



# undergraduate courses of instruction

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Courses listed within the catalogue are subject to change through normal academic channels. New courses and changes in existing course work are initiated by program faculty and approved by the appropriate academic officials and committees. Some courses are offered on an alternate schedule, and the College reserves the right to cancel or reschedule courses for enrollment, staffing, or other reasons. Credit hours are indicated in parentheses after the course title. A student who does not meet course prerequisites may petition the instructor for written permission to enter the course.

The first digit of the course number indicates the level of the course as follows:

- 7 Course open to doctoral students only
- 6 Course open to graduate students only
- 5 Course open to graduate students only; to others with permission of the instructor
- 4 Course open to seniors only, to others with permission of the instructor
- 3 Course open to juniors and seniors only, to others with permission of the instructor
- 2 Course open to sophomores, juniors, and seniors only; to first-year students with permission of the instructor
- 1 Course open to any student provided stated course prerequisites have been met



# General Education and College-Wide Course Listings

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General Education (COR)  
Chatham Abroad (CAB)  
English as a Second Language (ESL)  
Interdisciplinary Courses (IND)  
Physical Education and Wellness (PED)  
Student Development (SDE)

For more information on Chatham's General Education program and requirements, see pages 56-62.

## General Education (COR)

For a description of Chatham's general education program, see pages 56-62.

### 105 College Seminar (3)

College seminars are designed to initiate academic dialogues in a seminar setting often reserved to upper-level students. Limited to first-year students, College Seminars will focus on topics of particular interest to individual Chatham faculty. While building these seminars upon their scholarly passions, professors have designed these courses specifically for first-year students. Students will be encouraged to ask difficult questions, consider multiple answers, and develop strategies for articulating and arguing their intellectual positions through frequent writing assignments. The goal of each seminar is not breadth of coverage, but rather depth of intellectual inquiry.

### 110 Arts First (3)

This course explores the richness and diversity of the arts by engaging students in three arts modules during the semester: studio art, the performing arts, and the visual arts. Each module will include practical experience, research and study, and on-site exploration of the vast arts resources available both within the Chatham community and the larger Pittsburgh arts community. For example, the studio arts module will provide the opportunity to "make art" through printmaking, utilizing a range of local resources from those on campus to large museums. The music and theatre modules will explore the extensive resources in the area through attendance at a variety of performance events. Applied art fee.

### 115 First-Year Science (3)

This course will expose students to science in the context of the College's mission themes. Course topics include: Prisoners or Paradigm?; The Plant Explorers: A Global Plant Obsession; Earth on the Balance: Chemistry in Context; Epidemics: Past, Present, and Future. The laboratory portion will focus on teaching the scientific method and approaching scientific inquiry from an active, investigative point of view. Students will need one First-Year Science lecture course and one lab section to fulfill this requirement. Students taking other science lab courses must take the First-Year Science lecture course but may use the lab section attached to an existing disciplinary course (such as Biology 144) to fulfill the lab requirement.

### 115L First-Year Science Laboratory (1)

Science laboratory fee applies.

### 203 Citizenship and Civic Engagement: Building the Good Society (3)

This course utilizes classroom discussions, simulations, and group projects to explore current controversies in public policy such as the following: What place should religious beliefs have in public policy? How much are we willing to pay for public services, and who should pay? Is it more important in policy choice to preserve the past or to facilitate the future? The course is intended to build responsible citizens and leaders through active engagement in problem solving. Prerequisite: Completion of first-year general education requirements or placement based upon transfer credit.

### 203 Citizenship and Civic Engagement: Women's Leadership in Public Life (3)

This course is designed to encourage students to evaluate, contextualize, and participate in public leadership in its many forms in the U.S. political setting. We will

examine women's historical and current participation in civil society and public affairs from the local and grassroots to national levels. This course utilizes experiential learning activities in the classroom and in the community to cultivate both a theoretical understanding of civil society and leadership and to apply such understandings to the practice of public leadership. Prerequisite: Completion of first-year general education requirements or placement based upon transfer credit.

### **304 Diversity and Identity in Global Context (3)**

This course provides students with an understanding of issues pertaining to global diversity. Students will develop an understanding of how socially constructed categories such as race, ethnicity, gender, class, religion, sexuality, and nationality emerge, evolve, inform and affect the individual. This course prepares students for responsible citizenship in a global community. Prerequisite: Completion of COR 203 Citizenship and Civic Engagement or placement based upon transfer credit.

### **491 Supplemental Instruction in Writing (1)**

This course is designed to provide writing support and instruction for first-year students enrolled in College Seminars. Supplemental instruction focuses on the development of writing skills necessary for successful completion of the College Seminar and applicable to other courses across the curriculum.

## **Chatham Abroad (CAB)**

The Chatham Abroad program offers eligible sophomores the experience of international study and travel as an integral part of their Chatham degree program. (Eligible students may not bypass their year of eligibility.) Chatham Abroad is a series of academic courses focused on interdisciplinary topics taught abroad by the Chatham faculty during the Maymester term. The courses, topics, and foreign sites vary each year, dependent on faculty interests and expertise, the global economy, and current international political conditions. Thus, the Chatham Abroad courses described here are representative rather than inclusive. Each course carries three Chatham credits on a pass/fail basis. Participants must also take the required three-credit Chatham Seminar in the spring term prior to the Maymester. Specific guidelines for eligibility for participation in Chatham Abroad are available in the Office of International Programs.

### **110 Service-Learning Experience in Haiti (3)**

This is a two-week, intensive service-learning experience at the Hôpital Albert Schweitzer in Deschapelles, Haiti. Participants will engage in a variety of volunteer/service projects under faculty supervision at the facility as well as in the community.

### **115 Global Focus Seminar (3) *Spring***

This interdisciplinary course is intended to foster student intellectual involvement in the Chatham Global Focus program. Taught from global and comparative approach, this course seeks to provide a meaningful structure in studying the physical and cultural geography; key historical events; the current social, economic and political situation in the region of study. This course will be team taught by several

faculty members and guest lecturers. Also, students will begin to develop the necessary skills for accessing a culture or country that will be operationalized in a students' Chatham Abroad experience. The course will meet in large group sessions and in small breakout sections that will address items of relevance to specific trips. (Required for students enrolled in Chatham Abroad).

### **210 Italy: The Science of Art (3)**

#### *Recurring*

This course is a study-tour of three major Italian cities: Rome, Florence, and Siena. The concentration focuses on exploring the complex relationships between art and the sciences. Key artworks and buildings designed by Leonardo da Vinci and Michelangelo will be examined, as well as how scientific principles underlie art and its conservation.

### **220 France: The Growth of a Nation**

#### *(3) Recurring*

This course explores the actions, collective tastes, and traditions that make up the concept of nationhood, specifically of France. From Paris, prevailing center of French culture, students will travel through Normandy, Brittany, and the Loire Valley, visiting such significant historical sites as Rouen, Honfleur, the invasion beaches of Normandy, and Mont St. Michel, as well as the more southerly Renaissance Chateaux of Touraine. Through exposure to the language, art, architecture, food, and fashion of this culturally diverse nation, students will also see the contemporary relevance of historical preservation and urbanization to national environmental concerns.

### **230 Nature and Culture in Costa Rica**

#### *(3) Recurring*

Costa Rica is one of the more biodiverse nations on Earth. Fortunately, Costa Rica is one of the more environmentally respon-

sible nations on Earth as well. This course will examine how Costa Rica has managed to safeguard its natural resources against the economic pressures of development and tourism. Students will also investigate the questions of how we learn from and about nature as they explore many of Costa Rica's 12 different ecosystems.

### **235 Women, the Environment, and Transnational Networking in Brazil (3)**

This course will focus on grassroots women's leadership issues. In Puerto Alegre, they will seek out female activists and political leaders in various institutional settings, including health care, land reform, political reform, economic and environmental sustainability, and community activism. If possible, there will be an on-site service-learning component. The teaching approach for this class is modeled after Brazilian educator Paulo Freire and follows a learning community style.

### **240 Peru: Amazon and Machu Picchu (3)**

This "immersion" experience in Peru includes three days exploring Machu Picchu, the sacred valley of the Incas, and eight days in an Amazon jungle lodge. The goals are to experience and study biodiversity, native cultures, and the impact of tourism on sensitive ecosystems. These issues will be examined during the precourse and experienced through day hikes, canopy walks, boating and swimming experiences, nocturnal excursions, a visit to a native riberenos village in the rainforest, and the exploration of the Machu Picchu ruins.

### **245 Mexico: Memory and Migration (3)**

Engaging issues of migration and identity, this course will provide students with the opportunity to study and travel to Oaxaca, one of the Mexican states most affected by

migration to the United States. Students will come to understand not only Mexico's rich history, but also how contemporary patterns of migration affect narratives of Mexican history and identity on both sides of the U.S. – Mexican border. The course assumes that women's and environmental issues are intrinsic to an understanding of global issues, and will work to help students make these connections.

**250 In-migration and Metamorphosis: Prague (3)**

A victim of enforced obscurity throughout much of the 20th century, Eastern Europe became a focal point of the world's economic changes in the '90's, and is now poised for another cultural renaissance. While still containing the traces of centuries of wars, empires, and monuments, Prague's blooming market economy is located in what many call one of the most beautiful cities of Europe. The trip's conditional inclusion of Vienna would allow both extension and contrast to the effect of arbitrary political lines on the internal development of traditional culture within competing nationalisms.

**296 Semester in Rome Program (15)**

**320 Egypt (3) *Last offered January 1995***

Modern Egypt, home of an ancient civilization, today confronts problems besetting most of the Third World: soaring population, urban crowding, threats to health and hygiene, changing family dynamics, widespread illiteracy, low per-capita income, government ineffectiveness and corruption, and nativist rejections of modernity. The class examines the historical development of some of these problems. While in Egypt, students observe these problems firsthand and how the modern media is being used to combat them.

**340 History, Art, and Literature of London (3) *Recurring***

A study of the history of London as reflected in its architecture and cultural artifacts; the works of art, both those by English artists and those collected in London's great museums; and the literature that has grown from London events and scenes, with visits to sites and settings of the readings and writers.

**345 Belize (3) *Recurring***

Subtropical Belize offers a unique opportunity to study the partnerships between environmentally conscious humans and a wide variety of natural and historical environments. Students explore the rain forest, mountain, and marine habitats of howler monkeys, jaguars, and queen angelfish, as well as visit Mayan archaeological sites at Xunantunich, Cahal Pech, and Tikal. From the Maya to Spanish explorers and English buccaneers, Belize history demonstrates the interdependence of man and nature in what Rachel Carson called "the web of life."

**350 Women in Public Life: Dublin, Ireland (3) *Recurring***

Using Ireland as a case study, students examine the movement of women from traditional lifestyles into public life and leadership roles. Students consider women in Irish history and follow their progress in professions and political life since Irish independence. Ireland shifted relatively late from traditional patterns and relationships to those of a modern, industrial society. As a result, it provides a good opportunity to study the movement of women from traditional to modern roles, from lifestyles based on church and home to professional and public competence. This case study allows students to discover some of the problems and issues associated with the movement of women into the public sphere.

## English as a Second Language (ESL)

Each course carries academic credit, but credits earned in courses below the 100 level are not applicable to the baccalaureate degree.

### 081, 082 Speaking/Listening I, II (3 each)

Emphasizes speaking and listening skills appropriate to the student's proficiency level and academic preparation expectations. Four hours per week.

### 083, 084 Grammar I, II (3 each)

Emphasizes productive and receptive grammar patterns appropriate to the student's proficiency level and academic preparation expectations. Four hours per week.

### 085, 086 Reading I, II (3 each)

Emphasizes reading material and vocabulary acquisition appropriate to the student's proficiency level and academic preparation expectations. Four hours per week.

### 087, 088 Writing I, II (3 each)

Emphasizes writing patterns to reinforce other skill areas at beginning levels, and progresses to writing as an independent skill for academic purposes, including English rhetorical patterns. Four hours per week.

### 091, 092 Cultural Orientation I, II (3 each)

Presents American cultural patterns of interaction. Upper levels discuss appropriate activities in academic settings, including forms of address, classroom dynamics and communication, sharing of information, and taking examinations. Four hours per week.

### 101 College Reading and Vocabulary Study I (3)

This course focuses on reading and vocabulary acquisition required for undergraduate studies. Students systematically review Greek and Latin roots, prefixes, and suffixes, which are the core of academic and scientific vocabulary. They use a text with readings from a wide range of undergraduate subjects, including psychology, history, sociology, economics, and the sciences. A weekly news magazine such as *Time* or *Newsweek* provides current vocabulary and contemporary topics.

### 102 Writing and Research Paper Skills I (3)

Most international students have had no previous interaction in writing academic English and are not aware that the rhetorical patterns of English are different from those used by their native languages. Thus, the primary focus of this course is on the American English rhetoric necessary for presenting written arguments in a logical, coherent manner. Students write short papers (for their academic classes, if possible), demonstrating their mastery of the forms. The second focus is the form and mechanics of writing a research paper. Using library facilities, students learn the various types of materials and ways of researching a topic.

### 103 College Reading and Vocabulary II (3)

This course builds on material acquired in English as a Second Language 101 and focuses on advanced reading and vocabulary building. The course includes exercises designed to increase reading speed and comprehension. Material from several academic areas is brought to bear in these exercises and assignments so that students can acquire greater vocabulary and comprehension in approaching college-level material.

### 104 Writing and Research Paper Skills II (3)

This course builds on material acquired in English as a Second Language 102 and focuses on advanced writing and composition. Using library and on-line sources, students learn ways of researching a topic in several academic areas. They also learn proper forms of citation and become proficient in the mechanics of preparing a term paper appropriate for college-level courses – e.g., presenting arguments in a coherent and logical manner.

## Interdisciplinary Courses (IND)

### 099 Transitions: Essential Skills for Success@Chatham (2) Fall

This course introduces students to the essential skills necessary for successful learning in college. Students practice and demonstrate mastery of the skills within the contexts of the academic courses in which they are currently enrolled. Skills areas include: navigating the college environment, identifying goals, reading efficiently, managing time, controlling procrastination, taking notes and tests, and thinking critically. Students attend one group hour and one individual hour per week.

**110 Information Literacy (1) Occasional** Fundamental research skills necessary in today's information rich society are presented. Emphasis is on concepts, processes, and practical application rather than rote memorization. Working knowledge of methods of information gathering through library and Internet are provided. Skills in analyzing found information as it applies to a research topic are developed. This course satisfies part of the computer literacy requirement.

### 300 Science and Society (3) Fall

A cross-disciplinary examination of current scientific research and technological developments that lead to ethical questions or political controversy, emphasizing current science and technology, plus readings about making decisions on controversial subjects. May include: global warming; genetic engineering, human cloning, stem cell research; nuclear energy. Prerequisite: one 200-level science course.

### 350 Scientific Research Methods (2) Spring

This course serves as an introduction to research literature and research methodology in the sciences. Students prepare a research proposal including literature review, experimental design and methods, budget, timetable, and bibliography. Other topics include professional presentation techniques and research ethics. The student's major department must approve proposals prior to the Tutorial. Prerequisite: junior status and completion of at least two courses at the 200-level or above in the major, or permission of the instructor.

## Physical Education and Wellness (PED)

The Physical Education program provides a balance to the rigorous demands of the academic environment by offering courses to develop personal fitness and wellness, athletic skills, and recreational interests.

A Physical Education major is not offered.

The Athletic and Fitness Center houses a basketball/volleyball court, a dance and aerobics studio, an eight-lane competition swimming pool, whirlpool/sauna/steam-room, a three-lane walking track, squash courts, and rock-climbing wall. The

athletic training room contains a hydrotherapy room and complete line of rehabilitation equipment. The second-level fitness and cardiovascular rooms contain treadmills, elliptical machines, bikes, free weights, and circuit strength machines. The facility also has a “semi-smart” classroom with adjoining human performance laboratory, a “smoothie bar,” and comfortable seating areas for students to relax with friends, watch television, or use a personal laptop to connect to the Internet.

A soccer/softball field and one-sixth mile jogging path are located behind the old gymnasium building.

Students with a valid Chatham photo ID card may borrow an assortment of recreational equipment from the gymnasium office, including basketballs, volleyballs, soccer balls, tennis racquets, heavy-hand weights, exercise mats, jump ropes, golf clubs, and softball equipment.

### **101 Introduction to Lifetime Fitness (1)**

This course is designed to introduce the student to the concepts of fitness and personal health and physical skills needed to maintain fitness for life. Topics included are physical fitness, health, nutrition, jogging, walking, and the use of weight and exercise equipment.

### **103 Weight Training for Women (1)**

This class focuses on muscular toning and strengthening through the use of weight training equipment. Class discussions on muscle physiology supplement vigorous workouts using Body Masters equipment and free weights.

### **105 Body Conditioning and the Normal Aging Process (1)**

How a woman ages depends on a combination of lifestyle behaviors and hereditary factors. Women in their 30s and 40s can

begin taking steps to minimize the effects of aging. This course teaches students how to modify current physical and emotional health habits to improve the quality of their lives as they grow older.

### **107 Body Dynamics (1)**

This is an exercise program that incorporates basic dance warmup, back exercise, stretching, deep breathing, and relaxation exercises. Body Dynamics is created from many physical and mental disciplines and is not an aerobics program.

### **108 Yoga and Relaxation (1)**

Yoga is the world’s oldest system of personal development. It is a discipline that can help bring stress under control through the practice of physical postures (asanas) for muscle tone and flexibility and through breathing and meditation techniques for quieting the mind.

### **109 Pilates (1)**

This course is an introductory level pilates mat class. Exercises focus on core strength, stability, and flexibility. The six basic fundamentals are introduced as well as beginner exercises, which progress throughout the semester.

### **112 Total Fitness and Gym Ball (1)**

The gym ball is one of the many emerging disciplines/programs to target core/trunk stability as well as total body fitness. This class is for all levels and for those interested in improving muscular fitness, flexibility, and balance. Students are required to purchase an exercise ball before the class begins.

### **115 Squash (1)**

Students will learn the fundamentals of squash, including sound footwork, proper racquet technique, and various serves. Basic strategy, squash rules, and terminology are presented to give the student a complete understanding of the game.

**117 Tennis (1)**

Instruction for all levels of tennis skill from novice to advanced player, including skill development, competition strategy, and rules of play.

**118 Racquet Techniques: Badminton (1)**

Basic racquet skills, footwork, and strategies are taught. Students learn techniques, terminology, and rules of the game that will increase their proficiency and enjoyment of the sport of badminton.

**119 Skiing: Conditioning and Techniques (1)**

On-campus physical conditioning and classroom discussion are combined with ski trips to local ski resorts. Students will learn proper conditioning techniques to be better prepared to ski. Participation is open to skiers of all abilities. Students are required to attend two ski outings during the course. Additional fees are required.

**120 Conditioning for Rowing (1)**

Participants learn proper rowing techniques by training on the Concept II rowing ergometers and the rowing simulator at poolside. Daily workouts, videotaping, and individual skill analysis are performed. Students are instructed in proper strength training, flexibility, exercises, and nutritional guidelines to enhance performance. Safety considerations are also reviewed.

**123 Indoor Soccer (1)**

Students will learn the proper techniques used in the game of soccer including passing, shooting, heading, positioning, and game strategies. Physical conditioning will also be a part of the course.

**125 Volleyball Skills (1)**

Basic skills, footwork, and game strategies are taught. Students learn techniques, terminology, and rules of the game that will

increase their enjoyment and proficiency of volleyball.

**128 Beginning Karate (1)**

This course is an introduction to the principles and techniques of traditional Tang Soo Do (Korean) Karate. Starting with physical conditioning and basic blocking, striking, punching, and kicking techniques, training progresses through traditional formal exercises (Hyung), sparring, and self-defense methods.

**131 Cardio Kickboxing (1)**

Cardio Kickboxing is an exciting physical activity that incorporates the benefits of aerobic exercise and martial arts techniques. The course is designed to emphasize proper form, cardiovascular conditioning, and overall fitness.

**133 RAD: Rape Aggression Defense (1)**

This self-defense course will utilize education and physical activity to help students recognize and deal with dangerous situations. Self-defense is a means of empowerment: through stretching, discussion of risk reduction strategies, and practice of self-defense techniques, students will learn how to defend themselves.

**135 Campus Leadership and Wellness (1)**

Students will examine the relationship between leadership and wellness. The course provides an opportunity for students to engage in an interdisciplinary approach to leadership. The focus will be on exposure to resources, innovative methods, and programming for a diverse community. This course is designed to equip students with the necessary information and motivation to make healthy lifestyle choices.

**138 Peer Education Training (1)**

This course is designed to prepare students to participate in the Chatham College Resi-

dent Advisor program. Upon completion of course work, students are able to direct peer groups involved in various health and wellness topics and are prepared to conduct and assist with various residence life activities. Pass/Fail grading only. Prerequisite: Student must be a Resident Advisor to enroll in this course.

#### **140 Speed, Agility, & Quickness (1)**

Students will learn to utilize and increase speed, agility, and quickness to improve their training and athletic performance.

#### **141 Walking For Fitness (1)**

This course covers all aspects of walking, including equipment and training techniques. In addition, students will learn basic body dynamics and how they relate to this lifetime training activity.

#### **145 Aerobic Dancing (1)**

This course provides stimulating low-impact aerobic exercise to improve overall fitness. Routines are choreographed to music. Emphasis is on muscle tone, correct use of exercise techniques, fat density, and nutrition.

#### **147 Scottish Country Dancing (1)**

The course explores the traditional social dancing of Scotland: reels, jigs, and strathspeys (slow dances). Basic steps and figures are taught in every class and incorporated into specific dances. Students will be introduced to a variety of exciting music (fiddle, piano, accordion, bagpipes) and to the French etiquette and the history of the dance. No previous experience, partners, or kilts are required.

#### **150 Water Aerobics (1)**

This course introduces students to an aerobic method of training that is safe and unique. Students will learn a sequence of water exercises that are designed to increase cardiovascular fitness, flexibility, strength,

and muscular endurance. Swimming is not required.

#### **155 Swimming (1)**

Swimming can be an enjoyable means of maintaining fitness for a lifetime. Individual instruction is provided for beginners and experienced swimmers, who design their aquatic exercise programs. Basic stroke mechanics and common stroke defects are examined and corrected to enhance swimming proficiency.

#### **158 SCUBA (1)**

Designed for someone with no scuba experience. Students will learn the academics of diving, proper use of equipment, and safety concerns relating to scuba diving. Consists of classroom and pool time instruction. There is an additional fee for this course.

#### **161 Beginning Golf (1)**

This course emphasizes the fundamentals of golf. Attention is given to all strokes, strategies, and rules. The student is taught how to select, purchase, maintain, and properly care for equipment.

#### **165 Outdoor Adventure Course (2)**

Students engage in a variety of challenging problem-solving tasks and initiatives designed to foster individual and group goal setting; promote group dynamics and leadership development; increase self-awareness regarding abilities, limitations, strengths, and weaknesses; and encourage physical and emotional risk taking in a positive and supportive environment.

#### **166 Outdoor Leadership: Backpacking and Hiking (1)**

Students will learn the necessary skills to lead a wilderness trip, including equipment selection, outdoor cooking, map and compass reading, risk assessment and management, first-aid, and minimum impact

camping skills. Course will include a one-day and an overnight excursion.

### **209 Advanced Pilates (1)**

This course is a continuation of Physical Education 109. Beginner exercises will be reviewed and advanced options, exercises, and techniques will be taught. Prerequisite: PED 109 or permission by the instructor.

### **214 Lifesaving and Lifeguarding: American Red Cross (1)**

The course includes advanced lifesaving techniques, CPR and first-aid training, and lifeguard training as outlined by the American Red Cross guidelines. Upon completion, students may assume the responsibilities of a lifeguard at a pool or protected open water beach. (Lifesaving at open water surf beaches is not applicable to this course.)

### **228 Advanced Karate (1)**

A continuation of Physical Education 128. Students will learn advanced forms and techniques. In addition, they will have an introduction to traditional weapons used in the martial arts. Prerequisite: Physical Education 128 or permission of the instructor.

### **245 Step Bench Aerobics I (1)**

Students learn advanced, low-impact choreographed routines using step boxes, DynaBands, and hand weights. This course is not for beginners or for students who do not exercise regularly.

### **246 Step Bench Aerobics II (1)**

This course is a continuation of Physical Education 245. Students learn advanced step bench aerobic routines that require greater skill level and additional fitness demands. Prerequisite: Physical Education 245 or permission of the instructor.

### **306 Water Safety Instruction: American Red Cross (1)**

Methods of teaching swimming skills to others with emphasis on safe and skillful contact in, on, and around water. Prerequisite: Physical Education 214 or equivalent. Textbook fee required.

### **391, 392 Independent Study (1, 2)**

## **Student Development (SDE)**

Courses in this department are offered to enhance a student's professional development. Student Development 100 is a one-credit course designed to expose students to the world of work and to provide an opportunity for students to explore personal interests and abilities.

Cooperative education experience is a credit-bearing program that integrates one or more semesters of paid employment in areas related to the student's career interests. Co-op work experiences may be taken for four to 12 credits. Forty hours of work experience are required for each credit granted.

Students wishing to enroll in Chatham's internship program must register for the experience through a specific academic department. Internships are available for one to three credits. Forty hours of work experience are required for each credit granted. The Career Development office coordinates the Internship program.

A student may enroll for a maximum of 17 internship and cooperative education credits during her undergraduate education. A student may participate in only one internship experience per term. Co-ops are scheduled for one or more semesters. Students eligible for internships or co-ops

must have a 2.0 GPA or higher. Other non-credit opportunities that enhance a student's professional development are provided by the Office of Career Development.

### **100 Career Exploration (1)**

Career exploration is a course designed to assist those students who are undecided about career choices. This course covers self-assessment, career exploration, and the development of networking and internship/job search skills. Concepts such as the role and function of work in society and economic/job market trends will be incorporated into class discussions. Students learn about various sources of career information, including the Occupational Outlook Handbook and various online resources. Students leave the course with the skills to assist them in lifelong career planning and decision making.

### **105 The Learning Manager: Strategies for Success in an Academic Environment (1)**

This course prepares participants to adapt workplace strategies (quality assessment, project design and management, time management, and organization and communication skills) to an academic environment. Students are introduced to experiential learning and shown how they can receive credit for learning acquired outside the classroom. They participate in collaborative activities, including peer evaluation, study groups, and group work.

### **172 The Meaningful Life (2)**

A meaningful productive life engages people in enjoying doing their best while at the same time contributing to something beyond themselves, ideally with actions that have effect reaching far into the future. This course has 3 focal points: to examine the growing body of research on the meaningful life; to combine an academic study of the subject with an experiential component; and to help students to build a personal plan to incorporate the course concepts into their own lives.

### **204-212 Cooperative Education Experience (4-12)**

Cooperative education allows a student to pursue a paraprofessional experience and earn four to 12 academic credits. All work experiences are paid. Forty hours of co-op work experience are required for each credit granted. Through the director of career services and a faculty supervisor, both of whom advise the student on selecting a work site, the student undertakes a paid work experience appropriate to her interests and career goals. The director of career development facilitates the placement, registration, and evaluation procedures; the faculty supervisor guides the student in setting goals and awards academic credit. Pass/Fail grading option only.

# Division of Arts and Design

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*John Marsden, Ph.D., Division Chair*

## **Undergraduate Academic Programs**

Art History  
Arts Management  
Dance  
Interior Architecture  
Music  
Visual Arts  
    Electronic Media  
    Photography  
    Studio Arts

## **Graduate Academic Programs (see pages 283-360)**

Interior Architecture  
Landscape Studies  
Landscape Architecture

## **Affiliated Faculty and Staff**

Susana Amundarain, *Lecturer*  
Robert Cooley, *Director of the Media Resource Center and Lecturer*  
Liana Dragoman, *Assistant Professor of Art*  
John Marsden, *Associate Professor of Interior Architecture and Director of the Interior Architecture Programs*  
Emma Masley, *Lecturer*  
Hoda Moustapha, *Assistant Professor of Interior Architecture*  
Margaret Ross Mehl, *Director of Choral Activities and Lecturer*  
Elisabeth Roark, *Associate Professor of Art*  
Pauline Rovkah, *Instructor*  
Lisa Kunst Vavro, *Assistant Professor and Director of the Landscape Design Programs*

## Art History (ART)

The Art History major provides students with training in the critical analysis of visual images, including the traditional fine arts of painting, sculpture and architecture, and newer art forms like photography, film, video, and other electronic media. Emphasis is placed on understanding works of art in a variety of contexts: political, social, cultural, and theoretical. The program offers courses in Western art history from the Renaissance to the contemporary period. Non-Western course work focuses on Africa, Asia, Japan, and experimental courses related to the Global Focus Program. Distinctive to the major is the priority given access to and hands-on experience with actual works of art. Through site visits to local art museums, work with the College collections, and curating exhibitions for the College gallery, the Chatham art history student has an unusual degree of exposure to physical art objects, the contexts within which they exist, and the impact of those contexts.

### Major Requirements:

#### 14 courses, including:

- ART 131 History of World Art I: Pre-History to 1400 (3)
- ART 132 History of World Art II: 1400 to the Present (3)
- ART 231 Renaissance Art (3)
- ART 234 Baroque and Rococo Art (3)
- or**
- ART 248 19th-Century Art (3)
- ART 254 Modern Art, 1890 to 1950 (3)
- or**
- ART 256 Contemporary Art, 1950 to the Present (3)
- ART 271 Asian Art (3) **or**
- ART 372 African Art (3)
- ART 308 Museum Studies and Art Gallery Practicum (3)
- ART 363 Women and Art (3)

- ART 366 American Art: Colonial to 1900 (3)
- ART 498-499 Tutorial (8)
- 1 studio art course
- 2 of the following:
- ART 257 20th- and 21st-Century Architecture (3)
- ART 316 Japanese Prints: Technique and History
- ART 327 The Carnegie International (3)
- ART 338 Impressionism (3)
- ART 391, 392, 393 Internship (1, 2, 3)
- ART 491, 492, 493, 494 Independent Study (1, 2, 3, 4)

Any one of the courses not selected above as a major requirement, or approved experimental courses, may also be used to satisfy the elective requirements.

### Interdisciplinary Major Requirements

#### 8 courses, exclusive of the tutorial:

- ART 131 History of World Art I: Pre-History to 1400 (3)
- ART 132 History of World Art II: 1400 to the Present (3)
- ART 231 Renaissance Art (3)
- ART 234 Baroque and Rococo Art (3)
- or**
- ART 248 19th-Century Art (3)
- ART 254 Modern Art, 1890 to 1950 (3) **or**
- ART 256 Contemporary Art, 1950 to the Present (3)
- ART 271 Asian Art (3) **or**
- ART 372 African Art (3)
- ART 363 Women and Art (3)
- ART 366 American Art: Colonial to 1900 (3)

### Minor Requirements

#### 6 courses, including:

- ART 131 History of World Art I: Pre-History to 1400 (3)
- ART 132 History of World Art II: 1400 to the Present (3)

- ART 231 Renaissance Art (3)  
 ART 256 Contemporary Art, 1950 to the Present (3)  
 ART 271 Asian Art (3) **or**  
 ART 372 African Art (3)  
 ART 366 American Art: Colonial to 1900 (3)

### 131 History of World Art I:

#### Pre-History to 1400 (3) *Fall*

This introductory survey focuses on art of the ancient world and the Middle Ages in the West, and selected non-Western cultures to 1400, including India, China, and Mesoamerica. It emphasizes the role of art in the formation of a culture, the shifting function of art in different societies and time periods, and the approaches students can use to understand art.

### 132 History of World Art II: 1400 to the Present (3) *Spring*

This introductory survey focuses on Western art from the Renaissance to today and the art of selected non-Western cultures (including Japan, Africa, and Islamic countries) after 1400. It concentrates on the stylistic, technical, and expressive evolution of painting, architecture, and sculpture within specific historical contexts, yet also explores the cross-influences and interaction of non-Western and Western art as defining characteristics of the modern world.

### 231 Renaissance Art (3) *Every third fall*

This course traces the rise of the humanistic spirit in the art of Italy between 1300 and 1550. Equal emphasis is placed on the achievements of Early Renaissance artists and architects (Ghiberti, Alberti, Donatello, Masaccio, Botticelli), and the masters of the High Renaissance (Leonardo, Raphael, Michelangelo, Bramante, Titian). Prerequisite: Art 131 or 132, or permission of the instructor.

### 234 Baroque and Rococo Art (3)

*Every third spring*

An in-depth survey of the various styles and aims of European art from 1590 to 1700. Prerequisite: Art 131 or 132, or permission of the instructor.

### 248 19th-Century Art (3) *Every third fall*

This survey examines art movements in France, England, Germany, and other European countries from the early to late 19th-century, focusing on Romanticism and Realism, the Pre-Raphaelites, Impressionism and Post-Impressionism, and Symbolism. It explores the impact of urbanization, industrialization, and race and gender issues on visual culture. Prerequisite: Art 132 or permission of instructor.

### 250 History of Interior Architecture: Prehistory to the 20th Century (3)

This survey course examines world architecture from prehistoric times through the 20th century, including the built environment of Europe, the Middle East, Asia, and the Americas. Emphasis is placed on the role of interior spaces, furnishings, and art within architecture.

### 254 Modern Art, 1890 to 1950 (3)

*Even springs*

A survey of the major movements in the art of Europe and America from the end of the 19th century to the middle of the 20th century, focusing on the concept of modernism, who and what shaped it, and the shifting definitions of the artist in the modern period. Prerequisite: Art 132 or permission of the instructor.

### 256 Contemporary Art, 1950 to the Present (3) *Odd springs*

This course examines recent trends in world art, focusing on new media and movements, including installation art, earth art, video art, postmodernism, and

the new theoretical and conceptual approaches to art and art history.

**257 20th- and 21st-Century Architecture (3)** *Every third spring*

This course explores the history of 20th- and 21st-century architecture through such topics as visionary architecture, women in architecture, film and architecture, and virtual and media architecture. Walking tours of Pittsburgh and field trips to key buildings are planned.

**263 Women and Art (3)** *Every third fall*

This course explores the status of women in the arts, images of women in art, art made by women, and women as patrons. The orientation of the course, i.e., the periods, artists, and issues addressed, is determined by the instructor and may change each time it is taught. Prerequisite: Art 132 or permission of the instructor.

**271 Asian Art (3)** *Every third spring*

This course surveys the art of India, China, Southeast Asia, Korea, and Japan from the earliest civilizations to the modern period. Since much Asian artistic production was inspired by religious belief, students also will be introduced to the major currents of Asian religion and philosophy, including Buddhism, Hinduism, Jainism, Islam, Confucianism, Daoism, and Shintoism.

**308 Museum Studies and Art Gallery Practicum (3)** *Every third spring*

This course has three objectives: to introduce students to the history and development of art museums, to explore current critical issues, and to provide students with practical experience in the research, design, and installation of exhibitions for a small college art gallery and the management of the college collections. It involves visits to local art collections to view their holdings, study their organization, and talk to mu-

seum professionals. Prerequisites: Art 131 or 132, and one 200- or 300-level art history course.

**316 Japanese Prints: Technique and History (3)** *Every fourth spring*

This course is team-taught by an art historian, who explores with students the development of Japanese prints from the earliest Buddhist images to the brilliant ukiyo-e of the mid-19th century, and a printmaker, who teaches students the traditional Japanese method of woodblock printmaking.

**327 The Carnegie International (3)**  
*Every third or fourth fall, as the exhibition is scheduled*

Offered in conjunction with the Carnegie International, America's premier exhibition of contemporary art, the course examines the history and function of the International and similar exhibitions, trends in contemporary art as conceptualized by the exhibition's curator, and critical issues raised by the exhibition. One-third to one-half of the classes are held at the Carnegie. Prerequisite: Art 132 or permission of the instructor.

**338 Impressionism (3)** *Every third spring*

This course examines the revolutionary 19th-century French movement Impressionism from its origins in Realism and Manet to the triumph of the 1870s and 1880s, focusing specific attention on the careers of Monet, Degas, Caillebotte, and Cézanne and the social, political, and cultural contexts that shaped their work. Prerequisite: Art 132 or permission of the instructor.

**366 American Art: Colonial to 1900 (3)** *Every third spring*

This course examines the major movements, artists, and cultural issues of Ameri-

can painting, sculpture, and photography from its beginnings to 1900. Special attention is given to works that address definitions of American “identity” and cultural interaction and conflict between races. Prerequisite: Art 132 or permission of the instructor.

### **372 African Art (3) *Every third fall***

This course explores the rich diversity of art across sub-Saharan Africa from the Paleolithic era to today. It focuses on cultures from West Africa, Central Africa, and East Africa to complement the holdings of the College’s outstanding Olkes Collection of African Art, which includes more than 600 objects. Class lecture, discussion, and student projects utilize works from the collection, including masks, wood sculpture, beadwork, and metalwork.

### **391, 392, 393 Internship (1, 2, 3)**

### **491, 492, 493, 494 Independent Study (1, 2, 3, 4)**

### **498-499 Tutorial (8 on completion)**

## **Arts Management**

The arts management degree is an interdisciplinary major, combining courses from business, economics, and fine and performing arts. The program is designed specifically to prepare students for either immediate placement in managerial positions in a variety of visual or performing arts organizations or for graduate study in arts administration. Students must specialize in one area of the arts and are urged to gain preprofessional experience by completing an internship in their chosen fields.

## **Major Requirements**

### **16 courses, including:**

- ACT 222 Financial Accounting Principles I (3)
- BUS 105 Introduction to Management (3)
- BUS 245 Marketing (3)
- BUS 337 Managing Nonprofit Organizations (3) **or**
- BUS 343 Small Business Management and Entrepreneurship (3) **or**  
An approved course in arts management
- ECN 102 Principles of Microeconomics (3)
- MTH 110 Elementary Statistics (3)

Additionally, the student must chose an area of concentration by completing at least 8 courses from one of the following programs: Art History, Music, Theatre, or Visual Arts. The tutorial must explore an issue that combines the student’s field of artistic interest with business and economics. An internship in the student’s field of concentration, although not required, is highly recommended.

## **Dance (DAN)**

The dance minor is designed to provide students the opportunity to explore dance theory, dance technique, and the practice of dance.

### **Minor Requirements**

#### **5 courses, including:**

- DAN 101 The World of Dance (3)
- DAN 139 Dance Theatre Performance (2)
- DAN 201 Streams of Theatrical Dance (3)
- DAN 221 Contemporary Dance Technique II (3)

1 of the following:

- DAN 121 Contemporary Dance Technique I (3)
- DAN 249 Ethnic Dance Sampler (2)

**101 The World of Dance (3)**

This class explores the multitude of dance forms around the world via lectures, readings, films, and live performances. It approaches movement as a means of expressing the spirit and performing ritual, interacting socially and embodying cultural mores, and creating art. It looks at how new forms of dance are evolving as cultures fuse and technology opens up new venues.

**121 Contemporary Dance Technique I (3)**

This course introduces students to a blend of modern dance, modern ballet, and other prevalent dance forms.

**139 Dance Theatre Performance (2)**

This course is built around a specific dance performance, for which students must audition and be cast.

**201 Streams of Theatrical Dance (3)**

This course follows the development of dance as a concert art form, from the rise of ballet in Paris and St. Petersburg to the current explosion of new dance voices worldwide. To enhance student understanding, the class will view dance videos, while studying influential factors such as innovation in other art forms, changing social fads, and individual artist contributions.

**221 Contemporary Dance Technique II (3)**

This class continues an eclectic approach to technique, emphasizing varied approaches to modern dance and/or modern ballet. It provides some additional athleticism and challenge, as well as an exploration of new skills according to the expertise of the instructor: elements of contact improvisation or other forms of partnering and new approaches to composition.

**249 Ethnic Dance Sampler (3)**

An introduction to several selected folk and social dances from around the world. May include such dance forms as popular Latin, Balkan line, West African, Appalachian clog and Swing. May feature guest teacher workshops with specializations ranging from the Brazilian dance/martial art of Capoeira to Odissi Dance from India.

**Interior Architecture (IAR)**

The Bachelor of Interior Architecture is a first professional interior design program consisting of 120 credits. The curriculum includes foundation courses in the arts, interior architecture courses, an internship, electives, and a tutorial. The Bachelor of Interior Architecture prepares students for practice in an interior design or architecture firm.

**Major Requirements****26 courses, including:**

ART 117	Drawing I (3)
ART 135	2-D Design (3)
ART 124	3-D Design (3)
ART 250	History of Interior Architecture: Prehistory to the 20th Century (3)
ART 257	20th and 21st Century Architecture (3)
IAR 102	Introduction to Interior Architecture (3)
IAR 105	Environment and Behavior (3)
IAR 210	Drafting & Graphics (3)
IAR 215	Computer Design Technology (3)
IAR 220	Interior Architecture I (3)
IAR 225	Interior Architecture II (3)
IAR 230	Color & Textiles (3)
IAR 235	Materials & Assemblies (3)
IAR 310	Advanced Computer Design Technology (3)

- IAR 315 Construction Documents (3)  
 IAR 320 Interior Architecture III (6)  
 IAR 325 Interior Architecture IV (6)  
 IAR 330 Environmental Systems (3)  
 IAR 335 Lighting & Acoustics (3)  
 IAR 420 Tutorial I (4)  
 IAR 425 Tutorial II (4)  
 IAR 440 Internship (6)  
 IAR 445 Professional Practice (3)  
 3 courses (9 credits) from any program

### **102 Introduction to Interior Architecture (3)**

This course provides an overview of the interior design profession. Guest lectures are provided by local practitioners to provide information about the industry and to present recent design work.

