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All matters pertaining to major offerings or course offerings, cost, Admissions, and other areas as printed in the catalog may be subject to change by Trustee, faculty, or administrative action without notice. Hartwick College is a recycling community.

Hartwick College does not discriminate on the basis of race, color, national or ethnic origin, religion, sex, sexual orientation, marital or parental status, age, or handicap in its policies and procedures of admission, financial aid, instruction, athletics or other College-administered activities.

Courses of Study

Courses of instruction at Hartwick College are offered primarily by departments, organized into three main divisions: the Division of Arts and Humanities, the Division of Physical and Life Sciences, and the Division of Social and Behavioral Sciences. These divisional groups indicate characteristic approaches to learning.

The Arts and Humanities generally use the approach of studying human documents and artistic achievements. Courses of study offered by departments in the Division of Arts and Humanities include Art, Art History, Classics, English, French, German, Music, Philosophy, Religious Studies, Spanish, and Theatre Arts.

The Physical and Life Sciences provide experience in the scientific method as exemplified by laboratory and field research. Courses of study offered by departments in the Division of Physical and Life Sciences include Biochemistry, Biology, Chemistry, Computer and Information Sciences, Geology, Mathematics, Medical Technology, Nursing, and Physics.

The Social and Behavioral Sciences provide the experiences of gathering and analyzing social data. Courses of study offered by departments in the Division of Social and Behavioral Sciences include Accounting, Anthropology, Business Administration, Economics, Education, Finance, History, Political Science, Psychology, and Sociology.

Courses of study offered by departments appear alphabetically by discipline in this catalog.

Course numbers indicate the following:

100-199 - introductory courses;

200-299 - courses, some of which are introductory, normally open to freshmen, sophomores, and juniors;

300-399 - courses normally open to sophomores, juniors, and seniors;

400-499 - courses normally open to juniors and seniors.

Courses in the 100-199 and 200-299 series generally should be completed in the freshman and sophomore years.

Any course that meets a specific Liberal Arts in Practice curriculum requirement has a notation at the end of its description, e.g., (EL), (QFR), (LNC), etc.

The College reserves the right to cancel any course which has an enrollment of fewer than eight students at the end of the pre-registration period.

Accounting and Finance

Accounting

Accounting's focus on the preparation, communication, and use of economic information for decision making is especially relevant in an information age. Accounting-based information is the central means of communicating with internal and external stakeholders. It is the language of business.

Hartwick's demanding accounting program develops and demands critical thinking, analytical ability, and effective communication. At its core is decision making. The program's goal is to develop well-rounded individuals who understand the role of accounting within society, possess a solid accounting foundation, and can apply their education to ethical decision making. Graduates should be able to adjust to a dynamic, continually changing economic environment, to recognize the need for continual learning, and to assist the profession in responding to challenges.

Business leaders with strong accounting backgrounds have a significant competitive advantage. Many chief executive officers are certified public accountants (CPAs) or certified management accountants (CMAs). As commercial, industrial, and governmental organizations increase in complexity and international activity, they will seek accounting graduates with solid quantitative backgrounds and refined communicative ability: the combination found in our interdisciplinary accounting program and Hartwick's distinctive Liberal Arts in Practice requirements.

The two majors within the Accounting Program are the Accounting-CPA major (intended for those interested in licensure as a CPA) and the Accounting-General major (intended for those interested in internal reporting or graduate education as a path to licensure as a CPA). Minors in Accounting and Finance also are offered. The use of computers is integrated throughout the accounting curriculum that utilizes: the Internet for research, spreadsheets for analysis, and accounting software programs currently used by small business and accounting professionals.

The Accounting-CPA major has financial accounting and external reporting as its central focus. It investigates the questions and ethical dilemmas that underlie generally accepted accounting principles by studying the preparation, communication, and analysis of accounting information. It is a four-year licensure qualifying program, registered with the New York State Education Department Office of Professional Licensing. Registration identifies program graduates as having completed the 150 hours of designated academic credit required for CPA licensure in New York. It expedites CPA exam registration and licensure.

The Accounting-General major allows students more flexibility within the accounting discipline. Students complete 120 hours of study which may focus on management accounting or taxation.

