. 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. 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. 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. 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. 2 sem. hrs.

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

MUS 431. MARCHING BAND PEDAGOGY: Methods and materials for the organization and teaching of the high school marching band. Topics include teaching and rehearsal techniques, drill design, and philosophy. Field experience will be required. Corequisite: Participation in the 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 440. ADVANCED INSTRUMENTAL CONDUCTING: Individualized instruction dealing with advanced analysis, interpretation, aural skills, repertoire study, and conducting. Prerequisite: MUS 346. *2 sem. hrs.*

MUS 452. CONTEMPORARY LITURGICAL MUSIC REPERTOIRE: Examination of ways in which contemporary musical resources are utilized in the worship of Christian churches. Choral, congregational, cantoral and instrumental material will be considered in the context of both the liturgical seasons and specific services. REL 446 recommended. *3 sem. hrs.*

MUS 459. CHURCH MUSIC INTERNSHIP: Minimum of one semester's supervised service as organist and/or choral director in an approved parish setting. Prerequisites: Completion of half of certificate requirements; permission. *2 sem. hrs.*

MUS 460. SPECIAL STUDIES IN MUSIC: Studies in specialized areas of music, including music therapy and music education. May be repeated as topics change, up to nine semester hours. Prerequisite: Senior standing in music or permission of instructor. *1-9 sem. hrs.*

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

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

MUS 489. MUSIC THERAPY INTERNSHIP: Minimum of 1040 hours supervised clinical training through resident internship in an AMTA-approved program. This requirement precedes the granting of the music therapy degree. Prerequisites: Senior standing in music therapy; permission. *2 sem. hrs.*

MUS 491. UNIVERSITY SYMPHONY ORCHESTRA: Performing ensemble of string, wind, brass, and percussion players; preparing literature for orchestra and chamber orchestra. Open to all University community members by audition. *1 sem. hr.*

MUS 492. SYMPHONIC WIND ENSEMBLE: Select band that performs the finest in wind literature. Presents regular concerts during fall and winter terms. Auditions required. *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. Auditions required. *1 sem. hr.*

MUS 499. PERFORMANCE STUDIES: Private instruction (1-hr. lessons weekly) in the same subjects as MUS 399. Fee. Prerequisite: Permission of instructor. *4 sem. hrs.*

MUS 560. SPECIAL TOPICS IN MUSIC: Studies in specialized areas of music. May be repeated as topics change, up to six semester hours. Pre-requisite: Permission of instructor. *1-4 sem. hrs.*

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

*Fee per term*

Small group instruction in various instruments (MUS 196, 237, 238, 293, 294, 296-299, 336, 337, 338, 339) .....		\$ 60
MUS 399	Performance Studies: One 30-minute or 45-minute lesson weekly .....	\$135-190
MUS 499	Performance Studies: One 60-minute lesson weekly .....	\$250

General Education course. See Chapter V.



## PHILOSOPHY (PHL)

The objective of the philosophy major program is to provide students with the opportunity to understand contemporary philosophy in view of the history of philosophy. Students majoring in philosophy must successfully complete a minimum of 37. The Philosophy major program is also offered in India in conjunction with the Marianists. Consult the chairperson of the department for further information.

The philosophy minor consists of 18 semester hours of coursework, at least 12 of which must be at the 300-400 level. Required courses are 103, 201 or 302, 350 or 351 or 352 or 353 or 354, one 400-level seminar, and 6 additional semester hours at the 300-400 level. The courses in logic and the history of philosophy are prerequisites for 400-level seminars.

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## BACHELOR OF ARTS WITH A MAJOR IN PHILOSOPHY (PHL)

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	<i>Semester Hours</i>
Philosophy .....	37
PHL 103 .....	3
PHL 240 .....	1
PHL 302, 350, and 352 .....	9
PHL 351 or 353 or 354 .....	3
Four 400-level seminars. Courses in logic and the history of philosophy are prerequisites for the 400-level seminars .....	12
9 additional sem. hrs. at the 300-400 level .....	9
Liberal Studies Curriculum <sup>1</sup>	
Humanities and Fine Arts	
Religious Studies .....	9
History .....	6
Literature: English or Foreign Language .....	3
Creative and Performing Arts .....	3
Foreign Language and/or Arts and/or Humanities (excludes PHL courses) ....	3-9
Social Sciences .....	12
Mathematics (MTH 102, 204, 205 excluded) .....	3
Natural Sciences .....	11
Communication competencies .....	0-9
Introduction to the University: ASI 150 .....	0-1
General Education courses and academic electives to total at least .....	124

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

## FACULTY

Paul H. Benson, *Chairperson*

*Professors Emeriti:* Kunkel, Monasterio, Nersoyan, Rhodes, Zembaty

*Professors:* Johnson, Quinn, Tibbetts, Ulrich

*Associate Professors:* Fischer, Fouke, Inglis, Kebede, Mosser, Payne, Richards

*Assistant Professors:* DesAutels, Morgenstern, Poe, Wilcox

*Lecturer:* Mullins

*Artist-in Residence:* Jackson

## COURSES OF INSTRUCTION

NOTE: PHL 103 or ASI-111-112 is a prerequisite for all other PHL courses except PHL 201.

- \* 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. 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 240. RESEARCH METHODOLOGIES AND TECHNOLOGIES: Development of research skills appropriate for the major. Students submit papers carefully selected from written work required for major classes. Required for all Philosophy majors. 1 sem. hr.
- \* PHL 302. SYMBOLIC LOGIC: Concentrated study of the valid forms of deductive argument and proof in propositional logic and in predicate logic; study of formal systems and of logic and language. 3 sem. hrs.
- \* PHL 304. PHILOSOPHY OF HUMAN NATURE: The nature of human beings; the functions of consciousness, the possibility of freedom, the sources of values, and the goals of human life. 3 sem. hrs.
- \* PHL 306. PHILOSOPHY OF KNOWLEDGE: Various criteria, origins, and definitions of knowledge proposed by common sense, science, philosophy, and mysticism; questions of evidence, consistency, and validity pertaining to the problem of truth and belief. 3 sem. hrs.
- \* PHL 307. PHILOSOPHY AND WOMEN: Issues and problems related to feminist analysis of society and its ideals, such as equal opportunity, sex roles and gender, reverse discrimination, violence, and language. 3 sem. hrs.
- \* PHL 308. METAPHYSICS: Issues and problems under such topics as appearance and reality; universals; relations of mind and matter; the nature of persons and personal identity; causality; freedom and determination. 3 sem. hrs.
- \* PHL 309. PHILOSOPHY OF MIND: An analysis of the concept of mind and related issues such as Descartes' mind-body dualism and various responses; the nature of human agency, self-deception; and the rationality of emotions. 3 sem. hrs.
- \* PHL 310. SOCIAL PHILOSOPHY: The concepts of liberty, justice, and equality as they relate to social problems such as punishment and rehabilitation, insanity and responsibility, privacy, population regulation, economic injustice, environmental degradation, discrimination, and reverse discrimination. 3 sem. hrs.
- \* PHL 311. PHILOSOPHY OF RELIGION: The main issues involved in religious belief and practice, such as the relationship between reason and revelation; critical presentation of views of main writers in the field. 3 sem. hrs.
- \* PHL 312. ETHICS: Various types of moral and ethical theory in the Western tradition and major problems such as the extent of human responsibility and the conditions for making ethical judgments. 3 sem. hrs.

- \* PHL 313. BUSINESS ETHICS: Review of general ethical theory; ethical assessments of incidents that often occur in commerce affecting employees, employers, consumers, competitors, or the local community. *3 sem. hrs.*
- \* PHL 314. PHILOSOPHY OF LAW: Major concepts of law to include the nature of law, legal reasoning, liberty, justice, responsibility, punishment. *3 sem. hrs.*
- \* PHL 315. MEDICAL ETHICS: Introduction to morality in general and inquiry into the major moral problems of medical practice: human life and the preservation of its integrity. *3 sem. hrs.*
- PHL 315W. PROBLEMS IN MEDICAL ETHICS: An analysis of special ethical issues raised in a specific area of medical practice. Web-based course. May be repeated when topic changes. Prerequisite or Corequisite: PHL 315 or REL 367. *1 sem. hrs.*
- \* PHL 316. ENGINEERING ETHICS: Introduction to ethical issues in engineering by developing theories of moral justification and codes of ethics for engineers, and by applying these theories and codes to moral issues in engineering. *3 sem. hrs.*
- \* PHL 317. ETHICS AND MODERN WAR: Study in applied ethics focusing on the implications of power politics and militarism; various ethical approaches used to evaluate wars, terrorism and violence; and an overview of some alternatives to war. *3 sem. hrs.*
- \* PHL 318. FAMILY ETHICS: Introduction to the development of the concept of a family in the tradition of Western philosophy and the philosophic analysis of contemporary ethical problems in marriage and in parenthood. *3 sem. hrs.*
- \* PHL 319. INFORMATION ETHICS: Examination of ethical principles, codes, cases, incidents, and issues in the design, implementation, and use of computerized information systems. *3 sem. hrs.*
- \* PHL 320. PHILOSOPHY OF ART: Theories of art and criteria of evaluation developed by philosophers, artists, and critics; the relationship between art and society and between artistic and other human values. *3 sem. hrs.*
- \* PHL 321. ENVIRONMENTAL ETHICS: Study of the principal ethical perspectives on the treatment of animals and nature including such issues as agriculture, energy, pollution, and economics; assessment of political responses to current environmental problems. *3 sem. hrs.*
- \* PHL 323. PHILOSOPHY AND LITERATURE: Critical examination of philosophical concepts in selected literary masterpieces, ancient and modern. *3 sem. hrs.*
- \* PHL 324. PHILOSOPHY AND FILM: Introduction to philosophical issues and aesthetic theory through a critical reading of texts and examination of selected narrative, documentary, animated, or abstract films. *3 sem. hrs.*
- \* PHL 325. PHILOSOPHY OF MUSIC: Examination of theories on the meaning of music; experiencing music as composer, performer, and listener; aesthetic criteria; moral effect of music. *3 sem. hrs.*



- \* PHL 327. PHILOSOPHY OF PEACE: Examination of human violence and ethical justifications for war and exploration of resolutions for human conflict in processes such as pacifism, peacemaking, democratic world governance, nonviolent caring, and a sustainable economy. 3 sem. hrs.
- \* PHL 330. PHILOSOPHY OF SCIENCE: Study of the presuppositions and implications of scientific inquiry from a humanistic viewpoint; explanation in science, the relation between facts and theories, and problems of verification. 3 sem. hrs.
- \* PHL 331. SCIENCE, OBJECTIVITY, AND VALUES: Study of three interrelated issues: the limits of scientific methodology; science as a social institution; and science and human values. 3 sem. hrs.
- \* PHL 332. TECHNOLOGY AND VALUES: Study of the social impact of technology-scientists' responsibility; technological change and social change; the "technological fix"; democracy and the new technological elite; counter-culture critiques of technology. 3 sem. hrs.
- \* PHL 333. PHILOSOPHY AND COGNITIVE SCIENCE: A philosophical introduction to recent research in cognitive psychology, artificial intelligence, and neuroscience regarding human, animal, and machine intelligence; the relation between mind, brain, and personhood; and the biology of conscious states. 3 sem. hrs.
- PHL 340. SPECIAL PROBLEMS IN PHILOSOPHY: Examination of perennial and contemporary problems of philosophy. May be repeated when topic varies. 1- 3 sem. hrs.
- \* PHL 344. CORE SEMINAR IN PHILOSOPHY: Culminating course for students in CORE: discussion of selected readings on the issue of human values in a pluralistic society in such areas as wealth and poverty, education, and war and peace. Open only to students in CORE. 3 sem. hrs.
- \* PHL 345. HONORS SEMINAR IN PHILOSOPHY: Study and seminar discussion of selected major philosophical works and of the analysis, interpretation, and criticism of these works. Open by permission only to students in the University Honors Program. 3 sem. hrs.
- \* PHL 350. CLASSICAL GREEK PHILOSOPHY: The Greek origins of Western scientific, philosophical, and political thought; relationships to current thoughts; ideas of the pre-Socratics, Plato, and Aristotle in their cultural contexts. 3 sem. hrs.
- \* PHL 351. MEDIEVAL PHILOSOPHY: Major philosophical problems from the 4th through the 16th centuries and their importance in shaping current beliefs and traditions in the Augustinian, Jewish, Islamic, Persian, Thomist, and Oxford cultural settings; human action, conscience, freedom, and law. 3 sem. hrs.
- \* PHL 352. MODERN PHILOSOPHY: Development of philosophy in the 17th and 18th centuries up to Kant with a focus on several major philosophical figures such as Descartes, Spinoza, Leibniz, Locke, Berkeley, and Hume. 3 sem. hrs.
- \* PHL 353. KANT AND NINETEENTH-CENTURY PHILOSOPHY: Development of philosophy beginning with Kant through the 19th century including Kant and philosophers such as Fichte, Schelling, Hegel, Schopenhauer, Nietzsche, James, Peirce, and Frege. 3 sem. hrs.
- \* PHL 354. TWENTIETH-CENTURY 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 357. RADICAL PHILOSOPHY: Study of major attempts to develop a critical understanding of society; analysis of theories such as socialism, anarchism, feminism, critical theory, and critical race theory. 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 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 363. AFRICAN PHILOSOPHY: Introduction to African world views, ethical notions, and social ideas using analytical and comparative approaches; examination of concepts of human diversity and universality; analysis of the transition of traditional African culture to modernity. 3 sem. hrs.
- \* PHL 364. RACE, GENDER, AND PHILOSOPHY: A philosophical investigation into the systematic nature of racism and sexism, including inquiry into the epistemological, metaphysical, linguistic, and representational structures that sustain and perpetuate the power dynamics of western post-colonial patriarchal society. 3 sem. hrs.
- \* PHL 370. POLITICAL PHILOSOPHY: Philosophical theories regarding the nature of the state and the legitimation of political authority will be analyzed and evaluated in the context of philosophical conceptions of human nature, liberty, equality, justice, welfare, and power. 3 sem. hrs.
- \* PHL 371. PHILOSOPHY AND HUMAN RIGHTS: Examination of the nature and philosophical foundations of universal moral (human) rights; and application of human rights theory to issues and cases involving civil and political rights, and rights to equality, security, subsistence, education, welfare, employment, and health care. 3 sem. hrs.
- \* PHL 372. VALUES AND ECONOMICS: An inquiry into the impact of values and beliefs on the generation of modern economic forces. Analyzing capitalism as a system of validation of beliefs and values, the course relates underdevelopment with the conflict between tradition and modernity. It then reflects on the conditions of change liable to promote global expansion. 3 sem. hrs.

PHL 440. SEMINAR-ADVANCED PROBLEMS IN PHILOSOPHY: Detailed examination of some of the more technical problems of philosophy as well as those problems that arise in interdisciplinary settings upon which philosophers have brought their technical skills to bear. May be repeated when topic varies. 3 sem. hrs.

PHL 451. SEMINAR-INDIVIDUAL PHILOSOPHERS: Detailed examination of the thought of an individual philosopher (e.g., Aquinas, Kant, Rawls, Quine) who is of sufficient importance to warrant special study. May be repeated when topic varies. 3 sem. hrs.

PHL 461. SEMINAR-CONTEMPORARY EPISTEMOLOGY: Study of recent philosophical work in the theory of knowledge inclusive of scepticism, knowledge and belief, evidence and justification, theories of perception and knowledge, human interests and valuation. 3 sem. hrs.

PHL 462. SEMINAR-CONTEMPORARY ETHICS: Study of recent philosophical work in ethics inclusive of an analysis of ethical concepts, theories of normative ethics, theories of human action, and moral justification. 3 sem. hrs.

PHL 463. SEMINAR-CONTEMPORARY METAPHYSICS: Study of recent work in metaphysics inclusive of the nature of metaphysics, causality, free will and determinism, personal identity and the theory of mind and body. 3 sem. hrs.