### **105 Environment & Behavior (3)**

The designed environment influences and is influenced by human activity patterns and behavior. This course is an introduction to significant theories concerning the interaction of people and interior architecture. Emphasis is placed on shared human needs and differences based on age, culture, gender, and occupation.

### **210 Drafting & Graphics (3)**

This course develops graphic literacy as a language and philosophy for observation, analysis, expression, and presentation of interior architecture. Students are introduced to a number of techniques and methods of drawing used by interior designers, including freehand drawing, use of colored pencils, markers, and mechanical drafting through various exercises. An understanding is developed of architectural scale, plans, elevations and sections. Additional work is spent on values, colors, palettes, and shadowing techniques that culminate in a final project. *Cross listed as LAR 510.*

### **215 Computer Design Technology (3)**

Students learn the basic computer drafting and drawing skills associated with AutoCAD software. Projects include creating new work from scratch and working from existing files. An understanding of drawing layers, detailing, layout, and printing will be presented. Students are also introduced to Photoshop to build technical knowledge in image processing. *Cross listed as LAR 513.*

### **220 Interior Architecture I (3)**

This studio addresses problem identification and problem solving in the context of small scale projects of modest scope. Emphasis is placed on human factors, space planning, spatial experience, scale, materials, furniture, fixtures, equipment, and color with respect to user needs. Prerequisite: Art 124 and 135 or Art 200.

### **225 Interior Architecture II (3)**

This studio addresses problem identification and problem solving in the context of small scale projects of modest scope. Emphasis is placed on human factors, space planning, spatial experience, scale, materials, furniture, fixtures, equipment, and color with respect to user needs. Prerequisite: Interior Architecture 220.

### **230 Color & Textiles (3)**

The first part of this course examines theories of color in relation to light and space. In the second part, key topics include the selection, specification, and application of textiles based on their properties and performance criteria, sustainability, installation methods, maintenance requirements, and regulations and standards.

### **235 Materials & Assemblies (3)**

Materials and finishes appropriate for interior architecture are addressed in this course. Emphasis is placed on sustainability characteristics, properties and performance

criteria, installation and assembly methods, maintenance requirements, and estimation of material requirements.

### **310 Advanced Computer Design (3)**

This advanced computer-aided design course focuses on complex three-dimensional modeling. Students are instructed to use specific software, such as Autodesk VIZ, Revit 6, and Lightscape. Graphic skills are also developed to help students communicate interior design schemes. Prerequisite: Interior Architecture 215.

### **315 Construction Documents (3)**

Construction techniques are studied through the production of a set of construction documents. Issues addressed include the selection and assembly of materials, construction methods, detailing of interior finish systems and cabinetry, building codes, and accessibility. Prerequisites: Interior Architecture 210, 215, and 235.

### **320 Interior Architecture III (6)**

This advanced studio addresses concept development, design development, and detailing of medium and large-scale projects. Emphasis is placed on program analysis, user needs, space planning, three dimensional spatial development, design language and composition, materials and assemblies, color, lighting, acoustics, environmental systems, and building codes and life safety. Prerequisites: Interior Architecture 215 and 225.

### **325 Interior Architecture IV (6)**

This advanced studio addresses concept development, design development, and detailing of medium and large-scale projects. Emphasis is placed on program analysis, user needs, space planning, three dimensional spatial development, design language and composition, materials and assemblies, color, lighting, acoustics, envi-

ronmental systems, and building codes and life safety. Prerequisites: Interior Architecture 310 and 320.

### **330 Environmental Systems (3)**

This course provides an overview of environmental control systems including HVAC, plumbing, fire protection, power distribution, security, and data/voice telecommunication. Emphasis is placed on energy consumption and conservation, human comfort, and health and safety.

### **335 Lighting & Acoustics (3)**

This course is an introduction to lighting and acoustics. Emphasis is placed on the psychology of lighting, visual comfort criteria, measurement and calculations, available technologies in lighting design, the selection of fixtures, and the application of computer aided lighting simulation tools. Principles of acoustics, acoustic properties of materials and building systems in relation to building structures, sound transmission between rooms, and design methods in room and building acoustics are also addressed.

### **420 Tutorial I (4)**

This course is the first part of a year long tutorial that stresses evidence-based design. Students create a program for a project selected by the instructor using the latest research and literature available. The program serves as the foundation for design decision-making in IAR 425. Prerequisite: Interior Architecture 325.

### **425 Tutorial II (4)**

This course is the second part of a year long tutorial that stresses evidence-based design. Using the program developed in IAR 420 as a foundation, students investigate a problem from concept generation through design development and detailing. Prerequisite: Interior Architecture 420.

**440 Internship (6)**

An internship experience provides students with a greater understanding of professional practice. With instructor approval, students work full-time in an office environment under the supervision of a practitioner.

**445 Professional Practice (3)**

In this course, students are introduced to the specialized services provided by the professional interior designer. Emphasis is placed on office operations and personnel issues, marketing strategies, project management, contract documents, ethics, and the legal and financial aspects of professional practice.

## Landscape Studies (LNS)

The basic certificate in landscape studies introduces students to the range of ideas and practices within the landscape design field, with an emphasis on understanding the complex forces that shape the environment. *See the Landscape Studies Certificate on page 245.*

An undergraduate landscape studies major is not offered.

**300 Perspectives on Landscape (3)**

*This design studio is the foundation course for the landscape studies program.* The course gives students a broad overview of the breadth and scope of landscape design as it expresses society's relationship and attitudes toward nature and the land. Students will begin to learn the language and vocabulary used for viewing, describing, analyzing, and designing landscapes by looking at examples of historical and contemporary landscape design. Through weekly design exercises, including collages,

sketches, and model making, students will learn how landscape space and form are created and how they articulate meanings and functions. They will explore the interrelationships of the structural elements that define landscape space and investigate the principles that create spatial design. Emphasis will be placed on learning how to generate ideas, giving aesthetic and functional form to these creative concepts.

**411 Foundation Design Studio I: The Methods and Processes of Landscape Design (3)**

This foundation studio provides an overview of the art and philosophy of landscape design. Students begin to learn the verbal and graphic vocabulary to articulate and conceptually express approaches to the art world and landscape design. Students explore how space and form are created and how they articulate meanings and functions. Studio exercises place an emphasis on learning how to generate design ideas, giving aesthetic and functional form to creative concepts.

**412 Applied Design Studio II: The Principles and Practice of Landscape Design (3)**

In this course students learn to analyze, synthesize, and assimilate contextual and site-specific information into the development and presentation of creative design solutions for specific landscape projects at different scales. These projects lead to an understanding of design problem definition; program development; site analysis and inventory, as essential elements in the design process. Prerequisite: Landscape Studies 411 and 415. *Cross-listed as ENV 412.*

**415 Drafting and Graphic Representation (3)**

This studio develops graphic literacy as a language and philosophy for observation, analysis, expression, and presentation of

landscape design. Students are introduced to a number of techniques and methods of drawing used by landscape designers including: freehand drawing, colored pencils, markers, and mechanical drafting through exercises. Additional work is spent on values, colors, palettes, and shadowing techniques that culminate in a final studio project.

#### **421 Plants and Design I (3)**

This course introduces students to the art of designing landscape spaces with plant material. This study of outdoor space concentrates on exploring landscape character as a product of the relationship of spaces that people observe and occupy to the plants and architectural masses that define these spaces. The course explores the abstract relationships of mass, height, distance, perception of texture, and color in plant groupings. Students learn to recognize woody plants for their structural and visual qualities, growing conditions, plant spacing, and growth rates to generate detailed planting plans. Prerequisite: Landscape Studies 411 and 415 or permission of the instructor.

#### **422 Plants and Design II: Site Ecology and Ecological Design and Planning (3)**

In this studio, students are introduced to the concepts of ecological design and planning at a number of scales – from residential to urban space. They explore the systems approach to design, concerning both site ecology and enhancement of the site, which include the science and the art of ecological design. Through critical reflection, students are encouraged to go beyond mechanical and prescriptive responses to arrive at solutions that harmonize aesthetic form and ecological functioning. Prerequisite: Landscape Studies 411, 412, 415 and 421.

#### **423 Plant Propagation Laboratory (3)**

This course focuses on the principles and practical methods of the propagation of horticultural, herbaceous, and woody plants as they relate to commercial propagation. Principles of sexual and asexual vegetative propagation are covered. Students gain practical experience in a tissue culture laboratory that specializes in hard-to-propagate plants. Prerequisite: Biology 224 or permission of the instructor. *Cross-listed as Biology 323.*

#### **424 Field Botany (3)**

This course introduces students to the concepts and skills needed to identify plants, make practical and scientific collections, and understand the ecological and evolutionary relationships between major plant families. It includes field trips, class/laboratory work, and several research projects, including the generation of a dichotomous plant key and plant collection. Prerequisite: Biology 224 or permission of the instructor. *Cross-listed as Biology 324.*

#### **431 Survey of the History of Landscape Design (3)**

The landscape traditions of the Western and Eastern worlds are surveyed from antiquity to the present. The course explores the relationships between designed landscape forms within each culture as well as the political, social, philosophical, and artistic factors that could have determined and influenced the designed landscape. The course draws attention to the fundamental notion that landscape design is both an invention and cultural representation of landscape.

#### **451 Soil Science (3)**

Soils are studied as natural bodies, media for plant growth, and ecosystem components. Topics include soil morphology and characteristics, composition, formation, conservation, and soil erosion. Physical,

chemical, and biological properties of soil are related to the production of plants; the functioning of hydrologic and nutrient cycles; and the protection of environmental quality. Prerequisite: Environmental Studies 129 or equivalent, or permission of the instructor.

#### **453 Ornamental Horticulture (3)**

This course introduces students to plant biology and relates this science to practical applications in horticulture. It develops a general understanding of the botanical concepts of plant structure, physiology, function, growth, reproduction, and evolutionary diversity. In addition, students are introduced to the horticultural concepts and practices of plant propagation, transplantation, care, and management of ornamental plants.

#### **454 Plant Management (3)**

This course covers the identification, culture, use, care, and management of ornamental, woody, and herbaceous plants that can be used in designed landscapes. Students learn how to identify a large palette of plants while considering the aesthetics of form, color, texture, and seasonal changes in each plant. The course also covers the general issues of plant maintenance, use of fertilization, and management systems to create environmentally healthy horticultural practices. Maintenance topics include trimming, pruning, and transplanting. Prerequisite: Landscape Studies 453 or permission of the instructor.

#### **457 Diseases and Pests (3)**

This course introduces students to the common biotic and abiotic problems caused by diseases and pests in ornamental plants, as well as, basic concepts of the current techniques and practices on managing these problems. Students cover the general principles of plant problem diagnosis and identification of common dis-

ease and insect problems. Disease and pest management topics include the concepts of integrated pest management, vertebrate pest management, and pesticide use and safety. Prerequisite: Landscape Studies 453 or permission of the instructor.

#### **463 Greenhouse Plant Production/ Lab (3)**

This course provides introduction to techniques and concepts governing the care and maintenance of a modern greenhouse, along with the cultivation of greenhouse-grown plants. Topics include the environmental factors that influence plant growth. Students gain practical experience with greenhouse operations, and with the cultural and environmental requirements for growing various types of plants. Prerequisite: Biology 224 or permission of the instructor

#### **495 Capstone Project (3)**

## **Music (MUS)**

The music program offers a variety of courses in the history, theory, and performance of music, including cross-cultural and technological aspects. Performance is encouraged through numerous student recitals, the tutorial, and participation in the Chatham College Choir. Students have opportunities to study privately with members of the Pittsburgh Symphony Orchestra and on occasion may present public performances with their teachers. The student majoring in music also may choose to focus on other aspects of the discipline, including creative projects. The cross-disciplinary opportunities afforded by the College curriculum allow for imaginative program design.

### Major Requirements

**14 courses, including:**

- MUS 160 The Art of Music (3)  
 MUS 161 Music Theory I (3)  
 MUS 252 Music Theory II (3)  
 MUS 363 Music Theory III (3)  
 MUS 267 History of Music I (3)  
 MUS 368 History of Music II (3)  
 MUS 404 Composition: Song Arranging (3)

MUS 498-499 Tutorial (8)

1 of the following:

- MUS 225 From Blues to Rock (3)  
 MUS 232 Women in Music (3)  
 MUS 261 Music in America (3)  
 MUS 262 Electronic/Computer Music Studio (3)

MUS 266 World Music (3)

4 two-credit courses in applied music after acceptance into the major program.

Basic keyboard proficiency is expected for completion of the music major.

Additional Requirements:

**Voice Concentration**

MUS 171 Choir (2 each semester)  
 Two semesters of French or Spanish

**Piano and Orchestral Instrument Concentrations**

During the course of the program, four solo ensemble performances (piano and instrument, two pianos, voice and piano, etc.), supervised by Applied Music faculty.

### Interdisciplinary Major Requirements

**9 courses, excluding the tutorial:**

- MUS 160 The Art of Music (3)  
 MUS 161 Music Theory I (3)  
 MUS 252 Music Theory II (3)  
 MUS 267 History of Music I (3)  
 MUS 368 History of Music II (3)  
 4 two-credit courses in applied music.

### Minor Requirements

6 courses selected in conjunction with the music program director, and approved by the faculty advisor and music program director.

**124 Opera: Mozart to Verdi (3)**

This course examines Italian, French, and German operas from the Classical period through the 19th century. A study of components of operatic form (e.g., recitative, aria, ensemble) and musical characteristics of historical periods, national styles, and individual composers is implemented through musical examples and readings. Voice types/classifications and character interpretations are discussed.

**160 The Art of Music (3)**

Through guided listening, students examine musical works and gain an understanding of the style of various composers and historical periods. Relevant cultural features are presented and basic elements of music are introduced to enhance the appreciation of this art form.

**161 Music Theory I (3)**

The course covers the fundamentals of basic musicianship: scales, intervals, chord forms, analysis, and writing involving diatonic harmony. Creative use of materials is encouraged. The course includes aural training and sight-singing.

**165 Romanticism in Music (3)**

The course provides an introduction to the music of the master composers of the Romantic period and the early 20th century. Including the composers of opera, chamber, and symphonic music, the course surveys in sound the performances of today's finest orchestras, soloists, singers, and choruses.

**174 Survey of Jazz (3)**

Students explore the origin and development of jazz from its African origins to

Dixieland and contemporary styles. They become familiar with jazz musicians and a wide variety of jazz styles through recorded music and, when possible, live performances.

### **225 From Blues to Rock (3)**

A critical examination of the intimate relation between blues and rock; their roots in African, African-American, and Anglo-American traditions; the sociopolitical implications of the roles played by each in American life; and the function of both as forms of ironic social commentary and protest.

### **232 Women in Music (3)**

This course is a survey of women composers in Western art music, with a special emphasis on contemporary composers. This survey will include such important figures as Ruth Crawford, Ellen Taaffe Zwilich, and Tania Leon.

### **252 Music Theory II (3)**

The course is a continuation of Music Theory I, and includes a basic study of 16th-century counterpoint. Prerequisite: Music 161

### **261 Music in America (3)**

Students explore the development of music in the New World, showing the interaction of native contributions such as jazz or folk music on a transplanted European culture.

### **262 Electronic/Computer Music Studio (3)**

Using an array of MIDI-compatible keyboards, instruments, and computers, the course focuses on digitally generated sound and timbres, computer-assisted sound production, and multi-tracked recording techniques. Where appropriate, emphasis is placed on applications to film, theatre, dance, and other arts.

### **266 World Music (3)**

The course focuses on the music and related arts of selected major civilizations of the world, including India, China, and Japan as well as areas such as Southeast Asia, South America, and Africa. Emphasis is placed on the factors resulting in art that is sometimes quite different from Western music.

### **267, 368 History of Music I, II (3 each)**

These courses examine the growth and development of music as an art, music as a part of the whole of civilization, and representative works of all periods leading to an understanding of music itself. Music 267 is a prerequisite for Music 368.

### **284 From Pirates to Punks (3)**

This course examines British and American counter-cultural music from a cultural studies perspective, incorporating sources from British satire and ballads to films on punk subculture. Music of outlaws, prisoners, "fallen women," disenfranchised youth, and other marginalized people and outcasts will be studied in cultural context as a rich corpus of English-language creativity.

### **363 Music Theory III (3)**

The course examines the elements of 18th-century tonal counterpoint. The principles of tonal harmony are applied in combination with various contrapuntal techniques, and contrapuntal forms of the Baroque period are analyzed. The composition of small forms is included. Prerequisite: Music 252 or equivalent.

### **404 Composition: Song Arranging (3)**

The course is designed to apply the content of the Common Practice Period (tonal music) to current commercial music. Various arranging concepts and techniques will be applied as the student creates her own arrangements of melodies. Prerequisite: Music 363 or equivalent

## Applied Music Courses

Students register for these performance courses according to the established registration procedure. In the case of private lessons, students are responsible for arranging a lesson time with the private instructor at the beginning of each semester.

### 171 Choir (2)

Students prepare and perform a wide variety of choral literature for both women's and mixed voices. An audition is required, as are two two-hour rehearsals per week. Pass/fail grading only.

### 173 Instrumental Ensemble (2)

Preparation and performance of chamber music for various ensembles.

### 175 Voice (1)

One 30-minute lesson per week. Corequisite: Music 171 or another music program course. Applied music fee.

### 176 Voice (2)

One 60-minute lesson per week. Applied music fee.

### 177 Voice (3)

One 60-minute lesson per week, plus performance. Applied music fee.

### 191 Piano (1)

One 30-minute lesson per week. Corequisite: Music 171 or another music program course. Applied music fee.

### 192 Piano (2)

One 60-minute lesson per week. Applied music fee.

### 193 Piano (3)

One 60-minute lesson per week, plus performance. Applied music fee.

### 195 Orchestral Instruments (1)

One 30-minute lesson per week. Corerequisite: A music program course. Applied music fee.

### 196 Orchestral Instruments (2)

One 60-minute lesson per week. Applied music fee.

### 197 Orchestral Instruments (3)

One 60-minute lesson per week, plus performance. Applied music fee.

### 391, 392, 393 Internship (1, 2, 3)

### 491, 492, 493, 494 Independent

#### Study (1, 2, 3, 4)

### 498-499 Tutorial (8)

## Visual Arts (ART)

The Visual Arts major is designed to prepare students to work as visual communicators and artists in a complex, rapidly changing global culture. The mission of the major is to empower students through the integration of technical applications and critical theories, to provide students with marketable skills, to assume creative, scholarly and leadership roles in the visual arts field, and to promote an understanding of the role that the visual arts play in all facets of contemporary life. Concentrations are available in: Electronic Media, Photography, and Studio Arts.

### Major Requirements

#### 16 courses, including:

8 core courses

ART 132 History of World Art II (3)

ART 141 Media Literacy (3)

ART 151 Media Analysis: Text (3)

ART 254 Modern Art, 1890-1950 (3) **or**

ART 256 Contemporary Art, 1950 to the Present (3)

ART 393 Internship (3) **or**

ART 429 Junior Seminar (3)

ART 498-499 Tutorial/Capstone (8)

PHI 476 Art, Beauty, Truth (3)

In addition to the core courses listed above, students must complete the requirements for one of the following concentrations.

**Electronic Media Concentration**

Students in this concentration must substitute COM 161, Intro to Film, Video and New Media Art, for ART 132 in the core major requirements.

- ART 261 [www.design/code+aesthetics](http://www.design/code+aesthetics) (3)  
 ART 262 [www.design.two/interface+structure](http://www.design.two/interface+structure) (3)  
 ART 265 Interactive Strategies (3)  
 ART 277 Media Analysis: Context (3)  
 ART 206 Digital Sound Production (3)  
 ART 249 Introduction to Digital Video Production (3)  
 ART 353 Print Design (3)  
 ART 421 Digital Animation and Compositing (3)  
 ART 425 Electronic Sculpture (3)  
 ART 471 Advanced E-marging Media Studio (3)

**Photography Concentration**

- ART 241 Lighting Principles (3)  
 ART 247 Digital Photography and Restoration (3)  
 ART 273 Photography I (3)  
 ART 277 Media Analysis Context (3)  
 ART 357 Photography II (3)  
 ART 388 Landscape Photography (3)

2 electives in electronic media

**Studio Arts Concentration**

- ART 105 Sculpture I (3)  
 ART 111 Ceramics I (3)  
 ART 115 Painting I (3)  
 ART 117 Drawing I (3)

2 courses in 2-dimensional art from the following:

- ART 127 Printmaking I (3)  
 ART 135 2-D Design I (3)  
 ART 215/315/415 Painting Studio (3)  
 ART 217/317/417 Drawing Studio (3)  
 ART 222/322/422 Advanced Design & Color Theory (3)  
 ART 227/327/427 Printmaking Studio (3)

2 courses in 3-dimensional art from the following:

- ART 124 3-D Design I (3)  
 ART 205/305/405 Sculpture Studio (3)  
 ART 211/311/411 Ceramics Studio (3)

**Visual Arts Minor Requirements**

- ART 132 History of World Art II (3)  
 ART 141 Media Literacy (3)  
 ART 254 Modern Art: 1890-1950 (3)

**or**

- ART 256 Contemporary Art: 1950 to the Present

4 electives in one of the concentrations in Electronic Media, Photography, or Studio Arts, selected in conjunction with the faculty advisor and approved by the division chair.

*Note: For courses that require video editing equipment, students must provide their own portable hard drive. Please see a visual arts faculty member for specifications.*

**105 Sculpture I (3) Fall**

This beginning course explores the basic concepts, materials, and techniques of sculpture, including carving, casting, and construction. Conceptual and critical approaches are introduced in their relation to specific projects. Applied art fee.

**111 Ceramics I (3) Fall**

This studio course provides students with an introduction to ceramic processes and materials. Instruction in beginning wheel-throwing methods augments competency in basic construction and surface application techniques. Projects focus on development of form and surface in ceramics, as well as exposure to historical and contemporary issues specific to the medium. Applied art fee.

**115 Painting I (3) Spring**

This course introduces the student to basic principles of painting and two-dimen-

sional thinking and expression. Drawing skills, color theory, stretcher construction, and a general understanding of visual art concepts accompany each assignment. Applied art fee.

### 117 Drawing I (3) *Fall*

Through various drawing media, this studio course explores the basic principles of creating a work of visual art, including figure studies from the model, studies from nature, and techniques of composition. Applied art fee.

### 124 3-D Design I (3)

This course introduces the student to the basic elements of 3-D design. Through slide lectures, field trips, and a sequence of problem-solving exercises in conjunction with basic shop skills in a variety of materials, students explore such areas as furniture and interior, sculptural, and architectural design. Basic computer applications are introduced. Applied art fee.

### 127 Printmaking I (3) *As needed*

This course is an introduction to the techniques and aesthetics of graphic media, including dry point, engraving, mezzotint, etching, and aquatint. Applied art fee.

### 135 2-D Design I (3)

This course is an introduction to the problems and use of two-dimensional design. Subjects include pattern, balance, scale, movement, rhythm, proportion, and relationships of figure to ground in various media. Applied art fee.

### 141 Media Literacy (3) *Fall*

This course familiarizes students with some of the possibilities digital technology offers for the manipulation of still images, sound, and motion pictures. Students become proficient with the Macintosh system as they discover how computers are radically changing the way image makers

create and present their work. Applied art fee. *Cross-listed as COM 141.*

### 151 Media Analysis: Text (3) *Spring*

This course introduces the student to the development of the media arts from the invention of photography and film in the 19th century to the present electronic media. Lectures are accompanied by screenings of works in various media, including film, video, digital media, installation, and performance.

### 200 2-D & 3-D Design (3)

This accelerated course provides an introduction to two dimensional design and addresses pattern, balance, scale, movement rhythm, proportion, and relationships of figure to ground in various media. The course also introduces students to the basic elements of 3-D design. Students explore furniture and interior, sculptural, and architectural design through lectures, field trips, and a sequence of problem-solving exercises. (For transfer students and Chatham College students with a change of major.)

### 205/305/405 Sculpture Studio (3)

*Even springs*

This advanced studio course gives the student the opportunity to study a particular process or combination of processes in more depth. Contemporary approaches such as installation and performance art, and environmental and conceptual art are introduced. Prerequisite: Art 105 or permission of the instructor. Prerequisite: Art 105 or permission of the instructor. Applied art fee.

### 206 Digital Sound Production (3)

*Odd springs*

A studio course designed to present the theoretical and practical elements of audio physiology and production techniques, creating a learning environment in which stu-

dents can apply their production skills to a variety of media. Specific material includes recording and dubbing techniques, audio mixing, equipment management, and digital sound. Prerequisite: Art 141 or permission of the instructor. Applied art fee.

**211/311/411 Ceramics Studio (3)**

*Spring*

This studio course advances the student in all technical aspects of ceramics and explores conceptual, critical approaches both to the medium and to specific contemporary issues. Prerequisite: Art 111 or permission of the instructor. Permission of instructor required for Art 311 and 411. Applied art fee.

**215/315/415 Painting Studio (3) Fall**

This advanced course in painting gives the student a broad understanding of technical issues in the context of contemporary conceptual and critical approaches to the medium. Students will have an opportunity to work on independent projects. Prerequisite: Art 115 or permission of the instructor. Applied art fee.

**217/317/417 Drawing Studio (3)**

*Odd springs*

This advanced studio course continues figure studies from the model, as well as landscape drawing and architectural drawing. Conceptual and critical approaches to the medium are emphasized. Prerequisite: Art 117 or permission of the instructor. Applied art fee.

**222/322/422 Advanced Design and Color Theory (3) Odd falls**

This studio course introduces a series of advanced-level studio projects that integrate design concepts with an intensive study of color practice and theory. A variety of media and approaches, including the computer, are investigated. Prerequisite:

Art 124 or permission of the instructor. Applied art fee.

**224/324/424 3-D Design Studio (3)**

*Every third spring*

This studio-lecture course introduces students to the fundamentals of architectural design through slide lectures, field trips, studio exercises in spatial planning, model making, and basic computer-aided design techniques. Prerequisite: Art 124 or permission of the instructor. Applied art fee.

**227/327/427 Printmaking Studio (3)**

*Odd springs*

This course is an exploration of the expressive possibilities of graphic media. Historical methods of printmaking are introduced. Prerequisite: Art 127 or permission of the instructor. Applied art fee.

**241 Lighting Principles (3) Fall**

This course gives a basic grounding in lighting techniques for both studio and location work and covers the use of available light and various lighting instruments. Students create lighting plans, learn to create dramatic high-key effects or subtly sensitive illumination, and master color balance and metering. Prerequisite: Art 273 or permission of the instructor. Applied laboratory fee.

**247 Digital Photography and Restoration (3) Spring**

The course outline includes digital photography; cameras; camera specifications; composition, color and grayscale modes; Photoshop essentials; scanning old photographs; photographic deterioration; electronic retouching; color and tonal corrections; gamma corrections; composite restoration; hand-coloring old photographs; printing and display; cost factors and equipment; professional applications, potential internships with career opportu-

nities in the Visual Arts. Prerequisites: Art 141. Applied laboratory fee. *Cross-listed as COM 247.*

## 250 Introduction to Digital Video

### Production (3) *Even falls*

This course introduces the tools, technology, and techniques of digital video production. Students plan script, manage, and produce videos using digital technologies. Along with the technical applications, students will be exposed to the history of video as an artistic and instructional medium, as well as the relationship of digital video to film and television. The theoretical focus is on critiques of narrative construction. Prerequisite: Art 141. Applied laboratory fee. *Cross-listed as FLM 250.*

## 261 [www.design/code+aesthetics](http://www.design/code+aesthetics) (3)

### *Fall*

This course addresses methods for document production and dissemination using global electronic networks. Focus is on authoring non-linear documents using wysiwyg software and basic web programming languages. Issues of privacy, rights of access, and intellectual property rights are discussed. Students will develop their technical, aesthetic and conceptual skills by participating in lectures, demonstrations, computer labs and critiques, as well as participating in critical analysis of various sites and internet strategies. Prerequisite: Art 141 or permission of the instructor. Applied art fee. *Cross-listed as COM 261.*

## 262 [www.design.two/interface+structure](http://www.design.two/interface+structure) (3)

This course focuses on advanced methods of creative web page design. The student broadens her technical understanding of software programs including but not limited to Macromedia Dreamweaver and Flash. Students render complex net based works, which emerge from in-class conversations that critically analyze the internet

medium across disciplines. Creative projects cohesively demonstrate technical and innovative aesthetic practices with strong conceptual and artistic integration.

## 265 Interactive Strategies (3)

This course allows advanced students to explore interactive computer authoring skills. Students learn to create projects that integrate text, sound, and graphic materials for the creation of CD-ROMs, DVDs, or interactive installations. Students are exposed to a variety of existing electronic media projects and exhibitions, along with contemporary theoretical discourses in interactive design and non-linear narrative strategies. Does interactivity change the manner in which narrative works on us? How can we construct interfaces that take advantage of these new possibilities? Prerequisites: ART 141, 261.

## 265 Interactive Strategies (3) *Fall*

This course allows advanced students to explore interactive computer authoring skills. Students learn to create non-linear projects integrating text, sound, and graphic materials and burn them to CD-ROM. Students are exposed to a variety of existing electronic media projects and exhibitions, along with contemporary theoretical discourses in interactive design. Production variables include research, project proposal writing, storyboarding, navigation, flow-charting, image capture and scripting. Prerequisite: Art 141 or permission of the instructor. Applied art fee.

## 273 Photography I (3) *Fall*

This course is designed to introduce students to the basic techniques of exposure and development in black-and white photography. Emphasis is on technical as well as aesthetic characteristics. The photograph is studied as a medium for documentation, representation, and expression. Students are required to have a 35mm SLR (single

lens reflex) film camera. If you plan to buy one, wait until the first week of class. Applied laboratory fee. *Cross-listed as COM 273.*

**277 Media Analysis: Context (3) *Odd falls***

This course is an introduction to critical and aesthetic perspectives on film, i.e., the rules, codes, and strategies by which film represents reality. Students are exposed to a variety of movements and moments in film history, but history will not be an explicit focus for the course. The course maps out the ground of major conceptual areas in film studies using new methodologies in the areas of narrative comprehension, new vocabulary in film semiotics and multiculturalism and the media. Prerequisite: Art 151 or permission of the instructor.

**350 Intermediate Digital Video Production (3)**

Students will utilize the nonlinear editing software program Final Cut Pro to examine methods of production and related theories involved in achieving structure in film and video. By conceptually dissecting and practically applying techniques such as splicing, transitional effects and other editing processes, students will render sophisticated projects which are conscious of how the edit structures film and doing so becomes another creative and technical layer for study. Prerequisite: Art 141 and Communication/Film 250. *Cross-listed as FLM 350.*

**353 Print Design (3) *Even falls***

This course combines technical training in digital imaging with exercises in creative print-media based design and critical thinking. Students learn conceptual and technical differences between analog and digital imaging; and work with a range of digital tools including QuarkXpress, Adobe InDesign, and Photoshop. Conceptual and

content discourses will be developed through contemporary issues and the design of relevant documents. Prerequisite: Art 141. Applied art fee. *Cross-listed as COM 353.*

**357 Photography II (3) *Odd springs***

This course is designed to acquaint students with several darkroom and photo processing methods. Special attention is given to working with various photo papers, exposure manipulation in printing processes, toning, intensification, filtration, studio lighting of products, and photo finishing techniques. It also develops the student's aesthetic sense by emphasizing principles of composition in the photo essay, photojournalism, and product and advertising photography. Prerequisite: Art 273 or permission of the instructor. Applied laboratory fee. *Cross-listed as COM 357.*

**388 Landscape Photography (3) *Even springs***

The landscape is fascinating from a natural and contrived point of view. This course explores the art of taking landscape shots digitally with emphasis on composition, focal points, color, light, movement, time of day, framing, and weather conditions. You will explore a range of image capturing from macro flower shots to vast panoramic points of view from urban and rural subject matter. Several new digital image editing processes will be taught using Photoshop. Applied laboratory fee. Prerequisites: Art 273 or permission of instructor.

**391, 392, 393 Internship (1, 2, 3)**

This course requires supervised field placement experience and is aimed at enhancing students' abilities to offer design and media services to clients. Issues in contemporary media are examined in response to internship placements. Students are expected to produce portfolio quality work in the course of this on-the-job experience.

### 421 Digital Animation and Compositing (3) *Even springs*

This production course provides an introduction to computer animation and visual effects. Students learn the principles, process, and philosophy of animation with a focus on the design and construction of environments, characters, and time-based motion. Students script, storyboard, design and produce a short animated digital video. Prerequisites: Art 141 and 249. Applied art fee.

### 429 Junior Seminar (3)

This seminar is two-fold. Junior-level students will utilize this course to prepare for their senior tutorial projects by examining proposal writing, strategies for research, and writing by various artists. Students will also learn portfolio development and presentation techniques. Relevant festivals, journals, and other creative opportunities will be explored for future field placement. Upon completion of this course, students will have a written tutorial proposal and provisional portfolio completed. *Cross-listed s FLM 429.*

### 450 Advanced Digital Video Production Studio (3)

This studio course is an intensive laboratory that looks at advanced methods of digital video production including highly developed lighting practices, audio recording and mixing, non-linear editing and digital effects. Students will also experiment with various ways in which to prepare video for web streaming or embedding compressed video in multimedia applications. This course includes regularly scheduled screenings of significant experimental video and multimedia projects – continuing to engage students in conversations of aesthetic, structural, and critical concern. *Cross-listed as FLM 450.*

### 471 Advanced E-Merging Media Studio (3)

Students will engage in self-directed explorations of the creative, conceptual, and technical possibilities of e-merging media practices in this upper-level electronic media studio course. Advanced technical demonstrations will aid students as they create highly sophisticated and well-articulated creative projects. Through a series of fieldtrips, film/video screenings, critical readings, and critique sessions, students will examine a variety of historical and contemporary strategies employed by new media artists. Student must enter the course with a project in mind or in development.

### 491, 492, 493, 494 Independent Study (1, 2, 3, 4)

### 498-499 Tutorial (8)

# Division of Business and Entrepreneurship

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*Dr. Mary Riebe, Ph.D., Division Chair*

## **Undergraduate Academic Programs**

Business

- Accounting
- Business Economics
- International Business
- Management
- Marketing

## **Graduate Academic Programs (see pages 283-360)**

Business Administration

## **Certificate Programs (see pages 243-248)**

Accounting

## **Affiliated Institutes**

Chatham Center for Women's Entrepreneurship (CCWE)

## **Affiliated Faculty and Staff**

Robert Feidner, *Lecturer in Business and Accounting*

Matthew Kessler, *Assistant Professor of Business*

Allyn Morrow, *Associate Professor of Business Administration*

Mary Riebe, *Professor of Business, Executive Director of Business Programs, and Director of the CCWE*

## Accounting (ACT) and Business (BUS)

In our technological society a successful administrator, entrepreneur, or researcher is one who can understand the impact of change and effectively deal with it. The opinion of a growing number of professionals is that students graduating from programs emphasizing the liberal arts are better prepared to understand and manage change than others more narrowly educated. It is the purpose of Chatham's department of business to complement the student's liberal arts training by providing her with the fundamental tools necessary to comprehend the technical as well as the human environment in which we work.

The program is designed to provide a general foundation, as well as a concentration, in an area of the student's choosing. The student's first step is to take courses in economics, accounting, management theory, and statistics. Once these courses are completed, she decides on a major in accounting, management, international business, business economics, or marketing. After this decision, she takes a second set of courses especially designed to introduce her to more advanced topics in those areas. The final stage is to investigate in greater depth some aspect of her interest through the senior tutorial.

Management, accounting, business economics, and marketing are fields of study that can enhance a student's education in other areas. Students with broader interests can combine these majors with a discipline outside the program in an interdisciplinary major.

Although the courses are not part of the major requirements, a year of calculus should be considered a prerequisite for those students going on to graduate school.

### Core Major Requirements

#### 15 courses, including:

- ACT 222 Financial Accounting Principles I (3)
- ACT 223 Financial Accounting Principles II (3)
- BUS 105 Introduction to Management (3)
- BUS 225 Business Communication (3)
- BUS 235 Group Dynamics in Organizations (3)
- BUS 245 Marketing (3)
- BUS 272 Introduction to Finance (3)
- BUS 300 Organizational Research and Quantitative Methods (3)
- BUS 393 Internship (3)
- BUS 498-499 Tutorial (8)
- ECN 101 Principles of Macroeconomics (3)
- ECN 102 Principles of Microeconomics (3)
- MTH 110 Elementary Statistics (3)
- PHI 212 Business Ethics (3) **or**
- BUS 256 Business Law (3)

### Additional Major Requirements

Students must complete one of the following concentrations in addition to the core major requirements.

#### Accounting (6 Courses)

- ACT 322 Intermediate Accounting I (3)
- ACT 323 Intermediate Accounting II (3)
- ACT 324 Federal Tax Accounting (3)
- ACT 325 Cost Accounting (3)
- ACT 331 Auditing (3)
- BUS 256 Business Law (3)

#### Business Economics (6 courses)

- ECN 230 Intermediate Macroeconomics (3)
- ECN 231 Intermediate Microeconomics (3)

2 upper-level electives in Economics

2 approved Professional Electives (At least six semester hours, including at least one course from a business area other than economics)

**International Business (6 courses)**

BUS 240 International Business (3)

BUS 316 Organizational Design &amp; Operations (3)

ECN 351 International Trade and Finance (3)

1 course from the following:

BUS 272 Introduction to Finance (3)

BUS 327 Global Marketing (3)

ECN 358 Economic Development (3)

Language Proficiency at the 205 level: Requires placement at the 205 level or appropriate coursework

1 approved Civilization course

**Management (6 courses)**

BUS 316 Organizational Design and Operations (3)

BUS 415 Strategic Management (3)

2 approved Professional Electives (At least six semester hours, including at least one course from a business area other than management)

2 courses from the following:

BUS 255 Gender Issues in Work and Management (3)

BUS 337 Managing Nonprofit Organizations (3)

BUS 343 Small Business Management and Entrepreneurship (3)

BUS 357 Entrepreneurial Venture (3)

BUS 390 Human Resources Management (3)

**Marketing (6 courses)**

BUS 310 Marketing Research (3)

BUS 445 Marketing Strategy (3)

2 approved Professional Electives: At least six semester hours, including at least one course from a business area other than marketing.

2 courses from the following:

BUS 244 Consumer Behavior (3)

BUS 327 Global Marketing (3)

Approved Technical Course in Professional Communication (3)

*Interdisciplinary Major in Accounting***10 courses, exclusive of tutorial:**

ACT 222 Principles of Accounting I (3)

ACT 223 Principles of Accounting II (3)

ACT 322 Intermediate Accounting I (3)

ACT 323 Intermediate Accounting II (3)

ACT 324 Tax Accounting (3)

ACT 325 Cost Accounting (3)

BUS 300 Quantitative Research Methods (3)

PHI 212 Business Ethics (3) **or**

BUS 256 Business Law (3)

MTH 110 Elementary Statistics (3)

1 approved accounting or business elective

*Interdisciplinary Major in Business Economics***10 courses, exclusive of tutorial:**

ACT 222 Principles of Accounting I (3)

**or**

BUS 105 Introduction to Management (3)

BUS 225 Business Communication (3)

**or**

BUS 235 Group Dynamics (3)

BUS 300 Quantitative Research Methods (3) **or**

ECN 301 Econometrics (3)

ECN 101 Principles of Macroeconomics (3)

ECN 102 Principles of Microeconomics (3)

MTH 110 Elementary Statistics (3)

PHI 212 Business Ethics (3) **or**

BUS 256 Business Law (3)

3 upper-level Economics electives

*Interdisciplinary Major in Management***10 courses, exclusive of tutorial:**

ACT 222 Principles of Accounting I (3)

BUS 105 Introduction to Management (3)

BUS 225 Business Communication (3)

**or**

BUS 235 Group Dynamics (3)

- BUS 300 Organizational Research and Quantitative Methods (3)
- BUS 316 Organizational Design and Operations (3)
- ECN 101 Principles of Macroeconomics (3) **or**
- ECN 102 Principles of Microeconomics (3)
- MTH 110 Elementary Statistics (3)
- PHI 212 Business Ethics (3) **or**
- BUS 256 Business Law (3)
- 2 courses from the following:
- BUS 255 Gender Issues in Work and Management (3)
- BUS 337 Managing Nonprofit Organizations (3)
- BUS 343 Small Business Management and Entrepreneurship (3)
- BUS 390 Human Resources Management (3)
- BUS 415 Strategic Management (3)

### *Interdisciplinary Major in International Business*

An interdisciplinary major is not available in International Business.