The Accounting minor offers advantages to all Hartwick students. It is a natural complement to majors in Economics, Information Science, Business Administration, and Mathematics, among others. The minor helps prepare students for careers in business or in organizations that interact with business. It also provides an excellent foundation for students planning to pursue graduate study in business administration.

A benefit of the interdisciplinary nature of the Accounting program is the ease in double-majoring (e.g., Accounting and Economics, Information Science, or Business Administration) or minoring in a related discipline (e.g., Economics, Finance, or Business Administration). For additional information, contact the department chair.

Finance Minor

Our Finance Minor provides a foundation in the core topics critical to financial management success: Corporate Finance, Investment Management and Financial Institutions. The minor's focus is theory applied to ethical decision making and critical thinking through case analysis and computer simulations of portfolio management, corporate financial operations and business valuation. The minor is the first step to a career in finance as, for example a corporate finance officer, a stockbroker, a portfolio manager, a financial analyst, a banker, or a financial consultant.

Faculty

Priscilla Z. Wightman, CPA, Chair; Thomas Devaney, CPA; Stephen A. Kolenda, CPA; Thomas G. Sears, CPA

Accounting Courses

101 Financial Accounting (4 credits) Introduction to the financial information critical to decision-making for managers. This course includes reporting and interpreting: the financial position of the firm, the components of that position, the results of its operations, and its cash flows. Coverage includes accounting principles and concepts as well as models for financial analysis and ethical decision-making. This course is intended for Business Administration majors; potential Accounting majors or minors should take the ACCO 141 and 142. No prerequisite. (EL)

141 Principles of Accounting I (4 credits) The first of two courses designed to provide the fundamentals of ethical accounting. Focus is on the underlying concepts of accounting and their application to organizations with an emphasis on the sole proprietorship. Coverage includes the accounting cycle including the maintenance of journals and ledgers, and the preparation and analysis of external financial statements. Also examined in detail are various accounting systems, cash, receivables, inventory valuation, depreciation methods and liabilities. This course is intended for Accounting majors and minors. Potential Business Administration majors normally take ACCO 101. Note: ACCO 141 and 142 are equivalent to ACCO 101. No prerequisite. (EL)

142 Principles of Accounting II (4 credits) A continuation of the underlying theoretical framework of ethical accounting including partnerships and corporations. Manufacturing companies are introduced along with expanded coverage of service and merchandising firms. Topical coverage includes the liability and equity accounting and reporting, the Statement of Cash Flows, and expanded analysis of financial transactions/statements for internal and external purposes. This course is intended for Accounting majors and minors. Potential Business Administration majors normally take ACCO 101. Note: ACCO 141 and 142 are equivalent to ACCO 101. Prerequisite: at least a C in ACCO 141. (EL)

247 Managerial Accounting I (3 credits) The ethical decision-making role of the accountant in the planning, controlling and evaluation activities is analyzed. Emphasis is on cost behavior analysis, choice of costing systems, establishing standards and evaluating performance, short-term decision making and long-term capital budgeting. Also covered are responsibility accounting, divisional performance measurement and control, and evaluation of cost centers. Prerequisite: ACCO 142.

321 Intermediate Accounting I (4 credits) A concentration on the analysis of accounting data with an emphasis on the synthesis of theory with problem application. Intermediate level topics include cash; receivables; inventory valuation; long-term assets, both tangible and intangible; and liabilities. Prerequisite: ACCO 142. (EL, QFR)

322 Intermediate Accounting II (4 credits) A continuation of the analytical approach begun in Intermediate Accounting I. Topics include liabilities, pensions, taxes, leases, stockholders' equity, the Statement of Cash Flows, and the application of revenue and expense recognition principles. The technical rules, alternative presentations, and ethical dimensions of financial decisions/disclosures are also explored. Prerequisite: ACCO 321. (EL)

342 Taxation I (4 credits) A study of the U.S. federal tax structure and the Internal Revenue Code. Emphasis is placed on the theoretical foundation and practical application of tax law as they relate to individuals (including computerized tax preparation). Also included is an introduction to corporation and partnership taxation, as are tax law formation and tax research to support ethical decision making. Prerequisite: ACCO 142 or BUSA 280. (EL)

344 Taxation II (3 credits) A continuation of the study of the U.S. federal tax structure and the Internal Revenue code. Emphasis is on tax provisions relating to partnerships, corporations, estates and trusts. Also includes more complex individual tax topics with greater emphasis on tax research to support ethical decision making.. Prerequisite: ACCO 342.