PHL 490. DIRECTED READINGS: Guided independent study primarily for philosophy majors but open to students who have completed 12 sem. hrs. in philosophy. Normally 3 sem. hrs. but in certain cases the chairperson may approve 1, 2 or 4 sem. hrs. May be repeated when topic varies. Prerequisite: Permission of the instructor and the chairperson. 1-4 sem. hrs.

PHL 492. DIRECTED RESEARCH: Faculty-directed research for philosophy majors who have completed all 300-level requirements and at least one 400-level seminar. Students will write a substantial paper in relation to this research. Permission of the instructor and the chairperson. 3 sem. hrs.

PHL 495. INTERNSHIP: Supervised practical and professional experience related to philosophy for philosophy majors who have completed prescribed course work. Permission of the chairperson. May be repeated to a maximum of 3 sem. hrs. Grading Option 2 only. Prerequisites: PHL 103, 302, 350, 352 and one 400-level seminar. 1-3 sem. hrs.

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\*General Education course. See Chapter V.

## 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 (300-400) physics courses.

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### BACHELOR OF SCIENCE WITH A MAJOR IN PHYSICS (PHY)

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	<i>Semester Hours</i>
<sup>1</sup> Physics .....	37
Basic courses: PHY 206, 207, 208, 210L, 211L .....	11
PHY 301, 303, 333, 390, 408, 430, 431, and 300-400 level electives .....	26
Mathematics: MTH 168, 169, 218, 219, 302 .....	18
Chemistry: CHM 123, 123L, 124, 124L .....	8
Philosophy and religious studies .....	12
Humanities .....	9
Social and behavioral sciences .....	6
Communication competencies .....	3-9
Computer Science: CPS 132 or 144 .....	3
Minor (300-400 level courses) if chosen .....	12
First-year experience: ASI 150 .....	0-1
General Education courses and academic electives to total at least .....	120

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

## FACULTY

J. Michael O'Hare, *Chairperson*

*Distinguished Professor:* Bueche

*Professors Emeriti:* Graham, Kepes, Miner

*Professors:* Evwaraye, O'Hare, Pedrotti, Yaney

*Associate Professors:* Berney, Brecha, Craver, Erdei

*Assistant Professors:* Elhamri, Powers

## 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, physical science, and physics-computer 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. Corequisite: PHY 108. 1 sem. hr.

- \* PHY 201. GENERAL PHYSICS: Topics from mechanics, thermal and mechanical properties of matter, wave motion and sound, and electricity without the formalism of calculus. First term, each year. 3 sem. hrs.

PHY 201L. GENERAL PHYSICS LABORATORY: Introductory laboratory appropriate for students of the health sciences. Experimental scientific techniques and the use of standard laboratory equipment. One two-hour period each week. First term, each year. Corequisite: PHY 201 or 206. 1 sem. hr.

- \* PHY 202. GENERAL PHYSICS: Continuation of PHY 201 with a treatment of electricity and magnetism, wave motion and properties of light, atomic and nuclear physics. Second term, each year. Prerequisite: PHY 201. 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: College algebra, trigonometry, and introductory statics and dynamics. 3 sem. hrs.

PHY 203L. TECHNICAL PHYSICS LABORATORY: Laboratory experiences to accompany PHY 203. 1 sem. hr.

- \* PHY 206. GENERAL PHYSICS I-MECHANICS: Introductory course in mechanics for students with a strong background in physics. Three lectures, one recitation each week. Corequisite: MTH 148 or 168. 3 sem. hrs.

- \* PHY 206H. GENERAL PHYSICS I—MECHANICS (HONORS): Introductory course in mechanics for students with a strong background in physics. Three lectures, one recitation each week. By invitation only. Corequisite: MTH 148 or 168. 3 sem. hrs.

- \* PHY 207. GENERAL PHYSICS II—ELECTRICITY AND MAGNETISM: The basic principles of electricity and magnetism. Three lectures, one recitation each week. Prerequisite: PHY 201 or 206. Corequisite: MTH 149 or 169. 3 sem. hrs.

- \* PHY 208. GENERAL PHYSICS III—MECHANICS OF WAVES: Introduction to wave phenomena (including sound, light, and matter waves) leading to basic concepts in modern physics. Prerequisites: PHY 202, MTH 149; or PHY 207, MTH 169. 3 sem. hrs.

PHY 210L. GENERAL PHYSICS LABORATORY I: Introduction to laboratory methods, handling of data, and analysis of results. Experiments appropriate to the background of students with an interest in mathematical and physical sciences. Two hours laboratory, one hour recitation each week. Corequisite: PHY 206. 1 sem. hr.

PHY 211L. GENERAL PHYSICS LABORATORY II: Laboratory methods, data handling, and analysis of results. Experiments appropriate to the background of students with an interest in mathematical and physical sciences. Two hours laboratory, one hour recitation each week. Prerequisite: PHY 210L. Corequisite: PHY 207. *1 sem. hr.*

\* PHY 250. DESCRIPTIVE ASTRONOMY: Descriptive survey for students who have had little or no previous exposure to astronomy; material from ancient times to present, including pulsars and quasi-stellar objects. Prerequisite: None *3-4 sem. hrs.*

PHY 299. SPECIAL PROBLEMS: Special topical courses, laboratory, tutorial, or library work in areas of current interest. Students should consult the composite. *1-4 sem. hrs.*

PHY 301. THERMAL PHYSICS: Thermodynamical descriptions of many particle systems obtained from microscopic statistical considerations; laws of thermodynamics, kinetic theory of dilute gases, and Fermi-Dirac and Bose-Einstein statistics. Prerequisite: PHY 208. Corequisite: MTH 219. *3 sem. hrs.*

PHY 303. INTERMEDIATE MECHANICS I: The fundamental concepts of mechanics: virtual work, kinematics, special theory of relativity, Lagrange's equation and central forces, particle dynamics. Prerequisite: PHY 208. Corequisite: MTH 219. *3 sem. hrs.*

PHY 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 323. COMPUTATIONAL PHYSICS: The course will explore how computers are used in physics. Topics will include simulations of physical systems, numerical analysis, and the use of mathematical analysis packages (MATHCAD, for example.) Programming will be done in True BASIC and MATHCAD. Prerequisites: PHY 208, MTH 218. *3 sem. hrs.*

PHY 333. DIGITAL AND ANALOG ELECTRONICS FOR SCIENTISTS: Basic concepts of digital and analog integrated circuit electronics are developed as a way to understand modern microcomputer based instrumentation. A microcomputer based data collection and analysis system is used to study binary data input and output, analog to digital conversion (ADC) devices, digital to analog conversion (DAC) devices, and other digital integrated circuits and concepts. The analog electronics part of the course begins with a study of discrete analog devices and ends with operational amplifiers and their application. Two hours lecture and two-hour laboratories each week. Prerequisite: PHY 211L or PHY 202L or equivalent. *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. Corequisite: MTH 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 411. TOPICS IN MODERN PHYSICS: Elements of modern optics, solid state and other selected subjects. Consult chairperson for details. Prerequisite: PHY 390 or equivalent.

3 sem. hrs.

PHY 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, 390, 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 333. 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 450. SENIOR PROJECT: The senior project is a capstone experience for senior physics majors. It will consist of a research project of the student's choosing and will require both an oral and written report. The nature and scope of the project will be chosen in consultation with the student's advisor. Permission of the department chairperson is required. Prerequisite or corequisite: senior physics majors only.

3 sem. hrs.

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

1 sem. hr.

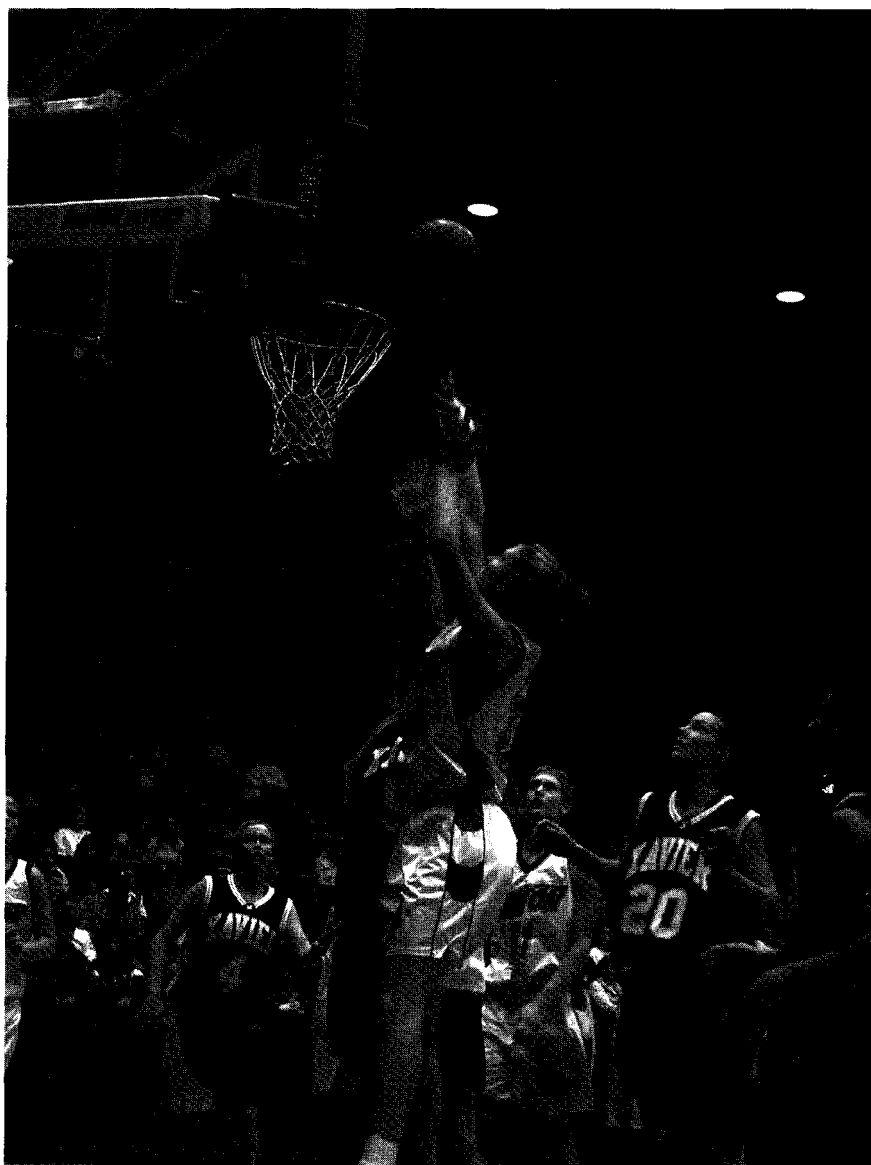
PHY 495. RESEARCH PARTICIPATION II: Individual projects conducted as part of the physics Undergraduate Research Participation program to encourage involvement of students with faculty researchers. Projects must be arranged in advance with faculty research directors.

1-6 sem. hrs.

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

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\*General Education course. See Chapter V.





PHYSICS-COMPUTER SCIENCE (PCS)

This combined program in physics and computer science leading to the Bachelor of Science with a major in Physics-Computer Science emphasizes the use of computer software in scientific applications and at the same time gives a foundation in the scientific disciplines of physics and computer science. Minimum requirements for the degree are listed below. Students are advised to select additional computer science, mathematics, and physics courses as electives. For further information contact the Physics Department.

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

	<i>Semester Hours</i>
Computer Science .....	27
CPS 150, 151, 250, 346, 350, 353, and two additional courses numbered above 340.	
Additional numerical analysis courses are recommended.	
Mathematics: MTH 168, 169, 218, 219, 302 .....	18
Physics .....	27-30
PHY 206, 207, 208, 210L, 211L, 323, 333 and four additional courses numbered above 300. In addition, a senior project involving some application of computers in physics is recommended.	
Communication competencies .....	3-9
Humanities .....	9
Social and behavioral sciences .....	6
Philosophy and religious studies .....	12
First-year experience: ASI 150 .....	0-1
General Education courses and academic electives to total at least .....	120

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

## 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.

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

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	<i>Semester Hours</i>
Physics: PHY 206, 207, 208, 210L, 211L .....	11
Chemistry: CHM 123, 123L, 124, 124L .....	8
Geology: GEO 115, 115L, 116, 116L .....	8
Mathematics: MTH 168, 169, 218, 219 .....	15
Upper-level physical sciences (at least 12 sem. hrs. in physics) .....	26
Philosophy and religious studies .....	12
Humanities .....	9
Communication competencies .....	3-9
Computer Science: CPS 132 or 144 .....	9
Social and behavioral sciences .....	6
First-year experience: ASI 150 .....	0-1
General Education courses and academic electives to total at least .....	120

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

# POL

## POLITICAL SCIENCE (POL)

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

A minor in political science includes POL 201 and four 300-400-level courses selected by the student to strengthen academic or career objectives.

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

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	<i>Semester Hours</i>
Political science .....	36
POL 201, 202 or 214, 207, 317, and 24 additional sem. hrs. including 18 sem. hrs. at the 300-400 level.	
Liberal Studies Curriculum <sup>1</sup>	
Humanities and Fine Arts	
Philosophy .....	12
History .....	6
Literature: English or Foreign Language .....	3
Creative and Performing Arts .....	3
Foreign Language and/or Arts and/or Humanities .....	3-9
Social Sciences .....	12
Mathematics (MTH 102, 204, 205 excluded) .....	3
Natural Sciences .....	11
Communication competencies .....	0-9
Introduction to the University: ASI 150 .....	0-1
General Education courses and academic electives to total at least .....	124

<sup>1</sup>See 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 licensure in education (see EDT) or a minor in any related discipline within the College of Arts and Sciences. The student must consult with the department administering the discipline for the particular requirements of a minor. Alternatively, the student may elect one of the four multidisciplinary concentrations in prelaw, international affairs, public administration and urban affairs, and political journalism developed by the Department of Political Science. A student completing an area concentration will, upon request, receive a certificate to that effect from the department.

	<i>Semester Hours</i>
1. Prelaw	
Required: POL 301 or 411; ENG 272, 316, or 474 .....	6
Choose three: ECO 204; ENG 203, 204, or 205; PHL 201; SOC 326, 327 .....	9
Recommended: POL 495 .....	3
2. International Affairs	
Required: POL 202, 214 .....	6
Choose four: ANT 150; ECO 450, 460, 461; any upper-level non-American HST .....	12
Recommended: Foreign language through 311 and study abroad	

## 3. Public Administration and Urban Affairs

Required: POL 305, 306, 360 ..... 9

Choose three: MGT 301; HST 355; SOC 328; ENG 370 or 372;  
ECO 445 or 485; POL 495 ..... 9

## 4. Political Journalism

Required: POL 303, 311; CMM 330 ..... 9

Choose three: CMM 201; CMM 353; CMM 431, 331; POL 360, 450 ..... 9

## FACULTY

Christopher Duncan, *Chairperson**Professors Emeriti:* Lapitan, Kerns*Professors:* Ahern, Karns*Associate Professors:* Bilocerkowycz, Ensalaco, Ghery, Inscho*Assistant Professor:* Nelson*Lecturer:* Putka

## COURSES OF INSTRUCTION

\* POL 101. GLOBAL POLITICS: Examination of major problems and trends in world politics such as ethnic and religious conflict, economic integration and inequality, democratization and security issues, as well as the role of regional and international organizations. 3 sem. hrs.

POL 201. THE AMERICAN POLITICAL SYSTEM: Study of the American political system, its attitudinal and constitutional base, its structure and processes. 3 sem. hrs.

POL 202. INTRODUCTION TO COMPARATIVE POLITICS: Analysis of major concepts and approaches in the study of comparative government and politics. 3 sem. hrs.

POL 207. POLITICAL ANALYSIS: Introduction to the basic concepts and processes of research in political science. 3 sem. hrs.