### *Interdisciplinary Major in Marketing*

**10 courses, exclusive of tutorial:**

- ACT 222 Principles of Accounting I (3)
- BUS 105 Introduction to Management (3)
- BUS 225 Business Communication (3) **or**
- BUS 235 Group Dynamics (3)
- BUS 245 Marketing (3)
- BUS 300 Organizational Research and Quantitative Methods (3) **or**
- BUS 310 Marketing Research (3)
- ECN 102 Principles of Microeconomics (3)
- MTH 110 Elementary Statistics (3)
- PHI 212 Business Ethics (3) **or**
- BUS 256 Business Law (3)

2 courses from the following:

- BUS 244 Consumer Behavior (3)
- BUS 310 Marketing Research (3)
- BUS 327 Global Marketing (3)
- BUS 445 Marketing Strategy (3)

### *Interdisciplinary Major in Two Business Disciplines*

**21 courses, exclusive of tutorial:**

- ACT 222 Principles of Accounting I (3)
- ACT 223 Principles of Accounting II (3)
- BUS 105 Introduction to Management (3)
- BUS 225 Business Communication (3)
- BUS 235 Group Dynamics (3)
- BUS 245 Marketing (3)
- BUS 272 Introduction to Finance (3)
- BUS 300 Organizational Research and Quantitative Methods (3)
- ECN 101 Principles of Macroeconomics (3)
- ECN 102 Principles of Microeconomics (3)
- MTH 110 Elementary Statistics (3)
- PHI 212 Business Ethics (3) **or**
- BUS 256 Business Law (3)

1 required internship

In addition to the above courses, students doing an interdisciplinary major in two business disciplines must complete two of the following clusters:

#### **Accounting (4 courses)**

- ACT 324 Federal Tax Accounting (3)
- ACT 325 Cost Accounting (3)
- ACT 322 Intermediate Accounting I (3)
- ACT 323 Intermediate Accounting II (3)

#### **Business Economics (4 courses)**

- ECN 230 Intermediate Macroeconomics (3)
- ECN 231 Intermediate Microeconomics (3)

2 approved economics electives

**Management (4 courses)**

- BUS 316 Organizational Design and Operations (3)  
 BUS 415 Strategic Management (3)  
 2 approved management electives

**Marketing (4 courses)**

- BUS 310 Marketing Research (3)  
 BUS 445 Marketing Strategy (3)  
 2 approved marketing electives

**Minor Requirements – Applied Management****6 courses, including:**

- ACT 222 Financial Accounting Principles I (3)  
 BUS 105 Introduction to Management (3)  
 BUS 245 Marketing (3)  
 ECN 101 Principles of Macroeconomics (3) **or**  
 ECN 102 Principles of Microeconomics (3)

One approved management elective  
 One approved 3-credit internship

**Minor Requirements - Business**

6 approved courses from Business program offerings

**Minor Requirements – Business Economics**

- ECN 101 Principles of Macroeconomics (3)  
 ECN 102 Principles of Microeconomics (3)

4 approved upper-level economics electives  
 Students may count 1 approved internship as an elective

**Minor Requirements – Accounting****6 courses, including:**

- ACT 222 Financial Accounting Principles I (3)  
 ACT 223 Financial Accounting Principles II (3)  
 ACT 322 Intermediate Accounting I (3)

- ACT 323 Intermediate Accounting II (3)  
 ACT 324 Federal Tax Accounting (3) **or**  
 ACT 325 Cost Accounting (3)  
 1 approved elective from Accounting or Business program offerings

**Minor Requirements – Marketing****6 courses, including:**

- BUS 105 Introduction to Management (3)  
 BUS 244 Consumer Behavior (3)  
 BUS 245 Marketing (3)  
 COM 141 Media Literacy (3)  
 ECN 102 Principles of Microeconomics (3)  
 1 approved 200-level or above communication technology course

**Certificate in Accounting**

8 courses are required by the State Board of Accountancy to sit for the Pennsylvania Certified Public Accounting (CPA) examination. Given the coverage on the examination in the past, the following courses are required for a certificate in accounting:

- ACT 222 Financial Accounting Principles I (3)  
 ACT 223 Financial Accounting Principles II (3)  
 ACT 322 Intermediate Accounting I (3)  
 ACT 323 Intermediate Accounting II (3)  
 ACT 324 Federal Tax Accounting (3)  
 ACT 325 Cost Accounting (3)  
 ACT 331 Auditing (3)  
 BUS 256 Business Law (3)

## Accounting Courses (ACT)

### 222 Financial Accounting Principles I (3)

An introduction to the fundamental principles and procedures of accounting, including double-entry bookkeeping, adjusting entries, and preparation for financial statements. Emphasis includes accounting techniques for sole proprietorships, corporations, and partnerships. Prerequisite: satisfactory completion of the mathematics proficiency requirement or permission of the instructor.

### 223 Financial Accounting Principles II (3)

This second-semester accounting course focuses on the analysis, preparation, interpretation, and use of accounting statements and information. The course includes the application of generally accepted accounting principles and techniques. Prerequisite: Accounting 222.

### 322 Intermediate Accounting I (3)

A comprehensive study of generally accepted accounting principles as they relate to the measurement and reporting of assets and income. Students examine the nature, composition, valuation, and classification of balance sheet items. Prerequisites: Accounting 222 and 223.

### 323 Intermediate Accounting II (3)

The second semester continues the application of generally accepted accounting principles related to intangibles, bonds, debt and loans, partnerships, corporations, and analysis of working capital. Prerequisite: Accounting 322.

### 324 Federal Tax Accounting (3)

This course is designed as the first course in federal taxation for the undergraduate student. The primary emphasis of the course is on the income taxation of individuals, but the course also includes an

overview of the federal taxation of other forms of business organization (e.g., corporations, partnerships). The focus of the course is on developing knowledge of tax law and its application. Prerequisite: Accounting 222.

### 325 Cost Accounting (3)

A study of cost principles, determination, and control as they apply to job order, process, and standard cost systems. Attention is given to accumulation and interpretation of cost data useful to management. Prerequisites: Accounting 222 and 223 or permission of the instructor.

### 331 Auditing (3)

A study of auditing objectives, standards, and procedures employed in the examination of business enterprises and verification of their financial statements. This course includes an evaluation of internal control, preparation of work papers, report writing, professional ethics, and current auditing trends. Prerequisites: Accounting 222 and 223.

### 391, 392, 393 Internship (1, 2, 3)

### 491, 492, 493, 494 Independent Study (1, 2, 3, 4)

### 498-499 Tutorial (8 on completion)

## Business Courses (BUS)

### 105 Introduction to Management (3)

This course provides an understanding of formal organizations – profit and nonprofit – and the development of effective and efficient managerial traits and skills. The course covers a wide range of topics, such as motivation, conflict, leadership, control, and change. The practical side of organizational life is examined: entry and adaptation, business culture, power, politics, discrimination, and resistance. The main functional areas of management also are

discussed. Focus is on real and/or simulated situations, field assignments, business games, and tests.

**128 Enron, Accounting, and You (3)**

This course examines how large and small companies circumvent practices for their private gain. The course explains what you, the small investor, need to know to protect your investment and to make money. The course will examine insider trading and why Martha Stewart is in the news.

**201 Entrepreneurial Internship Seminar (1)**

This course is designed to introduce students to entrepreneurship and integrate the entrepreneurial internship with her academic experience. Corequisite: student must be enrolled concurrently for an entrepreneurial internship or have completed one in the previous term.

**216 Management Information Systems (3)**

This course studies the collection, processing, and dissemination of information in support of business operations and management of organizations. The course material emphasizes the role of information in organizations and the implementation of effective information systems. Prerequisite: Business 105 or permission of the instructor.

**225 Business Communication (3)****235 Group Dynamics in Organization (3)****240 International Business (3)**

A course in the problems, procedures, and techniques of conducting international trade. Background is provided on the relationships among multinational corporations, international financial markets, and government agencies. Multinational corporations' strategic formulations of product

policy research and development, production, and supply systems, as well as financing of international operations, are examined. Prerequisites: Business 105 and Economics 101 or 102.

**244 Consumer Behavior (3)**

An analysis of the concepts and research related to buyer behavior. The course reviews and evaluates the major theories of consumer behavior from the economics, behavioral sciences, and marketing literatures. The use of consumer research data for marketing decisions is emphasized. Topics include market segmentation, theories of brand choice, family decision making, life cycle theories, and the diffusion of innovations. Prerequisites: Business 105 and Economics 101 or 102.

**245 Marketing (3)**

This course explains the principles of marketing for profit and nonprofit organizations. It explores the development and components of marketing programs, marketing economics, arithmetic, and forecasting, as well as consumer behavior, marketing communication, channel management, and international marketing. Special attention is paid to the designs and methods of marketing research. Instruction includes case studies, field projects, computer exercises, and statistical analysis. Issues of ethics, legal regulations, media, and consumerism also are addressed. Prerequisites: Business 105 and Economics 101 or 102.

**255 Gender Issues in Work and Management (3)**

This course examines the historical emergence of women in the workforce and management positions. A particular focus of the course is the structural and cultural barriers preventing women from entering the workforce and management positions; problems confronting women managers, such as discrimination and sexual harass-

ment; and solutions for resolving these barriers and problems, such as social legislation and the development of appropriate interpersonal skills. Prerequisites: Business 105 or permission of the instructor.

### **256 Business Law (3)**

An introduction to the substantive law that daily affects and controls the activities of business organizations, as well as citizens in our society. The course offers a broad survey that examines the preponderant body of the law and its processes, development, principles, terminology, and rationale. Prerequisite: Business 105.

### **272 Introduction to Finance (3)**

This course presents the basics of finance and how financial information is used in making business decisions. Topics include financial statements and analysis, markets and institutions, time value of money, capital budgeting, capital cash flow and risk analysis, financial planning and forecasting, and mergers and acquisitions.

### **275 Investments (3)**

This course begins with a description of the investment environment that includes the concepts of risk and return. It then examines popular investment vehicles, including common stock, fixed-income securities, speculative investments, real estate, and tax shelters. The course is taught from a decision-making perspective. Prerequisite: Accounting 222 and Business 105.

### **300 Organizational Research and Quantitative Methods (3)**

This course deals with the fundamentals of research and quantitative methodology in the social sciences, with specific emphasis on research in the organization. This course is designed for those who may both use research and produce it. Issues include evaluating the research of others; the manager-researcher relationship; scientific

method; research process, design, and measurement; and data collection, analysis, and reporting. Prerequisite: Mathematics 110 or Psychology 213.

### **310 Marketing Research (3)**

### **316 Organizational Design and Operations (3)**

Through the extensive use of case studies, students are introduced to the various theoretical approaches and applications used to design organizational structures and operations. Students learn about the different components of organizational structure and which types of structures and processes are appropriate for particular markets and conditions. The ways in which organizations change, control, and evaluate their structures and operations also are discussed. Prerequisites: Business 105 and Economics 101 or 102.

### **327 Global Marketing (3)**

### **337 Managing Nonprofit Organizations (3)**

Through the use of case studies, assignments, and class projects, this course familiarizes students with the distinctiveness of nonprofit organizations and their management. Specific topics include marketing and fund raising, budgeting, personnel management and supervision, strategic planning and implementation, environmental and program evaluation, and managing interorganizational networks. Prerequisite: Business 105, or Social Work 101 and 102, or permission of the instructor.

### **343 Small Business Management and Entrepreneurship (3)**

This course explores the roles of small businesses and entrepreneurship within the context of a global economy. Students are introduced to all aspects of small-business management, including small-business planning, risk management, financing,

marketing, human relations, purchasing and inventory, taxation, and social responsibility. Prerequisites: Business 105 and Economics 101 or 102.

### **357 Entrepreneurial Venture (3)**

This course provides a detailed exploration of startup businesses from initial concept to implementation. Topics to be discussed include reasons for developing new businesses, profiling entrepreneurs, developing formal business plans, management teams, financing the venture and evaluation techniques of venture performance and causes of failure among new ventures. Prerequisite: Business 105.

### **390 Human Resources Management (3)**

This course reviews the latest developments and technology in the emerging field of human resources management. Readings and case studies are used to assess and evaluate alternative approaches in staffing, training and development, organization development, performance appraisal, compensation, benefits, labor relations, and collective bargaining. The overall emphasis of the course is to help students understand these elements of human resources management within an integrated systems approach. Prerequisites: Business 105 and Economics 101 or 102.

### **391, 392, 393 Internship (1, 2, 3)**

### **415 Strategic Management (3)**

This course presents a detailed exploration of the importance of strategy for providing businesses with a “competitive advantage.” Through the analysis of case studies students gain a critical understanding of different business strategies, the different processes of business strategy development, and of strategy implementation. Students also examine the contextual conditions affecting strategy development and strategy successes and failures.

### **445 Marketing Strategy (3)**

This course examines the concepts and processes for gaining competitive advantage in the marketplace. It is designed around a marketing planning approach with a clear emphasis on how to do strategic analysis and planning. The course takes a hands-on approach toward analyzing markets and market behavior, and matching strategies to changing market conditions. Prerequisite: Business 245.

### **491, 492, 493, 494 Independent Study (1, 2, 3, 4)**

### **498-499 Tutorial (8 on completion)**



# Division of Global and Public Policy Studies

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*Marie Connolly, Ph.D., Division Chair*

## **Undergraduate Academic Programs**

Economics  
Environmental Studies  
Global and Public Policy Studies  
History  
Law and Society  
Modern Languages  
    French and Francophone Studies  
    Spanish and Hispanic Studies  
Philosophy  
Political Science  
Religion  
Women's Studies

## **Affiliated Institutes**

Pennsylvania Center for Women, Politics, and Public Policy  
Rachel Carson Institute

## **Affiliated Faculty and Staff**

William Aiken, *Professor of Philosophy*  
Douglas Chaffey, *Professor of Political Science*  
Marie Connolly, *Professor of Economics*  
Kristin DeLuca, *Director, Regional Women's Initiative*  
Nancy Gift, *Assistant Professor of Environmental Studies*  
Richard Goff, *Lecturer in History*  
Karen Goldman, *Associate Professor of Spanish*  
Charlotte Lott, *Associate Professor of Economics*  
Allyson Lowe, *Director, Pennsylvania Center for Women, Politics, and Public Policy*  
Christina Michelmore, *Associate Professor of History*  
Janet Walker, *Professor of French*

## Economics (ECN)

The economics program at Chatham builds on a student's liberal arts foundation to introduce the economic way of thinking about the world. Economic thinking involves using models of human behavior, such as supply and demand and comparative advantage, to understand economic decision-making. Economics majors learn abstract models, deductive reasoning, and empirical analysis. The program includes theoretical courses in microeconomics and macroeconomics, quantitative work, statistical analysis, and applied field courses. The major is flexible and provides students with a basic set of tools to understand major policies and problems in our society. Experiential learning courses and internships are available and encouraged. Courses in economics provide a sound underpinning for diverse careers in areas such as business, law, government and public policy, and for graduate level work in the social sciences.

### Major Requirements

#### 12 courses, including:

- ECN 101 Principles of Macroeconomics (3)
  - ECN 102 Principles of Microeconomics (3)
  - ECN 230 Intermediate Macroeconomics (3)
  - ECN 231 Intermediate Microeconomics (3)
  - ECN 301 Econometrics (3)
  - ECN 498-499 Tutorial (8)
  - MTH 110 Elementary Statistics (3)
- 4 of the following:
- ECN 262 Environmental Economics (3)
  - ECN 275 Ecological Economics (3)
  - ECN 280 Money and Banking (3)
  - ECN 358 Economic Development (3)
  - ECN 351 International Trade and Finance (3)
  - ECN 374 Labor Economics (3)

- ECN 385 Industrial Organization and Public Policy (3)

Students may count one approved internship as an elective.

### Interdisciplinary Major Requirements

#### 8 courses, exclusive of the tutorial:

- ECN 101 Principles of Macroeconomics (3)
  - ECN 102 Principles of Microeconomics (3)
  - MTH 110 Elementary Statistics (3)
- 5 courses from the economics major requirements. Students may count one approved internship.

### Minor Requirements

#### 6 courses in Economics including:

- ECN 101 Principles of Macroeconomics (3)
  - ECN 102 Principles of Microeconomics (3)
- Four upper level economics electives  
Students may count 1 approved internship.

### 100 World Economic Issues (3)

This course introduces students to the principles and methodology of economics through the study of world issues. It examines the economic and social effects of such problems as poverty, pollution, economic development, and economies in transition. Case studies are used to illustrate the connection between economic theory and global issues.

### 101 Principles of Macroeconomics (3)

#### *Every semester*

The concepts of national income and output are analyzed, and emphasis is placed on factors that influence the levels of economic activity, unemployment, and inflation, including fiscal and monetary policy and the role of international economics.

**102 Principles of Microeconomics (3)***Every semester*

The roles of the consumer and producer are studied in the context of the functioning of the price system in different market structures. Emphasis is placed on the factors that influence the distribution of income (rent, interest, profit, wages) in the economy.

**230 Intermediate Macroeconomics (3)***As needed*

Application of the concepts learned in the introductory course to problems facing the American economy. Questions are raised about government policy goals of growth, price stability, and full employment. The Keynesian model and the micro foundations of macroeconomics theory are considered in depth. Prerequisites: Economics 101 and 102.

**231 Intermediate Microeconomics (3)***As needed*

An intermediate study of the allocation of resources and the distribution of income within economic concepts is given operational content, but the main emphasis is on the tools of economic thinking. Prerequisites: Economics 101 and 102.

**262 Environmental Economics (3)**

This course focuses on the study of the relationship between economic activity and the environment. It teaches students the economic perspectives and tools for analyzing environmental problems and evaluating policy solutions. The course covers both conceptual topics and real-world applications. Prerequisite: Economics 102. *Cross-listed as ENV 262.*

**275 Ecological Economics (3)**

Ecological economics is a field and course that incorporates principles of economics and ecology into a framework for understanding and acting upon environmental

problems. The course discusses the flow of matter and energy through socioeconomic and ecological systems to derive strategies for creating a more environmental sustainable economy. The course involves a project to apply these methods to a particular good or service. Prerequisites: Economics 101 or 102 or permission of instructor. *Cross-listed as ENV 275.*

**280 Money and Banking (3)**

The following topics are studied: the nature and function of money; the American monetary system and the role of the banking system in creating the nation's money supply; the structure and functions of the Federal Reserve System as the principal agency for monetary control, monetary theory and its relation to monetary policy; and current problems relating to the impact of monetary policy on the levels of prices and employment. Prerequisite: Economics 101.

**301 Econometrics (3) *As needed***

This course provides an introduction to the theory and application of the estimation of economic relationships. Topics include simple and multiple regression, hypothesis testing, multicollinearity, serial correlation, hetero-skedasticity, and simultaneous equation models. Students use computer software statistical packages to analyze data and test hypotheses. Prerequisites: Economics 101 and 102; Mathematics 110 or Psychology 213.

**351 International Trade and Finance (3)**

An introduction to international trade and finance, and an examination of the structure of international trade and the functioning of the international monetary system. Attention is given to recent issues in these areas and the relationship between the domestic and international economies. Prerequisite: Economics 101 or 102.

**358 Economic Development (3)**

An examination of the economic and non-economic factors accounting for the economic growth and development of modern economically developed nations and less-developed areas of the world. A review of the problems encountered in initiating and sustaining the process of economic development. Various theories of economic development and major policy issues are discussed. Prerequisite: Economics 101 or 102.

**374 Labor Economics (3)**

An examination of the economic theory of wage determination and its effects on population, collective bargaining, automation, and industrial change. Focus is on the U.S. labor market, labor-force characteristics over time, and the economic effects of union and government labor policies. Prerequisite: Economics 101 or 102.

**385 Industrial Organization and Public Policy (3)**

This course analyzes the structure, conduct, and performance of American industry, with an emphasis on the monopoly problem. It examines the ways in which industries become monopolized, the measurement of industrial concentration, and government policies to control monopolies (e.g., antitrust laws, regulatory commissions). Prerequisite: Economics 102.

**391, 392, 393 Internship (1, 2, 3)****491, 492, 493, 494 Independent Study (1, 2, 3, 4)****603-604 Tutorial (8 on completion)****Environmental Studies (ENV)**

The environmental studies major, minor, and environmental education teaching certificate are multidisciplinary, drawing upon the expertise of faculty across all divisions of Chatham College. Students complete a common core of courses and experiences that focus on experiential and service-learning as well as building ecological literacy, problem-solving skills, and a community of environmentally oriented individuals. Students majoring in environmental studies complete a concentration in policy and advocacy, science (B.A. or B.S.), or literature and writing, as well as a senior tutorial. Minors in Environmental Studies complete only the core requirements. The Environmental Studies program reflects the College's commitment to the ideals espoused by Rachel Carson (a Chatham alumna), and is closely linked with the College's Rachel Carson Institute. Students leave the program with an understanding and appreciation of the natural world, the interconnectedness between social and natural systems, and tools for making positive contributions to environmental sustainability.

**Major and Minor Core Requirements****8 courses, including:**

- BIO 248 Ecology (5) **or**
- BIO 216 Aquatic Biology (5)
- ENV 116 Global Environmental Challenges (3)
- ENV 129 Our Fragile Planet: A Scientific Perspective (4)
- ENV 317 Environmental Solutions and Systems (3)
- ENV 391, 392, 393 Internship (1-3) An internship or service-learning project arranged or approved through the Rachel Carson Institute and/or program director.

3 courses from the following list:

- ENV 225 Environmental Ethics (3)  
 ENV 242 Women and the Global Environment (3)  
 ENV 425 Environmental Policy (3)  
 ENV 445 Nature and Culture (3)

### Major Concentration Requirements

#### Policy and Advocacy Concentration

The Policy and Advocacy concentration is for students interested in understanding and analyzing national and international environmental policy choices and implications as well as advocacy strategies. The concentration provides political and economic analytical skills for effectively comprehending and responding to environmental problems and opportunities in the public and private sectors.

#### 10 courses (in addition to the core courses), including:

- ECN 102 Principles of Microeconomics (3) **or**  
 ECN 101 Principles of Macroeconomics (3)  
 ENV 262 Environmental Economics (3) **or**  
 ENV 275 Ecological Economics (3)  
 ENV 352 Environmental Organizations and Governance (3) **or**  
 ENV 201 or 301 Participation in a special topics seminar with the Rachel Carson Institute and environmental program  
 ENV 498-499 Tutorial (8)  
 HIS 275 History and Policy Analysis (3) **or**  
 POL 202 Understanding Public Policy (3)  
 POL 101 American Government and Public Policy (3)  
 MATH 110 Elementary Statistics (3)  
 Junior Seminar: Students enroll in a junior seminar in a program that is closely aligned with their expected tutorial topic (e.g., BUS 300, ECN 301, POL 311).

1 additional Environmental Studies course or other course approved by the program director (3 or more credits).

#### Science Concentration (B.A.)

The Environmental Science concentration provides students with an understanding of human impact on ecosystems and methods of improving environmental health and quality as well as analytical tools for scientific measurement.

#### 12 courses (in addition to the core courses), including:

- BIO 143 The Cell (4)  
 BIO 144 The Organism (4)  
 CHM 107 Chemistry I (3) **and**  
 CHM 109 Chemistry I Laboratory (1)  
 CHM 108 Chemistry II (3) **and**  
 CHM 110 Chemistry II Laboratory (1)  
 ENV 498-499 Tutorial (8)  
 IND 350 Scientific Research Methods (2)  
 MTH 110 Elementary Statistics (3)  
 1 additional science course at the 200-level or above. BIO 216, 224, 226, or ENV/CHM 443 are highly recommended **or**  
 ENV 147 Environmental Geology (4)  
 1 additional ENV course or other course approved by the program director (3 or more credits).  
 Students in the Science concentration, in consultation with their advisor or the program director, may replace ENV 129 with:  
 ECN 102 Principles of Microeconomics (3) **or**  
 POL 101 American Government and Public Policy (3)

#### Science Concentration (B.S.)

In addition to the requirements for the B.A. degree with a science concentration, to obtain a B.S. degree with a science concentration, students must complete:

#### 4 additional courses, including:

- CHM 205 Organic Chemistry I (3)  
 CHM 215 Elementary Organic Laboratory (2)

2 additional courses in biology, chemistry, mathematics or physics, or other courses approved by the program director. BIO 216, 224, 226, 324 or ENV/CHM 443 are highly recommended.

### Literature and Writing Concentration

Environmental literature and writing is for students who are interested in exploring the development of ecology and identity as part of American literary culture. The concentration combines study of the cultural experience of nature with traditional writing and literature courses. Students develop their own writing as a powerful tool to investigate ecology as a response to the growth of mechanical culture and the rapid loss of wilderness.

#### 10 courses (in addition to the core courses), including

- ENG 243 Creative Writing I (3) **or**
- ENG 244 Creative Writing II (3)
- ENV 447 Contemporary Environmental Fiction (3) **or**
- ENV 452 Ecofeminist Literature
- ENV 498-499 Tutorial (8)

4 courses from the following or others approved by the program director:

- ENG 216 American Writers I (3)
- ENG 217 American Writers II (3)
- ENG 245 Advanced Writing Workshop (3)
- ENV 446 Wilderness and Literature (3)
- ENG 419 Frontier Women (3)
- ENG 422 American Exploration (3)

2 approved courses from the graduate curriculum (MFA in Writing) may be substituted for 2 of the courses above, with the permission of the program director.

Junior Seminar: Students enroll in a junior seminar in a program that is closely aligned with their expected tutorial topic (e.g., Communication 306, English 350).

1 additional Environmental Studies course or other course approved by the program director (3 or more credits).

### Minor Requirements

To obtain a minor, students take all the classes in the core requirements. No more than 2 courses used for the minor requirements may also be counted toward another major.

### Environmental Education Teaching Certification (K-12)

Chatham College is certified by the Pennsylvania State Department to offer a teaching certificate in environmental education to undergraduate and graduate students. This certificate prepares students to enter an exciting and rapidly growing arena for K-12 teaching (the state has recently passed academic standard requirements for “Environment and Ecology”) as well as work in nature centers, zoos, botanical gardens, etc. To receive a certificate, students must complete three requirements. First, undergraduate students must complete all requirements for Environmental Studies majors (in the “Science” concentration – B.A. or B.S.), including taking ENV/EDU 455: Environmental Education. Graduate students in the Master of Arts in Teaching program need to complete four Environmental Studies courses (including “Environmental Education”) at the graduate level, and have a comparable environmental or related degree at the undergraduate level. Second, in accordance with Pennsylvania Department of Education (PDE), certification candidates must satisfactorily complete the National Teacher Examinations (PRAXIS examinations) appropriate to their area of specialization (i.e., environmental education) and certification level. Third, students must complete the Elementary Education or Secondary Education Certification requirements (including field experiences) listed under the “Education (EDU)” section of this course catalog, using special projects in environmental education during coursework. However, this

requirement is waived if Environmental Education is a second area of certification and the student has already met the College's requirements for certification in either Elementary Education or in a related field in Secondary Education.

### **100 Current Environmental Issues (1)**

This course is an interdisciplinary introduction to current environmental issues such as population, global warming, risk assessment, bioremediation, and restoration. The specific topics covered vary each session. The course utilizes lectures, guest speakers, videos, and other materials to give a broad perspective on these issues.

### **110 Environment and Science in the Movies (1)**

This course explores how one form of mass media presents the scientific method, environmental issues, and human impact on the environment.

### **116 Global Environmental Challenges (3) Fall**

This course explores the global implications of environmental issues. It is designed for all students interested in our global environment, one of the most critical issues of our time. The basic premise is that global ecological systems are in decline. This course will not only introduce students to the major issues causing or relating to this ecological decline, but also provide a template for thinking about and acting on solutions. Therefore, the focus is on active, participation-based learning, and students should leave the course ready to create environmental change.

### **122 Environmental Chemistry (3)**

This course introduces chemistry through significant environmental issues developed within political, economic, social, global and personal contexts. Chemical principles

are introduced as needed to understand the important environmental issues of today. The course may include such topics as the ozone layer, acid rain, and solar energy.

### **129 Our Fragile Earth: A Scientific Perspective (4) Spring**

This course introduces students to a wide range of environmental issues from a scientific perspective. Specific topics vary from year to year, but this course utilizes lectures, discussions, laboratories, guest speakers and field trips to increase knowledge about environmental problems as well as increase scientific knowledge and literacy.

### **145 Environmental Biology (4) Spring**

This course addresses contemporary environmental issues in a consistent and concerted fashion so as to introduce students to biological concepts. The concepts are developed to the extent needed to inform an understanding of the issues. Three hours lecture and two hours lab per week. *Cross-listed as BIO 122.*

### **147 Environmental Geology (4) As needed**

Fundamental earth science concepts are used to assess the impact of increasing global population and development on the Earth's natural resources as well as to examine how natural processes interact with human activities. Aspects of environmental geology that are particularly applicable to western Pennsylvania are emphasized. Three hours lecture and two hours lab per week.

### **201 Special Topics (3)**

The Special Topics courses will vary by year to provide in-depth analysis of a particular environmental issue. Prerequisites, if any, will be determined by the instructor.

**225 Environmental Ethics (3)**

An investigation of some of the important moral issues generated by human interaction with the environment (natural entities, ecosystems, and other species), such as obligation to future generations, the theoretical foundations for an adequate environmental ethic, biodiversity preservation, environmentally sound development and cultural practices, responsibility to animals, and personal choices and lifestyles.

**242 Women & the Global Environment (3)**

This course will examine contemporary global environmental issues from a gendered perspective. It will address the following question: How does environmental change impact women's lives, women's health, women's community roles, and how are women offering leadership to address these problems and offer alternative solutions at the global, national, and local levels? The course will examine these issues from a North/South perspective, examining how northern countries consumption and policies are impacting women in poor and transitional countries. It will also focus on key environmental concerns, from climate change, resource extraction, population, consumption, and toxic contamination.

**262 Environmental Economics (3)**

This course focuses on the study of the relationship between economic activity and the environment. It teaches students the economic perspectives and tools for analyzing environmental problems and evaluating policy solutions. The course covers both conceptual topics and real-world applications. Prerequisite: Economics 102. *Cross-listed as ECN 262.*

**275 Ecological Economics (3)**

Ecological economics is a field and course that incorporates principles of economics and ecology into a framework for under-

standing and acting upon environmental problems. The course discusses the flow of matter and energy through socioeconomic and ecological systems to derive strategies for creating a more environmental sustainable economy. The course involves a project to apply these methods to a particular good or service. Prerequisites: Economics 101 or 102 or permission of instructor. *Cross-listed as ECN 275.*

**300 Perspectives on Landscape (3)**

*This design studio is the foundation course for the landscape studies program.* The course gives students a broad overview of the breadth and scope of landscape design as it expresses society's relationship and attitudes towards toward nature and the land. Students will begin to learn the language and vocabulary used for seeing, describing, analyzing, and designing landscapes by looking at examples of historical and contemporary landscape design. Through weekly design exercise, including collages, sketches, and model making, students will learn how landscape space and form are created and how they articulate meanings and functions. They will explore the interrelationships of the structural elements that define landscape space and investigate the principles that create spatial design. Emphasis will be placed on learning how to generate ideas and give aesthetic and functional form to creative concepts. *Cross-listed as LNS 300.*

**301 Special Topics (3)**

The Special Topics courses will vary by year to provide in-depth analysis of a particular environmental issue. Prerequisites, if any, will be determined by the instructor.

**317 Environmental Solutions & Systems (3) Fall**

This course takes an interdisciplinary, solution-oriented approach to the analysis of diverse environmental issues. Students

learn systems thinking and sustainability as methods to evaluate and act upon environmental problems. Annually, one topic receives in-depth assessment and action through individual and group projects as well as site visits, guests, etc. Prerequisite: Environmental Studies 116 or 129.

### **352 Environmental Organizations & Governance (3) Spring**

This course explores national and international environmental advocacy and organizations through a historical, political and economic context. The evolution, status, and future of the environmental movement are examined. Topics covered include ozone depletion, global climate change, sustainable development, and corporate environmentalism. Students conduct an environmental public opinion or advocacy project.

### **381 Principles of Landscape Design (3)**

This course explores the fundamental concepts of landscape design. By studying historical and contemporary examples, students examine the different structures of landscape using site plans and diagrams. The course also allows students to look at nature as the backdrop of all human activity and shows the convergence of elements from nature and the built world. Starting with the concept that natural landscaping is the basis for all planning, students gain an appreciation of ecological concepts in designing landscapes. *Cross-listed as ART 381 and LNS 309.*

### **391, 392, 393 Internship or Service Learning (1, 2, 3)**

### **412 Applied Design Studio II: The Principles and Practice of Landscape Design(3)**

In this course students learn to analyze, synthesize, and assimilate contextual and site-specific information into the development

and presentation of creative design solutions for specific landscape projects at different scales. These projects lead to an understanding of design problem definition; program development; site analysis and inventory, as essential elements in the design process. Prerequisite: Landscape Studies 411 and 415. *Cross-listed as LNS 412.*

### **414 Landscape Ecology (3)**

Introduces the study of how landscape structure affects the processes that determine the abundance and distribution of organisms. Students analyze spatial patterning as it relates to ecological systems and resource conservation. Students use quantitative and modeling tools to facilitate understanding of spatial processes, resource conservation, and ecosystem management. *Cross-listed as LAR 514.*

### **418 Native Plants (3)**

Analysis of the flora of Western Pennsylvania and Allegheny County is the basis of this course. Students learn native plant identification and plant families. Students also learn to compare native to non-native species and discuss the medicinal, food, and horticultural uses of natives through field trips and in-class activities. *Cross-listed as LAR 518.*

### **425 Environmental Policy (3)**

This course takes an interdisciplinary approach to the study of the theory and practice of environmental policies. The course focuses on the political and economic factors contributing to the success and failure of present environmental policies. Topics include the roles of government and the market in causing environmental problems, analysis of proposed means for resolving those problems, and the application of economic and political analyses to selected environmental issues. Prerequisites: One of the following courses: Political Science 101,

Economics 101, Economics 102, or Environmental Studies 116; or permission of instructor. *Cross-listed as POL 425.*

#### **443 Advanced Environmental Chemistry (4)**

This course is an advanced study of the chemical principles underlying common environmental problems. It aims to deepen the student's knowledge of chemistry and its role in the environment and to show the power of chemistry as a tool to help us comprehend the changing world around us. *Cross-listed as CHM 443.*

#### **445 Nature and Culture (3)**

This course explores the issues of ecology and identity as part of the development of American literary culture. The development of an ecological imperative and the patterns of "nature" consciousness will be explored as they rise, grow and change. Questions of the relationship between nature and culture will be the main focus of the course including the developing ideology of ecology as a response to the growth of mechanical culture and the rapid loss of wilderness. *Cross-listed as ENG 443.*

#### **446 Wilderness and Literature (3)**

Through close reading of poetry and prose, students will explore the relationship between wilderness and literature – both representations of the natural world and what Stanley Kunitz calls "your wilderness...the untamed self that you pretend doesn't exist, all that chaos locked behind the closet door, those memories yammering in the dark." Writers examined include: Anne Carson, Mark Doty, Kathleen Hill, and Virginia Woolf. *Cross-listed as ENG 446.*

#### **447 Contemporary Environmental Fiction (3)**

A study of environmental fiction ranging from Jack London's *The Call of the Wild* to Margaret Atwood's *Surfacing* and Jane

Smiley's *A Thousand Acres*, this course attends in specific to the representation of nature and environment in 20th-Century novels and other cultural texts (e.g., *Bambi* or *The Emerald Forest*). Students will consider how such representations interrogate, critique, or reinforce contemporary constructions of the environment. Special attention will be given to questions of history, gender, and "what counts" (e.g., urban versus wilderness) as the environment. Prerequisite: 200-level English course or permission of department chairperson. *Cross-listed as ENG 447.*

#### **451 Soil Science (3)**

Study of soils as natural bodies, media for plant growth, and ecosystem components. Topics include soil morphology and characteristics, composition, formation, conservation, and soil erosion. Physical, chemical, and biological properties of soils are related to the production of plants, the functioning of hydrologic and nutrient cycles, and the protection of environmental quality. Prerequisite: Environmental Studies 129 or equivalent, or permission of instructor. *Cross-listed as LNS 551.*

#### **452 Ecofeminist Literature (3)**

This course brings together theoretical, nonfictional, and fictional approaches to the study of women and the environment. Students will examine how diverse ecofeminist writers problematize, resituate, and reclaim the woman/nature paradigm – a construct historically based in patriarchal culture. This course focuses particularly on how representations of women and environment (ranging from the traditional to the radical) can help students rethink and reimagine their relationship to the Earth. *Cross-listed as ENG 452.*

#### **455 Environmental Education (3)**

This course reviews the historical development of environmental education in the k-

12 curriculum and the development of current standards in environment and ecology. A range of teaching methods for effectively presenting the scientific and economic aspects of environmental concerns as well as integration of community resources and agencies are explored. Course work includes observations and participation in environmental experiences within public school classrooms.

#### **470 Principles of Sustainability (3)**

Students develop skills and fluency in preparing, delivering and evaluating the interrelationships between humans and ecological systems. The specific focus is on decision-making approaches that satisfy environmental, economic and ethical criteria. An experiential learning approach is used to develop assessment skills environmental issues. Prerequisite: Junior or Senior Standing. *Cross-listed as LAR 570.*

#### **491, 492, 493, 494 Independent Study (1, 2, 3, 4)**

#### **498-499 Tutorial (8 on completion)**

**French and Francophone Studies,**  
*see Modern Languages, page 157*

**Global Policy Studies,**  
*see Policy Studies, page 165*

## **History (HIS)**

The history program offers courses in American, European, and non-Western history. These courses provide students with a grounding in the many ways historians have made sense of the world. Understanding how diverse societies, economies, states, and cultures have changed and developed over time is crucial to evaluating and adapting to today's ever-changing world. Throughout their course work, students learn to acquire, organize, analyze, and clearly communicate information – in other words, to think critically and write well.

The teacher certification program offers certification in secondary social studies teaching. Students interested in this program should see the Certification Coordinator in the Education program for specific requirements.

### *Major Requirements*

#### **12 courses, including:**

- HIS 100 Introduction to World History (3)
- HIS 101 Origins of the Modern West (3)
- HIS 102 History of American Society (3)
- HIS 347 The Pursuit of History: Process and Product (3)
- HIS 498-499 Tutorial (8)
- 3 courses concentrating in European or American history
- 1 course in non-Western history
- 1 300-level seminar
- 1 program elective

### *Interdisciplinary Major Requirements*

#### **8 courses, including:**

- HIS 347 The Pursuit of History: Process and Product (3)
- 2 courses from the following:
  - HIS 100 Introduction to World History (3)
  - HIS 101 Origins of the Modern West (3)
  - HIS 102 History of American Society (3)

- 2 courses concentrating in American or European history
- 1 course in non-Western history
- 2 program electives

### *Minor Requirements*

#### **6 courses, including:**

- 1 course in American history
- 1 course in European history
- 1 course in non-Western history
- 1 program elective
- 2 courses from the following:
  - HIS 100 Introduction to World History (3)
  - HIS 101 Origins of the Modern West (3)
  - HIS 102 History of American Society (3)

### **100 Introduction to World History (3)**

This course is an introduction to world history from the rise of civilization to the present. It establishes and compares major themes in the leading civilizations of today's world. It investigates the development of the modern world system and interpretations of its impact on these civilizations.

### **101 Origins of the Modern West (3)**

This course examines the origins of modern Western society through an investigation of the development of the major institutions and values that have shaped Western civilization over the past 500 years. The relationship between political change and the evolution of ordinary people is emphasized. Readings include documentary sources, literary sources, and an integrative text.

### **102 History of American Society (3)**

This course examines significant areas in the development of American society from the Colonial period to the present. It focuses particularly on the issues of gender, class, race, religion, politics, and ideology to provide students with the grounding in those areas crucial to understanding today's society.

### **206 Be a Man: Introduction to Men's History (2)**

This course explores the social construction of masculinity through the analysis of historical and contemporary representations of American manhood. The relationship between cultural expectations concerning masculine behavior and the appearance and lives of individual men are examined. Topics of discussion include dominant images of the "manly" man, prescriptions for gender socialization in childhood and adolescence, change and continuity in fatherhood, and the impact of feminism on traditional masculinity.

### **218 The Great War in Historical Perspective (3)**

This course examines the nature and impact of World War I, a landmark occurrence in modern Western history. Readings and class discussions focus on the course of the war, the peace process, the immediate and long-term social and cultural consequences of the conflict, and the relevant historiography.

### **221 Europe in the 19th Century (3)**

After a brief overview of the ancient *régime*, the course examines the two great revolutions that reshaped European society and politics in the 19th century: the French Revolution and Industrial Revolution. Topics range from the impact of these revolutions on the daily lives of Europeans to the gradual transformation of the parameters of European thought and culture.