349 Managerial Accounting II (3 credits) This course provides expanded coverage of Managerial Accounting I topics such as costing systems (job order, process, operations, activity based), budgeting, standard costs and performance evaluation, and cost-volume-profit analysis. In addition, there is a focus on critical analysis and ethical decision making in an international and quality control context. Prerequisite: ACCO 247.

395, 495 Internship in Accounting (3-6 credits) This course provides opportunities to further the professional career development of students. Placements are designed to utilize academic concepts in a work setting and to bring practical knowledge of a functioning business back to the classroom. Prerequisites: junior or senior standing, declaration of an accounting major/minor or finance minor, permission of the department, and satisfactory internship qualifications.

421 Auditing (4 credits) A study of auditing standards and procedures with an emphasis on ethical professional conduct. Included are legal and ethical responsibilities, internal control standards, evidence gathering techniques and accounting engagement reports. Prerequisite: ACCO 322. (EL)

422 Advanced Accounting (4 credits) An examination of the accounting for and reporting of complex areas of accounting including partnerships (organization and liquidation), business combinations, and international transactions . The ethical dilemmas associated with these areas are also discussed. Prerequisite: ACCO 322. (EL)

431 Accounting Theory (3 credits) A review of the historic trends and controversies in accounting thought. The views of academics and practicing professional accountants are examined in such areas as accounting in a multinational economic environment, ethical disclosure practices and reaction to governmental regulation of accounting rules. Prerequisite: ACCO 322.

490 Senior Thesis (3 credits) This course requires completion, in consultation with an accounting faculty member, of a research paper that demonstrates the ability to investigate and analyze some current accounting issue/topic and effectively communicate the results of that research. The thesis integrates accounting's conceptual framework, and should include the formulation of a hypothesis, complete with ethic considerations, capable of public defense. Prerequisites: ACCO 322 and senior standing.

491 Contemporary Issues in Accounting Seminar (4 credits) A capstone course that requires students to examine and research (independently and/or jointly) one or more current complex accounting issues. Contemporary events and presentation of student research will be the basis for class discussion and analysis. Topics will integrate national and international accounting: theory, standards, practice, regulatory considerations, economic effects, behavioral outcomes, and ethical dimensions with information system design and control processes. Prerequisite: ACCO 322 and Senior standing.

Finance Courses

327 Financial Management I (3 credits) This course introduces the student to the fundamentals of corporate financial management, theories and procedures relevant to the effective acquisition and utilization of capital and assets . Topics include time value of money, asset valuation, working capital management, forecasting, capital budgeting, evaluation of sources of capital, and expanded coverage of financial statement analysis. Prerequisite: ACCO 142 or BUSA 280. (QFR)

328 Financial Management II (4 credits) This course provides expanded coverage of corporate financial management. Topics include finance theory and the economic environment in which it is applied, complex issues in: capital budgeting, asset valuation, optimal capital structure and international finance with discussion of the related ethical considerations. Prerequisite: FINA 327.

345 Personal Financial Planning (3 credits) This course considers the various financial issues and decisions that confront individuals and the tools and techniques used to support ethical decision making. Issues includes the assessment of family net worth, credit sources and uses, risk management including insurance, and budgeting, with a focus on asset management and retirement planning. Prerequisite: FINA 327 or BUSA 280.

360 Investment Analysis (4 credits) This course focuses on the securities markets and the analytical techniques to value assets including securities. Topics covered include financial markets, portfolio theory and management, valuation of financial securities, as well as the international and ethical dimensions of these areas. Prerequisite: FINA 327.

381 Financial Institutions (3 credits) This course investigates the intermediary functions that financial institutions provide for savers and borrowers. Financial institutions covered include banks, insurance companies, mutual funds, and pension funds. Interest rates and the role of the Federal Reserve system are examined. Prerequisite: FINA 327.

395, 495 Internship in Finance (3 credits) This course provides opportunities to further the professional career development of students. Placements are designed to test academic concepts in a work setting and to bring practical knowledge of a functioning business back to the classroom. Prerequisites: junior or senior standing, Business Administration or Accounting major/minor or Finance minor, permission of the department, and satisfactory internship qualifications.