POL 214. INTRODUCTION TO INTERNATIONAL POLITICS: Analysis of the dynamic forces of conflict and cooperation in world politics. 3 sem. hrs.

POL 300. POLITICAL ISSUES: Introductory examination of contemporary political issues selected by the instructor, such topics as welfare, political morality, political campaigns, institutional reform, and political economy. 3 sem. hrs.

POL 301. THE AMERICAN JUDICIAL PROCESS: Study of the judicial process as part of the political system. Focus on the participants (police, lawyers, judges, interest groups, litigants, jurors) and the process (criminal, civil, and appellate proceedings). 3 sem. hrs.

POL 303. STATE AND LOCAL GOVERNMENT: Comparative study of the political institutions, processes, and systems of the fifty states and their effect on the content and administration of selected public policies, programs, and services. 3 sem. hrs.

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

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

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

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

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

POL 317. DEVELOPMENT OF POLITICAL THEORY: Analysis of selected theorists and political doctrines forming the tradition of Western thought on politics. Theorists including Plato, Aristotle, the Stoics, Augustine, Aquinas, Machiavelli, Hobbes, Locke, Rousseau, Mill, Marx, Spencer, Lenin, Gasset, and Camus presented in their historical and socio-political contexts. *3 sem. hrs.*

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

POL 320—Western Europe

POL 321—Russia and the New States

POL 323—Latin America

*3 sem. hrs. each*

POL 331. NATIONALISM AND ETHNOPOLITICS: An analysis of the politics of nationalism and ethnicity and their impact on social justice. Diverse case studies (US, Russia, Northern Ireland, Israeli-Palestinian) and institutions (European Community, United Nations) will be explored. *3 sem. hrs.*

POL 333. POLITICS OF HUMAN RIGHTS: Examines the evolution of international human rights norms and the creation of the institutions for the protection and promotion of human rights, and case material relating to each category of internationally recognized human rights. *3 sem. hrs.*

POL 335. UNITED STATES NATIONAL SECURITY POLICY: Analysis of various political, economic, and military issues and problems relating to U.S. national security. *3 sem. hrs.*

POL 350. LEGISLATIVE POLITICS: Study of the U.S. Congress, its organization and procedures, and its powers and influence in the political system. *3 sem. hrs.*

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

\* POL 371. ENVIRONMENTAL POLICY: Examination of environmental public policymaking and implementation in the U.S. and in the international arena. Analysis of domestic and international governmental responses to specific environmental issues. *3 sem. hrs.*

POL 404. UNITED STATES-LATIN AMERICAN RELATIONS: This course examines the foreign relations of the United States with other countries of the Western hemisphere.

Political, economic and security issues are examined from both theoretical and historical perspectives. Prerequisite: POL 201 or POL 214 or permission. *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. Prerequisite: POL 214 or permission. *3 sem. hrs.*

POL 407. CHINESE FOREIGN POLICY: Analysis of the Chinese foreign policy structures and processes as well as the development of Chinese foreign policy and relations with the Soviet Union, the United States, and the Third World. *3 sem. hrs.*

POL 408. AMERICAN FOREIGN POLICY: Critical study of the American foreign policy process and evaluation of the sources of American foreign policy. Prerequisites: POL 201 and POL 214 or permission. *3 sem. hrs.*

POL 409. RUSSIAN FOREIGN POLICY: Analysis of the internal and external factors shaping the foreign policies of Russia and the independent republics. *3 sem. hrs.*

POL 410. COMPARATIVE FOREIGN POLICY: Comparative analysis of the foreign policies of major states with emphasis on the process of policy development and on the national and international determinants of policy behaviors. Prerequisite: POL 202 or 214 or permission. *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. Prerequisite: POL 301 or permission. *3 sem. hrs.*

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

POL 421. SEMINAR IN POLITICAL SCIENCE: Seminar on current problems and issues in political science. May be taken more than once when content changes. Prerequisite: Must be POL major and have completed POL core courses. *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 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. Prerequisite: POL 301 or POL 411 or permission. *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. Prerequisite: POL 202 or POL 333 or permission. *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. Prerequisites: POL 201 and POL 317 or permission.

*3 sem. hrs.*

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

*3 sem. hrs.*

POL 495. INTERNSHIP: Supervised experience in government agencies and programs. Prelaw students are assigned to law firms and judicial chambers. Prerequisite: Permission of supervising professor.

*3 sem. hrs.*

POL 497. SERVICE LEARNING EXPERIENCE: Supervised community research or service experience that complements a specific upper division course in Political Science. Repeatable up to three semester hours. No more than 3 semester hours of Social Science 497 credits can count toward graduation. Prerequisite: Permission of instructor. Corequisite: A 300-400 Political Science course.

*1 sem. hr.*

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\*General Education course. See Chapter V.



## PRELAW

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

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

1. Skill in the analysis and synthesis of ideas. Courses in such disciplines as history, literature, mathematics, philosophy, and the sciences develop critical, analytical thinking.
2. Proficiency in communicating ideas effectively and clearly. Courses in such areas as composition theory and process, in exposition and argumentation, in persuasion, and in the techniques and uses of research aid in the development of this ability.
3. Comprehension of the basic principles of the American political and legal system, including their origins and functions. Courses in British and American history, political science, and criminal justice promote an understanding of these concepts.
4. A critical examination of the ethical issues in the law and the legal profession. Courses in philosophy and religious studies form a basis for such an examination.
5. An understanding of the basic principles of economics and accounting.

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

## PRELAW FACULTY COMMITTEE

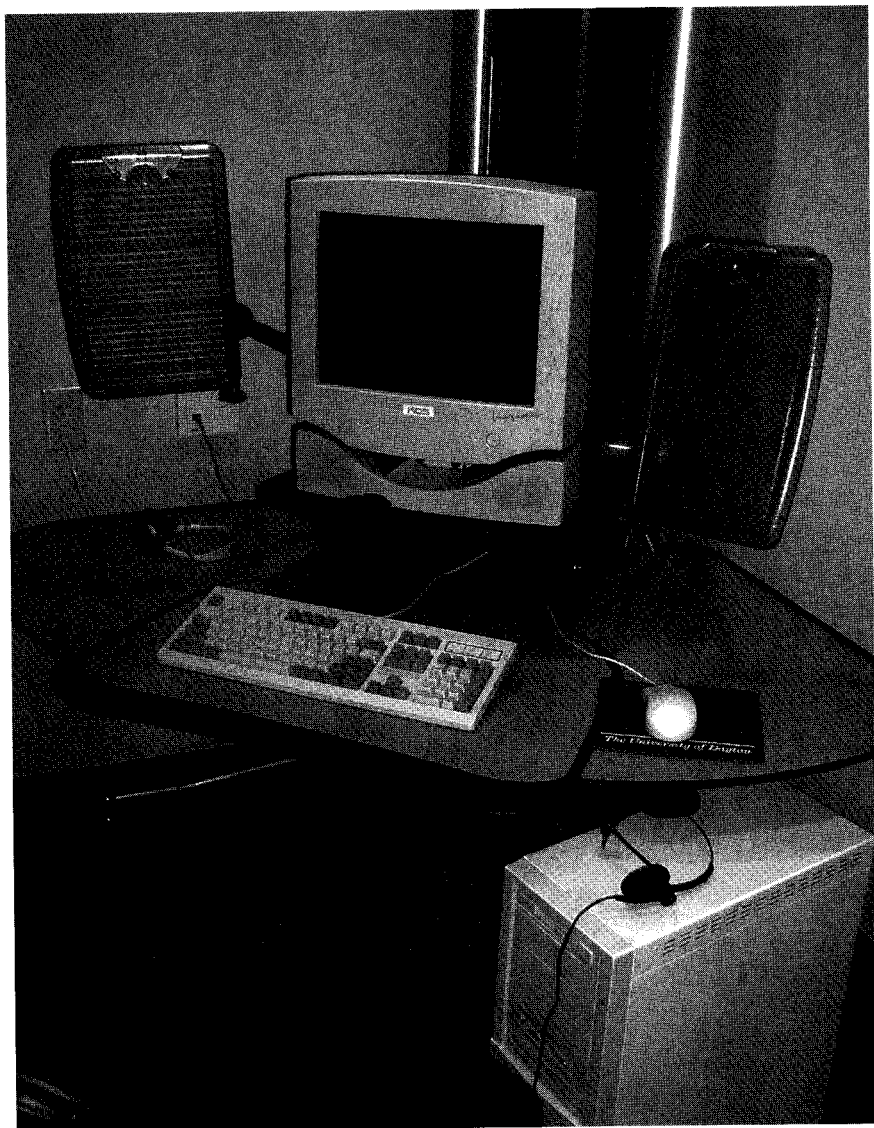
Roberta Sue Alexander (History), *Director, Prelaw Program*  
 Frasca (Economics), Ingram (Criminal Justice),  
 Kimbrough (English), Payne (Philosophy)



## COURSES OF INSTRUCTION

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

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



## 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. It also allows for easy transfer into psychology from prior majors. The Department encourages students who are interested in preparation for graduate school or a career in a particular area of psychology to consult the Psychology Undergraduate Student Handbook, available on the World Wide Web, for a listing of courses that are recommended for preparation in that area. Some examples of such areas include clinical psychology, developmental psychology, human factors/ergonomics, and social psychology.

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.

Psychology majors are required to attain grades of C or better in the following courses: PSY 101, 216, 217, and any two courses from each of the two core groupings (PSY 321, 322, 323, and 422) (PSY 341, 351, 361, and 363). If a C or better is not attained, courses will have to be retaken if they are used to satisfy the psychology major.

A minor in Psychology consists of 18 hours, including PSY 101, one course from each of the two core areas (PSY 321, 322, 323, and 422) and (PSY 341, 351, 361, and 363) and an additional 9 hours of 300/400 level psychology electives. Only 3 hours of PSY 490, 493, and 494, and/or 497 may count toward the minor.

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### BACHELOR OF ARTS WITH A MAJOR IN PSYCHOLOGY (PSY)<sup>1</sup>

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*Semester Hours*

Psychology requirements and electives .....	34
PSY 101, 216 <sup>2</sup> , 217 .....	10
Select two courses from PSY 321, 322, 323, 422 .....	6
Select two courses from PSY 341, 351, 361, 363 .....	6
PSY electives <sup>3</sup> .....	12-23

Liberal Studies Curriculum<sup>1</sup>

Humanities and Fine Arts	
Philosophy and Religious Studies .....	12
History .....	6
Literature: English or Foreign Language .....	3
Creative and Performing Arts .....	3
Foreign Language and/or Arts and/or Humanities .....	3-9
Social Sciences (Excluding PSY) .....	12
Mathematics: MTH 114, 116, 128, 129, 137, 138, 148, 149, 168, or 169 .....	3
Natural Sciences .....	11
Communication Competencies .....	0-9
Introduction to the University: ASI 150 .....	0-1
General Education courses and academic electives to total at least .....	124

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

<sup>2</sup>May substitute MTH 207 for PSY 216, but the MTH course does not count toward the 34 credit hours required in PSY for the major.

<sup>3</sup>No more than a total of 6 hours of PSY 490, 493, 494 and/or 497 may count toward the 34 credit hours required in PSY for the major.

## BACHELOR OF SCIENCE WITH A MAJOR IN PSYCHOLOGY (PSS)<sup>1</sup>

	<i>Semester Hours</i>
Psychology requirements and electives .....	34
PSY 101, 216 <sup>2</sup> , 217 .....	10
Select two courses from PSY 321, 322, 323, 422 .....	6
Select two courses from PSY 341, 351, 361, 363 .....	6
PSY electives <sup>3</sup> .....	12-23
Natural sciences <sup>4</sup> .....	24
MTH 148, 149 <sup>5</sup> .....	6
Humanities .....	9
Social and behavioral sciences .....	6
Philosophy and Religious Studies .....	12
Communication Competencies .....	0-9
Introduction to the University: ASI 150 .....	0-1
General Education courses and academic electives to total at least .....	120

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

<sup>2</sup>May substitute MTH 207 for PSY 216, but the MTH course does not count toward the 34 credit hours required in PSY for the major.

<sup>3</sup>No more than a total of 6 hours of PSY 490, 493, 494, and/or 497 may count toward the 34 credit hours required in PSY for the major.

<sup>4</sup>Two 3-sem. hr. natural science courses (BIO, CHM, GEO, PHY) with accompanying laboratories are required. The remaining 16 sem. hrs. may be fulfilled by courses in BIO, CHM, GEO, PHY, and CPS courses as well as by MTH courses beyond the departmental MTH requirement.

<sup>5</sup>May substitute MTH 116, 128, 129, 137, 138, 168, or 169 for MTH 148 or 149.

## FACULTY

David W. Biers, *Chairperson*

*Professors Emeriti:* Allik, DaPolito, Kuntz

*Professors:* Butter, Eggemeier, Kimble, Polzella

*Associate Professors:* Biers, Bower, Elvers, Graetz, Katsuyama, Korte, Moroney, Reeb

*Assistant Professors:* Geddie, Lutz, Roecker-Phelps, Rye

*Adjunct Faculty:* Martin, Ramsey, Szoke, Tedesco, Zink

## COURSES OF INSTRUCTION

PSY 101. INTRODUCTORY PSYCHOLOGY: Study of human behavior including development, motivation, emotion, personality, learning, perception; general application of psychological principles to personal, social, and industrial problems. Students must participate in departmental research. 3 sem. hrs.

PSY 216. ELEMENTARY STATISTICS: Basic probability and applied statistics: measures of central tendency and dispersion, sampling, estimation, hypothesis testing, tests between means, linear regression, correlation, and ANOVA. Prerequisites: PSY 101 and MTH 102 or higher. 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 processes. Prerequisite: PSY 101. 3 sem. hrs.

PSY 321L. COGNITIVE PROCESSES LABORATORY: In-depth discussion of seminal research in cognition. Collection, analysis, and interpretation of data. Prerequisites: PSY 101, 216, 217, 321 or permission of instructor. 1 sem. hr.

PSY 322. LEARNING: Foundations of the learning process. Classical and instrumental paradigms and variants of each considered in preparation for investigations of complex learning. Prerequisite: PSY 101. 3 sem. hrs.

PSY 323. PSYCHOLOGY OF PERCEPTION: Introduction to major theoretical and experimental work in perception, including visual, auditory, proprioceptive, and other sensory systems. Prerequisite: PSY 101. 3 sem. hrs.

PSY 333. PSYCHOLOGICAL TESTS AND MEASUREMENTS: Survey of major tests of intelligence, aptitude, interest, and personality presently used in clinics, schools, personnel offices, and research settings. Emphasis on evaluation and comparison, rationale of construction, ethical considerations. Prerequisites: PSY 101, 216 or equivalent. 3 sem. hrs.