### **222 Europe in the 20th Century (3)**

The impact of World War I on Europe, the crisis of democracy and rise of totalitarian ideologies in the interwar period, and the decline of European influence in the world after World War II provide the focal points of the course. It then explores the slow resurgence of Europe, prospects for European

unity, and revived European influence in international relations as a “third force.”

**223 Special Topics in Non-Western History (3)**

This course is intended to augment the present offerings in non-Western history. The content and material of the course depend on the visiting professor’s area(s) of specialization.

**224 The Holocaust: Nazis, Occupied Europe, and the Jews (3)**

This course surveys the destruction of two-thirds of European Jewry during World War II. Through a close reading of primary texts and secondary sources, it explores the foundations and development of Nazi policy toward the Jews. The course documents the reactions of Jews, European peoples and governments, the U.S. people and government, and various churches and political movements.

**225 Special Topics in European History (3)**

This course is intended to augment the present offerings in European history. The content and material of the course depend on the visiting professor’s area(s) of specialization.

**226 Special Topics in American History (3)**

This course is intended to augment the present offerings in American history. The content and material of the course depend on the visiting professor’s area(s) of specialization.

**227 Introduction to Oral History (3)**

This course introduces students to the theory and practice of oral history through an examination of selected historical topics. The topic for 2001 and 2002 was the history of women’s higher education in America, with emphasis on Chatham’s particular history. Readings and class discus-

sions focus on this topic and on the methodology of oral history. Students interview Chatham alumnae, transcribe, and analyze their data in the context of the broader historical background of women’s educational experiences.

**241 History of Islam (3)**

This course is a historical examination of classical Islamic civilization: its origins, nature, and development. Special attention is given to the religion of Islam and the contributions of Arabs, Persians, and Turks to Islamic civilization. *Cross-listed as REL 241.*

**242 The Modern Middle East 1500-Present (3)**

After examining the forces shaping the modern Middle East, the course studies the rise and fall of the Ottoman Empire, Western impact, and responses to it. Origins and development of nation-states, Arab search for independence and political community, the struggle for Palestine, inter-Arab rivalry, and the prospects for future stability also are examined.

**244 Africa, Past and Present (3)**

This course is an interdisciplinary examination of the problems and promises of African development. It investigates the historical development of pre-independence society, culture, political institutions, and economic structures and their interaction with post-independent economic problems and development strategies.

**263 The Family in American History (3)**

This course examines the major changes and continuities in family life in the United States since the Colonial period. Topics include demographic patterns, family roles and functions, family structure, child-rearing attitudes and practices, and the success of the American family over time.

**275 History and Policy Analysis (3)**

This course illustrates how historical perspectives and methods of investigation are effective tools for assessing contemporary policy debates. The focus of the course moves from foreign-policy issues to public-policy issues in education, criminal justice, economics, and social planning.

**285 African-American History to 1865 (3)**

This course offers a historical survey of topics of importance in understanding the African-American experience in and contribution to 19th-century America.

**286 African-American History Since 1865 (3)**

This course offers a historical survey of topics of importance in understanding the African-American experience in the 20th century.

**293 Work and Leisure in Western Society (3)**

Selected issues – work satisfaction, women's work roles, the development of the work ethic, perspectives on the purpose of leisure activities – are investigated in both historical and contemporary contexts. Current problems concerning work and leisure and future prospects for work and leisure in a postindustrial society are considered. Both Western European and American examples are analyzed.

**Special Topics**

These upper-level seminars focus on more specialized topics and provide students with opportunities for in-depth study and research. Special topics courses vary from year to year.

**318 American Women Since 1960 (3)**

This course examines the experiences of middle-class, working-class, and minority women in America during the era of the women's liberation movement. Themes

considered include the ideology of feminism, women's family roles and relationships, women and work, women's political issues, and women's health issues. The course is conducted in a seminar format. Prerequisite: History 102, one 200-level American history course, or permission of the instructor.

**329 Another Self: American Women and their Friends, 1750 to the Present (3)**

This course traces change and continuity in American women's friendship experiences from the Colonial period to the present. Readings drawn from both primary and secondary sources illustrate the connection between the relationships of individuals and the larger social and cultural context of American history. Prerequisite: History 102, one 200-level course, or permission of the instructor.

**347 The Pursuit of History: Process and Product (3)**

This course focuses on the nature of the discipline of history as both process and product. The course begins with a brief overview of the development of historiography and examines the diversity of current historical practice through a consideration of main themes and new trends in historical research. Prerequisite: one 200-level course in history or permission of the instructor.

**391, 392, 393 Internship (1, 2, 3)****426 The Arab-Israeli Conflict (3)**

This course examines the origins and issues of conflict between the Arabs and Israelis over Palestine. Using extensive primary materials and some secondary sources, the arguments of all sides of the conflict are presented and evaluated. While the core conflict between Palestinians and Israelis is emphasized, the role of regional

and world powers also is examined. Prerequisite: History 242 or permission of the instructor.

**439 Health, Medicine, and History:  
The American Experience (3)**

This course traces the evolution of health and medicine from the Colonial period in American history to the present. Three major themes are considered: health levels and disease incidence, medical practice and practitioners, and attitudes and perceptions regarding illness and its treatment. Issues of particular relevance to women's health are discussed. The influence of societal changes on each of these areas is analyzed. Prerequisite: History 102, one 200-level history course, or permission of the instructor.

**491, 492, 493, 494 Independent  
Study (1, 2, 3, 4)**

**498-499 Tutorial (8 on completion)**

**Law and Society, see  
Pre-Law, page 171**

**Modern Languages**

In a dynamic and increasingly interactive and interdependent world, a student's education must include a knowledge of other languages and cultures. By teaching language within a framework of intercultural understanding, the modern languages program at Chatham prepares students to experience the richness of other languages, literature, and cultures. Small classes and attention to individual student needs, abilities, and career aspirations, as well as creative use of technology, make Chatham's program particularly attractive to students who want to master another language. For advanced students, upper-level classes offer interdisciplinary perspectives on the lit-

erature and cultures of French- and Spanish-speaking regions of the world.

Due to the individualized program at Chatham, students majoring in a language should expect to utilize both independent studies and cross-registrations to complete their major requirements. In addition, the program offers a spring semester in Angers, France, at the Centre international d'études françaises (CIDEF), for which all credits transfer toward a Chatham degree and a major or minor in French, and a semester at the Institute for Central American Development Studies (ICADS) in Costa Rica, for which all credits transfer toward a Chatham degree and a major or minor in Spanish.

All students are welcome in any language course, except tutorials, subject to prerequisites.

*Major Requirements – French and Francophone Studies*

**10 courses, including:**

FRN 205 Grammar and Composition (3)

FRN 498-499 Tutorial (8)

5 courses in French literature and/or civilization

2 program electives

*Major Requirements – Spanish and Hispanic Studies*

**10 courses, including:**

SPN 205 Grammar and Composition (3)

SPN 498-499 Tutorial (8)

5 courses in Spanish literature and/or civilization

2 program electives

*Interdisciplinary Major Requirements*

8 courses in one language, including either FRN 205 or SPN 205

### *Minor Requirements – French and Francophone Studies*

5 courses beyond 100-level, including FRN 205

### *Minor Requirements – Spanish and Hispanic Studies*

5 courses beyond 100-level, including SPN 205

## **French and Francophone Studies Courses (FRN)**

### **101 Introduction to French I (3) *Fall***

An introduction to the four basic skills: comprehension, speaking, reading, and writing, with emphasis on the spoken language through interactive video programs. The course also introduces students to the people and culture of the French-speaking world.

### **102 Introduction to French II (3) *Spring***

A continuation of French 101. Prerequisite: French 101 or permission of the instructor.

### **203 Intermediate French I (3) *Fall***

Review and reinforcement of the basic skills learned in first-year French. Intensive grammar review through video programs, textbook, literary readings, and computer resources. Continued focus on the culture of the Francophone world. Prerequisite: French 102 or permission of the instructor.

### **204 Intermediate French II (3) *Spring***

A continuation of French 203. Prerequisite: French 203 or permission of the instructor.

### **205 Grammar and Composition (3)**

Intensive course in written French, emphasizing grammar and style. Translation from English texts and free composition on a wide range of topics, including a unit on writing for business purposes. Prerequisite: French 204 or permission of the instructor.

### **207 Conversation (3)**

Conversation, discussion, and debates on topics of timely interest, reinforced by short written résumés, emphasizing accuracy of expression and using a practical, up-to-date vocabulary. Prerequisite: French 204 or permission of the instructor.

### **296 French Study in Angers (15)**

Total immersion in the French language and culture through study at the Centre International d'Etudes Françaises at the Université Catholique de l'Ouest in Angers, France. Review of listening, speaking, and writing skills. Additional courses in art history, music history, philosophy, religion, political science, civilization, and current events according to the options available to the qualified student. Any major may apply. Students apply and are accepted for the program through the Office of Academic Affairs. Prerequisite: one year of French.

### **311 Survey of French Literature: Crusaders and Poets, Lovers, and Thinkers (3)**

A study of the epic, romance, and lyric genres, illustrating the quest for mythical and chivalric honor, expressions of love, and the problems of the poet. The course also includes the Renaissance reevaluation of this literary tradition and the development of works of moral persuasion, with readings from such writers as Marie de France, Rutebeuf, Villon, Rabelais, Ronsard, Marguerite de Navarre, and Montaigne. Prerequisite: French 204 or permission of the instructor.

### **312 Survey of French Literature: From Enlightenment to Romanticism (3)**

The dramatic and philosophical literature of the 17th and 18th centuries, including plays, novels, contes, and letters. Readings include works of Descartes, Pascal, Boileau,

La Fontaine, Montesquieu, Diderot, Voltaire, Rousseau, and Beaumarchais. Prerequisite: French 204 or permission of the instructor.

### **313 Survey of French Literature:**

#### **Writing, Absurdity, and Alienation (3)**

Twentieth-century French authors in relation to questions of identity and responsibility, philosophy and meaning, language, and translation. Readings from Camus, Ionesco, Sarraute, Sartre, Beauvoir, Duras, Beckett, among others. The course is taught in French. Prerequisite: French 204 or permission of the instructor.

### **315 France and the Francophone World (3)**

A study of the cultural diversity of France and of the French-speaking world outside mainland France, including countries in Africa, Asia, Europe, the Caribbean, and North America. Topics include political, artistic, and cultural history, as well as contemporary institutions, activities, and values. Cross-cultural comparison and contrast. Prerequisite: French 204 or permission of the instructor.

### **380 Francophone Studies in English (3)**

Investigation of broad themes or topics in French literature not covered in other course offerings. Recent topics have included Simone Says; Feminism and Existentialism; French African and Creole Writers; Evil, Madness, and Fantasy in Literature; and French Cinema. All readings and class discussions in English. Course may be repeated for credit.

### **391, 392, 393 Internship (1, 2, 3)**

#### **418 French Language Attachment (1)**

The French language attachment allows a student who is taking a foreign language literature or civilization course in transla-

tion to complete additional reading and research in French for one additional credit with the course instructor. Corequisite: enrollment in a foreign language, literature, or civilization course taught in English.

### **432 French Social Action Practicum (3)**

This internship offers students a unique opportunity to enhance their knowledge of a foreign language and language pedagogy while providing a valuable service to the larger community. Students are placed in one of the language magnet schools in the Pittsburgh Public School District to work with elementary or middle-school children as coaches and role models. Students are expected to give a minimum of 30 hours per semester and are supervised by Chatham faculty and school personnel. Students complete assigned readings and compile a portfolio reflecting the academic and experiential components of the course. Prerequisite: one year of French and permission of the instructor. Pass/fail grading option only. Students may enroll in the course twice for credit.

### **434 Foreign Language Teaching Methods (3)**

The course provides a broad background in language teaching methodology and second language acquisition for students considering becoming instructors of foreign languages, cultures, or literatures. The course will prepare serious undergraduate modern-language majors and minors and graduate students in education for effective and informed teaching. It includes a review of theories of second language acquisition and their application to the teaching of languages in an interactive approach at the primary, middle, and secondary levels. Attention will be given to the teaching and testing of listening, reading, writing, speaking, and cultural understanding, and to the integration of technology into teach-

ing. Students may take this course with French or Spanish 432.

#### **448 Literature of the Francophone World (3)**

An investigation of the writings, both theoretical and creative, of major French authors from outside mainland France. Primary emphasis on Francophone writers from Africa and the West Indies with additional works from Quebec, Belgium, Switzerland, and South East Asia. The specific concepts of “négritude” and “créolité” are discussed within the political, social, historical, and economic context. Prerequisite: French 204 or permission of the instructor.

#### **480 Special Topics in Francophone Literature (3)**

In-depth analysis and discussion of selected French and Francophone literature not covered in other advanced course offerings. Recent topics have included Women in French Literature; The French Court Theatre; Montaigne, Diderot, Stendhal; French Poetry; and French Literary Criticism. Course may be repeated for credit. Prerequisite: French 204 or permission of the instructor.

#### **491, 492, 493, 494 Independent Study (1, 2, 3, 4)**

#### **498-499 Tutorial (8 on completion)**

### **Languages Courses (LNG)**

#### **418 Language Attachment (1)**

The language attachment allows a student taking a modern language literature or civilization course in translation to complete additional reading and research for one additional credit with the course instructor. Corequisite: enrollment in a modern language, literature, or civilization course taught in English.

#### **434 Foreign Language Teaching Methods (3)**

The course provides a broad background in language teaching methodology and second language acquisition for students considering becoming instructors of foreign languages, cultures, or literatures. The course will prepare serious undergraduate modern-language majors and minors and graduate students in education for effective and informed teaching. It includes a review of theories of second language acquisition and their application to the teaching of languages in an interactive approach at the primary, middle, and secondary levels. Attention will be given to the teaching and testing of listening, reading, writing, speaking, and cultural understanding, and to the integration of technology into teaching.

#### **491, 492, 493, 494 Independent Study in Language (1, 2, 3, 4)**

### **Spanish and Hispanic Studies Courses (SPN)**

#### **101 Introduction to Spanish I (3) Fall**

An introduction to the four basic skills: comprehension, speaking, reading, and writing, with emphasis on the spoken language. This course also introduces students to the people and cultures of the Spanish-speaking world.

#### **102 Introduction to Spanish II (3)**

*Spring*

Continuation of Spanish 101. Prerequisite: Spanish 101 or permission of the instructor.

#### **203 Intermediate Spanish I (3) Fall**

Review and reinforcement of the basic skills learned in first-year Spanish. Intensive grammar review through video programs, textbook, literary readings, and computer resources. Continued focus on the cultures of the Spanish-speaking world. Prerequisite: Spanish 102 or permission of the instructor.

**204 Intermediate Spanish II (3) *Spring***

A continuation of Spanish 203. Prerequisite: Spanish 203 or permission of the instructor.

**205 Grammar and Composition (3)**

Intensive course in written Spanish, emphasizing grammar and style. Translation from English and free composition on a wide range of topics, including a unit on writing for business purposes. Prerequisite: Spanish 204 or permission of the instructor.

**207 Conversation (3)**

Intensive course in spoken Spanish. Devoted mainly to developing acceptable pronunciation, increasing vocabulary, and improving fluency through the discussion of cultural texts and topics of current interest. Prerequisite: Spanish 204 or permission of the instructor.

**209 Spanish Phonetics (3)**

The theory and practice of Spanish pronunciation. Required of teacher certification students. Prerequisite: Spanish 204 or permission of the instructor.

**215 Spanish Civilization (3)**

The cultural heritage of Spain: the interrelation of its customs, institutions, arts, and letters. Prerequisite: Spanish 204 or permission of the instructor.

**216 Spanish-American Civilization (3)**

The ethnic inheritance, culture, ecology, institutions, class structure, concepts of reality, and current problems in Spanish America. The influence of the Colonial period is traced in various aspects of present-day culture. Prerequisite: Spanish 204 or permission of the instructor.

**296 Spanish Study in Costa Rica (15)**

Students enrolled in this program travel to Costa Rica to study Spanish and Latin American culture through the San José-based Institute for Central American Development Studies (ICADS). During the

first four weeks, each student lives with a host family in San José and participates in an immersion Spanish course, seminars on the culture and politics of Costa Rica and Central American women, and an environmental issues course. Students then spend eight weeks in individualized internships reflecting their particular fields of interest. A student may stay in San José or pursue an internship project in another site in Costa Rica, Nicaragua, or Belize. All students are supervised by local mentors throughout their internships. Upon completion of the eight-week internship, students have the opportunity to participate in a special four-day excursion to Panama. After the trip, students return to ICADS in San José to complete written work and oral presentations on their internship experiences. Students apply and are accepted for the program through the Office of Academic Affairs. Prerequisites: Spanish competency and permission of the instructor.

**310 Latin America Through Its Cinema (3)**

Through the viewing and discussion of selected works of Latin American cinema, as well as the consideration of supplementary readings, students are introduced to major topics of contemporary Latin American history and culture. The class surveys Latin American cinema from the Mexican melodrama of the 1940s to recent productions from Mexico, Cuba, and Brazil. In addition to class meetings, students must attend one film screening per week.

**318 Contemporary Latin American Narrative in Translation (3)**

This course is designed to enable English speakers to read and discover those Latin American authors who attracted worldwide attention in the 20th century. Discussed are novels and short stories by Bombal, Borges,

Cortazar, Rulfo, Fuentes, Vargas Llosa, Puig, García Márquez, Allende, Poniatowska, Ferré, and Valenzuela. The readings will pay particular attention to the historical and cultural background of modern Latin America, the development of national identities, and the roles of humor, popular culture, and gender differences in the works. May be taken with a Spanish attachment for students with Spanish proficiency.

### **322 Spanish-American Literature (3)**

An introduction to the most significant works of Spanish-American literature. Emphasis is placed on the Colonial and Revolutionary periods, the Romantic literary theories, the realist novel, modernism, and the contemporary period. Prerequisite: Spanish 204 or permission of the instructor.

### **323 Survey of Spanish Literature (3)**

A survey of Spanish literature from the Middle Ages to the present through the study of representative authors in their historical and social contexts. Readings and discussions in Spanish. Prerequisite: Spanish 204 or permission of the instructor.

### **355 Spanish Literature of the 20th Century (3)**

The main trends in the drama, novel, and poetry since 1900. Prerequisite: Spanish 204 or permission of the instructor.

### **357 Women Writers of Latin America (3)**

This course examines a variety of genres: novels, short stories, poems, plays, and testimonials. Students will read and analyze works of outstanding Latin American women authors from the beginning of the 20th century to the present, emphasizing the diverse representations of women's lives, the formation of the woman's voice as a collective as well as an individual subject, and questions of race, class, and gender in

the writings. The course will consider texts by Alfonsina Storni, Delmira Agustini, Maria Luisa Bombal, Rosario Castellanos, Griselda Gambaro, Luisa Valenzuela, Rosario Ferre, Elena Poniatowska, Cristina Peri Rossi, Carmen Naranjo, Rigoberta Menchú, and Isabel Allende. Readings and discussions will be in Spanish. Prerequisite: Spanish 204 or equivalent, or permission of the instructor.

### **391, 392, 393 Internship (1, 2, 3)**

### **415 The Spanish American Short Story (3)**

This course will explore the important genre of the short story in Spanish American literature from its beginnings to the present. It introduces students to the short story in the Latin American context during the 20th century and encourages discussion and composition about development of the genre, as well as the texts themselves. Students will focus on major authors such as Quiroga, Borges, Bombal, Cortazar, Donoso, Garcia Marquez, Castellanos, Rulfo, Arreola, and Ferre. Prerequisite: Spanish 204 or permission of the instructor. *Cross-listed as SPN 515.*

### **418 Spanish Language Attachment (1)**

The Spanish Language Attachment allows a student who is taking a foreign language literature or civilization course in translation to complete additional reading and research in Spanish for one additional credit with the course instructor. Corequisite: enrollment in a foreign language, literature, or civilization course taught in English.

### **432 Spanish Social Action Practicum (3)**

This internship offers students a unique opportunity to enhance their knowledge of a foreign language and language pedagogy while providing a valuable service to the larger community. Students are placed in

one of the language magnet schools in the Pittsburgh Public School District to work with elementary or middle-school children as coaches and role models. Students are expected to give a minimum of 30 hours per semester and are supervised by Chatham faculty and school personnel. Students complete assigned readings and compile a portfolio reflecting the academic and experiential components of the course. Prerequisite: one year of Spanish and permission of the instructor. Pass/fail grading option only. Students may enroll in the course twice for credit.

#### **434 Foreign Language Teaching Methods (3)**

The course provides a broad background in language teaching methodology and second language acquisition for students considering becoming instructors of foreign languages, cultures, or literatures. The course will prepare serious undergraduate modern-language majors and minors and graduate students in education for effective and informed teaching. It includes a review of theories of second language acquisition and their application to the teaching of languages in an interactive approach at the primary, middle, and secondary levels. Attention will be given to the teaching and testing of listening, reading, writing, speaking, and cultural understanding, and to the integration of technology into teaching. Students may take this course with French or Spanish 432.

#### **491, 492, 493, 494 Independent Study (1, 2, 3, 4)**

#### **498-499 Tutorial (8 on completion)**

## **Philosophy and Religion**

This program explores the meaning and value of human existence, methods of rational inquiry, history of ideas; varieties of religious experience; and the moral and intellectual issues of a technological, global society. This liberal arts discipline encourages critical reflection, self-understanding, and the pursuit of wisdom.

### *Philosophy Minor Requirements*

#### **6 courses, including:**

PHI 113 Introduction to Philosophy

PHI 121 Introduction to Logic

Four approved electives

### *Religion Minor Requirements*

This sequence of courses will introduce students to the basic knowledge and essential vocabulary necessary to understand many of the world's great religious traditions.

#### **5 courses, including:**

REL157 World Religions (3)

REL 322 Special Topics Seminar (3)

3 of the the following:

REL 241 History of Islam (3)

REL 252 History of Judaism (3)

REL 266 History of Eastern Religions (3)

REL 275 History of Christianity (3)

## **Philosophy Courses (PHI)**

### **113 Introduction to Philosophy (3)**

*Spring*

An introductory course focusing on some of the perennial problems of philosophy: the relation of mind and body; the nature of knowledge, freedom and determinism; the existence of God; immortality, and moral responsibility.

### **117 Human Values and Ethics (3)**

*Spring*

A discussion-orientated critical exploration of some important value questions and conflicts. Focus is on one's responsibility to and for oneself and on conflicts arising from interpersonal and societal relationships.

### 121 Introduction to Logic (3) *Even springs*

An introduction to critical thinking, induction, deduction, and contemporary symbolic logic including argument symbolization, proof construction, and truth tables.

### 205 Introduction to Social and Political Thought (3)

An introductory exploration of the fundamental normative questions of politics and social life. The course examines the various methods of political and social thought, especially the range of solutions to the problems of authority, obedience, freedom, equality, and justice in the works of such theorists as Plato, Hobbes, Locke, Mill, Rousseau, and Marx.

### 210 Biomedical Ethics (3)

This course is concerned with the ethical issues arising from recent biomedical innovations or issues that might arise from future innovations. Among the topics discussed are new definitions of death and personhood, killing versus letting die, allocation of scarce medical resources, organ transplants, genetic engineering, the psychiatric control of human behavior, and new projected techniques of human sexual and asexual reproduction.

### 212 Business and Professional Ethics (3)

An investigation of some of the ethical and value conflicts that arise in the practice of business and the professions. Essays and case studies are used. Topics covered may include economic justice, corporate liability and social responsibility, worker rights, whistle blowing, advertising and truth telling, privacy, loyalty, confidentiality, and professional codes.

### 218 Ethics and Women's Issues (3)

A discussion-based course that focuses upon issues of particular relevance to women. Topics discussed may include

equality, affirmative action and comparative worth, social and gender roles, feminism, love, sexuality, family, work, caring and justice, pornography, fashion and beauty, abortion, reproduction, and ecofeminism.

### 225 Environmental Ethics (3) *Even falls*

An investigation of some of the important moral issues generated by human interaction with the environment (natural entities, ecosystems, and other species), such as obligation to future generations, the theoretical foundations for an adequate environmental ethic, biodiversity preservation, environmentally sound development and cultural practices, responsibility to animals, and personal choices and lifestyles. *Cross-listed as ENV 225.*

### 241 Love, Sex, and Friendship (3)

This course is an intensive philosophical inquiry into the concepts of love, friendship, and sex and how these are connected. It examines ideas on relationship, intimacy, and personal fulfillment by some of the best thinkers in the western intellectual tradition. It also explores some puzzling contemporary problems surrounding relationships.

### 276 Art, Beauty, Truth (3)

A philosophical inquiry into the nature and significance of art, beauty, and aesthetic experience, interpretation, and evaluation. Prerequisite: one course in philosophy.

### 382 Rights, Justice, and the Law (3)

An intensive critical investigation of the nature and role of rights in legal and political philosophy, especially in the theory of law, theory of distributive justice, propriety of legislating morality, and justification of punishment. Prerequisite: one course in philosophy.

**391, 392, 393 Internship (1,2,3)**

**491, 492, 493, 494 Independent Study (1, 2, 3, 4)**

## Religion Courses (REL)

**110 Religious Questions and Issues (3)**

This introductory level course will explore one or more central religious themes (such as, Why is there evil?) through the examination of diverse sources such as religious texts, contemporary fiction, drama, film, and music.

**157 World Religions (3) Fall**

An introduction to the world's major religious traditions, including Hinduism, Buddhism, Daoism, Confucianism, Judaism, Christianity, and Islam.

**241 History of Islam (3)**

This course is a historical examination of classical Islamic civilization: its origins, nature, and development. Special attention is given to the religion of Islam and the contributions of Arabs, Persians, and Turks to Islamic civilization. *Cross-listed as HIS 241.*

**252 History of Judaism (3)**

A survey of the development of Jewish religious ideas from Biblical to modern times and an examination of the impact of these ideas on the Western heritage. This course is funded by the Jewish Chautauqua Society of New York.

**266 History of Eastern Religions (3)**

The History of Eastern Religions will provide students with a broad historical overview of the various traditions of Hinduism, Jainism, Buddhism, Taoism, and Confucianism from their inception to their relevance in contemporary society. It will expose students to the primary sacred and historical texts and will attempt to foster an authentic understanding of these faith traditions.

**275 History of Christianity (3)**

The History of Christianity will provide students with a broad historical overview of Christianity from its founding to its relevance in contemporary society. It will expose students to the primary sacred and historical texts of Christianity and will attempt to foster an authentic understanding of this religion tradition.

**322 Special Topics Seminar in Religion (3)**

This seminar will serve as the culminating academic experience of the religion minor. It will focus on specialized topics and provide students with the opportunity for in-depth study and research. Prerequisites: Religion minors will be admitted to this seminar only after having completed Religion 157 and three of the following four courses: Religion 241, 252, 266, or 275. Other students will be admitted with the express consent of the instructor.

## Policy Studies

The policy studies majors – global policy and public policy – are multidisciplinary majors, centered in economics, history, and political science, and draw upon the expertise of faculty in other disciplines. These majors are built upon a single required core of courses, which provides students with the tools essential for a coherent understanding of and participation in policy making, as well as those tools necessary to undertake a policy-oriented tutorial. These majors also integrate internships with classroom experience, and provide applied courses focused on either American policy making or policy making in a global context.

## Global Policy Studies

Global policy studies is designed to prepare students for careers in international policy making in public and private set-

tings. Additionally, it prepares U.S. students for the examination for entrance into the U. S. Foreign Service and other government careers. It serves a similar purpose for international students interested in interpreting U. S. policy to their national governments, and all students for careers in multinational corporations and organizations. It serves as an appropriate base for graduate work in international relations, law, public policy, and applied history, as well as more traditional academic fields.

### Major Requirements

#### 14 courses, including:

- ECN 101 Principles of Macroeconomics (3)  
 ECN 102 Principles of Microeconomics (3)  
 HIS 100 Introduction to World History (3)  
 HIS 275 History and Policy Analysis (3)  
 POL 101 American Government and Public Policy (3)  
 POL 202 Understanding Public Policy (3)  
 POL 311 Methods of Social and Political Research (3) **or**  
 ECN 301 Econometrics (3)  
 MTH 110 Elementary Statistics (3)  
 498-499 Tutorial (8)  
 The tutorial is registered in the tutor's program and focuses on a global policy issue.

1 approved internship

1 economic analysis elective from the following:

- ECN 351 International Trade and Finance (3)  
 ECN 358 Economic Development (3)

1 historical analysis elective from the following:

- HIS 222 Europe in the 20th Century (3)  
 HIS 241 History of Islam, 600-1500 (3)  
 HIS 242 Modern Middle East, 1500-Present (3)  
 HIS 426 The Arab-Israeli Conflict (3)

1 political analysis elective from the following:

- POL 219 International Organizations (3)  
 POL 324 U. S. Foreign Policy (3)  
 POL 419 European Integration (3)  
 POL 445 Health Policy (3)

### Public Policy Studies

Public policy studies is designed to prepare students for careers in domestic policy making in public or private settings. Additionally, it provides an appropriate foundation for students interested in careers in public service, either in elected office or in government agencies. It is an appropriate background for students interested in non-governmental policy organizations. It serves as a base for graduate work in public policy and law, as well as for more traditional academic fields.

### Major Requirements

#### 14 courses, including:

- ECN 101 Principles of Macroeconomics (3)  
 ECN 102 Principles of Microeconomics (3)  
 HIS 102 History of American Society (3)  
 HIS 275 History and Policy Analysis (3)  
 POL 101 American Government and Public Policy (3)  
 POL 202 Understanding Public Policy (3)  
 MTH 110 Elementary Statistics (3)  
 POL 311 Methods of Social and Political Research (3) **or**  
 ECN 301 Econometrics (3)  
 498-499 Tutorial (8)  
 The tutorial is registered in the tutor's program and focuses on a domestic public policy issue.

1 approved internship

1 economic analysis elective from the following:

- ECN 262 Environmental Economics (3)  
 ECN 374 Labor Economics (3)

- ECN 385 Industrial Organizations and Public Policy (3)  
 1 sociopolitical analysis elective from the following:  
 POL 213 Sex Discrimination and the Law (3)  
 POL 425 Environmental Policy (3)  
 POL 445 Health Policy (3)  
 SWK 322 Social Welfare Policy II (3)  
 1 historical analysis elective from the following:  
 HIS 263 The Family in American History (3)  
 HIS 439 Health, Medicine, and History: The American Experience (3)  
 SWK 321 Social Welfare Policy I (3)

## Political Science (POL)

The study of government and political behavior has value in several different ways. First, it is important for all active citizens to learn about the political system in which they spend their lives, simply because it shapes their lives even as they participate in shaping the political future. Second, more than a passing knowledge of political systems should be acquired by anyone who expects to enter a profession in the public eye, whether that be teaching, law, law enforcement, the military or civil service, journalism, or issue advocacy. Third, political science, like its sister disciplines in the liberal arts, helps students develop reasoning, analytical, verbal, and writing skills, all of which are called upon in professional life.

The goal of the program is to provide Chatham students with the knowledge, experience, skills, and self-image needed to find employment and rise to leadership in one's field. Therefore, political science education occurs within and outside the Chatham classroom. The program coordinates classroom work with a variety of in-

ternships, research experiences, and encounters with professionals to provide the student with essential experience as well as knowledge. Chatham students are encouraged to explore practical and governmental careers through an active internship program. Political science students often play leadership roles within the campus community. Finally, Chatham participates in the Public Leadership Education Network (PLEN), through which students can spend time in Washington, DC, learning more about our national government.

### Major Requirements

#### 12 courses, including:

- MTH 110 Elementary Statistics (3)  
 POL 100 Introduction to Comparative Politics (3)  
 POL 101 American Government and Public Policy (3)  
 POL 202 Understanding Public Policy (3)  
 POL 311 The Research Process (3)  
 POL 498-499 Tutorial (8)  
 5 additional 3-credit program electives.  
 Students may count one approved 3-credit internship and one of the following three courses as part of the 5 course requirement:  
 ECN 101 Principles of Macroeconomics (3)  
 PHI 205 Introduction to Social and Political Thought (3)  
 PHI 482 Rights, Justice, and the Law (3)

### Interdisciplinary Major Requirements

#### 8 courses, exclusive of the tutorial:

- POL 100 Introduction to Comparative Politics (3)  
 POL 101 American Government and Public Policy (3)  
 POL 311 The Research Process **or**  
 An approved methods course in another discipline  
 5 political science electives, which may include one approved 3-credit political science-related internship.

### Minor Requirements

#### 6 courses, including:

POL 100 Introduction to Comparative Politics (3) **or**

POL 101 American Government and Public Policy (3)

5 political science electives, which may include one approved 3-credit political science-related internship.

#### 100 Introduction to Comparative Politics (3) *Even falls*

Introduction to politics, policies, and political institutions outside of the United States. Includes concepts such as electoral systems, party systems, parliamentary and presidential systems, democratization, and political change in both Western and non-Western settings.

#### 101 American Government and Public Policy (3) *Fall*

An examination of the major processes and institutions of American government with comparisons to Canadian government and the economic, social welfare, and environmental policies that these processes and institutions produce.

#### 104 Introduction to International Relations (3) *Odd springs*

A survey of significant patterns and trends in 20th-century world politics, modes of conducting relations among nations, instruments for promoting national interests, and current problems of economic and political interdependence.

#### 115, 116 Model United Nations (fall and spring, 1 each) *As needed*

This course prepares students to participate in regional and (inter)national Model United Nations summit conferences. There are three components: history, purpose, organization and procedures of the United Nations; structure, processes, and strategies

for participation as a “nation” at Model U.N.; and substantive research and preparation for position papers on an assigned country. Students must complete Policy Studies 115 as a prerequisite for Policy Studies 116. All students must participate in a Model U.N. conference with regard to research and preparation of position papers. To the extent that funding will allow, all students must participate in an actual regional or national conference as well.

#### 201 American Judicial Process (3)

This course examines the politics, processes, and policies of the American legal system. The operations and characteristics of state and federal trial courts, court officials, and correctional institutions are examined both through literature and field observation. Court policy making is related to contemporary problems of political justice. Prerequisites: Political Science 101 or permission of the instructor.

#### 202 Understanding Public Policy (3) *Spring*

This course introduces students to the concepts and tools used in the analysis of public policies, and uses these concepts and tools to examine public policies in the United States and other industrial democracies. Prerequisite: Political Science 100 or 101.

#### 213 Sex Discrimination and the Law (3)

An examination of past and present sources of discrimination experienced by men and women in the United States. Consideration of evolving patterns of equal protection and due process of law in recent local, state, and federal laws and court decisions. Employment, marriage, the right to privacy, and the possible impact of equal rights amendments. Prerequisite: Sophomore standing or above.

**219 International Organizations (3)***As needed*

This course examines the role of international organizations in world politics, including how and why the network of organized international institutions developed and what they contributed to managing such issues as military conflict, political change, and economic instability. Prerequisite: Political Science 104.

**228 Public Administration (3)**

An examination of the executive agencies and personnel of U.S. national, state, and local governments. Special attention is given to the relationship between the structure of governmental systems and resulting characteristics of administration. Special topics include decision making, budgeting, personnel, and administrative law. Prerequisite: Political Science 101 or permission of the instructor.

**229 Campaigns and Elections (3)**

What makes a candidate successful? How do you win in local, state, and national politics today? This course will provide a survey of trends in modern U.S. political campaigns and elections, including the effects of political parties, interest groups, the media, campaign finance, election laws, and individual candidates. Special emphasis will be placed on the impact of gender on electoral success. Students will follow one current campaign in detail, comparing it to the literature on campaigning. Prerequisite: Political Science 101.

**262 Women and Politics (3) *Annually***

Does gender make a difference in politics? Are women different from men in their political behavior? Do women contribute different norms, rules, and outcomes within political institutions? Students become familiar with the literature on, and conduct research projects in a specific aspect of, women's involvement in politics.

Prerequisite: Political Science 100 or 101, or Women's Studies 101, or permission of the instructor.

**270 Special Topics: Applied Politics and Policy (1)**

This course is intended to augment the political science curriculum by providing seminar experiences that connect co-curricular activities (e.g., workshops, internships, PLEN conferences) to political science and policy studies. Credit is earned for participation in experiential learning activities, such as the PLEN conferences, and completion of related disciplinary course work as defined by the instructor

**303 Constitutional Law I: U.S. Government Powers and Relationships (3)**

An examination of the role American courts have played in shaping governmental powers and relationships outlined in the Constitution. The course considers the doctrine and use of judicial review and the legal problems raised by separation of power between the national branches and by the division of power between nation and state. Special attention is paid to the ways in which courts have affected Congressional power over taxation and commerce and presidential domestic and international powers. These issues are examined through an analysis of court decisions and application of legal principles to hypothetical-fact situations. Prerequisite: Political Science 101 or permission of the instructor.

**304 Constitutional Law II: Civil Liberties (3)**

An examination of the role American courts have played in giving meaning and scope to rights and liberties protected by the Constitution. The course considers the rights of persons accused of crime; rights to free speech, press, and assembly; freedom of religious belief and practice; equal

protection of the law; and the right of privacy. These issues are examined partly through consideration of the actual impact of such decisions on the political system. Examinations require the student to apply principles to hypothetical-fact situations. Prerequisite: Political Science 101 or permission of the instructor.

### **311 The Research Process (3)**

This seminar is essential for students who both use and produce scholarly research. It examines both the process and products of scholarship in the social sciences, including the following: choice of topic, development of research questions or hypotheses, retrieval of sources, preparation of a literature review, choice of appropriate methodology, and consideration of research results. Prerequisite: Junior standing or consent of instructor.

### **324 U.S. Foreign Policy (3) *As needed***

This course examines the diverse factors that influence the formulation and implementation of American foreign policy. This entails the study of three components: the composition of governmental institutions involved in the policy-making process; the societal forces affecting foreign policy; and the changes in the global environment, which present new challenges to the foreign policy process. To this end, the course examines several issues, including the dominant patterns of continuity and change in foreign policy, the ability of the president to govern in foreign affairs, and the tension inherent between the needs of democracy and national security concerns. Prerequisite: Political Science 104 or permission of the instructor.

### **352 Research Practicum (1)**

A practical research opportunity through the Pennsylvania Center for Women, Politics, and Public Policy. Students learn to collect original data on women in politics

and policy, do preliminary analysis, and contact elected officials throughout Pennsylvania. Pass/fail grade only. Prerequisite: Political Science 311 or permission of the instructor.

### **391, 392, 393 Internship (1, 2, 3)**

#### **407 Minority Groups and the Law (3)**

An examination of the past and present impact of law and law enforcement on minorities in the United States. Differential treatment based on characteristics such as health, age, language, and race are examined in statutory, administrative, and judicial settings, as well as in the context of issues such as employment and sentencing discrimination or the right of access to education and other public services. Prerequisite: junior standing. (*See also Cultural Studies, pages 210.*)

#### **419 European Integration (3)**

The development of the European Union (EU) has been the significant political and economic force in post-war Europe. This course examines the historical conditions in which the EU was formed, the development and expansion of its institutions and policies, its relationship with the U.S., and its expansion into much of Eastern Europe. Prerequisite: Political Science 104 or permission of instructor.

#### **425 Environmental Policy (3)**

This course takes an interdisciplinary approach to the study of the theory and practice of environmental policies. The course focuses on the political and economic factors contributing to the success and failure of present environmental policies. Topics include the roles of government and the market in causing environmental problems, analysis of proposed means for resolving those problems, and the application of economic and political analyses to selected environmental issues. Prerequisites: Poli-

cal Science 101, Economics 101, Economics 102, or Environmental Studies 116; or permission of the instructor. *Cross-listed as ENV 425.*

#### 445 Health Policy (3)

This course examines health policies in the United States with comparisons to other countries. It uses a policy analysis framework to explore the formation, implementation, and outcomes of a wide variety of public policies relating to health, including professional standards and liability, costs and coverage of medical care, drug regulation, organ donation, and epidemics. Prerequisites: an introductory course in Economics or Political Science, or permission of the instructor.

#### 491, 492, 493, 494 Independent Study (1, 2, 3, 4)

#### 498-499 Tutorial (8 on completion)

## Pre-Law Program

Chatham's pre-law program is designed to encourage and support students with an interest in careers in law, and specifically, to help students prepare to enroll and to attend law school. The program includes the pre-law advisor, a pre-law minor entitled Law and Society, co-curricular programs offered in partnership with the PA Center for Women, Politics, and Public Policy, and the support of an advisory committee.

Law schools do not require students to major in any one area, and because of this, students are free to choose a course of study that best fits their interests and possible professional objectives, while keeping in mind the skills and values which will be important for success in the field of law. The American Bar Association identifies some of these skills as critical reading, analytic, and problem-solving abilities; oral

and written communication skills; and an interest in service and justice. For students who wish to pursue specific courses to better prepare them for the rigors of the Law School Aptitude Test, and for the study and practice of law, the Law and Society Minor combines courses which are useful for legal study, plus electives which will provide substantial depth in policy, philosophy, ethics, and law.