- PSY 334. INDUSTRIAL PSYCHOLOGY: Introduction to modern efforts to improve human performance in industrial organizations and society; selection and placement of employees, morale, training, and incentives. Prerequisite: PSY 101. 3 sem. hrs.
- \* PSY 341. SOCIAL PSYCHOLOGY: Survey of major theoretical and experimental work in the field; attitudes, conformity, emotions, group dynamics. 3 sem. hrs.
- PSY 344. INTERPERSONAL RELATIONS: Social psychological research in non-verbal behavior, social exchange, self-disclosure, and interpersonal attraction and how these are related to developing relationships. Prerequisite: PSY 101. 3 sem. hrs.
- PSY 351. CHILD PSYCHOLOGY: Study of psychological processes from the developmental point of view; changes in perception, cognition, emotion, and social behavior from infancy to adolescence. Prerequisite: PSY 101. 3 sem. hrs.
- PSY 352. FIELD EXPERIENCE IN CHILD PSYCHOLOGY: Practical experience with a community agency providing instructional, recreational, or therapeutic services. Volunteer 4-5 hours weekly. Grade option 2 only. Prerequisites: PSY 101 and previous or concurrent registration in PSY 351. 1 sem. hr.
- PSY 353. THE PSYCHOLOGY OF ADULT DEVELOPMENT AND AGING: Provides a general introduction to the multi-disciplinary field of adulthood and aging with a specific focus on aspects of interest to psychologists: cognitive, intellectual, personality, and biological changes across adult development. Prerequisite: PSY 101. 3 sem. hrs.
- PSY 355. DEVELOPMENTAL PSYCHOPATHOLOGY: Survey of developmental theory and research related to the psychopathology of infants, children, and adolescents. Focus is on etiology, identification, and intervention. Prerequisites: PSY 101 and 351 or permission of the instructor. 3 sem. hrs.
- PSY 361. PERSONALITY: Introduction to the study of personality through analysis of such major theories as those of Freud, Skinner, Maslow, and Rogers. The development of personality and the stability of personality characteristics over time. Review of clinical and experimental findings. Prerequisite: PSY 101. 3 sem. hrs.
- PSY 363. ABNORMAL PSYCHOLOGY: Patterns of disordered behavior; social, psychological, and physiological factors; theoretical explanations of abnormal behavior. Prerequisite: PSY 101. 3 sem. hrs.
- PSY 364. PSYCHOTHERAPY: Survey of current types of psychotherapy. Emphasis on similarities and differences in underlying theories of behavioral change and associated techniques. Prerequisite: PSY 101. 3 sem. hrs.
- \* PSY 375. PSYCHOLOGY OF THE ARTS: Explores the psychological experiences associated with the creation and appreciation of music, art, and literature. Course content is presented in terms of the theories, methods, and research findings in the fields of perception, cognition, and development. 3 sem. hrs.
- PSY 422. PHYSIOLOGICAL PSYCHOLOGY: Neurophysiological analysis of attention, sensation, perception, emotion, motivation, and learning. Electrophysiological methods are discussed. Prerequisite: PSY 101. 3 sem. hrs.

PSY 431. INTERVIEWING AND COUNSELING: Integrated approach to the theory, techniques, skills, and values of interviewing and counseling. Practice through written assignments, self study, classroom exercises, and role-playing. Prerequisite: PSY 101 or permission of instructor. 3 sem. hrs.

PSY 435. HUMAN FACTORS: Essential psychological concepts and methods to improve use of human efforts and equipment. Principles governing design of equipment for human use. Prerequisite: PSY 101. 3 sem. hrs.

\* PSY 443. PSYCHOLOGY OF WOMEN: Survey of topics related to the psychology of women, such as gender identity and roles, theories of female development, relationships, achievement, language, health issues, spirituality, sexuality, and violence. Prerequisite: PSY 101. 3 sem. hrs.

\* PSY 444. ENVIRONMENTAL PSYCHOLOGY: Study of the effects of the physical and social environment on human behaviors, attitudes, and affective responses. Prerequisites: PSY 101 and 341 or permission of instructor. 3 sem. hrs.

\* PSY 445. TECHNOLOGY, ENVIRONMENT, AND BEHAVIOR: Examines the cultural bases for the individual and societal choices which humans make about their use of technology. Technology is broadly defined to include human-machine systems. 3 sem. hrs.

PSY 450. PSYCHOLOGY FOR MINISTRY: Human development and adjustment, interpersonal communication, and the psychology of religion. Prerequisite: Acceptance into the Lay Ministry Program or permission of instructor. 3 sem. hrs.

PSY 451. PSYCHOLOGY OF RELIGION: Addresses the psychological study of the nature of religion and religious experience; explores the development of internalized beliefs, attitudes, and values and the effect they have on individual functioning. Prerequisites: Junior, Senior standing. An introductory course in psychology is highly recommended. 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. Prerequisites: PSY 101 and 351 or permission of instructor. 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, causalities, and myths associated with drug use and abuse. Emphasis on existing treatment methods and psychological implications of drug dependency. Prerequisite: PSY 101. 3 sem. hrs.

PSY 462. HUMAN SEXUALITY: Psychological factors in human sexuality including developmental, biological, and social perspectives. Such topics as sexual orientation, gender identity and roles, sexual relationships, sexual dysfunction, power and violence, and commercialization. 3 sem. hrs.

PSY 471. HISTORY OF PSYCHOLOGY: The evolution of psychology from its origins in philosophy, science, clinical, and applied settings. Emphasis on integrating these systems and schools of thought with modern psychology. Prerequisite: PSY 101 or permission of instructor. *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 for up to 6 sem. hrs. Grade Option 2 Only. *1-6 sem. hrs.*

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

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

PSY 495. SPECIAL TOPICS IN PSYCHOLOGY: Topics of special interest to faculty and students; intensive critical evaluation of appropriate literature. Prerequisite: Permission of instructor. *1-3 sem. hrs.*

PSY 497. SERVICE LEARNING EXPERIENCE: Supervised community research or service experience that complements a specific upper division course in Psychology. Repeatable up to three semester hours. Prerequisite: Permission of instructor. Corequisite: A 300-400 Psychology course. *1 sem. hr.*

Note: A total of no more than 6 sem. hrs. of PSY 490, 493, 494 and/or 497 may be counted toward the required 34 sem. hrs. for a psychology major. No more than 3 semester hours of Social Science 497 credits can count toward graduation

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\*General Education course. See Chapter V.

## RELIGIOUS STUDIES (REL)

The Department of Religious Studies sees itself as a community of scholars serving the University community and the local community by teaching, research, criticism, and action. The main concern of the department is an understanding and elucidation of the Judaeo-Christian religious experience as it is exemplified in the Roman Catholic tradition. This implies not only a deep investigation of the Roman Catholic position but also a dialogue with other Christian denominations and with other world religions.

Students majoring in religious studies ordinarily follow one of five tracks in the major. Students preparing for ministry in a Christian church (e.g., pastoral associates, youth ministry, parish religious educators) follow the "Ministry" track. Students preparing to teach religion in elementary or secondary schools follow the "Catholic Schools" track. Students preparing for graduate study in Christian theology, systematics, church history, ethics, etc., follow the "Graduate School Preparation" track. Students preparing for graduate study of religions other than Christianity and/or interested in World Religions follow the "World Religions" track. Students wishing to study religion as a way of broadening their horizons or who are interested in Religious Studies as an undergraduate major follow the "General" track. All religious studies majors must show basic practical communicative proficiency in one foreign language.

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

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### BACHELOR OF ARTS WITH A MAJOR IN RELIGIOUS STUDIES (REL)<sup>1</sup>

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	<i>Semester Hours</i>
Religious studies .....	36
All tracks require at least 9 sem. hrs. at 400 level, including REL 490	
REL 103 or 198 or equivalent .....	3
REL 490 .....	3
Ministry track:	
REL 315; REL 323 or 324; REL 360, 437, 440, 443, 485; one course in Old Testament; one course in world religions; one course in religion and culture .....	30
Catholic Schools track:	
REL 323 or 324; REL 327 or 328 or 329; REL 360; REL 383 or 487; one course in Old Testament; one course in New Testament; two courses in systematic theology; one course in world religions; one course in religion and culture .....	30
Graduate School Preparation track:	
REL 323, 324, 437; REL 440 or 443; one course in Old Testament; one course in New Testament; one course in ethics; one course in world religions; one course in religion and culture; one additional course in systematic theology .....	30



## World Religions track:

REL 323 or 324; three course from REL 304, 305, 306, 307, 308; one course in Old Testament; one course in New Testament; one course in ethics; one course in systematic theology; one course in religion and culture .....	27
REL electives .....	3

## General track:

One course in Old Testament; one course in New Testament; one course in world religions; one course in church history; one course in systematic theology; one course in ethics; one course in religion and culture .....	21
REL electives .....	9

Liberal Studies Curriculum<sup>1</sup>

## Humanities and Fine Arts

Philosophy .....	9
History .....	6
Literature: English or Foreign Language .....	3
Creative and Performing Arts .....	3
Basic proficiency in a Foreign Language .....	3-9
(may require additional elective hrs. in lang/humanities/arts) <sup>2</sup>	

Social Sciences .....	12
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Mathematics (MTH 102, 204, 205 excluded) .....	3
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Natural Sciences .....	11
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Communication competencies .....	0-9
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Introduction to the University: ASI 150 .....	0-1
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General Education courses and academic electives to total at least .....	124
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<sup>1</sup>See also Distribution Table for Bachelor of Arts programs and Chapter V for General Education requirements.

<sup>2</sup>See Distribution Table for Bachelor of Arts programs. Students who demonstrate basic practical communicative proficiency in a foreign language without taking College courses in language must complete an additional 3 semester hours of elective courses from foreign language and/or arts and/or humanities.

## FACULTY

Terrence W. Tilley, *Chairperson*

*Distinguished Service Professor:* Kohmescher

*Distinguished Teaching Professor:* Burns

*Professors Emeriti:* Anderson, Friedland, Hater

*Professors:* Barnes, Branick, Doyle, Heft, L'Heureux, Roberts, T. Tilley

*Associate Professors:* Lysaught, Martin, M. Tilley, Thimmes,

Yocum Mize, Zukowski

*Assistant Professors:* Buby, Kozar, Kallenberg, McGrath, Moore

## COURSES OF INSTRUCTION

NOTE: REL 103, REL 198, ASI 111-112 or equivalent is a prerequisite for all other REL courses.

\*REL 103. INTRODUCTION TO RELIGION: Examination of the nature of religion, comparative aspect of religion, and the function of religion as a source of interpretation of life. The "Catholic Option" takes the majority of its perspectives and examples about religious beliefs and practices from the Roman Catholic tradition. The "Scripture Option" takes the majority of its perspectives and examples about religious beliefs and practices from scriptural traditions.

3 sem. hrs.

- REL 198. RELIGIOUS STUDIES HONORS SEMINAR: Study and seminar discussion of major types of religions in history and some of their practices, values, beliefs, historical development, and theological reflection, including Catholic tradition; review of major theories on the nature, origin, and function of religion in human life. Open by permission only to first-year students in the University Honors Program. *3 sem. hrs.*
- \*REL 300. SELECTED RELIGIONS OF THE EAST: Introduction to several major religious traditions which originated in the East, including Hinduism, Buddhism, Jainism, Taoism, and Confucianism. *3 sem. hrs.*
- REL 304. HINDUISM: Study of the world's oldest living religion. Examines the historical development of major Hindu teachings, texts, practices and paths from ancient times to the present, including form of Hinduism taking root in the West today. *3 sem. hrs.*
- \*REL 305. EASTERN ORTHODOXY: Exploration of the history and theology of the Eastern Orthodox Church, from the Apostles to Byzantium to Russia and the United States. *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 308. ISLAM: Exploration of the Islamic religious traditions: the life of Islam's founder, the development of its teaching and ritual, its spread from North Africa into Europe, Asia, Oceania, its influence on culture and its contemporary resurgence. *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 315. THE 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. The course includes historical-critical study of the Gospel to John, its text, literary techniques, structure and theology. *3 sem. hrs.*
- \*REL 316. NEW TESTAMENT THEOLOGIES: A survey of New Testament writings with a focus on the religious ideas specific to each; special attention to authors' christology, eschatology, and soteriology; exploration of relevance of the New Testament message to Christian faith today. *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. RELIGIOUS EXPERIENCE: A study of a variety of religious traditions in their engagement with and influence within the U.S. social and cultural context including the effects of pluralism, religious liberty, secularization, and consumer capitalism. *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 329. AFRICAN-AMERICAN RELIGION: An exploration of the history and theology of African-American religious traditions and how African-American religion has influenced African-American social, political, economic, and cultural movements from the time of slavery to the present. *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 345. EASTERN ORTHODOXY: Exploration of the history and theology of the Eastern Orthodox Church, from the Apostles to Byzantium to Russia and the United States. *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 358. LIBERATION THEOLOGY: A historical-critical analysis and study of the theology of liberation and its specific expression among theologians of the Third World, particularly Latin America. *3 sem. hrs.*

- \*REL 360. 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 361. CORE RELIGION SEMINAR: Culminating course for students in CORE. Discussion of readings on values in a pluralistic society; such issues as wealth and poverty, education, war and peace. Open only to students in CORE. *3 sem. hrs.*
- \*REL 362. CHRISTIAN FAMILY VALUES AND TELEVISION: Comparative study of the criteria and rationale for family life in various Christian pronouncements with present values and practices in society as reflected in and promoted by current television programming. *3 sem. hrs.*
- \*REL 363. FAITH AND JUSTICE: This course explores the history, development, and basic principles of Catholic social teaching as well as other approaches to faith and justice. Issues of economic justice will receive special emphasis. In addition to church documents, the life and work of religious thinkers and activists will be examined. *3 sem. hrs.*
- REL 364. CURRENT MORAL ISSUES: An examination of one or more issues (individual and/or social) in contemporary reflection on Christian moral life. May be repeated when topic changes. *3 sem. hrs.*
- \*REL 365. CHRISTIAN ETHICS AND THE ENVIRONMENT: A Christian ethic of relationality and responsibility. Explores various approaches and related values found in society; elements of ethical judgments; and specific ethical issues resulting from ecofeminist, technological, and ecological awareness. *3 sem. hrs.*
- \*REL 366. THE HOLOCAUST: THEOLOGICAL AND RELIGIOUS RESPONSES: Examination of the religious and theological literature of the Holocaust, focusing especially on Jewish and Christian responses. *3 sem. hrs.*
- \*REL 367. CHRISTIAN ETHICS AND HEALTH CARE ISSUES: Study of, and reflection upon, the principles of Christian ethics as these relate to the health care professions. *3 sem. hrs.*
- \*REL 368. CHRISTIAN ETHICS AND THE BUSINESS WORLD: Study of, and reflection upon, the principles of Christian ethics as these relate to the business world. *3 sem. hrs.*
- \*REL 369. CHRISTIAN ETHICS AND ENGINEERING: Study in applied Christian ethics addressing the moral issues facing engineers. How to make a moral decision, engineering as a profession, codes of ethics, safety, environmental issues, confidentiality, employee rights, whistleblowing, consulting, conflicts, and career choices. *3 sem. hrs.*
- \*REL 372. RELIGION AND FILM: Study of issues common to narrative films and religious thought; the power of various film techniques, dominant models in religious and film reflection, the similar roles imagination plays in film and religious thought. *3 sem. hrs.*
- \*REL 373. RELIGION AND LITERATURE: Joint study of literature and religion, seeking the sacred in the secular, discussing the doctrines of humans and of God in major modern writings, especially those of current collegiate interest. *3 sem. hrs.*

- \* REL 374. RELIGION AND THE ARTS: Investigation of the religious interpretation of various art forms and the process by which the aesthetic experience assists in theological perception and construction. 3 sem. hrs.
- \* REL 375. 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 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 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 429. MODERN CATHOLICISM: An examination of Modern Catholicism based on a close study of the context, process, decisions, implementation and challenges of Vatican II in the Roman Catholic Church. 3 sem. hrs.
- \* REL 437. 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 440. 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 441. THEOLOGY OF MARY: Study of the place of the Mother of God in the great truths of faith in the light of chapter eight of the Constitution on the Church. 3 sem. hrs.
- \* REL 442. GOD AND ATHEISM: Study of some recent contributions made by theology, philosophy, psychology, and the humanities to the current discussion of God's existence, nature, and relationship to humanity. 3 sem. hrs.
- \* REL 443. 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 444. GOD IN CHRISTIAN TRADITION: A review of theologies of God in Christian tradition, from biblical through contemporary sources, especially as these theologies have affected overall Catholic thought and spirituality. Prerequisites: REL 103, PHL 103. 3 sem. hrs.

\*REL 446. CHRISTIAN LITURGY: Study of the basic principles of liturgy, the development of some of the basic forms of liturgy, and applications of the principles within current rites. *3 sem. hrs.*

\*REL 447. SELECTED CATHOLIC DOCTRINES: Detailed study of several important current theological questions primarily from a Catholic systematic and historical perspective. *3 sem. hrs.*

\*REL 464. LIBERATION THEOLOGY: A historical-critical analysis and study of the theology of liberation and its specific expression among theologians of the Third World, particularly Latin America. *3 sem. hrs.*

REL 471. WOMEN AND RELIGION: Examination of the impact of the women's movement on Judaism, Christianity, and other major world religions. Survey of traditional religious attitudes toward women. Relevance of feminist approaches to scripture, ethics, spirituality, and ministry in understanding contemporary global issues. *3 sem. hrs.*

\*REL 472. ECOLOGY AND RELIGION: Examination of the relationship between religion and ecology; bridges the contributions of traditional theological inquiry and modern scientific insights and offers an enlarged vision of ecological concerns. *3 sem. hrs.*

\*REL 474. WOMEN AND THE GLOBAL CHURCH: An exploration of the intersection between faith communities, traditional and non-traditional, and particular cultures in the lives of contemporary women. *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 485. 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 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 490. CAPSTONE SEMINAR: Study of a particular topic in religion or theology that draws upon a variety of resources in the fields. This course provides an integrative academic experience. Topic varies from semester to semester. Required of all majors, open to minors. May be repeated. Prerequisite: Junior or Senior standing. *3 sem. hrs.*

REL 492. SPECIAL TOPICS: Concentrated study of issues and subjects pertinent to religion. May be repeated when topic changes. *1-3 sem. hrs.*

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\*General Education course. See Chapter V.

## 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.

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

### COURSES OF INSTRUCTION

SWK 201. SOCIAL WORK PRACTICE AND PROFESSION: Study of the historical and theoretical underpinnings of the social work profession. Study of social work practice theory and technique. *3 sem. hrs.*

SWK 303. COMMUNITY PRACTICE AND RESEARCH: Study of the design and implementation of community research, including needs assessment and program evaluation in the social service system. Prerequisites: SOC 101 or SOC 204 and permission of instructor. (Same as SOC 309). *3 sem. hrs.*

SWK 305. SOCIAL SERVICES IN THE HEALTH FIELD: The role of social services in health care facilities and governmental health programs. U.S. health care policies and programs; methods of social work intervention in medical settings. *3 sem. hrs.*

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

SWK 310. LAW AND HUMAN SERVICES: 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 325. CHILD ABUSE: Comprehensive study of child abuse: its history, scope, causal factors, indicators for detection, treatment resources and modalities, and community responsibility. *3 sem. hrs.*

SWK 327. PARENTING: SOCIAL WELFARE ROLE: Comprehensive study of historical and contemporary perspectives on parenting, future of parenting (assessing trends and choices in family structure and function), cross-cultural comparisons, policy and legal aspects of parenting, societal influences on parenting. *3 sem. hrs.*

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

SWK 331. DEATH, DYING, AND SUICIDE: Study of the phenomena of death and dying. The role and responsibility of the professional in working with the dying and their survivors. Study of suicide in this society. *3 sem. hrs.*

SWK 392. SPECIAL TOPICS: Exploration of special topics related to the field of human services. Assessment of appropriate literature and research. May be repeated as topics change. *1-3 sem. hrs.*

SWK 401. COMMUNITY FIELD EXPERIENCE: Supervised field experience for students working in a micro or macro practice setting. Concurrent seminar includes intensive basic communication and interviewing skill development. Students spend 150 hours in the agency. Prerequisites: SWK 201 and permission of instructor. *5 sem. hrs.*

SWK 465. INDEPENDENT STUDY: Individual research, study, and readings on specific topics and/or projects of importance to social work. Under individual faculty direction. Prerequisite: Permission of instructor. *1-3 sem. hrs.*

SWK 497. SERVICE LEARNING EXPERIENCE: Supervised community research or service experience that complements a specific upper division course in Social Work. Repeatable up to three semester hours. Prerequisite: Permission of instructor. Corequisite: A 300-400 Social Work course. *1 sem. hr.*

Note: No more than 3 semester hours of Social Science 497 credits can count toward graduation.

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\*General Education course. See Chapter V.





## SOCIOLOGY (SOC)

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

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

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

	Semester Hours
Sociology requirements and electives .....	37
SOC 101 or 204 .....	3
SOC 208, 303, 308, 308L, 351, 409 .....	16
SOC electives <sup>2</sup> .....	18
Liberal Studies Curriculum <sup>1</sup>	
Humanities and Fine Arts .....	27-33
Philosophy and Religious Studies .....	12
History .....	6
Literature: English or Foreign Language .....	3
Creative and Performing Arts .....	3
Foreign Language and/or Arts and/or Humanities .....	3-9
Social Sciences (excludes courses in SOC) .....	12
Mathematics (MTH 102, 204, 205 excluded) .....	3
Natural Sciences .....	11
Communication competencies .....	0-9
Introduction to the University: ASI 150 .....	0-1
General Education courses and academic electives to total at least .....	124

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

<sup>2</sup>A total of no more than 6 semester hours of field experience or internship from SOC 495, SOC 497, SWK 401, SWK 497, or ANT 449 may count toward the required 37 semester hours for a sociology major. Up to 15 hours may be taken in anthropology or social work, but if used in the major may not double count toward a minor.

## FACULTY

Dan Miller, *Chairperson*

*Professor Emeritus:* Huth

*Professors:* Donnelly, T. Majka, Miller, F. Pestello, H. Pestello

*Associate Professors:* Dandaneau, Davis-Berman, L. Majka

*Assistant Professors:* Leming, Talwalker, Taylor, Yancik

## COURSES OF INSTRUCTION

SOC 101. PRINCIPLES OF SOCIOLOGY: Study of social groups, social processes, and society; the individual's relationship to society, social structure, social inequality, ethnic minorities, cities and human populations, and social institutions such as the family, education, religion, and government. *3 sem. hrs.*

\* SOC 204. MODERN SOCIAL PROBLEMS: Course to familiarize nonsociology majors with contemporary problems in society; historical development, current status, and analysis of problems, using modern social theories. Content may vary from section to section. *3 sem. hrs.*

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

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. Prerequisite: SOC 101 or SOC 204. *3 sem. hrs.*

SOC 298. HONORS SOCIAL SCIENCE SEMINAR: Study and seminar discussion of selected sociological writings and the analysis, interpretation and criticism of these works. Open only to second-year students in the University Honors Program. Prerequisites: ENG 198, HST 198. *3 sem. hrs.*

SOC 303. MODERN SOCIAL THEORY: Consideration of the works of modern theorists and major trends in the history of social thought. Prerequisite: SOC 101 or SOC 204. *3 sem. hrs.*

SOC 305. CRIMINOLOGICAL THEORY: Study of the major theories of crime; consideration of the implications of theory for the criminal justice system. Prerequisite: SOC 101 or SOC 204 *3 sem. hrs.*

SOC 308. DATA ANALYSIS: The analysis and interpretation of both quantitative and qualitative social science data. Prerequisite: SOC 208. Corequisite: SOC 308L. *3 sem. hrs.*

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

SOC 309. COMMUNITY PRACTICE AND RESEARCH: Study of the design and implementation of community research, including needs assessment and program evaluation in the social service system. (Same as SWK 303.) Prerequisites: SOC 101 or SOC 204 and permission of instructor. *3 sem. hrs.*

\* SOC 321. THE SOCIOLOGY OF WORK AND OCCUPATIONS: Survey of the major features of work and occupations in industrial society. The meaning of work, occupational choice and recruitment, occupational socialization, career patterns, and occupational rewards. Unemployment, underemployment, sex-typing, automation and alienation. *3 sem. hrs.*

- \* SOC 322. SEX ROLES AND SOCIETY: Research findings and major analytical approaches to study social and cultural influences on the development of personal sexual identity and relationships between men and women. Major social issues concerning human sexuality. *3 sem. hrs.*

SOC 323. JUVENILE JUSTICE: The environmental and internal factors that influence or determine delinquent behavior; roles of individual juvenile offenders, parents or guardians, school, church, police, business community, community agencies, and the juvenile justice and correctional system in preventing and treating delinquent behavior. Prerequisite: SOC 101 or 204. *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. Prerequisite: SOC 101 or 204. *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. Prerequisite: SOC 101 or 204. *3 sem. hrs.*

- \* SOC 328. RACIAL AND ETHNIC MINORITIES: Study of the major immigrant and racial groups in the United States and other countries. Issues and problems related to their minority status in the dominant culture. *3 sem. hrs.*

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

- \* SOC 331. MARRIAGE AND THE FAMILY: Historical, cross-cultural, and current study of social relationships during dating and courtship, interpersonal communication in marriage and family life, sexuality in marriage, adjustments in parenthood, divorce and remarriage, alternatives to traditional marriage, and the future of marriage and family life. *3 sem. hrs.*

- \* SOC 332. SOCIOLOGY OF WOMEN: Cross-societal analysis of the position of women, with emphasis on industrialized and developing societies. The social positions of women and men in the family, work, politics, and the legal system. Consideration of theories of the biological, psychological, and sociological bases for the behavior and characteristics of women in the context of societal institutions. *3 sem. hrs.*

SOC 334. RELIGION AND SOCIETY: Definitions of religion and its role in society. Traditional and nontraditional expressions of religious life from the viewpoint of society. Varieties of religious experience and the interrelations between religious phenomena and other social institutions and societal behavior. Prerequisite: SOC 101 or 204. *3 sem. hrs.*

SOC 336. ORGANIZATIONS IN MODERN SOCIETY: Analysis of the dynamics of organizations in modern industrial society. Organizational social psychology, organizational structure and process, and organization-community relations. Prerequisite: SOC 101 or 204. 3 sem. hrs.

SOC 337. POLITICAL SOCIOLOGY: Study of political power. Political influence by economic elites, impact of bureaucracies, competing ideologies, alienation and nonvoting, and social movements as challenges to power structures. Prerequisite: SOC 101 or 204. 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. Prerequisite: SOC 101 or 204. 3 sem. hrs.

\* SOC 341. SELF AND SOCIETY: Study of the relationship between self and others. Socialization, self conceptions, deviant behavior, social influence, and social control. 3 sem. hrs.

SOC 342. COLLECTIVE BEHAVIOR: Study of social protest, crowds, social movements, revolution, fads, fashion, public opinion processes, propaganda, and political and social responses to these phenomena. Prerequisite: SOC 101 or 204. 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 344. INTERACTION PROCESSES: Advanced study of the interaction processes of social life. Bargaining and negotiation, cooperation, social influence, solidarity, competition, and conflict. Prerequisite: SOC 101 or 204. 3 sem. hrs.

SOC 351. URBAN SOCIOLOGY: The study of the development of urban life from ancient times to the present, with an emphasis on contemporary urban population characteristics, social-economic-political structure, and problems. Prerequisite: SOC 101 or 204. 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. Prerequisite: SOC 101 or 204. 3 sem. hrs.

SOC 368. IMMIGRATION AND IMMIGRANTS: Perspectives on immigration and ethnicity. Studies of social and economic adaptation of new immigrants and the second generation in communities, cities, and societies. Ethnic change, conflict, and contemporary national and international issues, with an emphasis on human rights. Prerequisite: SOC 101 or 204. 3 sem. hrs.

SOC 392. SELECTED TOPICS IN SOCIOLOGY: Examination of a current topic of general interest in sociology. Majors and nonmajors may enroll. Consult composite for topics. May be repeated as topic changes. Prerequisite: SOC 101 or 204. 1-6 sem. hrs.

SOC 409. SENIOR SEMINAR IN SOCIOLOGY: Synthesis of previous course-work; 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 410. VICTIMOLOGY: The study of victimization including the relationships between victims and offenders, the interactions of victims and the criminal justice system and other social groups and institutions. Prerequisite: Twelve hours of course work in the social sciences. Prerequisite: SOC 101 or 204. 3 sem. hrs.

SOC 435. ECONOMY AND SOCIETY: Sociological analysis of modern economic institutions, with an emphasis on classical themes. Topics include capitalism, industrialism and social consequences of contemporary economic trends. Empirical research will be required. Prerequisites: SOC 101 or 204 and permission of instructor. 3 sem. hrs.

SOC 437. MARX AND SOCIOLOGY: Study of Marx's writings on topics relevant to the social sciences. Comparison of contemporary Marxian scholarship in such areas as social inequality, political structures, urban change, ideology and consciousness, and models for the future. Prerequisites: SOC 101 or 204 and junior or senior standing. 3 sem. hrs.

SOC 438. URBAN POVERTY: Study of the social factors that contribute to poverty in cities. Consideration of the social effects of government and other programs to alleviate poverty. Prerequisites: SOC 101 or 204. 3 sem. hrs.

SOC 492. SPECIAL TOPICS IN SOCIOLOGY: Intensive examination of current theoretical or methodological issues; faculty-advised research project or library work. Consult composite for topics. May be repeated as topic changes. Prerequisites: SOC 101 or 204 and 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 497. SERVICE LEARNING EXPERIENCE: Supervised community research or service experience that complements a specific upper division course in Sociology. Repeatable up to three semester hours. Prerequisite: Permission of instructor. Corequisite: A 300-400 Sociology course. 1 sem. hr.

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.

Note: No more than 3 semester hours of Social Science 497 credits can count toward graduation.

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\*General Education course. See Chapter V.

## TEACHER LICENSURE (EDT)

## COLLEGE BACCALAUREATE PROGRAM WITH TEACHER LICENSURE (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 concurrently a major program in the College and Adolescent to Young Adult Licensure for teaching at the secondary school level or Multi-age Licensure (K-12) for teaching music, fine arts, or languages. Students admitted to the program must satisfy all requirements for the appropriate Bachelor of Arts, Bachelor of Science, Bachelor of Music, or Bachelor of Fine Arts in the College as well as the requirements for licensure designated by the School of Education and the State of Ohio.

Teaching fields for Adolescent to Young Adult Licensure are Integrated Language Arts, Integrated Social Science, Integrated Mathematics, Integrated Science, Earth Sciences, Life Sciences, Physical Sciences, Earth/Chemistry, Earth/Physics, Life/Chemistry, Life/Earth, and Life/Physics. Teaching fields for Multi-age Licensure are Languages, Fine Arts, and Music (see Visual Arts and Music department listings for specific program requirements).

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 <sup>1,2</sup> .....	2
EDT 222 Development in MC and AYA <sup>1,3</sup> .....	3
EDT 208 Teaching and Learning <sup>1</sup> .....	3
EDT 340 Educating Diverse Student Populations in Inclusive Settings <sup>4</sup> .....	3
---- Methods course (Fall term only) <sup>1,4,5</sup> .....	4
EDT 452 Reading in the Content Areas <sup>1,4</sup> .....	3
EDT 475 Student Teaching AYA <sup>3</sup> .....	12
EDT 301 Philosophy of Education <sup>4</sup> .....	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 2.75 at the time of their application. Advising relative to the degree program is given by the student's major department; advising relative to licensure is given by the chairperson of the Department of Teacher Education or a designated advisor.

<sup>1</sup>Field experiences are required. Student must register for EDT 100.

<sup>2</sup>Praxis I (PPST) must be taken and passed before enrolling in EDT 222 or 207.

<sup>3</sup>Students seeking Multi-age Licensure (K-12) must take EDT 207 in place of EDT 222; Art students take EDT 477 in place of EDT 475; Music students take EDT 479 in place of EDT 477.

<sup>4</sup>These courses are taken as a block, Fall term, senior year, daily 8:00 a.m. to 12:00.

<sup>5</sup>To attain provisional licensure, students must verify "good moral character," be fingerprinted, and pass a state (Ohio) mandated Praxis II (NTE) exit exam.

## THR

### THEATRE (THR)

A major in theatre, offered by the Department of Communication, provides a solid academic foundation plus the experience of working in a wide range of theatre productions, including mainstage productions in the Boll Theatre as well as experimental work in the Studio Theatre.