### Law and Society Minor

In order to better prepare students for law school studies, this minor is intended to provide students with basic analytical skills in communication, logical reasoning, and introductory constitutional law supplemented with substantive depth in policy, philosophy, law, and ethics.

The minor shall consist of three required courses that comprise the "skills section" of the minor, and any three optional courses from the second list that provide background in law, policy, the regulatory arena, and ethics. Courses may not be double counted with the major and all are offered with sufficient frequency to allow the minor to be completed in a timely manner.

#### Minor Requirements

- COM 234 Persuasion I (3) **or**
  - ENG 102 Expository Writing (3) **or**
  - THT 158 Speaking to Inform and Persuade (3)
  - POL 303 Constitutional Law I (3) **or**
  - POL 304 Constitutional Law II (3)
  - PHI 121 Introduction to Logic (3)
- 3 of the following:
- BUS 256 Business Law (3)
  - ECN 385 Industrial Organization and Public Policy (includes significant anti-trust law) (3)
  - PHI 212 Business and Professional Ethics (3)

- PHI 482 Rights, Justice, and the Law (3)  
 POL 201 American Judicial Process (3)  
 POL 213 Sex Discrimination and the Law (3)  
 POL 303 Constitutional Law I (3) **or**  
 POL 304 Constitutional Law II (3)  
*(may take the Con Law not taken as a required course above)*  
 POL 407 Minority Groups and the Law (3)

**Public Policy Studies,**  
*see Policy Studies, page 166*

**Religion,** *see Philosophy and Religion, page 163*

**Spanish and Hispanic Studies,** *see Modern Languages, page 157*

### **Women's Studies (WST)**

The major in women's studies offers students the opportunity for the interdisciplinary study of women's contributions to society and women's experience in diverse cultures and historical periods. Students seek to understand the new scholarship on women and the new intellectual frameworks, methodologies, and feminist theories that examine gender as a social construct. They analyze critically the representations of women in literature and the arts, in social and political theory, and in the sciences, and they are encouraged to rethink their own responsibility for reshaping society.

### **Major Requirements**

#### **12 courses, including:**

- CST 183 Representations of Race and Gender (3)  
 WST 101 Introduction to Women's Studies (3)  
 WST 225 Gender Identity: Local, Transnational, and Global (3)  
 WST 250 Service Internship in Women's Studies (3)  
 WST 350 Feminist Theory (3)  
 WST 498-499 Tutorial (8)  
 5 electives from the following:  
 ART 263 Women and Art (3)  
 BUS 255 Gender Issues in Work and Management (3)  
 ENG 262 Introduction to Women Writers (3)  
 ENG 286 Contemporary African-American Women Writers (3)  
 ENG 385 Toni Morrison Seminar (3)  
 ENG 419 Frontier Women (3)  
 ENG 452 Ecofeminist Literature (3)  
 ENG 464 Early Modern Romance: Representations of Women (3)  
 FLM 225 Female Narration: Race and Gender in Women's Film (3)  
 FLM 226 Issues in Film: Gender, Race, and Ethnicity (3)  
 FOR 220 Women and the Criminal Justice System (3)  
 MUS 232 Women in Music (3)  
 PHI 218 Ethics and Women's Issues (3)  
 POL 213 Sex Discrimination and the Law (3)  
 POL 262 Women and Politics in the U.S. (3)  
 PSY 236 Psychology of Women (3)  
 PSY 415 Human Sexuality (3)  
 WST 355 Special Topics in Women's Studies (3)

**Minor Requirements****6 courses, including:**

- CST 183 Representations of Race and Gender (3)
- WST 101 Introduction to Women's Studies (3)
- WST 225 Gender, Migration, and Globalization (3)
- WST 350 Feminist Theory(3)
- 2 electives chosen from the above list of major electives.

**101 Introduction to Women's Studies (3)**

This course introduces students to the multiple ways in which gender has been understood in the past and examines current approaches to it from a feminist perspective. It examines the ways in which different disciplines approach issues of gender, and encourages interdisciplinary analysis.

**225 Gender Identity: Local, Transnational, and Global (3)**

This course will address Gender, Migration, and Globalization through an examination of the legacy of colonialism and process of decolonization in the context of 20th-century women's texts. A focus on the experience of migration will enable students to understand how colonization affects women's identities in both colonized and colonizing nations. Following through on the theme of migration, the course will provide students with an important historical context through which to understand postcolonial representation and critique. Prerequisite: Cultural Studies 183 or Women's Studies 101.

**250 Service Internship in Women's Studies (3)**

Students intern at a nonprofit or government agency, institution, or place of work that deals with concerns of women. Students also meet regularly with their internship advisor to monitor this experience. Arranged through the Office of Career Development.

**350 Feminist Theory (3)**

Students become familiar with the history of the feminist movement and with current feminist theories, including, among others, "second-wave" feminism, socialist/Marxist feminism, liberal feminism, psychoanalytic feminism, and the nature of difference. In addition, students analyze and apply methods used in women's studies. Particular attention is paid to the nature of evidence used in interpreting women's lives and cross-cultural awareness. The assumptions of the scientific method are evaluated, and other research methods are presented, e.g., historiography, textual analysis, and archival research. Minor emphasis is placed on preparation for tutorial research. Prerequisite: Cultural Studies 183 or Women's Studies 101

**491, 492, 493, 494 Independent Study (1, 2, 3, 4)****498-499 Tutorial (8 on completion)**



# Division of Health Sciences

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*Mark Freeman, M.B.A., M.Ed., PA-C, Division Chair*

## **Undergraduate Academic Programs**

Exercise Science

Pre-Health Professions Program

## **Graduate Academic Programs (see pages 283-360)**

Occupational Therapy

Physical Therapy

Physician Assistant Studies

## **Affiliated Faculty and Staff**

*Patricia Downey, Assistant Professor and Director of Physical Therapy and Exercise Science*

*Mark Freeman, Assistant Professor and Director of Physician Assistant Studies*

*Mary Jo Geyer, Assistant Professor of Physical Therapy*

*Susan Hawkins, Assistant Professor of Physician Assistant Studies and Pre-Health Professions Advisor*

*Mark Hertweck, Assistant Professor of Physician Assistant Studies*

*Deborah Kortyna, Assistant Professor of Physician Assistant Studies*

*Valerie Koval, Clinical Coordinator in Physician Assistant Studies*

*Douglas Kress, Medical Director in Physician Assistant Studies*

*Suchita Kulkarni-Lambore, Associate Professor of Physical Therapy*

*John Laird, Assistant Professor of Physician Assistant Studies*

*Beth Marcieski, Clinical Coordinator in Physician Assistant Studies*

*Susan Balko Perry, Associate Professor of Physical Therapy*

*Joyce Salls, Assistant Professor and Director of Occupational Therapy*

*Joseph Schreiber, Assistant Professor of Physical Therapy*

*Lyn Silverman, Assistant Professor of Occupational Therapy and Academic Fieldwork Coordinator*

*Brenda Swanson-Biearman, Assistant Professor of Physician Assistant Studies*

*Judith Traister, Assistant Professor of Physical Therapy*

## Exercise Science (EXS)

The exercise science major prepares students for professional practice in a variety of fields including exercise physiology, exercise and fitness training, hospital-based and corporate wellness programming, and sports medicine, as well as preparation for graduate study in physical therapy, medicine, and other health science programs.

Exercise science, as defined by the American College of Sports Medicine, is the study of movement and the associated functional responses and adaptations. The field of exercise science ranges from the study of how organ systems function at the cellular level, to enhancing the biomechanical efficiency of the individual. The benefits of exercise have been medically recognized and accepted for its role in preventive medicine and in the rehabilitative process of health and well being. Professionals in exercise science are prepared to examine, evaluate, prescribe, and manage health and fitness of healthy people across the life span, as well as promote healthy lifestyles and prevention programs for individuals and communities.

### Major Requirements

#### 26 courses, including:

- BIO 114 Basic Nutrition (3) **or**
- BIO 123 Nutrition (3)
- BIO 143 The Cell (4)
- BIO 144 The Organism (4)
- BIO 201 Anatomy (5)
- BIO 202 Physiology (5)
- BIO 209 Basic Neuroscience (3) **or**
- EXS 201 Management of Fitness and Wellness Programs (2)
  
- CHM 107 Chemistry I (3)
- CHM 108 Chemistry II (3)
- CHM 109 Chemistry I Lab (1)
- CHM 110 Chemistry II Lab (1)
- EXS 101 Introduction to Exercise Science (1)

- EXS 102 First Aid and Cardiopulmonary Resuscitation (1)
- EXS 345 Kinesiology and Movement Science (3)
- EXS 425 Applied Exercise Physiology (3)
- EXS 498-499 Tutorial (8)
- IND 350 Scientific Research Methods (2)
- MTH 108 Precalculus (3)
- MTH 151 Calculus I (4)
- MTH 110 Elementary Statistics (3)
- PHY 251 Principles of Physics I (4)
- PHY 252 Principles of Physics II (4)
- PHY 255 Physics Lab I (1)
- PHY 256 Physics Lab II (1)
- PSY 101 General Psychology (3)
- PSY 152 Human Growth and Development (3)

Students intending to apply to medical school are advised to take the following courses in addition to the above curriculum:

- CHM 205 Organic Chemistry (3)
- CHM 215 Organic Chemistry Lab (2)

### 101 Introduction to Exercise Science (1)

This course is designed to provide an overview of the field of exercise science as a discipline and profession. Students will be exposed to methods and techniques employed to develop positive attitudes and habits that support an active lifestyle. Topics of health risk factors and wellness will be explored as they specifically relate to exercise. Possible career choices related to this field will also be discussed.

### 102 First Aid and Cardiopulmonary Resuscitation (1)

Trains participants in the essentials of first aid, cardiopulmonary resuscitation (CPR), and basic health safety.

### **201 Management of Fitness and Wellness Programs (2)**

Examines principles of managing health promotion strategies and programs for a variety of customer groups.

### **345 Kinesiology and Movement Science (3)**

This course will cover the movement of muscles as well as their function and interaction with other muscles. It will also examine theories, principles, and practical applications in motor control and learning. Attention is given to the physiological and psychological foundations of motor control and learning. The motor control and learning laboratory portion of this course constitutes one credit of the four credit course.

### **393 Internship in Exercise Science (3)**

Supervised field experience in an exercise science field or motor control. May include research, athletic training, or community fitness projects.

### **425 Applied Exercise Physiology (3)**

The nature of muscular, metabolic, cardiovascular, and respiratory adjustment to acute and chronic exercise. Exercise testing and exercise prescription.

### **498-499 Tutorial (8 upon completion)**

## **Pre-Health Professions Program (HSC)**

The Pre-Health Professions Program at Chatham College allows women to explore the endless possibilities awaiting them. A formal plan of development allows students to explore a variety of professions and develop a plan to achieve their goals. The student is mentored and provided with valuable feedback throughout her academic career at Chatham, with the ultimate goal of attaining a rewarding and challenging

career in health care. Career exploration includes medicine, dentistry, veterinary medicine, allied health (Physician Assistant, Physical Therapy, and others), podiatry, chiropractic medicine, optometry, nursing, social work, medical technology, psychology, and other areas.

Students can major in any area of her choosing. Most students opt to major in the Sciences; however, successful health professions students have come from all majors. Pre-requisite courses for the various health professions are investigated and explored. Students opting for a 3-2 or other accelerated option for a Chatham College graduate health program are provided additional advisement to achieve success with all specific program prerequisites. Students interested in this program should contact the pre-health professions advisor for more information.

### **101 Introduction to the Health Professions (2)**

This course explores a variety of health professions available today. Students will have the opportunity to interact with health care professionals currently active in the field. Self-directed research of selected topics allows students to develop skills necessary for career exploration. The use of films, texts, and other media will allow the student to experience real-life scenarios and issues related to the health care professions. Students will be exposed to the concept of problem-based learning as one tool to actively explore real-life clinical issues and the health professions. Students will understand the process required for application to the professional school of their choice. This course is recommended for any student pursuing a career in medicine or the health professions.



# Division of Human Development

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*Deborah Rubin, Ph.D., Division Chair*

## **Undergraduate Academic Programs**

Education  
Forensics  
Human Services Administration  
Psychology  
Social Work

## **Graduate Academic Programs (see pages 283-360)**

Counseling Psychology  
Education  
Leadership and Organizational Transformation  
School Counseling

## **Certificate Programs (see page 243-248)**

Instructional Technology

## **Affiliated Faculty and Staff**

Ellen Ashburn, *Assistant Professor of Education*  
Donna Bayless, *Instructor in Education*  
Barbara Biglan, *Assistant Professor of Education and Certification Officer*  
Elizabeth Claytor, *Act 48 Coordinator*  
Lynne Curtis, *Associate Professor of Psychology*  
Patricia Demase, *Assistant Professor of Education*  
Helen Faison, *Professor Emeritus and Director of the Pittsburgh Teachers Institute*  
Anthony Goreczny, *Associate Professor of Psychology*  
Robert Gallen, *Associate Professor of Psychology*  
Thomas Hershberger, *Professor of Psychology*  
Martha Hildebrandt, *Assistant Professor of Education*  
Amanda Kloof, *Instructor in Education*  
Linda Loar, *Assistant Professor of Education*  
Ronald Lombard, *Assistant Professor of Education*  
Mary Beth Mannarino, *Assistant Professor of Psychology and Director of the MSCP Program*  
Christine Miller, *Field Experience Coordinator in Education*  
Gloria Nouel, *Assistant Professor of Psychology and Director of the MALOT Program*  
Bonnie Robinson, *Assistant Professor of Social Work*  
Deborah Rubin, *Assistant Professor of Social Work and Director of the Social Work Program*  
Sheila Seelau, *Assistant Professor of Forensics and Psychology and Director of the Forensics program*  
Margaret Stubbs, *Assistant Professor of Psychology*  
Stephanie Valutis, *Assistant Professor of Psychology and Social Work*  
Joseph Wister, *Associate Professor of Psychology*

## Education (EDU)

### *Requirements for Recommendation for State Certification in Teaching*

The Teacher Preparation Program offers teacher certification programs in early childhood education (N-3), elementary (k-6), secondary (7-12), Spanish, French, and environmental education (k-12).

The Liberal Arts Major in Elementary and Early Childhood Education offers a comprehensive preparation program for teaching young children predicated on a foundation in the liberal arts. Students in elementary and early childhood are required to complete a minor in an academic discipline as well as the sequence of professional preparation courses. Students in secondary and k-12 certification areas must complete a major in the academic discipline. This program involves both classroom study and extensive field experiences, culminating in a 14-week Student Teaching experience. In accordance with the Pennsylvania State Department of Education requirements, candidates also must satisfy all regulations pertaining to teacher training contained in the Pennsylvania School Code.

### *Liberal Arts: Early Childhood Education (N-3)*

- EDU 100 Introduction to Field Experiences (1)
- EDU 102 Principles of Teaching and Learning (2)
- EDU 103 Children's Literature and the Arts (2)
- EDU 104 Perspectives on Education (3)
- EDU 207 Trends and Issues in Early Childhood Education (3)
- EDU 208 Teaching Literacy in the Elementary School (4)
- EDU 233 Early Interventions (3)
- EDU 311 Early Childhood Curriculum (4)

- EDU 313 Early Childhood Education Practicum (3)
- EDU 314 Designing Early Childhood Centers (2)
- EDU 318 Technology and Assessment in the Elementary School (2)
- EDU 324 Teaching in Multicultural Settings (3)
- EDU 414 Early Childhood Student Teaching (9)
- PSY 351 Childhood and Adolescence (3)
- PSY 353 Field Placement for Principles of Child Development (1)
- 498-499 Tutorial (8)
- 1 course in English Writing
- 1 course in English Literature
- 2 course in Mathematics
- 1 course in Sciences
- 1 course in Environmental science + Lab
- 1 course dealing with U.S. History
- Minor in an academic discipline

### *Liberal Arts – Elementary Education (K-6) Requirements*

- EDU 100 Introduction to Field Experiences (1)
- EDU 102 Principles of Teaching and Learning (2)
- EDU 103 Children's Literature and the Arts (2)
- EDU 104 Perspectives on Education (3)
- EDU 208 Teaching Literacy in the Elementary School (4)
- EDU 212 Elementary Curriculum (2)
- EDU 234 Inclusion: Issues and Strategies (3)
- EDU 309 Field Experiences Level I (1)
- EDU 310 Field Experiences Level II (1)
- EDU 315 Mathematics Teaching Methods (2)
- EDU 316 Methods of Science Teaching Methods (2)
- EDU 318 Technology and Assessment in the Elementary School (2)
- EDU 319 Social Studies Teaching Methods (2)

- EDU 324 Teaching in Multicultural Settings (3)
- EDU 413 Elementary Student Teaching (9)
- PSY 351 Childhood and Adolescence (3)
- PSY 353 Field Placement for Principles of Child Development (1)
- 498-499 Tutorial (8)
- 1 course in English Writing
- 1 course in English Literature
- 2 courses in Mathematics
- 1 course in Science
- 1 course in Environmental science + Lab
- 1 course dealing with U.S. History
- Minor in an academic discipline
- EDU 104 Perspectives on Education (3)
- EDU 220 Principles of Secondary Education (3)
- EDU 220F Field Placement: Principles of Secondary Education (1)
- EDU 221 Secondary School Curriculum (2)
- EDU 234 Inclusion: Issues and Strategies (3)
- EDU 309 Field Experience I (1)
- EDU 310 Field Experience II (1)
- EDU 324 Teaching in Multicultural Settings (3)
- EDU 325 Tests and Measurements (3)
- EDU 326 Literacy in the Content Areas (3)
- EDU 326F Field Placement: Literacy in the Content Areas
- EDU 423 Secondary Student Teaching (9)

### Certification

Certification is available in early childhood, elementary, and secondary education. Certification requirements are set by the state of Pennsylvania and subject to change. Contact the teacher certification officer for current certification requirements.

Certification is available in environmental education. This certification is designated K-12. The program in this area will require some courses for both elementary and secondary education. Candidates for this area should contact the certification officer.

Secondary certification is available in biology, chemistry, English, mathematics, physics and social studies. Within each discipline there are specific academic courses required for certification. Students should contact the Teacher Preparation Program for a complete list of courses required.

**Following is a list of pedagogy courses required of all secondary certification candidates.**

- EDU 100 Introduction to Field Experiences (1)
- EDU 102 Principles of Teaching and Learning (2)

One of the following methods courses is required.

- EDU 327 Teaching Methods in Secondary English (3)
- EDU 328 Teaching Methods in Secondary Social Studies (3)
- EDU 329 Teaching Methods in Secondary Science (3)
- EDU 330 Teaching Methods in Secondary Mathematics (3)

In addition one course in instructional technology is required.

### 100 Introduction to Field Experiences (1)

This course is designed to ensure that all students are properly prepared for field experiences in Pittsburgh area schools. The course involves discussion of legal, social and cultural issues. In the second half of the course students are placed in school settings to complete observation assignments. Corequisite: Education 102.

### **102 Principles of Teaching and Learning (2)**

This course is taken concurrently with Introduction to Field experiences. Students explore the fundamental principles of learning and how these principles are applied in classroom settings. Learning and the factors that influence learning are analyzed. Effective teaching, management, instruction, and assessment are studied for their impact on learning. Corequisite: Education 100.

### **103 Children's Literature and the Arts (2)**

This class explores children's literature through the lens of the fine arts as well as from a developmental perspective. Students increase their repertoire of methods and materials used to engage children in literature activities. Noted works such as Newberry and Caldecott awardees in children's literature serve as the basis for class discussion. Students participate in storytelling and dramatic activities linked to literature.

### **104 Perspectives on Education (3)**

Students examine the role of teachers and schools in past and contemporary society. Selected educational issues are analyzed including role of technology in the classroom, legal issues for teachers, school-community relations, and current legislative initiatives. A field placement is embedded in this course.

### **207 Trends and Issues in Early Childhood Education (3)**

This course examines current and contemporary issues surrounding early childhood education. Class discussions focus on sociological, psychological, political, and economic forces shaping families, children and early educational experiences. Embedded in this course is a field experience of observations in a variety of day care and nurs-

ery school settings in the local area. Prerequisite: Education 100 and 102.

### **208 Teaching Literacy in the Elementary School (4)**

Interrelationships among listening, speaking, writing, and reading are investigated. Classroom organizational patterns, materials, and approaches within the total elementary curriculum and specific techniques for individualizing instruction are studied. The refinement of teaching strategies through microteaching and tutoring individual or small groups of children in cooperating preschools and elementary schools reinforces the theoretical considerations of the course. Prerequisites or corequisites: Education 100 and 102.

### **212 Elementary Curriculum (2)**

This course examines current research and trends in elementary school curriculum. Planning the structure and variety of developmentally appropriate learning experiences for children in grades K through 6 is explored in terms of theory and practice. The complexity of designing and implementing effective instructional experiences for elementary classrooms is an essential part of this course. Prerequisite: Education 100, 102, 103, 104 and 208.

### **220 Principles of Secondary Education (3)**

The course focuses on the characteristics of the secondary school student and the structure and climate of high school. Students examine the nature of adolescent development, the implications of cognitive and affective characteristics of adolescents in selecting instructional methods and designing curricular materials, and the structural features of typical secondary schools. A brief introduction to comparative education is provided through an investigation of secondary education in selected areas outside the United States. A half-day-per-week field

experience is required. Prerequisites or corequisites: Education 100, 102, and 104.

### **220F Field Placement: Principles of Secondary Education (1)**

Corequisite: Education 220

### **221 Secondary School Curriculum (2)**

Students investigate instructional planning and implementation as well as a range of behavior and classroom management techniques. Reading assignments in appropriate professional literature encourage students to develop a familiarity with the most effective teaching approaches. Motivation, evaluation of student achievement, and differentiation of instruction are considered. Prerequisite: Education 100, 102, 103, 104 and 208.

### **233 Early Interventions (3)**

This course explores the dynamics of interventions in the life of young children with exceptionalities. A team approach involving health care professionals, educators, social workers, and parents is employed to explore the multi-dimensional requirements of these young children. A field experience is embedded within this course. Prerequisites: Education 100, 102, 103, 104, and 208.

### **234 Inclusion: Issues and Strategies (3)**

This course provides the conceptual framework for understanding inclusion issues in our public schools. The students discuss the variety of exceptionalities found in public school settings and the resultant impact of inclusion policy upon instructional practice. A field placement is embedded in this course. Prerequisites: Education 100, 102, 103, 104, and 208.

### **309 Field Experience Level I (1)**

In this field experience, students observe teachers in classroom settings as well as tutor students in mathematics and reading. Students teach three mini-lessons dur-

ing this experience that are videotaped for analysis and evaluation. Prerequisite: Education 212.

### **310 Field Experience Level II (1)**

Students work with host classroom teachers at two different placements. Comparisons are drawn through reflective journals and differentiated lesson plans and summarized in a final presentation. Students assume a greater role in teaching small groups of students. Prerequisites: Education 212 and 234.

### **311 Early Childhood Curriculum (4)**

Students engage in seminars accompanied by field experiences in early childhood settings. The teaching of subject matter (mathematics, science, music, art, social studies, health, and physical education) is explored in the context of these learning situations. Theoretical approaches gathered from appropriate readings are analyzed through a variety of experiences: micro-teaching, videotaping, and small group instruction. A field placement is embedded in this course. Prerequisites: Education 100, 102, 103, 104, and 208.

### **313 Early Childhood Education Practicum (3)**

In this courses students spend 42 hours at the Carriage House or other sites working with the full range of early learning experiences from infants to kindergarten. Students work with early childhood professionals to gain a greater understanding of the application of developmental theory. A resource portfolio is created using observed and published activities, commercial programs and Internet lessons. Registration by permission of instructor.

### **314 Designing Early Childhood Centers (2)**

This course explores the connection between curriculum and physical environ-

ment. Major approaches and theories in early childhood curriculum are explored in terms of their cognitive, social, and physical dimensions. Emphasis is placed on the physical expression of early childhood learning theory. Issues of health and safety, including state and federal regulations are also explored. A field experience is part of this course. Prerequisites: Education 100, 102, 103, 208, 233, and 311.

### **315 Methods of Teaching Mathematics in the Elementary School (2)**

This course studies the methods, materials, and organization of essential learning and research-based perspectives of teaching mathematics in the elementary school. Strong emphasis is placed on the standards of the National Council of Teachers of Mathematics. All concepts presented are linked with manipulative materials. A structured field experience is part of the course. Prerequisites: Education 100, 102, 103, 208, and 212.

### **316 Methods of Teaching Science in the Elementary School (2)**

This course presents concepts, processes, and skills essential to the elementary school science program. The standards set by the National Science Teachers Association serve as a framework for the course. Inquiry teaching and learning are experienced through research-based national programs. A structured field experience is an essential part of this course. Prerequisites: Education 100, 102, 103, 208, and 212.

### **318 Technology and Assessment in the Elementary School (2)**

This course addresses the integration of technology in elementary classroom experiences. The focus is on both the nature of the technology and its appropriate use in instructional activities. This course also addresses the role of assessment measures in the elementary classroom both teacher-

made and standardized testing. As instruction can be influenced by test results, technology often is used for remediation and enhancement of skills. Prerequisites: Education 100, 102, 103, 208, and 212.

### **319 Methods of Teaching Social Science in the Elementary School (2)**

This course is a study of the resources and methods of teaching elementary social studies including geography and culture. Links to literature and the fine arts are part of this exploration of a thematic integration of social studies in classroom activities. A structured field experience is part of this course. Prerequisites: Education 100, 102, 103, 208, and 212.

### **324 Teaching in Multicultural Settings (3)**

This course is designed to help future teachers understand the complexities of teaching in a culturally diverse classroom. Instruction provides and guides pre-service teachers with the knowledge, insight, and understanding needed to work effectively with students from various social class, religious, ethnic, and cultural groups. Individual differences that affect teaching and learning are emphasized. Instructional concepts and strategies for multicultural classrooms are offered. Prerequisites for elementary and early childhood candidates: permission of instructor. Prerequisites for secondary candidates: Education 104 and 220 and Psychology 351.

### **325 Tests and Measurements (3)**

A study of the principles and major concepts of psychological and educational testing and a systematic coverage of various types of tests in current use in educational settings. Prerequisites: Education 100, 102, and 104.

**326 Literacy in the Content Areas (3)**

This course is designed for secondary education certification students to help them teach students to read and communicate more effectively in the subject area they plan to teach. This course demonstrates how reading strategies can be integrated with other language modes (listening, speaking, writing, and observing), thereby improving comprehension in any subject area. Prerequisites: Education 100, 102, and 104.

**326F Field Placement: Literacy in the Content Areas (1)**

Corequisite: Education 326

**327 Teaching Methods in Secondary English (3)**

This course addresses the theory and philosophy of teaching language arts in middle and secondary schools. Classroom teaching strategies are explored and implemented in class presentations and in grade 7-12 public school classrooms. Students plan instructional situations that clearly express the reading-writing connection that exists in effective language arts programs. Prerequisite or corequisite: Education 221.

**328 Teaching Methods in Secondary Social Studies (3)**

This course intends to develop teaching/learning styles that research has shown are most effective for teaching social studies to adolescents. Contextual teaching, problem-based learning, and critical thinking are approached through instructional strategies that combine investigative classroom inquiry with both national and state content standards. Students learn to frame issues, to help students research and analyze data and information, and to construct meaning and understanding. A field placement is embedded in this course. Prerequisite or corequisite: Education 221.

**329 Teaching Science in the Secondary School (3)**

Examination of current theory and practice for teaching science in secondary schools is explored in this course. Curriculum development, teaching strategies and methodologies, and assessment issues are also addressed. Students examine research-based curriculum and inquiry teaching and learning as best practices in science education. A field placement is embedded in this course. Prerequisite or corequisite: Education 221.

**330 Teaching Secondary School Mathematics (3)**

A balance of theory and practice is explored in this course to help students become effective teachers of mathematics. Curriculum development, teaching strategies and methodologies, and assessment issues are also addressed. A field placement is embedded in this course. Prerequisite or corequisite: Education 221.

**413 Elementary Student Teaching (9)****414 Early Childhood Student Teaching (9)****415 Secondary School Curriculum (2)**

Students investigate instructional planning and implementation as well as a range of behavior and classroom management techniques. Reading assignments in appropriate professional literature encourage students to develop a familiarity with the most effective teaching approaches. Motivation, evaluation of student achievement, and differentiation of instruction are considered.

**416 Teaching Methods in Secondary English (3)**

This course addresses the theory and philosophy of teaching language arts in middle and secondary schools. Classroom teaching strategies are explored and imple-

mented in class presentation and in 70-12 public classrooms. Students plan instructional situations that clearly express the reading-writing connection that exists in effective language arts programs. Prerequisites: EDU 100, 102, and 104.

#### **417 Teaching Methods in Secondary Social Studies (3)**

This course intends to develop teaching/learning styles that research has shown is most effective for teaching social studies to adolescents. Contextual teaching, problem based learning and critical thinking are approached through instructional strategies that combine investigative classroom inquiry with both national and state content standards. Students learn to frame issues, help students research and analyze data and information and to construct meaning and understanding. Prerequisites: Education 100, 102, and 104.

#### **418 Teaching Science in the Secondary School (3)**

Examination of current theory and practice for teaching science in secondary schools is explored in this course. Curriculum development, teaching strategies and methodologies and assessment issues are also addressed. Students examine research-based curriculum and inquiry teaching and learning as best practices in science education. Prerequisites: Education 100, 102, and 104.

#### **419 Teaching Secondary School Mathematics (3)**

A balance of theory and practice is explored in this course to help students become effective teachers of mathematics. Curriculum development, teaching strategies and methodologies and assessment issues are also addressed. Prerequisites: Education 100, 102, and 104.

#### **423 Secondary Student Teaching (9)**

#### **498-499 Tutorial Action Research in Classroom Settings (8)**

The tutorial in elementary/early childhood education will include an action research proposal. This study will be conducted as part of the student teaching experience. The findings and summary of the research will be presented both at Chatham College and at the Student Teaching school placement.

### **Forensics (FOR)**

Forensics is the application of scientific principles to the law. Completion of this program prepares students for graduate or professional study or for entry-level positions in law enforcement, legal, or human service agencies. The focus is on providing a general overview of the field that enables students to understand key concepts and procedures used in criminal investigations. In addition to the major and minor in Forensics, a minor in Forensic Science is available for students who complete Organic Chemistry and its associated prerequisites.

#### *Major Requirements*

##### **14 courses, including:**

- BIO 135 Applied Human Biology (3)
- FOR 102/102L Crime Scene Investigation (4)
- FOR 103 Introduction to Criminal Law and Criminal Justice (3)
- FOR 301 Behavioral Analysis in Forensics (3)
- FOR 393 Internship (3)
- FOR 498-499 Tutorial (8)
- PSY 101 General Psychology (3)
- PSY 213 Statistics and Research Design (3)
- PSY 214 Foundations of Behavioral Research (4)

- PSY 333 Abnormal Behavior (3) **or**  
 SWK 325 Deviant Behavior (3)  
 SWK 101 Introduction to Social Behavior  
 (3)

2 of the following:

- FOR 220 Women and the Criminal  
 Justice System (3)  
 PSY 331 Social Psychology (3)  
 PSY 341 Psychobiology (3)  
 PSY 340 Psychopharmacology (3)

### *Forensics Minor Requirements*

**5 courses, including:**

- SWK 101 Introduction to Social Behavior  
 (3)  
 FOR 102/102L Crime Scene Investigation  
 (4)  
 FOR 103 Introduction to Criminal Law  
 and Criminal Justice (3)  
 FOR 301 Behavioral Analysis in  
 Forensics (3)  
 PSY 333 Abnormal Behavior (3) **or**  
 SWK 325 Deviant Behavior (3)

### *Forensic Science Minor Requirements*

The forensic science minor is intended for students who are interested in careers as scientists collaborating with law enforcement. This includes those who are interested in working in forensic chemistry and toxicology laboratories. It will also serve students who are interested in the scientific background that is routinely performed as part of a criminal investigation. This minor complements the B.S. degrees in biology, biochemistry, and chemistry available at Chatham.

**7 courses, including:**

- BIO 144 The Organism (4)  
 FOR 102/102L Crime Scene Investigation  
 (4)  
 FOR 103 Introduction to Criminal Law  
 and Criminal Justice (3)  
 FOR 320 Forensic Science (3)

- PSY 101 General Psychology (3)  
 MTH 110 Elementary Statistics (3)  
 SWK 101 Introduction to Social Behavior  
 (3)

### **102/102L Crime Scene Investigation (4)**

Using concepts from biology, chemistry, and physics, students will learn the basics of forensic procedures, including DNA fingerprinting, organic and inorganic analysis, arson investigation, and trace evidence. The course will focus on relevance and implications of evidence for a criminal trial and how to process the evidence at a crime scene.

### **103 Introduction to Criminal Law and Criminal Justice (3)**

This course will address issues related to crime, criminal offenders, and American laws. Also addressed will be the law enforcement system. Emphasis will be on the role of forensic professionals in the criminal justice system.

### **220 Women and the Criminal Justice System (3)**

This course focuses on three aspects of women's involvement in the criminal justice system: as victims, offenders, and professionals. Coverage will include theories and facts about women offenders, the impact of crime on women victims and survivors, and special issues facing women who pursue careers in policing and corrections.

### **301 Behavioral Analysis in Forensics (3)**

This course provides a broad introduction to Forensic Psychology. Emphasis is on the role of forensic psychologists and other forensics professionals in a variety of legal matters. Students will learn about profiling, lie detection, insanity and competency, and child custody as well as several other issues related to the practice of forensic psychology.

**320 Forensic Science (3)**

This course will focus on the theory, methods, and instrumentation used in forensic science. Topics covered will include biochemical markers, uses of HPLC and mass spectrometry, trace evidence, toxicology, and arson/explosives analysis. This course will build upon principles learned in Forensic Science 102/102L. Prerequisites: Chemistry 205, Forensic Science 102/102L.

**391, 392, 393 Internship (1, 2, 3)****491, 492, 493, 494 Independent Study (1, 2, 3, 4)****498-499 Tutorial (8 upon completion)**

## Human Services Administration (HSA)

The human services administration minor provides a structured interdisciplinary foundation for understanding the historical roles, importance, and administration of human service and nonprofit organizations in contemporary American society. The minor acquaints students with the rationale for human service organizations and the many social needs that they meet and social problems they address. The minor also familiarizes students with the required knowledge, skills, and roles of administrators and social work professionals in human service and nonprofit organizations.

*Minor Requirements***6 courses, including:**

- BUS 105 Introduction to Management (3)  
 BUS 337 Managing Nonprofit Organizations (3)  
 SWK 101 Introduction to Social Behavior (3) **or**  
 PSY 101 General Psychology (3)

SWK 102 Introduction to Social Work and Social Issues (3)

SWK 321 Social Welfare Policy I (3)

SWK 351 Social Work Practice I (3)

## Psychology (PSY)

The major course work is organized in a common structure for the baccalaureate curriculum: a required introductory course, three methodology courses, six advanced content courses, and the tutorial.

Common elements of the curriculum include active and collaborative learning, research projects, fieldwork, practicums and community service, discussion of ethical issues and values, and courses and research methods that heighten the student's understanding of diversity in human behavior. Learning about psychology occurs in multiple settings: the classroom, laboratories, field experience, internships, psychology club (Psi Chi), and undergraduate research conferences (Western Pennsylvania Undergraduate Psychology Conference). The program places a strong emphasis on effective student advising that goes beyond guidance in course selection and information about institutional procedures. The intent is to motivate students to explore and develop their values, interests, abilities, and career and life goals and to encourage students to consider post-baccalaureate educational possibilities, including graduate and professional school.

The psychology curriculum enables students to think scientifically about behavior and mental processes, to appreciate and respect others, and to pursue a variety of post-baccalaureate alternatives, including employment and graduate or professional school. This major is applicable to any career in which an understanding of human thought and behavior is central, including

personnel/human resources, social work, introductory-level counseling, interviewing, and data collection.

### Major Requirements

#### 12 courses, including:

- PSY 101 General Psychology (3)  
 PSY 213 Statistics and Research Design(3)  
 PSY 214 Foundations of Behavioral Research (4)  
 PSY 302 Junior Seminar in Psychology (3)  
 PSY 498-499 Tutorial (8)  
 1 course in learning and cognition from the following:  
 PSY 307 Cognitive Psychology (3)  
 PSY 326 The Psychology of Learning (3)  
 1 course in individual differences, personality and social from the following:  
 PSY 323 Personality (3)  
 PSY 331 Social Psychology (3)  
 PSY 333 Abnormal Behavior (3)  
 1 course in biological bases from the following:  
 PSY 324 Motivation (3)  
 PSY 340 Psychopharmacology (3)  
 PSY 341 Psychobiology (3)  
 1 developmental course from the following:  
 PSY 351 Childhood and Adolescence (3)  
 PSY 352 Adult Development (3)  
 2 additional psychology program electives

### Interdisciplinary Major Requirements

#### 8 courses, exclusive of the tutorial:

- PSY 101 General Psychology (3)  
 PSY 213 Statistics and Research Design(3)  
 PSY 214 Foundations of Behavioral Research (4)  
 3 additional, approved 300-level courses  
 2 psychology program electives

### Minor Requirements

#### 6 courses, including:

- PSY 101 General Psychology (3)  
 PSY 213 Statistics and Research Design(3)  
 PSY 214 Foundations of Behavioral Research (4)  
 2 additional, approved 300-level courses  
 1 approved psychology program elective

### 101 General Psychology (3)

An introduction to the scientific study of behavior with an emphasis on the origins of behavior, learning, social influences, physiological factors, individual differences, personality, and adjustment and maladjustment.

### 152 Human Growth and Development (3)

Physical, cognitive, social, and emotional development are studied throughout the life span. Major theories of development are discussed. Applications and examples are presented from applied contexts. Special needs of individuals at various stages throughout the life span are addressed. This course is not a substitute for 200- and 300-level developmental courses that apply toward majors in psychology and social work and certification in education. Prerequisite: Psychology 101.

### 210 Psychology of Eating (3)

This course examines the research and theories of food consumption from biological, cultural, and learning perspectives. Topics include the physiology of hunger, development of food preferences, cuisines, and disordered eating. Prerequisite: Psychology 101.

### 213 Statistics and Research Design (3)

This course is designed to introduce students to essential research tools. Topics include frequency distributions, indices of

central tendency, variability, and various inferential statistics, including nonparametric techniques. This course also examines research design procedures with an emphasis on analysis of variance. Prerequisites: Psychology 101 and completion of the mathematics proficiency requirement.

### **214 Foundations of Behavioral Research (4)**

This course examines the scientific method employed by psychologists. Topics include sampling, validity and reliability, experimentation, and field research. Students also conduct laboratory assignments on areas within learning, cognition, and social psychology. Prerequisites: Psychology 101 and 213 or permission of the instructor.

### **215 Theories of Counseling and Psychotherapy (3)**

Major approaches to “helping” are examined and compared within two basic course orientations: a person-centered framework and a rational-emotive one. Interviewing and listening skills are discussed and practiced. The course also features guest lecturers who are practitioners in human-services settings. Prerequisites: Psychology 101 or permission of the instructor.

### **220 Special Topics in Psychology (3)**

This course is designed to allow students to explore in depth a specific topic or area of psychology. Topics will vary from year to year and might include coping and adaptation, history and systems of psychology, psychology of eating and eating disorders, or evaluation of self-help literature and programs. Prerequisite: Psychology 101 or permission of the instructor.

### **225 Death and Dying (3)**

This course explores the psychological and social impact of death. While such study will include theoretical approaches to death and bereavement, attention also will be

focused on individual, cultural, and situational differences. It examines the phenomenon of death as understood or not understood by family members, physicians, nurses, and the dying themselves. Prerequisite: Psychology 101, Social Work 101, or permission of the instructor.

### **230 Animal Behavior (4)**

A general introduction to the study of animal behavior from evolutionary and sociobiological perspectives. Emphasis is on social behaviors and interactions. The laboratory portion of the course involves work in the laboratory and fieldwork at the Pittsburgh Zoo, Frick Park, and Powdermill Nature Reserve in Rector, Pennsylvania. Prerequisite: Psychology 101 or permission of the instructor.

### **236 Psychology of Women (3)**

The course examines current theory and research on the psychology of women. Topics include the development of gender roles, gender comparisons, women and work, love relationships, women’s physical and mental health, violence against women, and women in later adulthood. Students who take this course should acquire an understanding of what it means to be a female in North America. Prerequisite: Psychology 101 or Women’s Studies 101.

### **238 Industrial/Organizational Psychology (3)**

The course examines psychological principles and methods as they apply to industry and organizations. Topics include motivation, leadership, communication systems, organizational change and development, performance assessment, stress, and group dynamics. Prerequisite: Psychology 101 or permission of the instructor.

**243 Health Psychology (3)**

An examination of the psychological processes that influence physical health. Topics include stress and coping; nutrition, weight control, and diet; managing and controlling pain; substance abuse; and health promotion. Prerequisite: Psychology 101 or permission of the instructor.