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

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

The Department of Communication also offers a concentration in THR (CTR).

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

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	<i>Semester Hours</i>
Theatre requirements and electives .....	38
THR 100 and THR 300 .....	4
THR 105, 310, 330 and 340 .....	12
THR 305 or 307 .....	3
THR 325 or 326, and 415 or 425 .....	6
THR 440 or 485 or 490 .....	3
THR electives <sup>2</sup> .....	10
Liberal Studies Curriculum <sup>1</sup>	
Humanities and Fine Arts	
Philosophy and Religious Studies .....	12
History .....	6
Literature: English or Foreign Language .....	3
Creative and Performing Arts (includes THR or other ARTS but not THR 100 or 300) .....	3
Foreign Lang. and/or Arts and/or Humanities (excludes THR 100 & 300) .....	3-9
Social Sciences .....	3
Mathematics (MTH 102, 204, 205 excluded) .....	3
Natural Sciences .....	11
Communication competencies .....	0-9
Introduction to the University: ASI 150 .....	0-1
General Education courses and academic electives to total at least .....	124

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

<sup>2</sup>THR electives may include no more than 3 additional hours of THR 100 and/or 300.

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#### FACULTY

Donald D. Yoder, *Chairperson, Department of Communication*

*Professor Emeritus:* Gilvary

*Associate Professor:* Anderson

*Assistant Professor:* Dunlevy-Shackleford

## COURSES OF INSTRUCTION

THR 100. THEATRE LABORATORY: Credit allowance for role playing and/or play production in mainstage 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. *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. Studio fee. *2 sem. hrs.*

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

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

THR 271. BEGINNING BALLET: Beginning course in the theory and practice of classical ballet technique. *2 sem. hrs.*

THR 300. THEATRE LABORATORY: The third and fourth-year level of credit allowance for role playing and/or play production. Requirements and registration same as for THR 100. *1-3 sem. hrs.*

THR 301. INTERMEDIATE DANCE FOR THE PERFORMING ARTIST: Intermediate-level course in movement for students interested in further developing dance and performance technique. Prerequisite: Permission. *2 sem. hrs.*

THR 303. SCENE PAINTING: Basic principles of color paint theory and materials. Investigation of various scene-painting techniques. One three-hour class meeting weekly. Studio fee. Prerequisite: Permission. *3 sem. hrs.*

THR 305. THEATRE STAGECRAFT: Study and application of scene construction, rigging, backstage organization, production analysis, and technician-designer relationship. Studio fee. *3 sem. hrs.*

THR 307. THEATRE LIGHTING: Study and application of lighting for the stage: instruments, controls, sources, elements of electricity, and lighting design for all types of theatres, as well as graphic representation. Studio fee. *3 sem. hrs.*

THR 310. ACTING I: The study and practice of basic techniques in rehearsal and performance. Emphasis on self-analysis and self-awareness. Development of basic skills in vocal, emotional, and mental interpretation of character. Required of all theatre majors. Prerequisite: THR 105 or permission. *3 sem. hrs.*

THR 312. FILM AND TV ACTING: The study and practice of basic techniques of acting for film and television. Emphasis on technical requirements of acting for the camera and the control of body and voice actors must exercise in these media. Prerequisite: THR 310. *3 sem. hrs.*



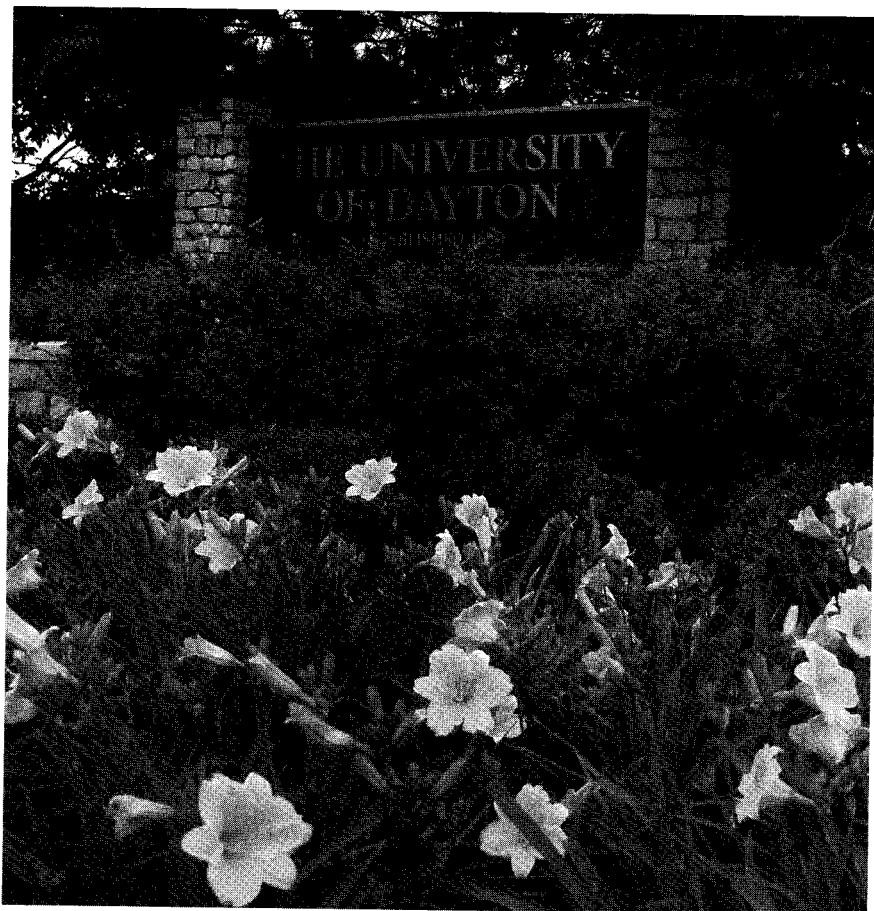
- THR 323. ACTING II: Further study and practice of techniques introduced in Acting I. Emphasis on interaction, ensemble, group processes, and scene study. Prerequisites: THR 105 and 310, or permission. 3 sem. hrs.
- THR 324. THEATRICAL MOVEMENT: Emphasis on interpreting and employing body language. Prerequisites: THR 105 and 310, or permission. 2 sem. hrs.
- THR 325. THEORY AND CRITICISM OF THE STAGE I: Survey of representative plays from classical to neo-classical periods as a basis for theatrical production and dramatic criticism. (THR 325 or 326 required of all majors.) Prerequisite: THR 105. 3 sem. hrs.
- THR 326. THEORY AND CRITICISM OF THE STAGE II: Continuation of THR 325 from romantic to modern periods. (THR 325 or 326 required of all majors.) Prerequisite: THR 105. 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, 310, 330. 3 sem. hrs.
- THR 350. THEATRE STYLES: Examination of the relationships among playwright, audience, actor, designer, and director in the development of major theatre styles of expression. 3 sem. hrs.
- THR 361. INTERMEDIATE JAZZ DANCE: An intermediate course in the theory and practice of jazz dance and technique. Prerequisite: Permission 2 sem. hrs.
- THR 371. INTERMEDIATE BALLET: Intermediate course in the theory and practice of classical ballet technique. Prerequisite: Permission. 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 330 and permission. 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.) 3 sem. hrs.
- THR 424. PLAY DIRECTING: Study of the evolution of the modern director. Emphasis is on script interpretation as a basis for the development and execution of the production concept. Studio fee. Prerequisite: THR 340. 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.) 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. (THR 440 or THR 485 or THR 490 required of all majors.) Repeatable up to 12 sem. hrs. Prerequisite: Permission. 3 sem. hrs.

THR 485. THEATRE SEMINAR: Concentration on one theatrical figure, genre period, or discipline for research and analysis. (THR 440 or THR 485 or THR 490 required of all majors.) Repeatable up to 6 sem. hrs. Prerequisite: Permission. *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 440 or THR 485 or THR 490 required of all majors.) Repeatable up to 9 sem. hrs. *3-5 sem. hrs.*

THR 498. THEATRE INTERNSHIP: Theatre work experience with an approved organization. Student must be in good academic standing with at least twelve hours of THR courses completed. Student may petition the head of the Theatre Program for a second internship if the second internship is at a different organization and the student can demonstrate that the second internship offers a unique and significant educational opportunity not available through the first internship. Permission. Option 2 grading only. *1-3 sem. hrs.*

\*General Education course. See Chapter V.



## VAR

### VISUAL ARTS (VAR)

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

The department offers eight degree programs:

Bachelor of Arts with a Major in Fine Arts  
Bachelor of Fine Arts with a Major in Fine Arts  
Bachelor of Arts with a Major in Visual Communication Design  
Bachelor of Fine Arts with a Major in Visual Communication Design  
Bachelor of Arts with a Major in Photography  
Bachelor of Fine Arts with a Major in Photography  
Bachelor of Fine Arts with Teacher Licensure  
Bachelor of Arts with a Major in Art History

#### Visual Arts Minors

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

A minor in Visual Communication Design requires 21 semester hours: VAF 104, 112; VAR 200; VAD 215 or 218; 245; and 9 additional upper-level semester hours of VAD electives.

A minor in Photography requires 12 semester hours of VAP 300-400 level courses and any prerequisites for those courses. VAH 382 may also be counted towards a minor in photography.

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

Transfer students seeking a visual arts minor must complete at least 9 of the required semester hours in the Visual Arts department while in residency at the University of Dayton.

#### Visual Arts Foundations

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

#### Second Year and Scholarship Review

Near the end of their second year, all Visual Arts majors are reviewed by the Visual Arts faculty. Also included in the review are first and third year students who have been awarded Visual Arts Scholarships. The review process is a valuable learning experience for the student and it helps the faculty to recommend ways in which students may build upon their assets and overcome their liabilities. Partici-

pation in the Second Year and Scholarship Review is mandatory for all majors. Scholarship funds are available to a limited number of students whose performance in the review is judged by the faculty to be outstanding.

Senior Capstone Courses

These courses, required in all majors, bring together the skills, education, ideas, and goals of senior students. They stress an integrated approach to learning and working and they focus on preparing students for their futures beyond the University. They provide a logical continuity that begins with the Visual Arts Foundations and the mid-point evaluation of the Second Year and Scholarship Review.

FINE ARTS

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

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

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

	<i>Semester Hours</i>
Major program requirements .....	45
VAF 104, 112, 117, 204, 216; 226 or 253; 232 or 240; 498 & 499 .....	25
Select two from VAH 201, 202, 203 .....	6
Select one from VAH 470, 471, 480, 481 .....	3
VAP 101 .....	3
VAF electives (300-400 level) .....	8
Liberal Studies Curriculum <sup>1</sup>	
Humanities and Fine Arts	
Philosophy and Religious Studies .....	12
History (may not include VAH courses) .....	6
Literature: English or Foreign Languages .....	3
Foreign Language and/or Arts and/or Humanities (may not include Visual Arts courses) .....	3-9
Social Sciences .....	12
Mathematics (MTH 102, 204, 205 excluded) .....	3
Natural Sciences .....	11
Communication competencies .....	0-9
Visual Arts Foundation: VAR 100 .....	0-1
General Education courses and academic electives to total at least .....	124

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

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

	Semester Hours
Major program requirements .....	79
VAF 104, 112, 117, 204, 216, 226, 232, 253, 304, 326	
332, 353, 498, 499 .....	40
Select two from VAH 201, 202, 203; VAH electives (300-400 level) .....	12
VAP 101 .....	3
VAF concentration .....	12
Visual arts electives .....	12
Communication competencies .....	0-9
Natural sciences .....	7
Mathematics (MTH 102, 204, 205 excluded) .....	3
Social and behavioral sciences .....	9
Humanities .....	12
Philosophy and/or Religious Studies .....	12
Introduction to the University: VAR 100 .....	0-1
Program and general electives to total at least.....	120-130

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

VISUAL COMMUNICATION DESIGN

The Visual Communication Design (B.A.) program offers a very flexible opportunity to combine a broad liberal arts education with a strong foundation in visual communication design. In this program it is possible for students to earn a minor, or even a second major, in another discipline within the University.

The Visual Communication Design (B.F.A.) is an intensive program that combines visual arts foundation courses with the visual communication design curriculum and a liberal arts education. It prepares students for professional careers in graphic and advertising design, illustration, electronic media and related new technologies. Attention is given to conceptual and visual problem-solving. Program options include (1) graphic design, (2) illustration, and (3) computer imaging.

BACHELOR OF ARTS WITH A MAJOR IN  
VISUAL COMMUNICATION DESIGN (VCA)<sup>1</sup>

	Semester Hours
Major program requirements requirements .....	45
VAF 104, 112, 117, 216, .....	12
VAR 200 .....	1
VAD 215 or 218; 245, 498, 499 .....	9
VAP 101 .....	3
Select two from VAH 201, 202, 203 .....	6
VAH 383 .....	3
VAD, VAF, VAP, VAR electives (300-400 level) .....	11

Liberal Studies Curriculum<sup>1</sup>

Humanities and Fine Arts	
Philosophy and Religious Studies .....	12
History (may not include VAH courses) .....	6
Literature: English or Foreign Language .....	3
Foreign Language and/or Arts and/or Humanities (may not include Visual Arts courses) .....	3-9
Social Sciences .....	12
Mathematics (MTH 102, 204, 205 excluded) .....	3
Natural Sciences .....	11
Communication competencies .....	0-9
Visual Arts Foundation VAR 100 .....	0-1
General Education courses and academic electives to total at least .....	124

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

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

	<i>Semester Hours</i>
Major program requirements .....	85
Design concentration:	
VAF 104, 112, 117, 204, 216, 226 .....	18
VAD 215, 245, 312, 320, 350, 411, 412, 415, 498, 499 .....	27
VAR 200 .....	1
VAP 101, VAP elective .....	6
Select two from VAH 201, 202, 203 .....	6
VAH 383 .....	3
Visual arts electives .....	18
Marketing or communication .....	6
Illustration concentration:	
VAF 104, 112, 117, 204, 216, 226, 304, 326, 404 .....	27
VAD 218, 245, 312, 321, 397, 398, 404, 498, 499 .....	24
VAR 200 .....	1
VAP 101 .....	3
Select two from VAH 201, 202, 203 .....	6
VAH 383 .....	3
Visual arts electives .....	15
Marketing or communication .....	6
Computer Imaging concentration:	
VAF 104, 112, 117, 204, 216, 226 .....	18
VAD 215 or 218, 245, 312, 320 or 321, 498, 499 .....	15
VAR 200 .....	1
VAP 101, 240, 340 .....	9
VAR 345, 440, 445 .....	9
Select two from VAH 201, 202, 203 .....	6
VAH 383 .....	3
Visual arts electives .....	18
Marketing or communication .....	6
Communication competencies .....	0-9
Natural sciences .....	7
Mathematics (MTH 102, 204, 205 excluded) .....	3

Social and behavioral sciences .....	3
Humanities .....	9
Philosophy and/or Religious Studies .....	12
Visual Arts Foundation: VAR 100 .....	0-1
Program and general electives to total at least .....	123-129

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

## PHOTOGRAPHY

The two programs in Photography (B.A. and B.F.A.) offer many approaches to using the medium. Art, journalism, advertising, illustration, and digital imaging are just a few of the fields in which accomplished photographers find rewarding careers.

The B.A. program emphasizes a traditional liberal arts background with a thorough grounding in photographic practice. The B.F.A. allows for greater concentration within photography and related disciplines. Electives allow students to pursue individual interests and goals.