**292 Individualism and Commitment (3)**

This discussion course examines the values inherent in Western psychologies: emphasis on autonomy, independence, and identity to the exclusion of issues of relatedness and commitment. It presents an interdisciplinary study of alternative values stressed by women, many minority groups, and non-Western societies. Examples of women's created lives reveal issues of class, culture, and gender.

**302 Junior Seminar in Psychology (3)**

Prepares students of psychology for the tutorial. Research methodology, statistical analysis, computer usage, and professional issues of APA style, format, and ethics are key components. Each student intensively studies a specific research problem by surveying current research literature and then designs an appropriate research protocol. Required of all junior psychology majors. Prerequisites: Psychology 101, 213, 214, and junior standing.

**307 Cognitive Psychology (3)**

A survey of theories and research concerned with human cognitive processes. Topics include attention, memory, problem solving, and concept formation. Prerequisite: Psychology 101.

**323 Personality (3)**

A survey of individual characteristics from four conceptual strategies: psychoanalytic, dispositional, phenomenological, and behavioral. All conceptual strategies address

issues of theory, assessment, research, and personality change. Emphasis is on enduring principles and contemporary issues, illustrated with selected examples and personal application. Prerequisite: Psychology 101.

**324 Motivation (3)**

A survey of concepts and data related to the arousal and direction of behavior. Prerequisite: Psychology 101.

**326 Psychology of Learning (3)**

An overview of the principles and research associated with modern learning theory. Topics include classical conditioning, operant learning, reinforcement theory, and stimulus control of behavior. Prerequisite: Psychology 101.

**331 Social Psychology (3)**

An examination of human social behavior with an emphasis on social influences that people have upon the beliefs or behaviors of others. The course covers methods of inquiry as well as the scientific study of how we think about, influence, and relate to one another. Representative topics include conformity, persuasion, social cognition, prejudice, aggression, and interpersonal relationships. Prerequisite: Psychology 101.

**333 Abnormal Behavior (3)**

A study of definitions of normality and abnormality, functional and organic syndromes, theories of causation, and procedures for the diagnosis and modification of disturbed behavior. Prerequisite: Psychology 101.

**340 Psychopharmacology (3)**

The influence of drugs on behavior and psychological state. Topics include neuron morphology, neurochemistry, principles of pharmacology, and the action and effects of psychotropic drugs. Prerequisite: Psychology 101 or permission of the instructor.

**341 Psychobiology (3)**

An examination of the biological correlates of behavior. Emphasis is placed on the central nervous system and its structure, organization, and function. Specific topics considered are sleep, learning, memory, sexual behavior, motivation, and complex processes such as thought and language. Prerequisite: Psychology 101.

**350 History and Systems of Psychology (3)**

The history of psychology from its early philosophical forebearers through its development in the schools of the late 19th and early 20th centuries to its present stages of theoretical development. Prerequisites: Psychology 101 and junior status.

**351 Childhood and Adolescence (3)**

A general introduction to theories and methods of developmental psychology. The course covers patterns and possible mechanisms of behavioral development from conception through adolescence. Audio- and videotapes of infants, children, and their families supplement lectures, discussions, and written exercises. The life span perspective is continued in Psychology 352. Prerequisite: Psychology 101.

**352 Adult Development (3)**

A life-span perspective is adopted to study physical, cognitive, and social/emotional aspects of adult development. Questions of qualitative changes, continuity/discontinuity stages, individual differences, and the impact of biological, environmental, and cultural factors throughout adulthood are addressed. This course is designed to follow Psychology 351 but may be taken as a stand-alone course. Prerequisite: Psychology 101.

**353 Field Placement for Principles of Child Development (1)**

Twenty-four hours of fieldwork in an educational setting, which permits observation of a variety of developmental stages. Required co-enrollment with Psychology 351 for education students. Optional for non-education students.

**391, 392, 393 Internship (1, 2, 3)****402, 403 Individual Research (2,3)**

Intensive study of a specific research problem by survey of literature, data collection, and data analysis with the supervision and collaboration of a faculty member, possibly in collaboration with other students who are working on the same problem or related ones. Minimum registration: one term or interim; repeated registration to a total of three permitted. This course is ideal preparation for tutorial work in psychology. Prerequisites: Psychology 101, 213, 214, and permission of the instructor.

**415 Human Sexuality (3)**

This course draws from current research to examine biological, psychological, and social aspects of sexuality. In addition, issues relating to sexuality for parents and educational and counseling professionals will be addressed. Prerequisite: Psychology 101.

**491, 492, 493, 494 Independent Study (1, 2, 3, 4)****498-499 Tutorial (8 on completion)**

## Social Work (SWK)

The social work program offers a major in social work leading to a Bachelor of Social Work (B.S.W.) degree. The social work program is accredited by the Council on Social Work Education. A liberal arts foundation is an integral part of an undergraduate social work education and provides an essential context for understanding human behavior. The B.S.W. prepares students for entry-level generalist social work practice as well as graduate education in social work and related fields. Bachelor level social workers are employed in all areas of human services and health care. They are also eligible for advanced standing in graduate programs in social work.

Students must apply for admission to the social work major while completing academic prerequisites. This process is required to help ensure that students possess both the academic ability and personal maturity necessary for beginning social work practice. To apply for admission to the major, students must either: 1) be enrolled in Social Work 102; 2) have completed Social Work 102; or 3) be at least a second-term sophomore. Specifics of the application process may be obtained from any member of the social work faculty.

### Major Requirements

#### 19 courses, including:

- BIO 135 Applied Human Biology (3) **or** another approved biology course
- POL 101 American Government and Public Policy (3)
- PSY 101 General Psychology (3)
- PSY 213 Statistics and Research Design (3)
- PSY 214 Foundations of Behavioral Research (4)
- SWK 101 Introduction to Social Behavior (3)

- SWK 102 Introduction to Social Work and Social Issues (3)
- SWK 201 Human Behavior in the Social Environment I (3)
- SWK 202 Human Behavior in the Social Environment II (3)
- SWK 321 Social Welfare Policy I (3)
- SWK 322 Social Welfare Policy II (3)
- SWK 341 Human Diversity (3)
- SWK 351 Social Work Practice I (3)
- SWK 352 Social Work Practice II (3)
- SWK 354 Social Work Practice III (3)
- SWK 355 Social Work Practice IV (3)
- SWK 460 Integrative Seminar in Social Work (3)

SWK 498-499 Tutorial (8)

12 credits of field placement from the following:

- SWK 451 Field Placement (1)
- SWK 452 Field Placement (2)
- SWK 453 Field Placement (3)
- SWK 454 Field Placement (4)
- SWK 455 Field Placement (5)

Preparation for professional social work practice necessitates a broad range of course work. Accreditation requirements preclude interdisciplinary majors. There is no social work minor. Social work majors may not minor in human services administration. Students interested in the social work major are advised to meet with a member of the faculty early in their academic careers to develop a course sequence plan.

### 101 Introduction to Social Behavior (3)

The goal of the course is to introduce students to basic sociological concepts and methods, including socialization, groups, social institutions, collective behavior, and social change. Emphasis is placed on conceptual and methodological tools necessary for the scientific analysis of human interaction and on society's fulfillment of hu-

man needs through health, education, and social welfare systems.

### **102 Introduction to Social Work and Social Issues (3)**

This course examines selected social issues as well as related social welfare policies and programs. It introduces the profession of social work, key aspects of the professional knowledge base, fields of practice, and populations served by social workers.

### **164 Diversity in Health and Illness (3)**

This course will examine the impact of culture on health care services and delivery in the United States. The influence of cultural difference on patient/provider interactions will be considered within the cultural competency model. The context of health and illness for groups including African-American, Asian-Americans, and Latin-Americans will be included.

### **201 Human Behavior in the Social Environment I (3)**

This course examines the development of individuals, couples, and families from birth to adolescence within the framework of relevant biological, psychological, sociological, and social work research and theory. Additionally, it examines the evolution of families, groups, organizations, institutions, and communities as systems and their influence on human development and behavior. Attention is also given to the interactions of systems that influence development as well as the impact of gender, race, ethnicity, social, and economic influences on systems and behavior, and implications for social work practice. Prerequisites: Psychology 101 or permission of the instructor.

### **202 Human Behavior in the Social Environment II (3)**

This course is a continuation of Social Work 201. It examines the development

of individuals, couples, and families from adolescence to death within the framework of relevant biological, psychological, sociological, and social work research and theory. Additionally, it examines the evolution of families, groups, organizations, institutions, and communities as systems and their influence on human development and behavior. Attention is also given to the interactions of systems that influence development as well as the impact of gender, race, ethnicity, social, and economic influences on systems and behavior, and implications for social work practice. Prerequisite: Social Work 201 or permission of instructor.

### **212 Social Gerontology (3)**

Understanding the aging process through an introductory examination of the biological, psychological, and physiological aspects of aging. A systematic examination, using an ecological framework of social aspects of aging; of the political, familial, educational, economic; and religious institutions and other noninstitutional forces affecting the elderly in Western society.

### **224 Juvenile Justice (3)**

Examination of biological, psychological, sociological, and ecological theories of juvenile delinquency; its historical and current legal definitions and enabling legislation; statistical resources and activity patterns; and methods of prevention, control, and treatment of juvenile delinquency.

### **248 Marriage and the Family (3)**

This course analyzes marriage and the family in American society: historical development, contemporary economic and cultural pressures, and the impact that social class has upon the nature of family life. The course also contrasts the American family with examples of marriage and fam-

ily life from other selected cultures and sub-cultures.

### **260 Special Topics in Social Work (3)**

A topic of current interest in social work. Topics will vary from year to year depending on interest and needs of students. Possible topics include alcoholism and other drug addictions, social work with the developmentally disabled, domestic violence, advocacy in social work, or conflict resolution skills.

### **321 Social Welfare Policy I (3)**

This course examines the history, development, context, and current status of the American social welfare system. The American system is compared with policies and programs in other countries. The specifics of major welfare programs such as Social Security and Temporary Aid to Needy Families are explored.

### **322 Social Welfare Policy II (3)**

This course builds upon and adds to the knowledge gained in Social Work 321. Social welfare policies, programs, and related institutions are examined within the context of the social problems they address. Special focus is given to social welfare policies and programs designed to promote social justice, although economic justice also is addressed. This course also explores the strengths and weaknesses of current interventions and institutions regarding their promotion of social and economic justice. Prerequisite: Social Work 321 or permission of instructor.

### **325 Deviant Behavior (3)**

This course examines psychological and sociological theories and research on deviant behavior. Deviancy is examined from biological, psychological, and sociological perspectives, and discussed as a problem in individual adjustment, small groups, and social organizations. Theory and research

concerning the major types of deviant behavior and societal reactions, as both causes and consequences of deviant behavior, also are discussed. Prerequisite: Social Work 101.

### **341 Human Diversity (3)**

This course explores aspects of human diversity including race, gender, ethnicity, sexual orientation, and disability within the context of oppression and privilege. Concepts of ethnocentrism, marginality, social class, prejudice, stereotypes, power, and inequality are examined in relation to social and economic justice.

### **346 Seminar in Gerontology (3)**

This course will be offered in three stages. First, it will provide for an assessment of student knowledge of gerontology. Second, it will focus substantially upon the research methods used in gerontological research and a student project. Third, it will provide a forum for the presentation of student research projects. Prerequisites: completion of all other certificate in gerontology requirements or permission of the instructor.

### **351 Social Work Practice I (3)**

This course introduces generalist social work practice, including its philosophy, domains, and values. The role of the practitioner and an overview of the helping process provide the foundation for the study and practice of basic interviewing skills. Prerequisite: Social Work 102. Open only to social work and psychology majors, human services administration minors, or with permission of the instructor.

### **352 Social Work Practice II (3)**

Building on the knowledge and skills acquired in Social Work 351, this course focuses on direct practice with individuals and families, including the assessment, middle, and termination phases of social

work practice. Skills for working with diverse populations will be illustrated and practiced using videos and role playing. Prerequisite: Social Work 351. Open only to social work majors.

### **354 Social Work Practice III (3)**

This course examines the essential components of generalist social work practice with groups. Topics include group typology, formation, development, and processes. Strategies for effective leadership with small and large groups are explored using both didactic and experiential methods. Prerequisite: Social Work 351. Open only to social work majors.

### **355 Social Work Practice IV (3)**

Organizational and community theories are examined and linked to agency design and administration, community organization, and social planning. Models of intervention are evaluated in terms of existing power structures, underlying assumptions, and potential for enhancing social and economic justice. Strategies based on the strengths perspective and aimed at empowering disadvantaged groups receive special attention. Prerequisite: Social Work 351. Open only to social work majors.

### **391, 392, 392 Internship (1, 2, 3)**

**451, 452, 453, 454, 455**

#### **Field Placement (1, 2, 3, 4, 5)**

Students participate in a practice experience with the opportunity to apply social work knowledge, ethics, and practice skills. Students work closely with their field instructors, as well as meeting weekly with social work faculty. Students must complete a total of 12 credits of field placement. Open only to senior social work majors. Prerequisites or corequisites: Social Work 352, 354, 355; corequisite in the spring term, Social Work 460.

### **460 Integrative Seminar in Social Work (3)**

The capstone course of the social work program, this seminar requires students to synthesize and integrate their professional knowledge with field experience. Topics include ethics, professional practice, critical thinking, and integration of research in practice, and career development. Corequisite: Field placement.

### **491, 492, 493, 494 Independent Study (1, 2, 3, 4)**

### **498-499 Tutorial (8 on completion)**

# Division of Natural and Physical Sciences

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*Larry Viehland, Ph.D., Division Chair*

## **Undergraduate Academic Programs**

Behavioral Neuroscience

Biochemistry

Biology

Botany

Chemistry

Computing

Engineering

Mathematics

Physics

## **Affiliated Faculty and Staff**

*Renee Falconer, Associate Professor of Chemistry*

*Roxanne Fisher, Assistant Professor of Biology*

*Mary Kostalos, Professor of Biology*

*Lisa Lambert, Associate Professor of Biology*

*Joseph MacNeil, Associate Professor of Chemistry*

*Autumn Maloy, Lecturer in Biology*

*T.J. Meehan, Assistant Professor of Biology*

*Corey Stilts, Assistant Professor Chemistry*

*Larry Viehland, Professor of Chemistry*

*Colleen Witkowski, Lecturer in Biology*

*Japheth Wood, Assistant Professor of Mathematics*

## Behavioral Neuroscience

Behavioral neuroscience is a branch of the biological sciences that focuses on the structure and function of the nervous system, emphasizing the neural bases of behavior. The behavioral neuroscience minor offers a diverse and challenging selection of courses in biology, psychology, chemistry, and neuroscience.

### Minor Requirements

#### 6 courses, including:

- BIO 143 The Cell (4)
- BIO 144 The Organism (4)
- BIO 209 Basic Neuroscience (3)
- BIO 309 Advanced Neuroscience (5)
- BIO 312 Neuropharmacology (3)
- PSY 101 General Psychology (3) **or**
- CHM 105 General Chemistry (3) **or**
- CHM 107 Chemistry I (3)

Courses listed here that are also required for a student's major must be replaced by a course approved in advance by the division chair.

## Biochemistry

Biochemistry is a science whose boundaries now encompass many aspects of chemistry and biology, from molecules and cells to organisms and ecology. Scientists use the tools of biochemistry and molecular biology to explore cures for disease, improve public health, remediate environmental pollution, and develop cheaper and safer natural products. The program is ideal for students who are planning graduate work in biochemistry or molecular biology, seeking jobs in biotechnology, or applying to medical school.

### Major Requirements (B.A. Degree)

#### 18 courses, including:

- BIO 143 The Cell (4)
  - BIO 144 The Organism (4)
  - CHM 105 General Chemistry (3) **or**
  - CHM 107 Chemistry I (3)
  - CHM 108 Chemistry II (3)
  - CHM 109 Chemistry I Laboratory (1)
  - CHM 110 Chemistry II Laboratory (1)
  - CHM 205 Organic Chemistry I (3)
  - CHM 206 Organic Chemistry II (3)
  - CHM 215 Elementary Organic Laboratory (2)
  - CHM 216 Organic Chemistry Laboratory (3)
  - CHM 338 Biochemistry I (3)
  - CHM 339 Biochemistry II (3)
  - CHM 340 Biochemistry, Cell, and Molecular Biology Laboratory (2)
  - CHM 498-499 Tutorial (8) **or**
  - BIO 498-499 Tutorial
  - IND 350 Scientific Research Methods (2)
- 3 credits of biology at the 200-level or above.
- 3 credits of chemistry at the 300-level or above.

### Major Requirements (B.S. Degree)

#### 28 courses, including:

- BIO 143 The Cell (4)
- BIO 144 The Organism (4)
- CHM 105 General Chemistry (3) **or**
- CHM 107 Chemistry I (3)
- CHM 108 Chemistry II (3)
- CHM 109 Chemistry I Laboratory (1)
- CHM 110 Chemistry II Laboratory (1)
- CHM 205 Organic Chemistry I (3)
- CHM 206 Organic Chemistry II (3)
- CHM 215 Elementary Organic Laboratory (2)
- CHM 216 Organic Chemistry Laboratory (3)
- CHM 311 Physical Chemistry I (3)
- CHM 317 Integrated Chemistry Laboratory (2)

- CHM 318 Chemical Analysis Laboratory (3)
- CHM 322 Topics in Analytical Chemistry (3)
- CHM 338 Biochemistry I (3)
- CHM 339 Biochemistry II (3)
- CHM 340 Biochemistry, Cell, and Molecular Biology Lab (2)
- CHM 498-499 Tutorial (8) **or**
- BIO 498-499 Tutorial
- IND 350 Scientific Research Methods (2)
- MTH 151 Calculus I (4)
- MTH 152 Calculus II (4)
- PHY 251 Principles of Physics I (4)
- PHY 252 Principles of Physics II (4)
- PHY 255 Physics Laboratory I (1)
- PHY 256 Physics Laboratory II (1)
- 2 courses from the following:
- BIO 221 General Microbiology (5)
- BIO 231 Principles of Cell and Molecular Biology (3)
- BIO 317 Genetics (5)
- BIO 331 Advanced Principles of Cell and Molecular Biology (3)

## Biology (BIO)

Biology offers a broad curriculum with exposure to all major areas of biology. This major provides intensive preparation for graduate and professional study or entry-level positions. Course and career preparation in areas including preprofessional, medical and health-related, and environmental are covered in the program. A secondary education certification in biology is also available.

### *Major Requirements (B.A. and B.S. Degrees)*

All biology majors must complete IND 350, BIO 498 and 499, and at least two biology courses with a laboratory component at Chatham College. Exclusive of BIO 143 and 144, biology courses on the 100 level do not count toward a major.

### *Major Requirements (B.A. Degree)*

#### **15 courses, including:**

- BIO 143 The Cell (4)
- BIO 144 The Organism (4)
- BIO 498-499 Tutorial (8)
- CHM 105 General Chemistry (3) **or**
- CHM 107 Chemistry I (3)
- CHM 108 Chemistry II (3)
- CHM 109 Chemistry I Laboratory (1)
- CHM 110 Chemistry II Laboratory (1)
- IND 350 Scientific Research Methods (2)
- MTH 110 Elementary Statistics (3)
- MTH 108 Elementary Precalculus (3) **or**
- MTH 151 Calculus I (4)
- 4 additional courses selected from CHM 338, CHM 339, PSY 230, and biology courses numbered 200 or above; at least 3 of these must have a laboratory component, and at least 1 of the courses with a laboratory component must be numbered 300 or above.

### *Major Requirements (B.S. Degree)*

#### **19 courses, including:**

- BIO 143 The Cell (4)
- BIO 144 The Organism (4)
- BIO 317 Genetics (5) **or both**
- BIO 331 Advanced Principles of Cell and Molecular Biology (3)
- and**
- BIO 340 Biochemistry, Cell, and Molecular Biology Lab (2)
- BIO 498-499 Tutorial (8)
- CHM 105 General Chemistry (3) **or**
- CHM 107 Chemistry I (3)
- CHM 108 Chemistry II (3)
- CHM 109 Chemistry I Laboratory (1)
- CHM 110 Chemistry II Laboratory (1)
- CHM 205 Organic Chemistry I (3)
- CHM 215 Elementary Organic Laboratory (2)
- IND 350 Scientific Research Methods (2)
- MTH 110 Elementary Statistics (3)

MTH 108 Precalculus (3) **or**

MTH 151 Calculus I (4)

3 additional courses selected from CHM 338, CHM 339, PSY 230, and the biology courses numbered 200 or above; at least 2 of these must have a laboratory component. 2 additional courses selected from the offerings in biology, chemistry, environmental studies, mathematics, and physics.

### *Interdisciplinary Major Requirements*

**8 courses, including:**

BIO 143 The Cell (4)

BIO 144 The Organism (4)

IND 350 Scientific Research Methods (2)

5 courses selected from biology courses numbered 200 or above; at least 2 of these must have a laboratory component. Students may take their tutorials in either biology or the cooperating department.

### *Minor Requirements*

**6 courses, including:**

BIO 143 The Cell (4)

BIO 144 The Organism (4)

3 courses selected from biology courses numbered 200 or above; at least two of these must have a laboratory component. 1 biology elective or any science or mathematics course approved in advance and not already counted toward a major or minor.

### **114 Basic Nutrition (3) *As Needed***

This course is an overview of scientific principles of nutrition and their application to humans throughout the life cycle. It is designed for students who need a broad coverage of nutrition and have little or no background in science. Three hours of lecture per week. Prerequisite: Enrollment in a school of nursing.

### **115 Basic Microbiology (4) *As Needed***

This course is designed for students who need a broad coverage of microbiology and have little or no background in biology or chemistry. It includes a study of microscopic organisms and their relation to health and disease. There is a special emphasis on disinfection, sterilization, immunology, and microbiological aspects of infectious disease. Three hours of lecture and two hours of lab per week. Prerequisite: Enrollment in a school of nursing.

### **116 Basic Anatomy and Physiology I (4) *As Needed***

This is the first of two courses designed for students who need a broad coverage of anatomy and physiology and have little or no background in science. It includes a study of the structure and function of human cells, tissue, organs, and systems. Clinical applications of anatomy and physiology will also be considered. Three hours of lecture and two hours of lab per week. Prerequisite: Enrollment in a school of nursing.

### **117 Basic Anatomy and Physiology II (4) *As Needed***

This is the second of two courses designed for students who need a broad coverage of anatomy and physiology and have little or no background in science. It includes a study of the structure and function of human cells, tissue, organs, and systems. Clinical applications of anatomy and physiology will also be considered. Three hours of lecture and two hours of lab per week. Prerequisite: Biology 116.

### **121 Plant and Human Interactions (3) *Summer***

For millennia plants have provided food, shelter, and medicine for humanity. This course teaches how civilization began with agriculture and how plants have helped to shape the course of human history from

prehistoric times to present. Two hours of lecture and two hours of laboratory per week. Laboratory fee.

**122 Environmental Biology (4) Spring**

This course addresses contemporary environmental issues in a consistent and concerted fashion to introduce students to biological concepts. The concepts are developed to the extent needed to inform an understanding of the issues. Three hours of lecture and two hours of laboratory each week. Laboratory fee. *Cross-listed with ENV 145.*

**123 Nutrition (3) Odd springs**

An introduction to nutrients, their composition, functions, and sources. Human physiology, including digestion, metabolism, and excretion, is covered, along with special nutritional needs throughout the life cycle. Integrated with this basic information are special topics pertaining to diets, organic foods, preservatives, pesticides, world hunger, and other current concerns. Two hours of lecture and two hours of laboratory per week. Laboratory fee.

**131 Human Genetics (3) Even springs**

This course is designed to help students understand issues in genetic research and biotechnology. Topics include pedigrees, birth defects, cancer, and the creation of transgenic animals. Two hours of lecture and two hours of laboratory per week. Laboratory fee.

**135 Applied Human Biology (3)**

This course is designed to introduce non-science majors to major aspects of human biology. The course will be taught as a series of modules covering the basic biology of various human systems followed by applications that are appropriate to the needs of students.

**143 The Cell (4) Spring**

This course is designed to provide a broad overview of current biological concepts, including cell structure, function, division, and basic genetics. Biologically important molecules also are presented. This course is a prerequisite for all upper-level biology courses. Three hours of class and two hours of laboratory per week. Laboratory fee.

**144 The Organism (4) Fall**

This course provides a general survey of animals and plants at the organismic level, with emphasis on their evolution and various physiological processes such as respiration, circulation, digestion, and reproduction. This course is a prerequisite for all upper-level biology courses. Three hours of class and two hours of laboratory per week. Laboratory fee.

**201 Anatomy (5) Fall**

Lectures emphasize the human body and clinical applications of anatomy while laboratory experiments emphasize comparative anatomy between humans and other animals. They focus on anatomical terminology, gross structures, body movements, forming a three-dimensional mental image of body parts, and functional understanding of normal structures. Prerequisites: Biology 143 and 144. Laboratory fee.

**202 Physiology (5) Spring**

This course introduces students to the basic concepts of physiology. The lecture will emphasize chemical principles, cellular biological principles, and a survey of the nervous, endocrine, immune, musculoskeletal, cardiovascular, excretory, respiratory, and digestive systems. The laboratory will emphasize comparative physiology between humans and other animals. Prerequisite: Biology 201. Laboratory fee.

**209 Basic Neuroscience (3) *Odd falls***

This course is designed for wide appeal. It is an introduction to structure and function of the brain and spinal cord, and how nerves function and communicate. The basics of movement, sensation, language, emotion, and consciousness are discussed. Emphasis is placed on contrasting normal function with altered function in diseases. Prerequisites: Biology 143, 144.

**216 Aquatic Biology (5) *Odd springs***

Basic ecology of a variety of freshwater ecosystems is examined, including energy flow, nutrient cycling, physical and chemical parameters, flora, and fauna. The management, maintenance, preservation, and pollution of aquatic systems are considered. Laboratory sessions include laboratory work and field trips. Prerequisites: Biology 143 and 144; Chemistry 109 and 110; or permission of the instructor. Laboratory fee.

**219 Immunology (3) *Odd falls***

A study of the basic principles of immunology: evolution, development, and functions of the immune systems, and applications such as allergy, autoimmune diseases, transplants, and tumor immunology. Prerequisites: Biology 143 and 144.

**221 General Microbiology (5) *Odd springs***

The study of fundamental characteristics of bacteria and related microorganisms, including taxonomy, physiology, and distribution. Three class meetings and four hours of laboratory per week. Prerequisites: Biology 143 and 144; Chemistry 109 and 110. Laboratory fee.

**224 Botany (5) *Even springs***

An introduction to the structure and function of plants. Topics include the evolutionary rise of green plants, plant life cycles and development, plant physiology, plant ecology, and the morphology and tax-

onomy of vascular plants. The importance of plants for humans is discussed, including their use for food and medicine. Three hours of lecture and four hours of laboratory or field experience per week. Prerequisites: Biology 143, 144. Laboratory fee.

**226 Toxicology (3) *Even falls***

An introduction to toxic substances, their classification, entry into living systems, modes of action, and fate. Various living systems are considered, from the subcellular to the ecosystem level. Prerequisites: Biology 143 and 144; Chemistry 109 and 110.

**231 Principles of Cell and Molecular Biology (3) *Odd falls***

A lecture course covering the organelles and activities of cells. Topics include the structure of proteins and other biomolecules, bioenergetics and enzymes, membranes, the mitochondrion, the chloroplast, the endo-membrane system, the cytoskeleton, and the nucleus and cellular reproduction. Prerequisites: Biology 143 and 144, and Chemistry 109 and 110.

**248 Ecology (5) *Odd falls***

A study of the interrelation between organisms and their environment. Three class meetings and four hours of laboratory and/or field work per week. Prerequisites: Biology 143 and 144. Laboratory fee.

**275 Evolution (3) *Even springs***

This course introduces the student to the principles and forces that produce evolutionary change. Students will also examine the development of modern evolutionary theory through a historical perspective. Special emphasis will be given to the evolution of the vertebrate classes. Prerequisites: Biology 143 and 144.

**309 Advanced Neuroscience (5)**

*Even springs*

A thorough study of structure and func-

tion of the human nervous system. Detailed examination of anatomy, motor and sensory systems, brain stem, autonomic integration, and cortical functioning. Particular emphasis on membrane physiology, ion channels, and clinical correlation of basic science. Laboratory focuses on anatomy, demonstration of basic physiology, and methods of investigation. Prerequisite: Biology 209. Laboratory fee.

### 312 Neuropharmacology (3) *Even falls*

This course examines the effects of therapeutic and recreational drugs on neural function and behavior. Basic anatomy, physiology, and pharmacology will be reviewed prior to an in-depth analysis of drug effects based upon the neural systems that are affected. Prerequisites: Biology 144, Biology 209, or Psychology 341, Chemistry 105 or 107, or permission of the instructor.

### 317 Genetics (3)

This study of the modern concepts of the gene stresses theory and experimental evidence relating to the structure of the gene, heritability of characteristics, and the behavior of genes in populations. Three hours of lecture per week. Prerequisites: BIO 143, 144; CHM 205, 215. Statistics recommended.

### 317L Genetics Laboratory (2)

Genetics laboratory consisting of investigation in molecular genetics, genomics, and classical and population genetics. Both computer and wet lab techniques will be employed. Five hours per week. Prerequisites: BIO 143, 144; CHM 205, 215. Corequisite: BIO 317.

### 320 Laboratory Information Management Systems (3) *Odd falls*

Basic concepts of information representation, storage, and retrieval as they pertain to biology and chemistry, with emphasis

on applications in laboratory and commercial settings. Prerequisites: Computing 140 and Chemistry 215. *Cross-listed as CHM 320.*

### 323 Plant Propagation Laboratory (3) *As needed*

This course focuses on the principles and practical methods of the propagation of horticultural, herbaceous, and woody plants as they relate to commercial propagation. It covers the principles of sexual and asexual vegetative propagation. Students gain practical experience in a tissue culture laboratory that specializes in hard-to-propagate plants. Prerequisite: Biology 224 or permission of the instructor. Laboratory fee. *Cross-listed as LNS 323.*

### 324 Field Botany (3) *As Needed*

This course introduces students to the concepts and skills needed to identify plants, make practical and scientific collections, and understand the ecological and evolutionary relationships between major plant families. It includes field trips, class/laboratory work, and several research projects, including generation of a dichotomous plant key and a plant collection. Prerequisite: Biology 224 or permission of the instructor. Laboratory fee. *Cross-listed as LNS 324.*

### 331 Advanced Principles of Cell and Molecular Biology (3) *Even springs*

An advanced course for the junior or senior science major. Topics include genes and genomes, transcription, translation, the control of gene expression by prokaryotes and eukaryotes, DNA synthesis and repair and cell signaling. Prerequisites: Biology 143 and 144; Chemistry 109 and 110; Biology 231; or permission of the instructor. Corequisite: Biology 340. Recommended: Biology 317, Chemistry 205, or Chemistry 338.

**332 Biostatistics (3) Fall**

The study and application of biostatistics and probability distributions in biology, for students who already have a working knowledge of statistics and want to understand the place and application of biostatistical methods in science. Topics include hypothesis testing, analysis of variance for one and many variables, and linear and non-linear regression. Prerequisites: Mathematics 110, Mathematics 151, and Biology 144 or equivalent.

**340 Biochemistry, Cell, and Molecular Biology Laboratory (2)**

*Even springs*

An advanced laboratory course for junior or senior science majors who wish to gain theoretical and practical experience with the techniques and equipment commonly used in the fields of cellular biology, molecular biology, and biochemistry. Topics include PCR, electrophoresis, enzyme kinetics, aseptic cell and tissue culture, cell surface receptors, and molecular modeling. Five-hour laboratory with one-hour pre-lab lecture each week. Prerequisite: Biology 231 or Chemistry 338, or corequisite Biology 331, or permission of the instructor. Laboratory fee. *Cross-listed as CHM 340.*

**358 Histology (5) Even falls**

An introduction to the study of tissues and cells of plants and animals. This course emphasizes the relationship between microscopic structure and function in living organisms. In the lab, students learn basic methods for preparing and staining tissues for histological study. Students examine prepared slides and make slide collections. Three hours of lecture and four hours of laboratory per week. Prerequisite: Biology 143 and 144, Chemistry 109 and 110. Laboratory fee.

**375 Special Topics in Women's Health (3) Odd falls**

An upper level course designed for Health Care Studies majors. This course will examine a variety of health issues with emphasis on those of special importance to women. The emphasis will be on the biological aspects of these issues, but social, ethical and other aspects may be covered.

**384 Plant Physiology (5) Odd springs**

This course is an introduction to the physiology and biochemistry of plants. Lectures and laboratory exercises cover plant cells, enzymes, transport of water and nutrients, metabolism, defenses against pathogens, gene expression, hormones, and responses to environmental stimuli. Three lectures and four hours of laboratory per week. Prerequisites: Biology 143 and 144, and Chemistry 109 and 110. Laboratory fee.

**391, 392, 393 Internship (1, 2, 3)****408 Developmental Biology (5)**

*Even springs*

A study of the embryonic and post-embryonic development of animals, with special emphasis on humans. The morphogenesis, growth and mechanisms of differentiation are stressed. Other topics include cancer, regeneration, cloning, hormones as mediators of development, and developmental genetics. Prerequisite: One 200-level biology course. Laboratory fee.

**425 Plant Development (5) Even falls**

This course combines classical and molecular biological approaches to the study of plant growth and development. Topics covered in this course include: plant morphology, axis development in plants, plant pattern formation, and the molecular genetics of plant growth and development. Prerequisites: Biology 143 and 144, Chemistry 109 and 110, and one of the following: Biology 231, 224, or 317. Laboratory fee.

**451 Bioinformatics (3) Spring**

An introduction to computer-aided analysis of gene sequences and their relationships to DNA, RNA, and proteins. Topics include use of the computer for restriction mapping, primer selection, and database searches for homology discovery. In addition, students will be able to carry out analyses aimed at predicting the structure and evolution of macromolecules. Prerequisites: Biology 332 and Chemistry 205. Recommended prior course: Biology 317.

**452 Computational Drug Design (3)**

*As needed*

Study of computational techniques of importance in contemporary drug design. Topics include molecular docking, ligand binding free energy calculations, de novo drug design, pharmacophore elucidation, quantitative structure-activity relations, and combinatorial library design. Prerequisites: A 300-level biology or chemistry course **or** permission of the instructor. *Cross-listed as CHM 452.*

**491, 492, 493, 494 Independent Study (1, 2, 3, 4)****498-499 Tutorial (8 on completion)****Botany**

Botany, or plant biology, is the scientific study of plants, from algae to giant sequoia trees. A minor in botany is ideal for students who wish to supplement their studies in some other discipline with a concentrated study of plant life.

**Minor Requirements****8 courses, including:**

- BIO 143 The Cell (4)
- BIO 144 The Organism (4)
- BIO 224 Botany (5)
- BIO 384 Plant Physiology (5) **or**
- BIO 425 Plant Development (5)

- CHM 105 General Chemistry (3) **or**
- CHM 107 Chemistry I (3)
- CHM 108 Chemistry II (3)
- CHM 109 Chemistry I Laboratory (1)
- CHM 110 Chemistry II Laboratory (1)

Courses listed here that are also required for a student's major must be replaced by a course approved in advance by the division chair.

**Chemistry (CHM)**

Approved by the American Chemical Society, the curriculum includes intensive preparation for graduate study and careers in the chemical industry or governmental laboratories. Secondary education certification in chemistry is also available.

**Major Requirements (B.A. Degree)****16 courses, including:**

- CHM 105 General Chemistry (3) **or**
- CHM 107 Chemistry I (3)
- CHM 108 Chemistry II (3)
- CHM 109 Chemistry I Laboratory (1)
- CHM 110 Chemistry II Laboratory (1)
- CHM 205 Organic Chemistry I (3)
- CHM 206 Organic Chemistry II (3)
- CHM 209 Inorganic Chemistry (3)
- CHM 215 Elementary Organic Laboratory (2)
- CHM 216 Organic Chemistry Laboratory (2)
- CHM 498-499 Tutorial (8)
- IND 350 Scientific Research Methods (2)
- MTH 151 Calculus I (4)

9 additional credits in chemistry at the 200-level or above.

**Major Requirements (B.S. Degree)****26 courses including:**

- CHM 105 General Chemistry (3) **or**
- CHM 107 Chemistry I (3)
- CHM 108 Chemistry II (3)
- CHM 109 Chemistry I Laboratory (1)

CHM 110	Chemistry II Laboratory (1)	CHM 317	Integrated Chemistry Laboratory (2)
CHM 205	Organic Chemistry I (3)	CHM 318	Chemical Analysis Laboratory (3) <b>or</b>
CHM 206	Organic Chemistry II (3)	CHM 340	Biochemistry, Cell, and Molecular Biology Laboratory (2)
CHM 209	Inorganic Chemistry (3)		1 400-level chemistry course <b>or</b>
CHM 215	Elementary Organic Laboratory (2)	CHM 312	Physical Chemistry II (4) <b>or</b>
CHM 216	Organic Chemistry Laboratory (2)	CHM 322	Topics in Analytical Chemistry (3) <b>or</b>
CHM 311	Physical Chemistry I (3)	CHM 338	Biochemistry I (3)
CHM 312	Physical Chemistry II (4)		Students may take their tutorial in either chemistry or the cooperating program.
CHM 317	Integrated Chemistry Laboratory (2)		
CHM 318	Chemical Analysis Laboratory (3)		
CHM 322	Topics in Analytical Chemistry (3)		
CHM 338	Biochemistry I (3)		
CHM 340	Biochemistry, Cell, and Molecular Biology Lab (2)		
CHM 498-499	Tutorial (8)		
IND 350	Scientific Research Methods (2)		
MTH 151	Calculus I (4)		
MTH 152	Calculus II (4)		
PHY 251	Principles of Physics I (4)		
PHY 252	Principles of Physics II (4)		
PHY 255	Physics Laboratory I (1)		
PHY 256	Physics Laboratory II (1)		
	3 credits in chemistry at the 400-level		

### *Interdisciplinary Major Requirements*

#### **13 courses, including:**

CHM 105	General Chemistry (3) <b>or</b>
CHM 107	Chemistry I (3)
CHM 108	Chemistry II (3)
CHM 109	Chemistry I Laboratory (1)
CHM 110	Chemistry II Laboratory (1)
CHM 205	Organic Chemistry I (3)
CHM 206	Organic Chemistry II (3)
CHM 209	Inorganic Chemistry (3)
CHM 215	Elementary Organic Laboratory (2)
CHM 216	Organic Chemistry Laboratory (2)
CHM 311	Physical Chemistry I (3)

### *Minor Requirements*

#### **11 courses including:**

CHM 105	General Chemistry (3) <b>or</b>
CHM 107	Chemistry I (3)
CHM 108	Chemistry II (3)
CHM 109	Chemistry I Laboratory (1)
CHM 110	Chemistry II Laboratory (1)
CHM 205	Organic Chemistry I (3)
CHM 206	Organic Chemistry II (3)
CHM 209	Inorganic Chemistry (3)
CHM 215	Elementary Organic Laboratory (2)
CHM 216	Organic Chemistry Laboratory (2)
CHM 311	Physical Chemistry I (3) <b>or</b>
CHM 338	Biochemistry I (3)
CHM 317	Integrated Chemistry Laboratory (2) <b>or</b>
CHM 340	Biochemistry, Cell, and Molecular Biology Lab (2)

### **105 General Chemistry (3) Fall**

This class covers the same material as Chemistry 107 below, but is specifically structured for students who have had little or no previous chemistry experience, or who need extra help with algebraic problem solving. Three hours of lecture and one hour of recitation per week. Corequisite: Chemistry 109.

**107 Chemistry I (3) Fall**

This class begins with a study of atomic structure, then expands to cover chemical naming, patterns of reactivity, thermochemistry, the interaction of light and matter, atomic orbitals, ionic and covalent bonding, and molecular shapes. This class concludes with an introduction to organic chemistry and biochemistry. Corequisite: Chemistry 109.

**108 Chemistry II (3) Spring**

The second semester of general chemistry continues exploring the structure, properties, and bonding of atoms and molecules, with emphasis on the physical characteristics of gases, liquids, solids and solutions, chemical equilibria, thermodynamics and kinetics. Prerequisite: Chemistry 105 or 107. Corequisite: Chemistry 110.

**109 Chemistry I Laboratory (1) Fall**

Introduction to the basic experimental procedures and laboratory techniques in chemistry. Experiments are correlated with the lectures in Chemistry 105 and Chemistry 107. Three hours of laboratory per week. Corequisite: Chemistry 105 or 107. Laboratory fee.

**110 Chemistry II Laboratory (1)**

*Spring*

Continued introduction to the basic experimental procedures and laboratory techniques in chemistry. Experiments are correlated with lectures in Chemistry 108. Three hours of laboratory per week. Corequisite: Chemistry 108. Laboratory fee.