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

	<i>Semester Hours</i>
Major program requirements .....	45
VAP 101, 201, 302, 410, 498, 499 .....	16
Select two from: VAP 240, 320, 330 .....	6
VAF 104, 112; 117 or 216 .....	9
Select one from VAH 201, 202, 203 .....	3
VAH 382, 482 .....	6
Visual Arts electives (300-400 level) .....	5
Liberal Studies Curriculum <sup>1</sup>	
Humanities and Fine Arts	
Philosophy and Religious Studies .....	12
History (may not include VAH courses) .....	6
Literature: English or Foreign Language .....	3
Foreign Language and/or Arts and/or Humanities (may not include Visual Arts) .....	3-9
Social Sciences .....	12
Mathematics (MTH 102, 204, 205 excluded) .....	3
Natural Sciences .....	11
Communication competencies .....	0-9
Visual Arts Foundation: VAR 100 .....	0-1
General Education courses and academic electives to total at least .....	124

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

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

	<i>Semester Hours</i>
Major program requirements .....	72
Photographic Imaging Concentration	
VAP 101, 201, 302, 410, 498, 499 .....	16
Select two from VAP 240, 320, 330 .....	6

VAF 104, 112, 117 or 216 .....	9	
Select two from VAH 201, 202, 203 .....	6	
VAH 382, 480, 482 .....	9	
Visual Arts electives .....	26	
Digital Imaging Concentration		
VAP 101, 201, 240, 302, 320 or 330, 340, 410, 498, 499 .....	25	
VAF 104, 112, 117 or 216 .....	9	
VAD 215 or 218, 245, 320 or 321 .....	8	
Select two from VAH 201, 202, 203 .....	6	
VAH 382, 480, 482 .....	9	
VAR 200 .....	1	
Visual Arts electives .....	14	
Communication competencies .....		0-9
Natural Sciences .....		7
Mathematics (MTH 102, 204, 205 excluded) .....		3
Social and behavioral sciences .....		9
Humanities .....		18
Philosophy and/or Religious Studies .....		12
Visual Arts Foundation: VAR 100 .....		0-1
Program and general electives to total .....		121-131

## ART EDUCATION

The Bachelor of Fine Arts with Teacher Licensure, a B.F.A. (E11A) program, offers students expertise in studio practice, art history, aesthetics, and critical analysis of art. Field experience in the Dayton area allows students to transform theoretical knowledge into classroom practice. Graduates are well prepared for teaching positions in public or private schools, pre-kindergarten through grade 12, as well as for master's degree programs.

### BACHELOR OF FINE ARTS WITH TEACHER LICENSURE (E11A) (FAE)<sup>1</sup>

	<i>Semester Hours</i>
Major program requirements <sup>2,3</sup> .....	69
VAF 104, 112, 117, 204, 216, 226, 232, 304; 240 or 340, 253 or 353; 498 .....	33
VAE 231, 383, 483 .....	8
Select two from VAH 201, 202, 203 .....	6
VAH 470 or 471 or 480 or 483 .....	3
VAH electives .....	3
VAP 101 .....	3
VAR 200 .....	1
Visual arts electives .....	12
Education requirements: EDT 110, 222, 301, 340, 421 .....	23
Communication Skills .....	0-9
Natural sciences .....	6
Mathematics (MTH 102, 204, 205 excluded) .....	3
Social and behavioral sciences .....	6
Humanities (includes VAH 470 or 471 or 480 or 483) .....	6
Philosophy and Religious Studies (must include EDT 301) .....	12
Visual Arts Foundation: VAR 100 .....	0-1
Program and general electives to total .....	125-135

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



<sup>2</sup>Students in the Art Education program are required to maintain a 2.0 cumulative grade point average overall, and a 2.5 cumulative grade point average in teacher education and visual arts courses.

<sup>3</sup>Students are required to pass PRAXIS I and II and a Second Year Review in their studio work.

ART HISTORY

Art history is the study of art and architecture, produced within specific cultural contexts, as a manifestation of human creativity and as a valuable form of historical documentation. Students learn to appreciate the fundamental and varied roles that the visual arts have played and continue to play in the lives of human beings. Toward this end, students learn how images and objects, identified as art, embody—but also condition and control—social, religious, cultural, economic, political, and gender dynamics.

BACHELOR OF ARTS WITH A MAJOR IN ART HISTORY (HOA)<sup>1</sup>

	<i>Semester Hours</i>
Major Program Requirements .....	42
VAH 101, 201, 202, 203 .....	12
VAH 485 .....	3
VAH electives (300-400) .....	21
Major program electives <sup>2</sup> .....	6
Liberal Studies Curriculum <sup>2</sup>	
Humanities and Fine Arts	
Philosophy and Religious Studies .....	12
History .....	6
Literature: English or Foreign Language .....	3
Creative and Performing Arts .....	3
Foreign Language <sup>3</sup> .....	6-8
Social Sciences .....	12
Mathematics (MTH 102, 204, 205 excluded) .....	3
Natural Sciences .....	11
Communication Skills .....	0-9
Visual Arts Foundation: VAR 100 .....	0-1
General Education courses and academic electives to total at least .....	124

<sup>1</sup>See also distribution table for Bachelor of Arts Programs and Chapter V for General Education requirements.

<sup>2</sup>Major program electives may be chosen, in consultation with an art history advisor, from among the following disciplines and courses: ANT 300, CMM 313, ENG 322, VAF 104, VAF 232, PHL 320, PSY 375 and REL 374. Alternatives to these courses may be elected with the approval of an art history advisor. Major program electives must be at the 300-400 level (except in the case of Fine Arts courses), and they may not be used to satisfy the liberal studies.

<sup>3</sup>Where appropriate, this credit may apply to other requirements.

## FACULTY

Fred Niles, *Chairperson*

*Professors:* Niles, Wilkinson

*Associate Professors:* Crum, Gooch, Marcinowski, J. Whitaker, J.M. Whitaker, Wilbers, Zahner

*Assistant Professors:* Gibbons, Rappaport

*Lecturer:* Simon

*Part-time Instructors:* Anderson, Carr, Crum, Kargl, Langenderfer, Manera-Missall, Megginson, Smith, Snow

*Visiting Artists:* Phelps, Phelps

## COURSES OF INSTRUCTION

## FINE ARTS

VAF 104. FOUNDATION DRAWING: Introduction to basic visual concepts, various drawing media, and approaches to experimental technique. Emphasis on perspective, perceptual awareness, volume in space, and expressive freedom. Studio fee.

3 sem. hrs.

VAF 112. FOUNDATION 2-D DESIGN: Study of the underlying elements and principles of design as they are used in two-dimensional composition and the creation of illusionistic three-dimensional space.

3 sem. hrs.

VAF 117. FOUNDATION 3-D DESIGN: Introduction to basic principles and practices of design in three dimensions. Emphasis on current theory and construction techniques using a variety of media and methods. Studio fee.

3 sem. hrs.

VAF 204. DRAWING II: Emphasis on figure drawing with work from the nude model and the skeleton. Study of proportion, rendering volume, and developing expressive drawing skills in a variety of drawing media. Model fee. Prerequisite: VAF 104.

3 sem. hrs.

VAF 216. DESIGN AND COLOR: The study of color based on historical and contemporary color theories and the use of color in expressing and integrating design concepts. Prerequisite: VAF 112 or permission.

3 sem. hrs.

VAF 226. PAINTING I: Introduction to basic painting principles, techniques, and materials; still life, landscape, figure, and abstraction. Studio fee. Prerequisites: VAF 104, 112, 216, or permission.

3 sem. hrs.

VAF 228. WATERCOLOR I: Principles and techniques of transparent watercolor. Emphasis on technical mastery. Prerequisites: VAF 104, 112, 216, or permission.

3 sem. hrs.

VAF 232. SCULPTURE I: Consideration of forms as a means of developing an understanding of mass, shape, and control of medium. The use of various materials such as wood, plaster, and clay, with emphasis on integrating material with personal expression. Studio fee.

3 sem. hrs.

VAF 240. CERAMICS I: Introduction to basic methods of working in clay using coil and slab techniques. Studio fee.

3 sem. hrs.

VAF 253. PRINTMAKING I: Introduction to the traditional printmaking methods of woodcut and intaglio. Instruction in edition-printing techniques and curating of prints. Studio fee. Prerequisites: VAF 104, 112, or permission. 3 sem. hrs.

VAF 304. DRAWING III: Continuation of work done in VAF 204 with an emphasis on the development of finished figure drawings. Study of anatomy and the rendering of convincing volumes in space. Model fee. Prerequisite: VAF 204. 3 sem. hrs.

VAF 325. FIGURE PAINTING: Painting from the model with a variety of media. Traditional and contemporary approaches to the figure. Model fee: Prerequisites: VAF 204 or 304, 226 or permission. 3 sem. hrs.

VAF 326. PAINTING II: Painting with oils or acrylics; continuing study of the principles and techniques of painting, with emphasis on personal expression and experimentation. Studio fee. Prerequisite: VAF 226 or 228 or permission. 3 sem. hrs.

VAF 328. WATERCOLOR II: Continuing investigation of watercolor techniques, both traditional and experimental. Still life, figure, landscape, and abstraction. Prerequisite: VAF 228 or permission. 3 sem. hrs.

VAF 332. SCULPTURE II: Continued exploration of three-dimensional concepts and materials, concentrating on wood, stone, and metal. Studio fee. Prerequisite: VAF 232 or permission. 3 sem. hrs.

VAF 340. CERAMICS II: Introduction to basic methods of working clay using the wheel. Studio fee. 3 sem. hrs.

VAF 353. PRINTMAKING II: Advanced work in woodcut, monoprint and intaglio, including acrylic process and color etchings. Studio fee. Prerequisite: VAF 253 or permission. 3 sem. hrs.

VAF 404. DRAWING IV: Observational and expressive drawing. Continued work with the figure in combination with a variety of other subject matter. Emphasis on the development of a body of work with a related idea. Model fee. Prerequisites: VAF 204-304 or permission. 3 sem. hrs.

VAF 426. PAINTING III: Directed advanced studio problems; contemporary issues in painting. Repeatable up to 9 sem. hrs. Studio fee. Prerequisite: VAF 325 or 326, or permission. 3 sem. hrs.

VAF 440. CERAMICS III: Introduction to Raku, a 400-year-old Japanese ceramic glaze firing technique adapted for the contemporary potter. Study includes glaze formulation, handbuilding and/or wheel throwing techniques. Studio fee. Prerequisites: VAF 240, 340, or permission. 3 sem. hrs.

VAF 453. PRINTMAKING III: Advanced work in printmaking processes with an emphasis on the production of multi-color editions. Studio fee. Prerequisite: VAF 353 or permission. 3 sem. hrs.

VAF 490. SPECIAL PROBLEMS: A course for advanced individual work in fine arts. Approval based on academic standing and permission of instructor. Repeatable up to 15 sem. hrs. Studio fee. 1-5 sem. hrs.

VAF 498. SENIOR/PROFESSIONAL SEMINAR—FINE ARTS: Capstone course required of all B.A. and B.F.A. fine arts and art education (E11) majors, to be taken in the first semester of the senior year. Examination of aesthetic, cultural, ethical, and pragmatic

issues in preparation for post-graduate experience. Prerequisite: Senior standing or permission. Studio fee. *3 sem. hrs.*

VAF 499. PORTFOLIO AND PAPER—FINE ARTS: Completion and presentation of undergraduate portfolio and paper, to be reviewed by faculty and peers. Faculty approval of portfolio and paper is required for graduation. Prerequisite: VAF 498 or permission. *1 sem. hr.*

Studio fees: \$20. - \$60.

## VISUAL COMMUNICATION DESIGN

VAD 211. FUNDAMENTALS OF VISUAL COMMUNICATION DESIGN: A course for non-majors in the basics of design for communication. Attention to page layout, typography, image, graphic style, and information delivery. Studio fee. *3 sem. hrs.*

VAD 215. COMPUTER APPLICATIONS—DESIGN: An introduction to page design software programs and their use in the design process. Studio fee. Prerequisite: VAR 200. *2 sem. hrs.*

VAD 218. COMPUTER APPLICATIONS—ILLUSTRATION: An introduction to drawing and paint software programs and their use in illustration. Studio fee. Prerequisite: VAR 200. *2 sem. hrs.*

VAD 245. TYPOGRAPHY I: The study of the design, appearance and arrangement of letters and words. Attention to their importance as both functional and expressive elements in communication messages. Studio fee. Prerequisites: VAR 200, 215. *3 sem. hrs.*

VAD 307. DRAWING FOR GRAPHIC DESIGN: Exploration of materials, procedures, and drawing techniques for design presentations. Studio fee. Prerequisite: VAF 104. *3 sem. hrs.*

VAD 312. VISUAL FORM: Investigation of the perceptual and psychological effect of the visual elements—line, shape, value, volume, texture, and color—in visual communication. Exploration of word and image relationships. Studio fee. Prerequisite: VAF 216. *3 sem. hrs.*

VAD 318. GRAPHIC DESIGN FOR THREE DIMENSIONS: The application of graphic design principles to packaging, product, exhibition, and environmental design. Studio fee. Prerequisites: VAF 117, 245, 312. *3 sem. hrs.*

VAD 320. COMPUTER-AIDED GRAPHIC DESIGN: An exploration of the use of the computer as both a tool and a medium for the design and production of visual communication. Studio fee. Prerequisites: VAD 215, 245. *3 sem. hrs.*

VAD 321. COMPUTER-AIDED ILLUSTRATION: An exploration of the use of the computer as both a tool and a medium for the creation and production of illustrations. Studio fee. Prerequisites: VAD 218, 245. *3 sem. hrs.*

VAD 344. DESIGN FOR MULTIMEDIA I: An introduction to the design process, including visual principles, aesthetic issues, and diverse applications for multimedia and interactive electronic media. Emphasis is placed on the visual organization of information in these environments. Studio fee. Prerequisites: VAD 215 or 218; 245, 360. *3 sem. hrs.*

VAD 345. **TYPOGRAPHY II:** The advanced study of typographic design. Attention to the aesthetic and informational qualities of type in print and electronic communication. Studio fee. Prerequisite: VAD 245. *3 sem. hrs.*

VAD 350. **DESIGN PROCESS:** Focus on the developmental process of visual communication, including concept development, visualization techniques, presentation formats, and production methods. Studio fee. Prerequisites: VAD 215, 312, 245. *3 sem. hrs.*

VAD 360. **DESIGN FOR THE INTERNET:** Studio course in the design of electronic communications for the Internet, and specifically the World Wide Web. The course will emphasize current technology for information delivery, with significant consideration being given to critical issues in visual communication. Studio fee. Prerequisites: VAD 215 or 218; 245. *3 sem. hrs.*

VAD 395. **ADVERTISING DESIGN:** Emphasis on print advertising, its creation and presentation. Concept development and attention to advertising layouts that carry motivating images and messages to consumers about products, services, or ideas. Studio fee. *3 sem. hrs.*

VAD 397. **ILLUSTRATION I:** Attention to conceptual, visual, and technical development. Exploration of media and techniques employed by the illustrator in creating images for printed communication. Studio fee. Prerequisites: VAF 104, 204. *3 sem. hrs.*

VAD 398. **ILLUSTRATION II:** Interpretation and representation of concepts, products, or stories for magazines, books, newspapers, and advertising. Continued technical development with a variety of materials, media, and techniques. Studio fee. Prerequisite: VAD 397. *3 sem. hrs.*

VAD 404. **ILLUSTRATION III:** Focus on developing an individual point of view and illustration style. Studio fee. Prerequisite: VAD 398. *3 sem. hrs.*

VAD 411. **GRAPHIC DESIGN I:** Study, design, and application of marks, logos, and symbols in visual communication. Attention to effective visual relationships between typographic elements and images in single-page applications. Studio fee. Prerequisite: VAD 245. *3 sem. hrs.*

VAD 412. **GRAPHIC DESIGN II:** Continued study of effective visual relationships between typographic elements and images. Emphasis on sequential page design. Studio fee. Prerequisite: VAD 411. *3 sem. hrs.*

VAD 414. **TRADEMARK DESIGN:** Advanced study of marks, logos, and symbols as communication and identification elements. Emphasis on conceiving design marks of identity for small businesses, corporations, institutions, products, and/or services. Studio fee. Prerequisite: VAD 411. *3 sem. hrs.*

VAD 415. **GRAPHIC DESIGN III:** The study and design of identification and image systems for products, organizations, institutions, or corporations. Emphasis on continuity in the application of visual communication factors. Studio fee. Prerequisite: VAD 412. *3 sem. hrs.*

VAD 444. **DESIGN FOR MULTIMEDIA II:** Advanced level design for multimedia and interactive electronic media. Emphasis is placed on actual or simulated client-based projects. Studio fee. Prerequisite: VAD 344. *3 sem. hrs.*

VAD 480. VISUAL COMMUNICATION DESIGN INTERNSHIP: Opportunities for practical experience in professional working environments. Repeatable up to 12 sem. hrs. Prerequisite: Permission. 3 sem. hrs.