**205 Organic Chemistry I (3) Fall**

Development of the structural theory of organic compounds. Relationship of structure to reactivity, stereochemistry, types of organic reactive intermediates, and the chemistry of alkanes, alkenes, and aromatic compounds are covered. Prerequisites:

Chemistry 108 and 110; corequisite: Chemistry 215.

**206 Organic Chemistry II (3) Spring**

Discussion of organic functional groups and their chemistry. Spectroscopy, mechanisms, and synthetic type-reactions are included. A discussion of biologically important compounds is covered during the last third of the term. Prerequisites: Chemistry 205 and 215.

**209 Inorganic Chemistry (3) Even  
falls**

A descriptive survey of inorganic chemistry, including bonding theories, coordination compounds, electrochemistry, inorganic syntheses, and the chemistry of the transition metals. Prerequisite: Chemistry 108.

**215 Elementary Organic Laboratory  
(2) Fall**

Basic manipulative skills, including introduction to several chromatographic techniques, are followed by chemistry of alkenes and aromatic compounds. Corequisite: Chemistry 205. Laboratory fee.

**216 Organic Chemistry Laboratory  
(2) Spring**

Chemistry of organic functional groups. Identification of unknowns and a multi-step synthesis. Prerequisite: Chemistry 215; corequisite: Chemistry 206. Laboratory fee.

**311 Physical Chemistry I (3) Fall**

Thermodynamic descriptions of chemical systems, emphasizing gases and solutions. Phase transitions and phase equilibria, chemical equilibria, kinetics, and electrochemistry. Prerequisites: Chemistry 205 and 215; Mathematics 152; and Physics 252.

**312 Physical Chemistry II (4) *Even springs***

Quantum mechanics, spectroscopy, introduction to symmetry, and introduction to statistical mechanics. Four lectures per week. Prerequisite: Chemistry 311.

**317 Integrated Chemistry Laboratory (2) *Fall***

Experiments are selected to illustrate important principles of advanced experimental chemistry and familiarize students with important experimental methods. The course is intended to encourage students to think critically about the reliability of their experimental results in the light of their previous chemistry experience. Prerequisite: Chemistry 216. Laboratory fee.

**318 Chemical Analysis Laboratory (3) *Spring***

This laboratory teaches the proper design, implementation and analysis of modern techniques in instrumental chemistry, encompassing spectroscopy, electrochemistry, and separation science. In addition, several inorganic compounds are synthesized and characterized. Student-originated research projects are used extensively throughout this course. Prerequisite: Chemistry 216. Laboratory fee.

**320 Laboratory Information Management Systems (3) *Odd falls***

Basic concepts of information representation, storage, and retrieval as they pertain to biology and chemistry, with emphasis on applications in laboratory and commercial settings. Prerequisites: Computing 140 and Chemistry 215. *Cross-listed as BIO 320.*

**322 Topics in Analytical Chemistry (3) *Odd springs***

This course explores the fundamental chemical principles underlying modern chemical instrumentation. Students learn the advantages and limitations of these in-

struments, how to select the proper instrumental configuration for a specific experiment, and how to evaluate emerging chemical technologies. Prerequisite: Chemistry 215; corequisite: Chemistry 318.

**338 Biochemistry I (3) *Fall***

This course covers the structure and functions of proteins, polynucleic acids, and biological membranes. Enzymes and kinetics are taught. Metabolic pathways, with emphasis on the thermodynamics of the equilibria and the storage and usage of energy, are covered. Prerequisite: Chemistry 206 or permission of the instructor.

**339 Biochemistry II (3) *Even springs***

Metabolism is studied with an emphasis on anabolic pathways and special pathways such as cytochrome P450. Other topics include molecular genetics and protein synthesis, hormones and receptors, and immunology. Prerequisite: Chemistry 338.

**340 Biochemistry, Cell, and Molecular Biology Laboratory (2)**

*Even springs*

An advanced laboratory course for junior and senior science majors who wish to gain theoretical and practical experience with the techniques and equipment commonly used in the fields of cellular biology, molecular biology, and biochemistry. Topics include PCR, electrophoresis, enzyme kinetics, aseptic cell and tissue culture, cell surface receptors, and molecular modeling. Five-hour laboratory with one-hour prelab lecture each week. Prerequisite: Biology 231 or Chemistry 338, corequisite Biology 331, or permission of the instructor. Laboratory fee. *Cross-listed as BIO 340.*

**391, 392, 393 Internship (1, 2, 3)****431 Advanced Inorganic Chemistry**

(3) *As needed*

Modern theories and concepts of atomic and molecular structure, with illustrative

material drawn from various classes of inorganic compounds of current interest, as well as descriptive chemistry of the lanthanides and actinides. Three lectures and one recitation session per week. Prerequisites: Chemistry 209 and 312.

#### 441 Advanced Organic Chemistry (3)

*As needed*

This course covers three areas of organic chemistry at an advanced level: molecular orbital theory and pericyclic reaction, multistep synthesis and retrosynthesis, and polymer chemistry. Prerequisites: Chemistry 206, 216, and 311.

#### 443 Advanced Environmental Chemistry (3) *As needed*

This course is an advanced study of the chemical principles underlying common environmental problems. It aims to deepen the student's knowledge of chemistry and its role in the environment and shows the power of chemistry as a tool to help us comprehend the changing world around us. *Cross-listed as ENV 443.*

#### 452 Computational Drug Design (3)

*As needed*

Study of computational techniques of importance in contemporary drug design. Topics include molecular docking, ligand binding free energy calculations, de novo drug design, pharmacophore elucidation, quantitative structure-activity relations, and combinatorial library design. Prerequisites: A 300-level biology or chemistry course, or permission of the instructor. *Cross-listed as Biology 452.*

#### 491, 492, 493, 494 Independent Study (1, 2, 3, 4)

#### 498-499 Tutorial (8 on completion)

## Computing (CMP)

Knowledge of computing is becoming increasingly important in today's market. Chatham computing courses prepare students majoring in other disciplines for computer use in graduate or professional study, employment in industry, or teaching in the elementary or secondary school.

### Minor Requirements

#### 6 courses, including:

- CMP 140 Introduction to Computer Science (3)
- CMP 202 Introduction to Programming (3)
- CMP 204 Algorithms and Data Structures (3)
- CMP 283 Database Management Systems (3)
- CMP 393 Internship (3) **or**  
1 200-level or above course in computing or mathematics.
- MTH 244 Discrete Mathematics (3)

#### 106 Excel Workshop (1) *Fall*

Fundamental techniques in Excel spreadsheets are presented in this introductory course. This course is designed for students who are comfortable with Microsoft Word, Microsoft Windows, Microsoft Outlook (including e-mailing attachments), the Internet, and local network conventions. Pass/fail grading only.

#### 108 Access Workshop (1) *Interim*

Fundamental techniques in Access databases are presented in this introductory course. This course is designed for students who are already comfortable with Microsoft Word, Microsoft Windows, Microsoft Outlook (including e-mailing attachments), the Internet, and local network conventions. Pass/fail grading only.

**109 Advanced Word Processing (1)***Spring*

This course emphasizes the advanced word processing and other computer skills involved in successfully completing a large word processing document (such as a tutorial). Good academic and professional skills are stressed and expected throughout the course. Pass/fail grading only.

**110 Web Page Development (1)***Interim*

Fundamental web page development techniques are presented in this introductory course. In the computer laboratory, students are expected to complete basic HTML coding assignments. A current Web Page Editor software application also will be used. Pass/fail grading only.

**112 PowerPoint Workshop (1) Fall**

The course introduces students to computer presentation software, specifically Microsoft PowerPoint. Pass/fail grading only.

**140 Introduction to Computer Science (3) Fall**

This course provides an introduction to the science of computing. It surveys the breadth of the subject and provides enough depth to convey an appreciation of the topics. The course covers the history of computing, machine architecture and operating systems, algorithms, programming languages, and data organization.

**202 Introduction to Programming***(3) Spring*

An introduction to programming using C++ for students with no previous computer programming experience. Includes introduction to algorithms and object-oriented programming techniques. Prerequisites: Computing 140 or permission of the instructor.

**204 Algorithms and Data Structures***(3) Odd falls*

This course is an introduction to standard data structures and algorithms used in program development. Topics cover algorithm growth analysis, lists, trees, searching, sorting, hashing, text searching, and encoding. This course also serves to round off the students' programming proficiency. Prerequisite: Computing 202 and Mathematics 244, or permission of the instructor.

**283 Database Management Systems***(3) Even springs*

This course is a study of database management systems and their applications to a wide range of information processing needs. Students design and implement database management systems while being introduced to a conceptual model of a database environment comprised of five basic components: databases, database management systems, data dictionary/directory systems, database administration, and user-system interfaces. Prerequisite: Computing 202 or permission of the instructor.

**300 Computer Graphics and Imaging***(3) As needed*

This is an introductory course in computer-generated graphics and image processing. Topics include drawing elementary objects in a plane, color schemes, and image filtering. The course covers the basics of three-dimensional rendering and interactive graphics, and introduces some of the popular graphic file formats. Students develop graphic projects using OpenGL and Flash ActionScript. Prerequisite: Computing 202 and Mathematics 108, or equivalent.

**301 Scientific Computer Modeling***(3) As needed*

This is a course in the basics of scientific computing. It introduces students to computational approach to problems in natu-

ral sciences: the underlying concepts, methods of approach, issues of stability, and computational speed. Upon completion, students will be able to effectively use scientific software and understand the results of computations. Prerequisites: Computing 202 and Mathematics 151.

### 322 Telecommunications and Networking (3)

The study of telecommunications theory and interconnected stations and databases from simple local area networks to transcontinental networks. Prerequisite: Computing 202 or permission of the instructor.

### 391, 392, 393 Internship (1, 2, 3)

### 491, 492, 493, 494 Independent Study (1, 2, 3, 4)

## Engineering

Cooperative programs in engineering have been established with Carnegie Mellon University and Pennsylvania State University. In addition, the University of Pittsburgh accepts students as transfers into its engineering programs, under similar but less formal arrangements. Students spend three years at Chatham and two years at one of the engineering schools. Upon successful completion of the program, a student receives a Bachelor of Arts degree from Chatham and a Bachelor of Science degree in engineering from the engineering school.

### Major Requirements

Students in the program are required to complete the general education requirements, the requirements specific to the liberal arts degree they wish to obtain (except for the tutorial), and the engineering core courses listed below.

#### 14 core courses, including:

CHM 105 General Chemistry (3) **or**  
CHM 107 Chemistry I (3)

CHM 108 Chemistry II (3)  
CHM 109 Chemistry I Laboratory (1)  
CHM 110 Chemistry II Laboratory (1)  
CMP 202 Introduction to Programming (3)  
MTH 151 Calculus I (4)  
MTH 152 Calculus II (4)  
MTH 221 Linear Algebra (3)  
MTH 222 Multivariate and Vector Calculus (3)  
MTH 241 Differential Equations (3)  
PHY 251 Principles of Physics I (4)  
PHY 252 Principles of Physics II (4)  
PHY 255 Physics Laboratory I (1)  
PHY 256 Physics Laboratory II (1)

For students accepted and enrolled in an approved engineering program, the senior tutorial and final Chatham residence requirement are waived. Students who have completed all other degree requirements for the bachelor's degree are awarded a Chatham degree upon the successful completion of their first year at the engineering school and the accumulation of 120 credit hours.

To gain admission into the program, a student must successfully complete the first year at Chatham with a 3.0 GPA. By the end of the second year, a student should apply to the engineering school in which she plans to complete the final two years of the program. She must have a 3.0 GPA in her engineering core courses and a 2.5 GPA overall; however, higher GPA standards may exist in particular departments at particular engineering schools. A faculty member coordinates the program and advises all participating or interested students.

**Forensic Science, see  
Forensics, page 186**

## Mathematics (MTH)

Mathematics includes an introduction to the principle branches of mathematics: calculus, algebra, probability, statistics and analysis, with emphasis on application of mathematics to the sciences and social sciences.

The teacher certification program offers certification in secondary mathematics teaching. Students interested in this program should see the Certification Coordinator in the Education program for specific requirements.

### Major Requirements (B.A. Degree)

#### 13 courses, including:

- IND 350 Scientific Research Methods (2)
- MTH 110 Elementary Statistics (3)
- MTH 151 Calculus I (4)
- MTH 152 Calculus II (4)
- MTH 221 Linear Algebra (3)
- MTH 222 Multivariate and Vector Calculus (3)
- MTH 327 Advanced Analysis (3) **or**
- MTH 341 Abstract Algebra (3)
- MTH 498-499 Tutorial (8)

4 additional 200-level or above physics or mathematics courses approved in advance.

### Major Requirements (B.S. Degree)

#### 19 courses, including:

- CMP 202 Introduction to Programming (3)
- IND 350 Scientific Research Methods (2)
- MTH 110 Elementary Statistics (3)
- MTH 151 Calculus I (4)
- MTH 152 Calculus II (4)
- MTH 221 Linear Algebra (3)
- MTH 222 Multivariate and Vector Calculus (3)
- MTH 327 Advanced Analysis (3) **or**
- MTH 341 Abstract Algebra (3)
- MTH 498-499 Tutorial (8)

- PHY 251 Principles of Physics I (4)
- PHY 252 Principles of Physics II (4)
- PHY 255 Physics Laboratory I (1)
- PHY 256 Physics Laboratory II (1)

1 course from the following:

- BIO 143 The Cell (4)
  - BIO 144 The Organism (4)
  - CHM 105 General Chemistry (3) **and**
  - CHM 109 Chemistry I Laboratory (1)
  - CHM 107 Chemistry I **and**
  - CHM 109 Chemistry I Laboratory (1)
- 4 additional 200-level or above mathematics courses approved in advance.

### Interdisciplinary Major Requirements

#### 8 courses, including:

- MTH 151 Calculus I (4)
- MTH 152 Calculus II (4)
- MTH 221 Linear Algebra (3)
- MTH 222 Multivariate and Vector Calculus (3)
- MTH 327 Advanced Analysis (3) **or**
- MTH 341 Abstract Algebra (3)

3 additional courses approved in advance are required and the tutorial must combine mathematics and the cooperating program.

### Minor Requirements

#### 6 courses, including:

- MTH 151 Calculus I (4)
- MTH 152 Calculus II (4)
- MTH 221 Linear Algebra (3)
- MTH 222 Multivariate and Vector Calculus (3)

1 200-level or above course in mathematics approved in advance.

1 200-level or above course in computing, mathematics or physics that has not been counted already toward a major or minor.

### 100 Mathematical Literacy (3) *Fall and spring*

This course explores the mathematics of everyday life and problem-solving skills needed to be world ready. Topics include

how to plan an efficient distribution network, making sense of statistics, how information is made digital, how to design a fair and equitable voting system, symmetry in the world, and how to get out of debt.

**105 College Algebra (3) *As needed***

The study of real numbers, linear equations and inequalities, polynomials, rational expressions, roots and radicals, quadratic equations and inequalities, graphs, systems of linear equations, conics, quadratic functions, and inverse functions. Prerequisite: one year of high school algebra or equivalent.

**106 Trigonometry (3) *As needed***

The study of right-triangle and circular function approaches to trigonometry, graphs of trigonometric functions, trigonometric identities, inverse trigonometric functions, polar coordinates, complex numbers, exponential functions, and logarithmic functions. Prerequisite: one year of high school algebra or equivalent.

**108 Precalculus (3) *Fall and Spring***

Development of essential skills in algebra and trigonometry. Topics include the coordinate system, functions and their graphs, solutions of equations and inequalities, introduction to transcendental functions, trigonometric functions and their graphs, trigonometric identities, and the historical and cultural significance of mathematics. Prerequisite: one year of high school algebra or equivalent.

**110 Elementary Statistics (3) *Fall and spring***

Topics include statistical measures and distributions, decision making under uncertainty, application of probability to statistical inference, linear correlation, introduction to nonparametric statistical methods, and application to problems drawn from the natural and social sciences.

Prerequisite: two years of college-preparatory mathematics.

**151 Calculus I (4) *Fall***

This is the first course in the calculus sequence. Topics include differential and integral calculus for algebraic and trigonometric functions with applications. Prerequisites: Mathematics 105 and 106, or Mathematics 108, or equivalent.

**152 Calculus II (4) *Spring***

This is the second course in the calculus sequence. Topics include differential and integral calculus for the transcendental functions, advanced methods of integration, and infinite sequences and series. Prerequisite: Mathematics 151.

**221 Linear Algebra (3) *Even springs***

Topics include finite dimensional vector spaces, geometry of  $\mathbb{R}^n$ , linear functions, systems of linear equations, and theory of matrices and determinants. Prerequisite: Mathematics 152.

**222 Multivariate and Vector Calculus (3) *Fall***

An introduction to multivariate calculus using vector spaces, partial differentiation and multiple integration, calculus of vector functions, applications to extremum problems, and differential equations. Prerequisite: Mathematics 152.

**241 Differential Equations (3) *Even springs***

Introduction to differential equations. Topics include first-order and linear equations, systems of equations, series solutions, Laplace transform methods, computer-aided study of numerical solutions, introduction to partial differential equations, and Fourier series. Prerequisite: Mathematics 222.

**244 Discrete Mathematics (3) *Even falls***

This course is an introduction to the fundamental logic and mathematical concepts

of discrete quantities, as employed in digital computers. Emphasis will be on the careful and precise expression of ideas. Topics include sets and logic, relations and functions, proof techniques, algorithms, combinatorics, discrete probability, graphs, and trees.

### **256 The History and Theory of Numbers (3) *Maymester***

A survey of the history of our number system and theory of numbers. Topics covered include the development of number systems and mathematics from before the sixth century to the present, divisibility, factorization, arithmetic functions, quadratic reciprocity, primitive roots, and diophantine equations. Prerequisite: Mathematics 105 and 106, or Mathematics 108, or equivalent.

### **310 Probability (3) *Odd springs***

An introduction to the theory of probability and the role of proofs in mathematics. Topics include discrete and continuous probability functions, random variables, expectations, moments, moment generating functions, the central limit theorem, and Chebyshev's inequality. Applications of probability such as queuing theory, Markov processes, and reliability theory also will be covered. Prerequisite: Mathematics 152. Linear Algebra recommended.

### **327 Advanced Analysis (3) *Odd falls***

Foundations for abstract analysis, real and complex number systems, elements of point set topology and limits, continuity, and derivatives. Prerequisite: Mathematics 222 or equivalent.

### **341 Abstract Algebra (3) *Even falls***

Introduction to elements of modern abstract algebra, including rings, groups, and fields. Prerequisite: Mathematics 221 or equivalent.

### **391, 392, 393 Internship (1, 2, 3)**

### **417 Seminar in Advanced Calculus (3) *Spring***

A study of specialized topics in differential, integral and vector calculus; sequences and infinite series; improper integrals; Fourier series; orthogonal functions; and functions of a complex variable. Prerequisite: Mathematics 241.

### **418 Mathematics Seminar (3) *As needed***

A study of some specialized topic in mathematics not ordinarily treated in one of the regular course offerings. Prerequisite: permission of the instructor.

### **462 Numerical Methods and Mathematical Modeling (3) *As needed***

Numerical methods and mathematical models used in computational science, including techniques for solving scientific problems, scientific visualization, and vector, parallel, distributed and massively parallel architecture. Prerequisites: Mathematics 241, Computing 202, and permission of the instructor.

### **491, 492, 493, 494 Independent Study (1, 2, 3, 4)**

### **498-499 Tutorial (8 on completion)**

## **Physics (PHY)**

Chatham College offers both B.A. and B.S. degrees in physics in collaboration with Carnegie Mellon University (CMU). This major prepares students for graduate or engineering study or for employment in industry. Students take first-year physics requirements and mathematics courses at Chatham; upper-level physics requirements and electives are taken at CMU through a special cross-registration agreement. Students also may choose to seek certification

in physics at the secondary level by completing the appropriate courses in the education program at Chatham. A minor in physics is not available.

To complete this major, students should plan to register for both calculus and physics during the first semester of the first year.

Tutorial work will be done at CMU with collaboration between Chatham and CMU faculties.

### *Major Requirements (B.A. Degree)*

#### **20 courses, including:**

- IND 350 Scientific Research Methods (2)
- MTH 151 Calculus I (4)
- MTH 152 Calculus II (4)
- MTH 222 Multivariate and Vector Calculus (3)
- MTH 241 Differential Equations (3)
- PHY 251 Principles of Physics I (4)
- PHY 252 Principles of Physics II (4)
- PHY 255 Physics Laboratory I (1)
- PHY 256 Physics Laboratory II (1)
- PHY 498-499 Tutorial (8)
- Physics 211, 231, 234, 331, 338, 340, and 341 at CMU are also required.
- 1 physics elective taken at CMU.
- 1 "technical" elective in physics, mathematics, computing, chemistry, or biology that is approved in advance.

### *Major Requirements (B.S. Degree)*

#### **23 courses, including:**

- IND 350 Scientific Research Methods (2)
- MTH 151 Calculus I (4)
- MTH 152 Calculus II (4)
- MTH 222 Multivariate and Vector Calculus (3)
- MTH 241 Differential Equations (3)
- PHY 251 Principles of Physics I (4)
- PHY 252 Principles of Physics II (4)
- PHY 255 Physics Laboratory I (1)
- PHY 256 Physics Laboratory II (1)

PHY 498-499 Tutorial (8)

Physics 211, 231, 234, 331, 338, 340, 341, and 439 at CMU are also required.

2 physics electives taken at CMU.

2 "technical" electives in physics, mathematics, computing, chemistry, or biology that are approved in advance.

#### **251 Principles of Physics I (4)**

Introduction to the concepts, laws, and structure of physics. This is the first course in a calculus-based sequence that focuses on classical mechanics. Topics include vector analysis, kinematics, Newton's laws, work, conservation of energy and momentum, collisions, gravity, harmonic motion, and wave phenomena. Prerequisite or corequisite: Mathematics 151.

#### **252 Principles of Physics II (4)**

Introduction to the concepts, laws, and structure of physics. The second course in a calculus-based physics sequence. Topics include thermodynamics, fluids, electricity, circuit analysis, magnetism, Maxwell's equations, properties of light, and optics. Prerequisite: Physics 251.

#### **255 Physics Laboratory I (1)**

Experimental techniques of classical mechanical physics. Three hours per week. Prerequisite or corequisite: Physics 251. Laboratory fee.

#### **256 Physics Laboratory II (1)**

Experimental techniques of classical physics with applications to electricity, magnetism, sound, and optics. Three hours per week. Prerequisite or corequisite: Physics 252. Laboratory fee.

#### **391, 392, 393 Internship (1, 2, 3)**

#### **491, 492, 493, 494 Independent Study (1, 2, 3, 4)**

#### **498-499 Tutorial (8 upon completion)**

**Check the CMU catalog for listings and descriptions of physics courses.**



# Division of Writing, Literary, and Cultural Studies

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*William Lenz, Ph.D., Division Chair*

## **Undergraduate Academic Programs**

African-American Studies  
Creative Writing  
Cultural Studies  
English  
Film/Digital Video-Making  
Professional Communication  
    Broadcast Journalism  
    Print Journalism  
    Professional Writing  
    Public Relations  
Theatre

## **Graduate Academic Programs (see pages 283-360)**

Master of Fine Arts in Film and Digital Technology  
Master of Fine Arts in Writing  
Master of Professional Writing (Online)

## **Certificate Programs (see pages 243-248)**

Nonfiction Writing  
Writing for Children and Adolescents

## **Affiliated Faculty and Staff**

Lynne Dickson Bruckner, *Associate Professor of English*  
Karen Dajani, *Associate Professor of Communication*  
Kerri LaCharite, *Technical Director and Theatre Manager*  
William E. Lenz, *Professor of English*  
Prajna Parasher, *Associate Professor of Art and Communication*  
Sheryl St. Germaine, *Professor of English and Director of the MFA in Writing Program*  
Sandra Sterner, *Lecturer*  
Anissa Ward, *Associate Professor of English and Cultural Studies*  
Lisa Weaver, *Assistant Professor of Journalism*

## African-American Studies

The minor in African American Studies is an interdisciplinary program of study designed to expose students to the history and culture of African Americans in the United States and to place their experiences, conditions, social institutions, and artistic contributions within the context of the literature, histories and cultures of the African Diaspora.

### Minor Requirements

#### 6 courses, including:

- CST 183 Representations of Race and Gender (3)
- 5 African-American Studies electives

**Broadcast Journalism,**  
*see Professional Communication, page 233*

**Creative Writing,** *see English, page 223*

## Cultural Studies (CST)

Cultural Studies is an interdisciplinary major that examines issues of race, ethnicity, class, and culture. Drawing on social, cultural, and literary theories, this major introduces methods of interpretation for the analysis of cultural objects in their social contexts. Students learn to apply contemporary theory in their critical analysis of literature, film, and other cultural narratives. A required core of courses provides students with the tools necessary to analyze representations of culture. The electives allow a student the opportunity to focus on an aspect of the field that meets her particular interests. The student is ex-

pected to work closely with her advisor in order to construct a coherent course of study.

### Major Requirements

#### 16 courses, including:

- CST 183 Representations of Race and Gender (3)
- CST 498-499 Tutorial (8)
- ENG 350 Seminar in Literary Theory and Scholarly Writing (3)
- ENG 385 Toni Morrison Seminar (3)
- FLM 300 Critical Theory (3)
  - 1 film-related course
  - 2 courses in multiethnic studies
  - 2 courses in African-American Studies
  - 3 Cultural Studies electives

### Interdisciplinary Major Requirements

#### 9 courses, exclusive of the tutorial

- CST 183 Representations of Race and Gender (3)
  - ENG 350 Seminar in Literary Theory and Scholarly Writing (3)
  - ENG 385 Toni Morrison Seminar (3)
  - FLM 300 Critical Theory (3)
    - 1 film-related course
    - 2 courses in multiethnic studies
    - 2 courses in African-American Studies
- The tutorial must confront a significant cultural studies topic and demonstrate the relationship between cultural studies and the other subject in the major

### Minor Requirements

Cultural Studies is not available as a minor. *See Minor Requirements for African-American Studies.*

### COM 405 Intercultural Values (3)

This course is designed to provide the student with an adequate appreciation of the complexities involved in the process of intercultural communication and an understanding of the specific forces that shape

the thoughts, feelings, and behaviors of various cultural groups. It also explores the diffusion and adoption of innovations, particularly in less-developed countries. Not open to first-year students.

**CST 183 Representations of Race and Gender (3)**

This course introduces students to the methodology of cultural studies. In this survey students learn those skills essential to analyzing social constructions of identity. Specific attention is paid to diverse texts, including film, in order to locate how representations of race, gender, ethnicity, and “otherness” are culturally produced and disseminated.

**CST 215 Perspectives in Gay and Lesbian Studies (3)**

**CST 225 Female Narration: Race and Gender in Women’s Film (3)**

This course looks predominantly at films directed by women who have worked out strategies for a feminist film practice. The course will focus on the relationship between representations of women and the socio-political structures in which women live. It will also focus on the need for women, if they wish to affect perception of self and other, us and them, to take up the means of production. Exposing the sexual stratagems in various contemporary societies permits women filmmakers to recreate the world in their own image. Study of traditional portrayals of women will support understanding of the differences between subject and object position. Negotiating these often conflicting spaces allows students to comprehend the multiple mediations that structure a critical consciousness. Such awareness allows questions of responsibility in a world of diverse values and perspectives. The course is organized as a reading, viewing, and lecture experience.

**CST 383 Special Topics in Cultural Studies (3)**

This course is intended to augment the current offerings in Cultural Studies. The content and material of the course depend on faculty areas of specialization. Prerequisite: Cultural Studies 183.

**CST 498-499 Tutorial (8)**

**ENG 100 Multicultural Literature (3)**

This survey course explores works written by multiethnic writers. In this course, students will spend considerable time learning the principles and methods of close literary analysis to develop critical reading and thinking skills. Students will examine how culture relates to literature: How does ethnic heritage contribute to writing? How do these writers define community and culture? How do strong oral traditions translate into literary forms? Students also will spend considerable time exploring the historical and social issues raised by the various texts. In discussing the many ways multicultural writers express their identities, students will attempt to analyze the complexity of their own cultural identities.

**ENG 200 Frankenstein: Creation of Culture (3) *As needed***

This course introduces students to Mary Shelley’s *Frankenstein or, The Modern Prometheus*. In addition to studying this primary text, they will examine the reasons for the extensive presence that Frankenstein and his creature occupy in our cultural imagination. To this end, many critical approaches will inform our analysis of the text and mythology of Frankenstein.

**ENG 204 World Literature (3) *Fall***

A critical approach to major writers in several world traditions, from various periods, including such representative authors as Chuang Tze, Plato, and Wole Soyinka, and such representative works as the “Book of

Genesis," *The Bacchae*, and *The Odyssey*. Prerequisite: completion of reading and writing proficiency requirements.

**ENG 262 Introduction to Women Writers (3) *As needed***

Examining writers from Mary Wollstonecraft to the present, this course works to delineate the features of a literary tradition specific to women writing in English. It considers novels, essays, and poetry by writers including Austen, Eliot, Stowe, Chopin, Gilman, Woolf, Morrison, Walker, Rich, Lorde, and Dove.

**ENG 281 19th-Century African-American Literature (3)**

This course is a critical and historical study of major African-American writers from the slave narrative to the turn of the century. The course examines the themes of community, literacy, and religion and the role they played in slavery and freedom.

**ENG 282 20th-Century African-American Literature (3)**

This course is a critical study of major African-American writers from the Harlem Renaissance of the 1920s to the present. Although the course will concentrate on primary texts, specific attention will be paid to contextualizing these works within historical and cultural frameworks.

**ENG 283 The Harlem Renaissance (3)**

The course explores the literature, politics, and arts of the Harlem Renaissance. This artistic, philosophical, and intellectual movement in New York City's Harlem took place roughly from the early 1920s to the onset of the Depression. Topics to be considered include the "New Negro," the Jazz Age, and Urban Migration. Specific focus will be placed on the relationship between identity and geography as we consider the effects of migration and urbanization.

**ENG 286 Contemporary African-American Women Writers (3)**

This course will examine the literature of African-American women from 1950 to the present. Specifically, students focus on issues of marginalization, silencing, and female community and how they affect these narratives. Possible authors include Shange, Naylor, Williams, and Jones.

**ENG 350 Seminar in Literary Theory and Scholarly Writing (3)**  
*Spring*

An advanced course in writing literary analysis and methods of literary research; required of all junior English majors and interdepartmental majors before enrollment in the tutorial. Prerequisite: second-term junior status.

**ENG 385 Toni Morrison Seminar (3)**

This seminar is a study of Toni Morrison's literature within the context of African-American critical theory. Through Morrison's work, students will engage in current issues regarding the politics of language; narrative authority, historical revision, and the production of meaning; and African-American subjectivity.

**ENG 419 Frontier Women (3)**

An impressive number of narratives, novels, diaries, and poems recording the responses of women to the American frontier have become available in recent years. By reading about these frontier experiences, and examining differences in perception and conception based apparently on gender, students will better understand how the frontier functioned within American culture, and what "cultural work" these texts accomplished.

**ENG 449 Exiles (3) *Even falls***

This course will examine the 20th-century condition of exile in relation to its different configurations, from European émigrés

to postcolonial subjects to experiences of exile in the United States, to the relation of exile to Diaspora (African, Indian, and Jewish). Students will see how different patterns of movement define subjects variously as exiles, migrants, nomads, and tourists. They will also approach the concept of exile from psychological, geographical, and cultural angles to understand the different uses of the term, its scope, and its limitations.

### **FLM 160 World Film History (3)**

This course presents an overview of the history of film by focusing on key countries, both Western and non-Western, whose film industries have made important contributions to world cinema and/or whose filmmakers have pioneered important film movements. The course places film industries and movements in the context both of cinematic history and history of the societies in question.

### **FLM 161 Introduction to Film Art (3)**

This course is an introduction to critical and aesthetic perspectives on film, i.e. the rules, codes, and strategies by which film represents reality. Students will be exposed to a variety of movements and moments in film history, but history will not be an explicit focus for the course. The course will map out the major conceptual areas in film studies using new methodologies in the areas of narrative comprehension, new vocabulary in film semiotics, and multiculturalism and the media. Issues explored in this course include questions of history and memory, self and other, and identity in both the Western and non-Western contexts.

### **FLM 185 Introduction to Black Filmmaking (3)**

An introductory course that examines black filmmakers as an artistic social force. Students venture into areas as diverse as cul-

ture, philosophy, economics, and ideology. The course also covers the aesthetic elements of cinema, the terminology governing film production, and the line of critical inquiry developed for the medium.

### **FLM 226 Issues in Film: Gender, Race, and Ethnicity (3)**

This course examines some of the major theoretical issues developed in film theory and practice. Emphasis is placed on ways in which the film text is also a social text that can be used to examine underlying assumptions and ideas with regard to issues of gender, race, and ethnicity. The class attempts to go beyond plot and theme analysis to probe for examinations of how culture shapes the way people think, and, in the process, what it selectively leaves out.

### **FLM 300 Critical Theory (3)**

Communication theory offers a critical study of the key debates in theories of media and communication interfaced with cultural studies. The course also examines the communication circuit from production to consumption within the broader paradigms of cultural studies, feminism, politics of identity, and theories of ideology and postmodernism. Connections are made between these debates and wider debates in communication studies. Prerequisite: Communication 101; prerequisite or corequisite: Communication 106.

### **HIS 241 History of Islam (3)**

This course is a historical examination of classical Islamic civilization: its origins, nature, and development. Special attention is given to the religion of Islam and the contributions of Arabs, Persians, and Turks to Islamic civilization.

### **HIS 242 The Modern Middle East 1500-Present (3)**

After examining the forces shaping the modern Middle East, the course studies the rise and fall of the Ottoman Empire, West-

ern impact, and responses to it. Origins and development of nation-states, Arab search for independence and political community, the struggle for Palestine, inter-Arab rivalry, and the prospects for future stability also are examined.

**HIS 244 Africa, Past and Present (3)**

This course is an interdisciplinary examination of the problems and promises of African development. It investigates the historical development of pre-independence society, culture, political institutions, and economic structures, and their interaction with post-independence economic problems and development strategies.

**HIS 285 African-American History to 1865 (3)**

This course offers a historical survey of topics of importance in understanding the African-American experience and contributions to 19th-century America.

**HIS 286 African-American History Since 1865 (3)**

This course offers a historical survey of topics of importance in understanding the African-American experience in the 20th century.

**HIS 426 The Arab-Israeli Conflict (3)**

This course examines the origins and issues of conflict between the Arabs and Israelis over Palestine. Using extensive primary materials and some secondary sources, the arguments of all sides of the conflict are presented and evaluated. While the core conflict between Palestinians and Israelis is emphasized, the role of regional and world powers also is examined.

**MUS 225 From Blues to Rock (3)**

A critical examination of the intimate relationship between blues and rock; their roots in African, African-American, and Anglo-American traditions; the sociopolitical implications of the roles played

by each in American life; and the function of both as forms of ironic social commentary and protest.

**POL 407 Minority Groups and the Law (3)**

An examination of the past and present impact of law and law enforcement on minorities in the United States. Differential treatment based on characteristics such as health, age, language, and race are examined in statutory, administrative, and judicial settings, as well as in the context of issues such as employment and sentencing discrimination or the right of access to education and other public services. Prerequisite: junior standing.

**SPN 215 Spanish Civilization (3)**

The cultural heritage of Spain: the interrelation of its customs, institutions, arts, and letters. Prerequisite: Spanish 204 or departmental placement.

**SPN 216 Spanish-American Civilization (3)**

The ethnic inheritance, culture, ecology, institutions, class structure, concepts of reality, and current problems in Spanish America. The influence of the Colonial period is traced in various aspects of present-day culture. Prerequisite: Spanish 204 or departmental placement.

**SPN 310 Latin America Through Its Cinema (3)**

Through the viewing and discussion of selected works of Latin American cinema, as well as the consideration of supplementary readings, students are introduced to major topics of contemporary Latin American history and culture. The class surveys Latin American cinema from the Mexican melodrama of the 1940s to recent productions from Mexico, Cuba, and Brazil. In addition to class meetings, students must attend one film screening per week.

**SPN 318 Contemporary Latin American Narrative in Translation (3)**

This course is designed to enable English speakers to read and discover those Latin American authors who in the 20th century have attracted worldwide attention. Discussed are novels and short stories by Bombal, Borges, Cortazar, Rulfo, Fuentes, Vargas Llosa, Puig, García Márquez, Allende, Poniatwoska, Ferré, and Valenzuela. The readings will pay particular attention to the historical and cultural background of modern Latin America, the development of national identities, and the roles of humor, popular culture, and gender differences in the works. May be taken with a Spanish attachment for students with Spanish proficiency.

**SPN 322 Spanish-American Literature (3)**

An introduction to the most significant works of Spanish-American literature. Emphasis is placed on the Colonial and Revolutionary periods, the Romantic literary theories, the realist novel, modernism, and the contemporary period. Prerequisite: Spanish 204 or departmental placement.

**SPN 323 Survey of Spanish Literature (3)**

A survey of Spanish literature from the Middle Ages to the present through the study of representative authors in their historical and social contexts. Readings and discussions in Spanish. Prerequisite: Spanish 204 or departmental placement.

**SPN 355 Spanish Literature of the 20th Century (3)**

The main trends in the drama, novel, and poetry since 1900. Prerequisite: Spanish 204 or departmental placement.

## English (ENG)

The English major teaches students to analyze literary texts of considerable difficulty within the frames of literary history and theory. English majors learn to make successful and astute arguments about the interrelations between literary texts, literary history, and literary theory orally and in writing. Strong critical thinkers who are trained to articulate difficult concepts in clear language, English majors are prepared for careers requiring intellectual sophistication and clear expression, and graduate study in professional or academic areas ranging from literature or law to creative writing or teaching. Certification in secondary education in English is available. A combined B.A./M.F.A. in Creative Writing or a B.A./M.A.T. in Teaching at Chatham is also available for qualified students.

### Major Requirements

**12 courses, including:**

- ENG 204 World Literature (3)
- ENG 207 British Writers I (3)
- ENG 208 British Writers II (3)
- ENG 216 American Writers I (3)
- ENG 222 Shakespeare Survey (3)
- ENG 287 African-American Writers (3)
- ENG 350 Seminar in Literary Theory and Scholarly Writing (3)
- ENG 498-499 Tutorial (8)
- 2 300-level or above seminars
- 1 English elective (not ENG 102 or 104)

### Interdisciplinary Major Requirements

**8 courses, excluding the tutorial:**

- ENG 204 World Literature (3)
- ENG 207 British Writers I (3)
- ENG 208 British Writers II (3)
- ENG 216 American Writers I (3)
- ENG 222 Shakespeare Survey (3)
- ENG 287 African American Writers (3)
- ENG 350 Seminar in Literary Theory and Scholarly Writing (3)

1 300-level or above literary seminar

### *English Minor Requirements*

**6 courses, including:**

- ENG 204 World Literature (3)
- ENG 207 British Writers I (3)
- ENG 208 British Writers II (3)
- ENG 216 American Writers I (3)
- ENG 222 Shakespeare Survey (3)
- ENG 287 African American Writers (3)

### *Creative Writing Minor Requirements*

The minor in Creative Writing draws upon the strengths of the undergraduate English program and the graduate faculty of the Master of Fine Arts program. Students who choose this minor may be interested in pursuing a graduate degree in creative writing or looking to enter careers as professional writers.

Designed in conjunction with a faculty member in the English program, individual programs of study require the approval of the division chairperson.

**5 courses, including:**

- 3 of the following:
- ENG 243 Creative Writing I (3)
- ENG 244 Creative Writing II (3)
- ENG 245 Advanced Writing Workshop (3)
- ENG 249 Writing for Children (3)

2 300-level or above writing-intensive courses or graduate writing workshops with permission of the director of the M.F.A. program.

### *Professional Writing Minor Requirements*

Designed for students who wish to develop their writing skills to a professional level. Completion of this program prepares students for the changing requirements of the workplace in a variety of fields, including education, science, the web, advertising and public relations, grant writing, technical writing, political communication, and speech writing.

**5 courses from the following list:**

- COM 141 Media Literacy (3)
- COM 234 Persuasion (3)
- COM 251 News Writing and Editing (3)
- COM 260 Practical Public Relations (3)
- COM 331 Foundations of Screenwriting (3)
- COM 371 Speech Writing (3)
- ENG 241 Business Writing (3)

### *Writing Minor Requirements*

Building on the strengths of Chatham's English department, the writing minor enhances students' writing skills in a variety of genres. Featuring courses ranging from creative writing to business writing, this minor prepares students for careers in professional writing (e.g., advertising, public relations, law), supplements majors in business and other fields, and allows students to explore the possibility of becoming published creative writers.

Designed in conjunction with a faculty member in the English department, individual programs of study require the approval of the department chairperson.