VAD 490. SPECIAL PROBLEMS: A course for advanced individual work in design or illustration. Approval based on academic standing and permission of instructor. Repeatable up to 15 sem. hrs. Studio fee. 1-3 sem. hrs.

VAD 498. SENIOR/PROFESSIONAL SEMINAR—VCD: Capstone course required of all B. A. and B.F.A. visual communication design majors, to be taken in the first semester of the senior year. Examination of aesthetic, cultural, ethical, and pragmatic issues in preparation for post-graduate experience. Studio fee. Prerequisite: Senior standing or permission. 3 sem. hrs.

VAD 499. PORTFOLIO AND PAPER—VCD: Completion and presentation of undergraduate portfolio and paper, to be reviewed by faculty and peers. Faculty approval of portfolio and paper is required for graduation. Prerequisite: VAD 498 or permission. 1 sem. hr.

Studio fees: \$20. - \$65.

## ART EDUCATION

VAE 101. EARLY CHILDHOOD ART EDUCATION: Acquaints students, especially those seeking Early Childhood Licensure, with the principles and concepts of art and with the various materials and techniques used in artistic expression. Open to all students. Studio fee. 2 sem. hrs.

VAE 231. INTRODUCTION TO ART EDUCATION: An introduction to the pedagogical, philosophical, and psychological aspects of teaching the arts. Topics will include: technology, national and state standards, history, learners with special needs, reading in the arts, and professional associations. Studio fee. Prerequisite: EDT 110. Corequisite: EDT 100. 2 sem. hrs.

VAE 232. INTEGRATING THE ARTS: VISUAL ARTS: Developing knowledge, skills values and attitudes in visual arts for the purpose of integration into classrooms for middle childhood and the adolescent learner. Studio fee. Prerequisite: EDT 110. 2 sem. hrs.

VAE 383. FOUNDATION OF ART EDUCATION: Introduction to the philosophy, history, and theory of teaching art to prekindergarten through grade eight students with varied needs and abilities. Art education majors only or permission. Studio fee. Prerequisites: EDT 110, 207, 208, and permission. 3 sem. hrs.

VAE 483. TEACHING VISUAL ARTS: Study of curriculum, planning, theory, and practice for teaching visual arts to students grades seven through twelve. Art Education majors only. Studio fee. Prerequisites: EDT 110, 207, 208, VAE 383, and permission. Corequisites: EDT 318, 419. 3 sem. hrs.

VAE 483W. ELEMENTARY AND SECONDARY SCHOOL ART: Workshop to give the student of elementary and secondary education new approaches to teaching studio arts, art criticism, art history, and aesthetics. Studio fee. 3 sem. hrs.

VAE 490. SPECIAL PROBLEMS: A course for advanced individual work in art education. Approval based on academic standing and permission of instructor. Repeatable up to 15 sem. hrs. Studio fee. *1-5 sem. hrs.*

Studio Fees: \$20. - \$40.

## PHOTOGRAPHY

VAP 101. FOUNDATION PHOTOGRAPHY: Emphasis on learning and exploring the visual language of photographic imagery through a series of creative assignments. Fundamentals of black-and-white still photography: camera function, exposure, film processing, and printing. Students gain sound technical and creative control of the medium. Studio fee. *3 sem. hrs.*

VAP 201. PHOTOGRAPHY II: Specific projects to develop personal expression and sustained creative growth, increased technical competence and greater visual awareness. Students learn more advanced photographic techniques, including negative and printing controls, and different camera formats. Studio fee. Prerequisite: VAP 101 or equivalent. *3 sem. hrs.*

VAP 240. DIGITAL IMAGERY I: Introduction to the theory, ethics, aesthetics, and practice of computer image digitizing, enhancement, compositing, and manipulation as applied to digital photography. Some prior knowledge of computers is helpful. Studio fee. *3 sem. hrs.*

VAP 302. COLOR PHOTOGRAPHY I: Introduction to techniques and aesthetics of color photography; students learn to use transparency and negative films and to make color prints. Studio fee. Prerequisites: VAP 101, 201 or permission. *3 sem. hrs.*

VAP 320. STUDIO PRACTICE I: Extensive use of large format camera, studio grip equipment, tungsten and electronic flash lighting techniques; still-life and portrait photography in a studio environment. Studio fee. Prerequisite: VAP 201. *3 sem. hrs.*

VAP 321. STUDIO PRACTICE II: Emphasis on the production of a professional-quality portfolio which will demonstrate advanced knowledge of the studio and image production. Studio fee. Prerequisite: VAP 320. *3 sem. hrs.*

VAP 330. ALTERNATIVE PHOTOGRAPHY I: Introduction to specialized image production utilizing silver and non-silver photographic processes. Emphasis on technical and aesthetic aspects of alternative photographic practice. Studio fee. Prerequisite: VAP 101. *3 sem. hrs.*

VAP 331. ALTERNATIVE PHOTOGRAPHY II: Continuing work with alternative silver and non-silver processes. Emphasis on completion of an artist book or installation which demonstrates advanced technical command and aesthetic understanding of the processes employed. Studio fee. Prerequisite: VAP 330. *3 sem. hrs.*

VAP 340. DIGITAL IMAGERY II: Continuation of the theory and practice of computer imaging and the electronic darkroom; and the incorporation of digital images into other media. Emphasis on digital photography, videographic imaging and the role of digital images in art and society. Studio fee. Prerequisite: VAP 240. *3 sem. hrs.*

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

VAP 402. COLOR PHOTOGRAPHY II: A continuation of color printing from negatives; completion of individual projects which will demonstrate an advanced understanding of the techniques and aesthetics peculiar to color photography. Studio fee. Prerequisite: VAP 302. *3 sem. hrs.*

VAP 410. ADVANCED PHOTOGRAPHY: Students with a substantial commitment to photography and with demonstrated technical skills work on individual projects and participate in group critiques and discussion. Studio fee. Prerequisites: VAP 201, 302; VAH 382 *3 sem. hrs.*

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

VAP 430. PROFESSIONAL PHOTOGRAPHIC APPLICATIONS: Problem-solving associated with professional photography; may include commercial, editorial, industrial, architectural, and illustrative photographic work both in the studio and on location. Studio fee. Prerequisite: VAP 320 or permission. *3 sem. hrs.*

VAP 450. PHOTOGRAPHY INTERNSHIP: Practical applications of photographic skills. Opportunities for advanced development and practical experience in professional working environments. Repeatable up to 6 sem. hrs. for B.F.A. students.. Prerequisite: Permission. *1-3 sem. hrs.*

VAP 490. SPECIAL PROBLEMS IN PHOTOGRAPHY: Series of assignments to guide independent study in photography, formulated to meet individual needs of the student. Studio fee. Prerequisites: VAP 201 and permission. *1-5 sem. hrs.*

VAP 498. SENIOR/PROFESSIONAL SEMINAR—PHOTOGRAPHY: Capstone course required of all B.A. and B.F.A. photography majors, to be taken in the first semester of the senior year. Examination of aesthetic, cultural, ethical, and pragmatic issues in preparation for post-graduate experience. Studio fee. Prerequisite: Senior standing or permission. *3 sem. hrs.*

VAP 499. PORTFOLIO AND PAPER—PHOTOGRAPHY: Completion and presentation of undergraduate portfolio and paper, to be reviewed by faculty and peers. Faculty approval of portfolio and paper is required for graduation. Prerequisite: VAP 498 or permission. *1 sem. hr.*  
Studio fees : \$30. - \$75.

## ART HISTORY

\* VAH 101. INTRODUCTION TO THE VISUAL ARTS: Thematically-based, non-chronological introduction that covers the fundamental and varied roles that the visual arts have played and continue to play in the human experience. Open to all students. Fee. *3 sem. hrs.*

\* VAH 201. SURVEY OF ART I: Survey of Western art from pre-history through the late medieval period. Open to all students. Fee. *3 sem. hrs.*



\* VAH 202. SURVEY OF ART II: Survey of Western art from the late medieval period through the Baroque. Open to all students. Fee. *3 sem. hrs.*

\* VAH 203. SURVEY OF ART III: Survey of Western art from the eighteenth through the twentieth centuries. Open to all students. Fee. *3 sem. hrs.*

VAH 350. WESTERN ARCHITECTURE: Introduction to the history, theory, and practice of Western architecture from pre-history through the contemporary period. Open to all students. Fee. *3 sem. hrs.*

\* VAH 360. ART HISTORY AND FEMINISM: Introduction to feminist approaches to art history and women artists from the medieval period to the present. Open to all students. Fee. *3 sem. hrs.*

VAH 370. AMERICAN ART: Introduction to American art and architecture from the colonial period to the present. Open to all students. Fee. *3 sem. hrs.*

\* VAH 382. HISTORY OF PHOTOGRAPHY I: History of the cultural, social, and aesthetic roles of photography from the camera obscura to 1945. Emphasis on the changing practice and perception of the medium as an art form, as social document, and as popular culture. Open to all students. Fee. *3 sem. hrs.*

VAH 383. HISTORY OF VISUAL COMMUNICATION DESIGN: Study of the significant developments, movements, and figures in the history of visual communication with an emphasis on the twentieth century. Open to all students. Fee. *3 sem. hrs.*

VAH 450. ITALIAN RENAISSANCE ART: Introduction to the painting, sculpture, and architecture of Italy between c. 1300 and c. 1550. Fee. Prerequisite: VAH 202 or permission. *3 sem. hrs.*

VAH 460. BAROQUE ART: Study of the major painters, sculptors, and architects of the seventeenth century. Fee. Prerequisite: VAH 202 or permission. *3 sem. hrs.*

VAH 470. NINETEENTH-CENTURY ART I: Study of the major artists and movements in European art from Neo-Classicism to the beginnings of Realism. Fee. Prerequisite: VAH 203 or permission. *3 sem. hrs.*

VAH 471. NINETEENTH-CENTURY ART II: Study of the major artists and movements in European art from Realism through Art Nouveau. Fee. Prerequisite: VAH 470 or permission. *3 sem. hrs.*

\* VAH 480. TWENTIETH-CENTURY ART I: Study of the major movements and artists in the painting, sculpture, architecture, and other media from 1900 to 1945. Open to all students. Fee. *3 sem. hrs.*

\* VAH 482. HISTORY OF PHOTOGRAPHY II: The history of photography from 1945 to the present. Open to all students. Fee. *3 sem. hrs.*

VAH 483. TWENTIETH-CENTURY ART II: Study of the major movements and artists in painting, sculpture, architecture, and other media from 1945 to the present. Open to all students. Fee. *3 sem. hrs.*

VAH 485. ART HISTORY SEMINAR: A seminar and capstone reading and research course concentrating on one art historical topic for detailed analysis. May be repeated as topics change. Permission of instructor. *3 sem. hrs.*

VAH 490. SPECIAL PROBLEMS: Advanced, independent study with faculty direction in art history. Prerequisite: one art history course or permission. *1-5 sem. hrs.*

Visual Resources fees: \$25.

## VISUAL ARTS

VAR 100. VISUAL ARTS FOUNDATION: Defines and examines the process of beginning a program of education in the visual arts within the larger context of the College of Arts and Sciences and the University. Integrates pragmatic and conceptual issues critical to liberal learning for visual arts students. *1 sem. hr.*

VAR 200. INTRODUCTION TO VISUAL ARTS COMPUTING: An introduction to the computer as a tool, and the computer lab as an environment, for visual art production. Studio fee. *1 sem. hr.*

VAR 210. VISUAL JOURNAL: Students document and interpret their experience of a given site through the creation of unique journals. They create, collect, edit, and juxtapose visual materials in combination with written commentary and reflections. Studio fee. *3 sem. hrs.*

VAR 220. VISUAL RESOURCES: Students study a wide variety of visual elements, including many forms of visual communication as well as architecture, public spaces, and museums, in order to understand ways in which art and design play key roles in defining the unique cultural environment of a given site. Studio fee. *3 sem. hrs.*

VAR 345. COMPUTER MODELING AND ANIMATION I: Introduction to history, theory, and practice of 3-dimensional computer modeling and animation for video, computer and print media. Visualization, Cartesian space, simple polygonal modeling, surface rendering, and animation techniques will be explored. Studio fee. Prerequisite: VAP 240, or VAR 200, or permission. *3 sem. hrs.*

VAR 440. COMPUTER MODELING AND ANIMATION II: Detailed study of spline-based modeling, surface rendering and mapping, editing complex animation sequences, motion control, and other topics. Studio fee. Prerequisite: VAR 345. *3 sem. hrs.*

VAR 445. COMPUTER MODELING AND ANIMATION III: Individual projects in conceptualization and production of animated sequence from storyboard to final presentation. Studio fee. Prerequisite: VAR 440. *3 sem. hrs.*

VAR 490. SPECIAL PROBLEMS: Advanced, independent study with faculty direction in a visual arts subject or topic that is not covered in existing, discipline-specific courses. Permission. Studio fee. *1-5 sem. hrs.*

Studio fees: \$25. - \$60.

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\* General Education course. See Chapter V.

## WOMEN'S STUDIES (WST)

The interdisciplinary minor in women's studies provides a timely academic concentration appropriate to many majors and useful in many fields. As an academic pursuit, women's studies attempts to compensate for the traditional omission from many curricula of the historical and contemporary contributions of women. It also looks to the future, intending to enhance the dignity, worth, and effectiveness of all women.

The minor in women's studies requires 13 semester hours. It must include the interdisciplinary seminar ASI 228, Focus on Women, and 12 semester hours in upper-division courses (300-level or above) from at least three different disciplines. The following courses are among those offered.

ASI	228	Focus on Women
CMS	415	Women and Communication
ENG	204	Major American Writers: Women Writers <sup>1</sup>
ENG	319	Contemporary Fiction: Women Writers <sup>1</sup>
ENG	324	The Novel: Contemporary Women Novelists <sup>1</sup>
ENG	324	The Novel: Southern Women Writers <sup>1</sup>
ENG	329	The Short Story: Women Writers <sup>1</sup>
ENG	333	Images of Women in Literature
ENG	335	Modern Black Literature
ENG	380	Early Women Writers
HSS	130	Self Defense for Women
HSS	376	Women's Health Issues
HST	351	History of American Women
HST	352	History of the American Family
HST	353	History of Women in European Societies
MGT	440	Women in Management
PHL	307	Philosophy and Women
POL	300	Women and Politics
PSY	443	Psychology of Women
PSY	462	Human Sexuality
REL	471	Women and Religion
REL	472	Ecology and Religion
REL	474	Women and the Global Church
SOC	322	Sex Roles and Society
SOC/SWK	330	Perspectives on Aging
SOC	332	Sociology of Women
VAH	360	Art History and Feminism

In addition, independent study courses and UDI courses may be applicable.

<sup>1</sup>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

B. Youngkin (English), *Director*

Carlson (History), Fischer (Philosophy), Hill-Vasquez (English), Huff (Arts & Sciences), Johnson (Philosophy), Lutz (Psychology), L. Majka (Sociology, Anthropology, and Social Work), J. Martin (Religious Studies), O'Meara (Languages), Shereen (English).