### *Minor Requirements*

**6 courses, including:**

- 2 content courses in English
- 3 writing-intensive courses
- 1 300-level or above writing-intensive course

### **100 Multicultural Literature (3)**

This survey course explores works by multiethnic writers. Students will spend considerable time learning the principles and methods of close literary analysis to develop critical reading and thinking skills. Students will examine how culture relates to literature: How does ethnic heritage contribute to writing? How do these writers define community and culture? How do strong oral traditions translate into literary forms? Students also will spend con-

siderable time exploring the historical and social issues raised by the various texts. In discussing the many ways multicultural writers express their identities, students will attempt to analyze the complexity of their cultural identities.

### **102 Expository Writing (3) Spring**

A practical course for students who need to improve their grammar and usage skills, digesting and arranging ideas, marshalling suitable evidence, illustrating a point, composing distinct paragraphs, and commanding various appropriate means of reaching an intended audience. May be repeated up to three times with permission of the English program.

### **104 Academic Composition and Portfolio Development (3) Fall**

The purpose of the course is to introduce or reintroduce adult learners to college-level work and study, discuss and consider concepts and issues, and improve analytical writing skills. Participants also are introduced to experiential portfolio writing techniques, including a focus on the requirements and expectations of academic composition.

### **108 Telling Our Stories: Writing Family History into Legend (3)**

This course will focus on techniques of recording and crafting remembered stories into a book of family history. Using whatever people and resources are available, each writer will first collect memories and legends and then organize and write them into "Our Story."

### **200 Frankenstein: Creation of Culture (3) As needed**

This course introduces students to Mary Shelley's *Frankenstein or, The Modern Prometheus*. In addition to studying this primary text, they will examine the reasons for the extensive presence that Frankenstein

and his creature occupy in our cultural imagination. To this end, many critical approaches will inform our analysis of the text and mythology of Frankenstein.

### **204 World Literature (3) Fall**

A critical approach to major writers in several world traditions, from various periods, including such representative authors as Chuang Tze, Plato, and Wole Soyinka, and such representative works as the "Book of Genesis," *The Bacchae*, and *The Odyssey*.

### **207 British Writers I (3) Fall**

A critical and historical approach to major writers in English during the Anglo-Saxon, medieval, and Renaissance periods, including such representative authors as the Beowulf poet, Chaucer, Spenser, Shakespeare, Donne, and Milton.

### **208 British Writers II (3) Spring**

A critical and historical approach to major writers in English during the Augustan, Romantic, and Victorian periods, including such representative authors as Swift, Pope, Johnson, Wordsworth, Keats, Arnold, Tennyson, and Browning.

### **209 Linguistics (3) Even springs**

An introduction to theoretical and applied linguistics as the "science of language" and its history, nature, and functions. Includes consideration of cross-disciplinary and cross-cultural linguistics, the nature of learning language, and linguistic analysis. Fulfills secondary English education certification requirement; recommended also for any student considering graduate study in English.

### **216 American Writers I (3) Fall**

A study of cultural and literary developments in America, beginning with the Puritans and culminating with the writers of the American Renaissance: Emerson, Thoreau, Douglass, Hawthorne, and Melville.

**217 American Writers II (3) *Odd****springs*

A continuation of English 216, with emphasis on such figures as Whitman, Dickinson, Twain, Henry James, Faulkner, and Sylvia Plath.

**218 20th-Century Literature (3) *As****needed*

A study of the major British, American, Latin American, and Continental writers from World War I to the present, including Eliot, Woolf, Joyce, Kafka, Stevens, Robbe-Grillet, and Borges.

**220 Women in Science Fiction (3) *As****needed*

This course focuses on the Science Fiction genre, attending in particular to issues of gender and sexuality. In addition to looking at images of women in Science Fiction (e.g. *Barbarella* or *The Stepford Wives*), students will study how women writers have used the genre to envision alternative gendered realities. How and why does this genre have specific appeal for women writers? How is Science Fiction particularly elastic when it comes to constructions of language, the body, sexuality, and identity?

**222 Shakespeare Survey (3) *Spring***

A representative study of Shakespeare's comedies, histories, and tragedies as literary, dramatic, and Elizabethan art.

**230 The English Novel (3) *As needed***

A study of landmark English novels, from developmental forms in the 18th century through refined Victorian fictions, as art forms and reflections of social concerns. Readings include works by such novelists as Defoe, Richardson, Fielding, Smollett, Sterne, Austen, the Brontës, Dickens, Eliot, Hardy, and Conrad.

**241 Business Writing (3)**

Business writing is designed to help students write clearly and effectively about a

variety of subjects for specific audiences. Through actual writing practice and discussions of readings, a number of important issues are addressed, such as targeting an audience, determining methods of organization, and developing a flexible style.

**243, 244 Creative Writing I, II (3 each) *Annually***

Students present a selection of their work each week for class comment and criticism. In addition, special problem topics are assigned weekly to develop writing skills. Readings concentrate on contemporary prose and verse.

**245 Advanced Writing Workshop (3)**

This course focuses on creative writing for experienced writers, geared toward preparing a finished manuscript for potential publication. Fiction writers work intensively on a single story, revising and integrating its various parts. Poets write either long poems or poetic sequences and experiment with contemporary variations on traditional forms. Prerequisites: English 243 and 244, or equivalent.

**249 Writing for Children (3)**

Explores multiple facets of writing literature for preschool through adolescent audiences. Focuses on the transformation of experience and memory into a fictional story, developing a voice and point of view, character development, plot construction and intensification, describing setting, and use of vocabulary appropriate to the age of the audience.

**262 Introduction to Women Writers (3)***As needed*

Examining writers from Mary Wollstonecraft to the present, this course delineates the features of a literary tradition specific to women writing in English. It considers novels, essays, and poetry by Austen, Eliot, Stowe, Chopin, Gilman, Woolf, Morrison,

Walker, Rich, Lorde, Dove, and others.

**281 19th-Century African-American Literature (3)**

This course is a critical and historical study of major African-American writers from the slave narrative to the turn of the century. The course examines the themes of community, literacy, and religion and the role they played in slavery and freedom. (*See also Cultural Studies.*)

**282 20th-Century African-American Literature (3)**

This course is a critical study of major African-American writers from the Harlem Renaissance of the 1920s to the present. Although the course concentrates on primary texts, specific attention is paid to contextualizing these works within historical and cultural frameworks. (*See also Cultural Studies.*)

**283 The Harlem Renaissance (3)**

The course explores the literature, politics, and arts of the Harlem Renaissance. This artistic, philosophical, and intellectual movement in New York City's Harlem took place roughly from the early 1920s to the onset of the Depression. Topics to be considered include the "New Negro," The Jazz Age, and Urban Migration. Specific focus will be placed on the relationship between identity and geography as we consider the effects of migration and urbanization. (*See also Cultural Studies.*)

**286 Contemporary African-American Women Writers (3)**

This course will examine the literature of African-American women from 1950 to the present. Specifically, students focus on issues of marginalization, silencing, and female community and how they affect the construction of these narratives. Possible authors include Shange, Naylor, Williams, and Jones. (*See also Cultural Studies.*)

**287 African-American Writers (3)**

*Spring*

This course provides an introduction to the African-American expressive tradition, including poetry, fiction, autobiography, song and folktales from the 18th century to the present. Examining writers such as Douglass, Chesnutt, Brooks, Baldwin, Ellison, and Walker, this course works to delineate the critical and historical contours of the African-American literary tradition.

**391, 392, 393 Internship (1,2,3)**

*Special Topics*

Upper-level seminar topics vary from year to year.

**350 Seminar in Literary Theory and Scholarly Writing (3) *Spring***

An advanced course in writing literary analysis and methods of literary research; required of all junior English majors and interdepartmental majors before enrollment in the tutorial. Prerequisite: junior status.

**357 Writers Writing: Process, Practice, and Perspectives (3)**

The seminar considers the writing process, its elements, and purposes, as discussed by writers, scholars, and teachers of composition. Seminar topics include literacy acquisition, the history of composition studies, the development of invention procedures and revision strategies, the use and evaluation of composition studies, the creation of challenging and workable composition topics, the assessment of "errors" and error patterns, distinctions between "fiction" and "fact," the sociopolitical role of composition courses, and the role of composition courses and varieties of composition theory. Participants write often, critiquing texts and academic studies.

**385 Toni Morrison Seminar (3)**

This seminar is a study of Toni Morrison's literature within the context of African-American critical theory. Through Morrison's work, students will engage in current issues regarding the politics of language; narrative authority, historical revision, and the production of meaning; and African-American subjectivity.

**419 Frontier Women (3)**

An impressive number of narratives, novels, diaries, and poems recording the responses of women to the American frontier have become available in recent years. By reading about these frontier experiences, and by examining differences in perception and conception based apparently on gender, students will better understand how the frontier functioned within American culture, and what "cultural work" these texts accomplished.

**422 American Exploration (3)**

Focus on American fiction that records physical as well as metaphysical journeys; writers' exploration of new territories such as the frontier West, Polynesian Isles, and South Pole; their imaginative discovery of new truths about nature, society, and the self. Includes works by Poe, Cooper, Melville, Simms, Kirkland, and Chopin.

**423 American Literary Realism (3)**

A study of the 19th-century American literary movement known as Realism. The course focuses on works by Henry James, William Dean Howells, and Mark Twain.

**425 Love and Lies: The European Novel (3)**

This course will cover the modern European novel through the thematic rubric of "love and lies." The latter theme affords the opportunity to consider fiction not only as a medium of the literary genre of the novel, but also as a discourse of self-

expression, self-creation, and, in the cases of some of our lying protagonists, self-destruction. Students will focus on characters' constructions of "truth" and "lies" as these concepts are informed by characters' emotional positions. At its most ambitious, this focus on the dynamic of intersubjectivity not only provides important insights into the literature we will read, but also enhances students' understanding of the interpersonal connections that drive individuals' worldviews and narratives.

**430 Mark Twain and American Humor (3)**

A study of selected works of Twain within the context of American literature and the tradition of American humor.

**434 Literature of Fact (3)**

A study of selected nonfiction (e.g., essays, histories, biographies) designed to examine treatments of "fact" and to highlight differences in style among periods and writers. Selections compare 17th-, 18th-, and 19th-century works to contemporary pieces.

**438 Principles of Literary Criticism (3)**

A course focusing on the historical development of the principles of literacy criticism from classical origins to modern practice. Texts analyzed include passages and works by Plato, Aristotle, Horace, Longinus, Sidney, Pope, Johnson, Hazlitt, Brooks, Frye, and others.

**441 Writing Personal Legend (3)**

This writing class will use as inspiration self-representation by contemporary women authors who have written on the scrim of legend, myth, and folklore. The telling of tales is central to community interaction; story has always been used as a way, direct and indirect, of making culturally specific meaning out of experience.

Students will read archival and contemporary material and then select traditional and modern stories resonant of their private experience to generate original work.

**442 American Multicultural Literature: Texts, Theory, Pedagogy (3)**

Students explore the issues, debates, and politics of American literary multiculturalism; consider texts from non-European imaginative traditions (Native American, African-American, and Chicano/a) that challenge not only the canon of American literature but notions of the American and the literary; and devise strategies for incorporating such texts in courses on American multicultural literature.

**443 Nature and Culture (3)**

This course explores the issues of ecology and identity as part of the development of American literary culture. The development of an ecological imperative and the patterns of “nature” consciousness will be explored as they rise, grow and change. Questions of the relationship between nature and culture will be the main focus of the course including the developing ideology of ecology as a response to the growth of mechanical culture and the rapid loss of wilderness. *Cross-listed as ENV 445.*

**446 Wilderness and Literature (3)**

Through close reading of poetry and prose, students will explore the relationship between wilderness and literature – both representations of the natural world and what Stanley Kunitz calls “your wilderness . . . the untamed self that you pretend doesn’t exist, all that chaos locked behind the closet door, those memories yammering in the dark.” Writers examined include: Anne Carson, Mark Doty, Kathleen Hill, and Virginia Woolf. *Cross-listed as ENV 446.*

**447 Contemporary Environmental Fiction (3)**

A study of environmental fiction ranging from Jack London’s *The Call of the Wild* to Margaret Atwood’s *Surfacing* and Jane Smiley’s *A Thousand Acres*, this course attends in specific to the representation of nature and environment in 20th-Century novels and other cultural texts (e.g., *Bambi* or *The Emerald Forest*). Students will consider how such representations interrogate, critique, or reinforce contemporary constructions of the environment. Special attention will be given to questions of history, gender, and “what counts” (e.g., urban versus wilderness) as the environment. Prerequisite: 200-level English course or permission of department chairperson. *Cross-listed as ENV 447.*

**449 Exiles (3) Even falls**

This course will examine the 20th-century condition of exile in relation to its different configurations, from European émigrés to postcolonial subjects to experiences of exile in the United States, to the relation of exile to Diaspora (African, Indian, and Jewish). Students will see how different patterns of movement define subjects variously as exiles, migrants, nomads, and tourists. They also will approach the concept of exile from psychological, geographical, and cultural angles to understand the different uses of the term, its scope, and its limitations.

**452 Ecofeminist Literature (3) As needed**

This course brings together theoretical, nonfictional, and fictional approaches to the study of women and the environment. Students will examine how diverse ecofeminist writers problematize, resituate, and reclaim the woman/nature paradigm – a construct historically based in patriarchal culture. This course focuses particularly on how representations of women and

environment (ranging from the traditional to the radical) can help students rethink and reimagine their relationship to the Earth. *Cross-listed as ENV 452.*

**463 Transcribing Lives (3) *As needed***

Focused on developing personal histories into stories that entertain, inform, and inspire, this course teaches students to write autobiography and biography for young audiences using solid research techniques and storytelling skills. Prerequisite: English 243, 244, and 245, or permission of the program director.

**464 Early Modern Romance: Representations of Women (3) *As needed***

The course looks primarily at medieval and Renaissance romances, asking how they do or do not challenge past or stereotypical notions of the feminine. Possible reading selections include *Tristan and Isolde*, *Sir Gawain and the Green Knight*, *Le Morte d'Arthur*, *The Faerie Queene*, and *The Arcadia*. The course ends by looking at *The Mists of Avalon*, a feminist rewriting of Arthurian romance.

**491, 492, 493, 494 Independent Study (1, 2, 3, 4)**

**498-499 Tutorial (8 on completion)**

## Film/Digital Video-Making (FLM)

The film/digital video-making major provides the opportunity for students to develop creative, conceptual and technical skills across coursework in film, art, communication and cultural studies, fostering a critical awareness of media practices and a thorough knowledge base in digital video and audio production and emerging media technologies. The major explores the creative tension between individual expression and the social and political forces that shape culture at large.

Students will be trained in developing content, production, and theory simultaneously. Graduates will be prepared to produce their own digital films and to assume a creative role in the film, video and new media industries.

### Major Requirements

**16 courses, including:**

- ART 141 Media Literacy (3)
- ART 151 Media Analysis: Text (3)
- ART 206 Digital Sound Production (3)
- CST 183 Representations of Race and Gender (3)
- FLM 250 Introduction to Digital Video Production (3)
- FLM 429 Junior Seminar (3)
- FLM 498-499 Tutorial (8)
- 5 of the following production courses:
  - ART 241 Lighting Principles (3)
  - ART 265 Interactive Strategies (3)
  - FLM 331 Foundations of Screenwriting (3)
  - FLM 350 Intermediate Digital Video Production (3)
  - FLM 421 Digital Animation and Compositing (3)
  - FLM 450 Advanced Digital Video Production Studio (3)
  - FLM 471 Advanced E-Merging Media Studio (3)

5 of the following theory courses:

- CST 383 Special Topics in Cultural Studies (3)  
 FLM 160 World Film History (3)  
 FLM 161 Intro to Film, Video and New Media Art (3)  
 FLM 185 Intro to Black Filmmaking (3)  
 FLM 225 Female Narration: Race and Gender in Women's Films (3)  
 FLM 226 Issues in Film: Gender, Race, and Ethnicity (3)  
 FLM 300 Critical Theory (3)  
 SPN 310 Latin America through Its Cinema (3)

### *Minor Requirements*

**6 courses, including:**

- ART 141 Media Literacy (3)  
 ART 206 Digital Sound Production (3)  
 CST 183 Representations of Race and Gender (3)  
 FLM 160 World Film History (3)  
 FLM 250 Introduction to Digital Video Production (3)  
 FLM 350 Intermediate Digital Video Production (3)

### **160 World Film History (3)**

This course presents an overview of the history of film by focusing on key countries, both Western and non-Western, whose film industries have made important contributions to world cinema and/or whose filmmakers have pioneered important film movements. The course places film industries and movements in the context both of cinematic history and history of the societies in question.

### **161 Introduction to Film, Video and New Media Art (3)**

This course is an introduction to critical and aesthetic perspectives on film, i.e. the rules, codes, and strategies by which film represents reality. Students will be exposed

to a variety of movements and moments in film history, but history will not be an explicit focus for the course. The course will map out the major conceptual areas in film studies using new methodologies in the areas of narrative comprehension, new vocabulary in film semiotics, and multiculturalism and the media. Issues explored in this course include questions of history and memory, self and other, and identity in both the Western and non-Western contexts.

### **185 Intro to Black Filmmaking (3)**

An introductory course that examines black filmmakers as an artistic social force. Students venture into areas as diverse as culture, philosophy, economics, and ideology. The course also covers the aesthetic elements of cinema, the terminology governing film production, and the line of critical inquiry developed for the medium.

### **225 Female Narration: Race and Gender in Women's Films (3)**

This course looks predominantly at films directed by women who have worked out strategies for a feminist film practice. The course will focus on the relationship between representations of women and the socio-political structures in which women live. It will also focus on the need for women, if they wish to affect perception of self and other, us and them, to take up the means of production. Exposing the sexual stratagems in various contemporary societies permits women filmmakers to recreate the world in their own image. Study of traditional portrayals of women will support understanding of the differences between subject and object position. Negotiating these often conflicting spaces allows students to comprehend the multiple mediations that structure a critical consciousness. Such awareness allows questions of responsibility in a world of diverse

values and perspectives. The course is organized as a reading, viewing, and lecture experience.

### **226 Issues in Film: Gender, Race, and Ethnicity (3)**

This course examines some of the major theoretical issues developed in film theory and practice. Emphasis is placed on ways in which the film text is also a social text that can be used to examine underlying assumptions and ideas with regard to issues of gender, race, and ethnicity. The class attempts to go beyond plot and theme analysis to probe for examinations of how culture shapes the way people think, and, in the process, what it selectively leaves out.

### **250 Introduction to Digital Video Production (3)**

This course introduces the tools, technology, and techniques of digital video production. Students plan script, manage, and produce videos using digital technologies. Along with the technical applications, students will be exposed to the history of video as an artistic and instructional medium, as well as the relationship of digital video to film and television. The theoretical focus is on critiques of narrative construction. Prerequisite: Art 141.

### **300 Critical Theory (3)**

Communication theory offers a critical study of the key debates in theories of media and communication interfaced with cultural studies. The course also examines the communication circuit from production to consumption within the broader paradigms of cultural studies, feminism, politics of identity, and theories of ideology and postmodernism. Connections are made between these debates and wider debates in communication studies.

### **331 Foundations of Screen Writing (3)** *Cross-listed with COM 331.*

### **350 Intermediate Digital Video Production (3)**

Students will utilize the nonlinear editing software program Final Cut Pro to examine methods of production and related theories involved in achieving structure in film and video. By conceptually dissecting and practically applying techniques such as splicing, transitional effects and other editing processes, students will render sophisticated projects which are conscious of how the edit structures film and doing so becomes another creative and technical layer for study. Prerequisite: Art 141 and Film 250. *Cross-listed with ART 350.*

### **421 Digital Animation and Compositing (3)**

This production course provides an introduction to computer animation and visual effects. Students learn the principles, process, and philosophy of animation with a focus on the design and construction of environments, characters, and time-based motion. Students script, storyboard, design and produce a short animated digital video. Prerequisites: Art 141 and Art/Film 250. *Cross-listed with ART 421.*

### **429 Junior Seminar (3)**

This seminar is two-fold. Junior-level students will utilize this course to prepare for their senior tutorial projects by examining proposal writing, strategies for research, and writing by various artists. Students will also learn portfolio development and presentation techniques. Relevant festivals, journals, and other creative opportunities will be explored for future field placement. Upon completion of this course, students will have a written tutorial proposal and provisional portfolio completed. *Cross-listed with ART 429.*

### 450 Advanced Digital Video Production Studio (3)

This studio course is an intensive laboratory that looks at advanced methods of digital video production including highly developed lighting practices, audio recording and mixing, non-linear editing and digital effects. Students will also experiment with various ways in which to prepare video for web streaming or embedding compressed video in multimedia applications. This course includes regularly scheduled screenings of significant experimental video and multimedia projects – continuing to engage students in conversations of aesthetic, structural, and critical concern. Prerequisites: Art 141 and Art/Film 350. *Cross-listed with ART 450.*

### 471 Advanced E-Merging Media Studio (3)

Students will engage in self-directed explorations of the creative, conceptual and technical possibilities of e-merging media practices in this upper-level electronic media studio course. Advanced technical demonstrations will aid students as they create highly sophisticated and well-articulated creative projects. Through a series of fieldtrips, film/video screenings, critical readings and critiques sessions, students will examine a variety of historical and contemporary strategies employed by new media artists. Students must enter the course with a project in mind or in development. *Cross-listed with ART 471.*

### 491, 492, 493, 494 Independent Study (1,2,3,4)

### 498-499 Tutorial (8)

## Professional Communication (COM)

Professional Communication is a degree targeted to new opportunities in a media-savvy world. Students in the major take a common set of core courses that prepares them for careers in an industry where convergence in print, broadcast, and online media is growing. Students then choose one of four concentrations: broadcast journalism, print journalism, professional writing, and public relations.

In addition to required course work, students must complete an internship and a tutorial presenting the results of an extensive print, broadcast, public relations, or news media project.

### Major Requirements

#### 8 core courses, including:

- COM 106 Mass Communication and Modern Society (3) **or**
- COM 166 Global Communication (3)
- COM 141 Media Literacy (3)
- COM 251 News Writing and Editing (3)
- COM 400 Media Ethics and Responsibility (3)
- COM 391, 392, 393 Internship (1, 2, or 3)
- COM 498-499 Tutorial (8 on completion)
- POL 311 The Research Process (3)

In addition to the core requirements, students must complete one of the following concentrations.

#### Broadcast Journalism (Editorial)

##### 5 courses, including:

- ART/FLM 250 Intro to Digital Video Production (3)
- COM 240 Introduction to Broadcast Production (3)
- COM 340 Intermediate Broadcast Production (3)
- COM 351 Advanced News Writing and Editing (3)
- COM 407 International Journalism (3)

**Broadcast Journalism (Technical)****5 courses, including:**

- ART/FLM 250 Introduction to Digital Video Production (3)
- ART/FLM 350 Intermediate Digital Video Production (3)
- COM 240 Introduction to Broadcast Production (3)
- COM 340 Intermediate Broadcast Production (3)
- COM 351 Advanced News Writing and Editing (3)

**Print Journalism****6 courses, including:**

- COM 247 Digital Photography and Restoration (3)
- COM 261 www.design/code+aesthetics (3)
- COM 273 Photography I (3)
- COM 351 Advanced News Writing and Editing (3)
- COM 407 International Journalism (3)
- COM 415 Pre-Press Production Methods (3)
- COM 260, COM 371 or ENG 241 may be substituted for COM 273 or COM 407

**Professional Writing****5 courses, including:**

- ENG 241 Business Writing (3)
- COM 234 Persuasion
- COM 260 Practical Public Relations (3)
- COM 371 Speech Writing (3)
- 1 approved elective from another track focusing on technical-artistic, public relations, or advertising.

**Public Relations****6 courses, including:**

- COM 234 Persuasion (3)
- COM 247 Digital Photography and Restoration (3) **or**
- COM 273 Photography I (3)
- COM 260 Practical Public Relations (3)
- COM 360 Advanced Public Relations (3)

- COM 410 Advertising as Communication (3)
- COM 415 Pre-Press Production Methods (3)

**Print Journalism Minor Requirements****6 courses, including:**

- COM 247 Digital Photography and Restoration (3)
- COM 261 www.design/code+aesthetics (3)
- COM 273 Photography I (3)
- COM 351 Advanced News Writing and Editing (3)
- COM 407 International Journalism (3)
- COM 415 Pre-Press Production Methods (3)
- COM 260, COM 371, or ENG 241 may be substituted for COM 273 or COM 407.

**Broadcast Journalism (Editorial) Minor Requirements****5 courses, including:**

- ART/FLM 250 Introduction to Digital Video Production (3)
- COM 240 Introduction to Broadcast Production (3)
- COM 340 Intermediate Broadcast Production (3)
- COM 351 Advanced News Writing and Editing (3)
- COM 407 International Journalism (3)

**Broadcast Journalism (Technical) Minor Requirements****5 courses, including:**

- ART/FLM 250 Introduction to Digital Video Production (3)
- ART/FLM 350 Intermediate Digital Video Production (3)
- COM 240 Introduction to Broadcast Production (3)
- COM 340 Intermediate Broadcast Production (3)
- COM 351 Advanced News Writing and Editing (3)

### *Professional Writing Minor Requirements*

Designed for students who wish to develop their writing skills to a professional level. Completion of this program prepares students for the changing requirements of the workplace in a variety of fields, including education, science, the web, advertising and public relations, grant writing, technical writing, political communication, and speech writing.

#### **5 courses, chosen from the following list:**

- COM 141 Media Literacy (3)
- COM 234 Persuasion (3)
- COM 251 News Writing and Editing (3)
- COM 260 Practical Public Relations (3)
- COM 331 Foundations of Screenwriting (3)
- COM 371 Speech Writing (3)
- ENG 241 Business Writing (3)

### **106 Mass Communication and Modern Society (3) Spring**

The effects of mass communication on individuals and society, particularly as they relate to values and ethics, are examined. The course emphasizes the history and structure of the mass media.

#### **141 Media Literacy (3) Fall**

This course familiarizes students with some of the possibilities digital technology offers for the manipulation of still images, sound, and motion pictures. Students become proficient with the Macintosh system as they discover how computers are radically changing the way image makers create and present their work. Applied art fee. *Cross-listed as ART 141.*

#### **166 Global Communication (3) Fall**

This course examines the impact of global broadcast, satellite, and telecommunication systems on both Western and non-Western societies and cultures. Topics covered include the impact of transnational media monopolies on both Western and non-

Western understandings of world events; Western entertainment industries, cultural imperialism, and non-Western modes of resistance; and the concept of “globalization” as it relates to communication and culture.

#### **234 Persuasion (3) Even falls**

This course explores rhetorical and experimental studies of persuasion. It introduces the student to research in the field and critically examines some of the techniques developed in “selling” products, politics, and culture. It also examines the ethical considerations relevant to these techniques.

#### **240 Introduction to Broadcast Production (3) Fall**

Introduction to broadcast newsroom production; preparation and treatment of form and content; and procedures, problems, ethics, and practice in planning and producing a program. Emphasizes the essentials of good research reporting methods; how to cover stories; interviewing techniques; and how to get information. Introduction to television producing and directing; preparation and treatment of form and content; procedures, problems, and practice in planning and producing television materials. Introduction to basic reporting techniques, public records reporting, and beginning investigative journalism. Introduction to field reporting, audio and visual media, computer-assisted reporting, and precision reporting including statistics. Prerequisite: Communication 251.

#### **247 Digital Photography and Restoration (3) Spring**

The course outline includes digital photography; cameras; camera specifications; composition, color and grayscale modes; Photoshop essentials; scanning old photographs; photographic deterioration; electronic retouching; color and tonal corrections; gamma corrections; compos-

ite restoration; hand coloring old photographs; printing and display; cost factors and equipment; professional applications; and potential internships with career opportunities in the Visual Arts. Prerequisites: Communication 141. Photography fee. *Cross-listed as ART 247.*

**251 News Writing and Editing (3) Fall**

This course will familiarize students with print, broadcast, and on-line news writing. Emphasis is placed on social responsibility and ethics. Students are introduced to basic skills of print news writing, news judgment, construction of print news stories, and broadcast news writing with an emphasis on the ear and eye. Students are introduced to on-line news writing with an emphasis on context and the relationship of topics to the story.

**251L Staff Position: *The Communiqué* (1)**

A one-credit pass-fail lab section attached to Communication 251: Newswriting and Editing. Credit will be awarded upon a student's fulfillment of a staff position on *The Communiqué* over the course of one semester. A student may register for this lab a maximum of three times during her undergraduate years.

**260 Practical Public Relations (3)**

*Odd springs*

Students learn the theories, processes, and techniques involved in planning and implementing programs designed to influence public opinion and behavior through socially responsible performance and mutually satisfactory communication. The course emphasizes research, design, production, and writing public relations media, including news releases, features, pamphlets, brochures, financial statements, management reports, scripts, scenarios, and publicity. Students will analyze case histories presented by professional practitioners;

appraise success and failure factors; and explore new concepts and developing trends.

**261 www.design/code+aesthetics (3)**

*Fall*

This course addresses methods for document production and dissemination using global electronic networks. Focus is on authoring non-linear documents using wysiwyg software and basic web programming languages. Issues of privacy, rights of access, and intellectual property rights are discussed. Students will develop their technical, aesthetic, and conceptual skills by participating in lectures, demonstrations, computer labs, and critiques, as well as participating in critical analysis of various sites and internet strategies. Prerequisite: Communication 141 or permission of the instructor. Photography fee. *Cross-listed as ART 261.*

**262 www.design.two/  
interface+structure (3)**

This course focuses on advanced methods of creative web page design. The student broadens her technical understanding of software programs including but not limited to Macromedia Dreamweaver and Flash. Students render complex net based works, which emerge from in-class conversations that critically analyze the internet medium across disciplines. Creative projects cohesively demonstrate technical and innovative aesthetic practices with strong conceptual and artistic integration.

**273 Photography 1 (3) Fall**

This course is designed to introduce students to the basic techniques of exposure and development in black-and white photography. Emphasis is on technical as well as aesthetic characteristics. The photograph is studied as a medium for documentation, representation, and expression. Students are required to have a 35mm SLR (Single

Lens Reflex) film camera. If you plan to buy one, wait until the first week of class. Photography fee. *Cross-listed as ART 273.*

### **331 Foundations of Screenwriting (3)**

*Cross-listed as FLM 331.*

### **340 Intermediate Broadcast Production**

(3) *Spring*

Advanced analysis, methods, and techniques of broadcast production; preparation and treatment of complex form and content; procedures, problem-solving, and practice. Studio and field production; production of television news programs; practice in planning and producing broadcast news materials; direction, camera, lighting, sound editing techniques. Presentation and selection in non-fiction television programs, including documentaries, electronic magazines, and news series; ethical problems, field research, reporting, interviewing, and pre-production. Prerequisite: Communication 240.

### **351 Advanced News Writing and Editing (3) *Spring***

This course emphasizes the “how to” of interviewing, researching, writing, and placing professional quality articles for a full range of magazines and newspapers, including women’s, sports, ethnic, local, and national publications. Analyses of the skills and background needed to report on the various topics. The following topics may be covered, depending on student interest: science, medicine, and environment writing; sports news and feature coverage, including social and economic factors influencing sports in America; business, including economics and finance; entertainment and arts, including television, film, theatre, music, graphic arts, architecture, and design; government, covering local, state, and federal government. Students may also concentrate on

*Reporting Pittsburgh*, where they will focus on Pittsburgh and be required to do intensive field work in the neighborhoods, ethnic communities, and local institutions such as City Council, hospitals, police departments, and social work agencies. Prerequisite: Communication 251.

### **357 Photography 2 (3) *Odd Springs***

This course is designed to acquaint students with several darkroom and photo processing methods. Special attention is given to working with various photo papers, exposure manipulation in printing processes, toning, intensification, filtration, studio lighting of products, and photo finishing techniques. It also develops the student’s aesthetic sense by emphasizing principles of composition in the photo essay, photojournalism, and product and advertising photography. Prerequisite: Communication 273 or permission of the instructor. Photography fee. *Cross-listed as ART 357.*

### **360 Advanced Public Relations (3)**

*Odd falls*

Application of principles and methods to intensive analysis of public relations problems, decision making, programming, and evaluation in simulated staff and agency organization. The course emphasizes the principles and practices of public relations as a basic component in the promotion and marketing of goods and services; regulatory considerations; and consumerism. The following topics may be covered, depending on student interest: public relations in entertainment, including films, broadcasting, music, expositions, amusement parks, resorts, and arenas; developing, managing, and evaluating campaigns designed to reach niche audiences segmented by culture, lifestyle, and other factors; sports information and promotion, including lectures,

media assignments, role-playing, and presentations by sports professionals. Prerequisite: Communication 260.

### **371 Speech Writing (3)**

This course gives students the confidence and skills to write speeches that will inform and captivate their audiences. With an interactive format taking students through a variety of techniques that will improve their writing skills, this course also offers the opportunity for specific skills to be learned, including grabbing your audience – writing great openings; how to structure your speeches; communicating technical information and facts; and writing a great finish.

### **391, 392, 393 Internship (1,2, 3)**

#### **400 Media Ethics and Responsibility (3)**

*Odd falls*

Study of current and past battles over the limits of free expression; moral and ethical issues and dilemmas and conflicts of interest; public perceptions of the press; and the interdependence of the media, economics, politics, sports, and entertainment. Media as instruments of social and esthetic change will be discussed, along with press law and government controls, and the portrayal of people of color, gender issues, sexual diversity issues, and community issues.

#### **405 Intercultural Values (3)**

This course is designed to provide the student with an adequate appreciation of the complexities involved in the process of intercultural communication and understanding of the specific forces that shape the thoughts, feelings, and behaviors of various cultural groups. It also explores the diffusion and adoption of innovations, particularly in less-developed countries. Not open to first-year students.

#### **407 International Journalism (3) *Even springs***

This course uses coverage of current inter-

national affairs to prompt students to analyze and discuss how various American media differ in reporting foreign news, as well as to provide a forum for comparing domestic and international news coverage. Topics for comparison will range from geopolitical issues like the Middle East to more mundane topics like global conferences. The “war on terror” coverage and media-military relations during the Afghan and Iraq wars will also be examined. The non-American perspective on world events will be highlighted by studying other countries’ media. The final lecture focuses on concrete advice on how students interested in international reporting can start laying the necessary groundwork in their own careers.

#### **410 Advertising as Communication (3)**

*Even springs*

This course reviews the history and development of advertising. The courses emphasizes basic advertising campaigns showing relationships of marketing, creative, print, and electronic media. Students will learn the basics of writing and editing for advertising and commercial copy for all media; selling, planning, and buying for the media; advertising’s relationship to society and business; media choice; and production of advertising materials, with an emphasis on the creation and design of advertising elements. Prerequisite: Communication 234.

#### **415 Pre-Press Production Methods (3)**

This course explores the processes and materials used in the printing industry and how they relate to graphic designers. Exploration of “electronic” publishing and computer graphics is emphasized with special attention given to finished layouts, camera-ready artwork, mechanical preparation, and text. Field trips to electronic printing facilities acquaint students with contemporary materials and equipment. Prerequisites: Art/Communication 141 or 151. Laboratory fee.

**421 Digital Animation and****Compositing (3)** *Even springs*

This production course provides an introduction to computer animation and visual effects. Students learn the principles, process, and philosophy of animation with a focus on the design and construction of environments, characters, and time-based motion. Students script, storyboard, design, and produce a short animated digital video. Prerequisites: Art/Communication 141 and Art/Film250. Applied art fee. *Cross-listed as ART 421.*

**462 Writing for Digital Media (3)****491, 492, 493, 494 Independent Study (1,2,3,4)****498-499 Tutorial (8)**

## Public Relations, see *Professional Communication, page 233*

## Theatre (THT)

The theatre program offers students opportunities to explore the various theatre arts within the context of a liberal education. Performance/production courses in acting, directing, design, and technical theatre are complemented by a sequence of theatre history and dramatic literature courses. The program provides three to four major productions a year, which may include tutorial productions.

**Major Requirements****12 courses, plus internship, including:**

- THT 103 The Living Theatre (3)
- THT 141 Acting: Getting Started (3)
- THT 145/146 Practicum in Technical Theatre (2)
- THT 243 Heroes and Heroines in Drama (3)

- THT 252 American Drama and Musical Theatre (3)

- THT 355 Playwriting (3)

- THT 380 Acting for Camera (3)

- THT 391, 392, 393 Approved Internship (1-3)

- THT 458 Directing (4)

- THT 498-499 Tutorial (8)

1 of the following:

- THT 149-150 Play Performance (2)

- THT 158 Speaking to Inform and Persuade (3)

- THT 245 Scene Work for the Stage (3)

- ENG 222 Shakespeare Survey (3)

### *Interdisciplinary Major Requirements*

**8 courses, including:**

- THT 103 The Living Theatre (3)

- THT 141 Acting: Getting Started (3)

- THT 145/146 Practicum in Technical Theatre (2)

- THT 243 Heroes and Heroines in Drama (3)

- THT 252 American Drama and Musical Theatre (3)

- THT 355 Playwriting (3) **or**

- THT 458 Directing (4)

One of the following:

- THT 149-150 Play Performance (2)

- THT 158 Speaking to Inform and Persuade (3)

- THT 245 Scene Work for the Stage (3)

- THT 391, 392, 393 Approved Internship (1-3)

- ENG 222 Shakespeare Survey (3)

### *Suggested Interdisciplinary Majors*

Arts Management, Theatre/Communication, Theatre/English, Theatre/Music, Theatre/Modern Languages, Theatre/Visual Arts

### *Minor Requirements*

5 courses selected in conjunction with the faculty advisor and approved by the director of the theatre program.

**103 The Living Theatre (3)**

A broad-based introduction to the collaborative nature of theatre arts, including acting, directing, and design.

**141 Acting: Getting Started (3)**

Through exercises, improvisations, and scene work, students develop important performance skills, including imagination, concentration, and vocal techniques. They analyze scenes for a character's intention, obstacles, and tactics. They learn to work with scene partners and develop self-confidence in a performance situation. The term's culminating project is a production in the Purnell Studio Theatre.

**145/146 Practicum in Technical Theatre (2)**

Students gain experience at stage managing; constructing sets, costumes, and props; hanging and focusing lights; operating lighting and sound systems; and organizing and maintaining the theatre program's stock of sets, costumes, props, and lighting instruments. Under supervision of the theatre program's designer/technical director, students accumulate 45 hours of work.

**149, 150 Play Performance (2 each)**

Students who audition successfully for a theatre production are cast and then permitted to enroll in this course. Over a five-week rehearsal period, they develop roles and explore various aspects of the play in production: genre, author, social context, interpretation, and production style. They also participate in workshops and exercises related to specific needs of the production, e.g., training in the use of dialect, period movement, dance, choral speaking, or specific acting styles. May be repeated for up to eight credits. Pass/fail grading only. Students may not register for this course until they have auditioned and been cast in a specific production.

**158 Speaking to Inform and Persuade (3)**

Students prepare and present a series of speeches. Emphasis is on selecting topics appropriate for specific audiences, gathering and analyzing materials, supporting points with evidence and logical reasoning, organizing presentations through the use of outlines, and achieving a clear and effective style of delivery.

**240 Special Topics in Technical Theatre (3)**

Seminar members explore in-depth a specific area of technical theatre. Topics will vary each year and may include set, prop, and lighting design; costume and makeup design, scene painting; stage management; and construction techniques.

**241 World Theatre Classics (3)**

Students encounter masterpieces of classical Japan, China, India, Greece, and Renaissance Europe and explore the performance arenas, acting styles, and staging methods that gave these scripts life. They examine key figures and trends and discover the ways in which theatre both reflects and affects the society that creates it.

**243 Heroes and Heroines in Drama (3)**

Students encounter masterpieces of modern and contemporary theatre and explore the historical contexts, performance arenas, acting styles, and staging methods that gave these scripts life. They examine key figures and trends and discover the ways in which theatre both reflects and affects the society that creates it.

**245 Scene Work for the Stage (3)**

Students develop techniques for the proper preparation of a role through disciplined rehearsal and comprehensive character and script analysis. These techniques are applied to scene work and monologue preparation, encompassing both classical and

contemporary dramatic literature. Prerequisites: Theatre 141 and permission of the instructor.

### **252 American Drama and Musical Theatre (3)**

Students encounter modern and contemporary classics of American drama and musical theatre. The emphasis is on how American drama and musical theatre reflects America's version of itself throughout the 20th century. Students examine historical figures and trends in the development of contemporary theatre movements in the United States.

### **355 Playwriting (3)**

Students explore the role of the writer in the theatre and in society to deepen appreciation of the craft of dramatic writing by examining and practicing scriptwriting techniques. Students will also be introduced to the vocabulary of dramatic criticism and further develop the imagination, discipline, and craft of playwriting.

### **380 Acting for the Camera (3)**

### **391, 392, 393 Internship (1, 2, 3)**

### **458 Directing (4)**

Students develop the stage director's crafts: selecting, researching, analyzing, and interpreting the script; rehearsing the actors; coordinating the design and technical elements; and supervising publicity. Each student director prepares a prompt book for a one-act play and mounts the play as part of the New Directions series. This program of student-directed one-acts is the final production of the Theatre program's season. Prerequisite: permission of the instructor.

### **498-499 Tutorial (8)**