Accounting and Finance

Accounting-CPA Major Requirements: Minimum of 150 total credits; **35 credits in Accounting; 36 credits in Business; 60 hours in Liberal Arts; 19 Elective credits**

Accounting Courses (12 courses):

- ACCO 141 Principles of Accounting I (4 credits)
- ACCO 142 Principles of Accounting II (4 credits)
- ACCO 247 Managerial Accounting I (3 credits)
- ACCO 321 Intermediate Accounting I (4 credits)
- ACCO 322 Intermediate Accounting II (4 credits)
- ACCO 342 Taxation I (4 credits)
- ACCO 421 Auditing (4 credits)
- ACCO 422 Advanced Accounting (4 credits)
- ACCO 491 Contemporary Issues in Accounting (4 credits)

Business Administration Courses

- BUSA 310 Business Law I (3 credits)
- BUSA 311 Business Law II (3 credits)
- BUSA 348 Statistical Analysis in Operations (3 credits)
- FINA 327 Financial Management I (3 credits)
- FINA 328 Financial Management II (4 credits)

Economics Courses

Two courses in Economics (ECON) (minimum 6 credits)

Elective “Business” Coursework...defined as a:

Minimum of 14 credit hours completed in either Finance, Economics, Business Administration, or Computer Science courses.

Students can double-major if they follow a recommended program of study. Contact the department chair for additional information.

Suggested four-year sequence for students in the Accounting-CPA Major:

Freshman Year ACCO 141, 142, ECON, ECON, Elective. Total hours: 35-40.

Sophomore Year ACCO 247, 321, 322, Elective. Total hours: 35-40.

Junior Year BUSA 310, 311, 342, 348, FINA 327, 328, Elective. Total hours: 35-40.

Senior Year ACCO 421, 422, 491. Elective. Total hours: 35-40.

General Accounting Major Requirements: 12 courses Accounting Courses:

- ACCO 141 Principles of Accounting I (4 credits)
- ACCO 142 Principles of Accounting II (4 credits)
- ACCO 247 Managerial Accounting I (3 credits)
- ACCO 321 Intermediate Accounting I (4 credits)
- ACCO 322 Intermediate Accounting II (4 credits)
- ACCO 342 Taxation I (4 credits)
- ACCO 491 Contemporary Issues in Accounting (4 credits)
- ACCO/BUSA elective (minimum 6 credits) from:
 - ACCO 344,349,395/495 (maximum 3 credits), 421,422,431,490 and BUSA 348

Economics Courses (2 courses):

Two courses in Economics (ECON) (minimum of 6 credits)

Finance Course:

FINA 327 Financial Management I (3 credits)

Suggested four-year sequence for students in the Accounting-General Major:

Freshman/Sophomore Year ACCO 141, 142, ECON, ECON

Sophomore/Junior Year ACCO 247, 321, 322, Elective

Senior Year ACCO 421, 422, 491, Elective

The general accounting major enhances the ability to double-major in other disciplines. Contact the department chair for additional information.

Accounting Minor Requirements: 6 courses:

- ACCO 141 Principles of Accounting I (4 credits)
- ACCO 142 Principles of Accounting II (4 credits)
- ACCO 247 Managerial Accounting I (3 credits)
- ACCO 321 Intermediate Accounting I (4 credits)
- ACCO electives: minimum of 6 credits from:
 - ACCO 322,342,344,349,421,422

Finance Minor Requirements: 7 courses: Accounting requirement (8 hours)

ACCO 141 Principles of Accounting I and ACCO 142 Principles of Accounting II OR

ACCO 101 Financial Accounting and BUSA 280 Finance

One ECON course (minimum 3 hours)

FINA 327 Financial Management I (3 hours)

FINA 328 Financial Management II (4 hours)

FINA 360 Investment Analysis (4 hours)

FINA 381 Financial Institutions (3 hours)

Grades for all courses required for the major (including those from other departments) are used to calculate the average in the major for Departmental Distinction.

Anthropology

Anthropology is devoted to the holistic study of humankind, understanding and explaining human beings in all of their diverse aspects at all times and places. Teasing out the origins of Homo sapiens from fossilized bones, discovering the common humanity among different cultures, exploring why contemporary peoples do what they do—all are part of this wide-ranging and fascinating field.

Anthropology at Hartwick addresses three major sub-areas: cultural anthropology, biological anthropology and archaeology. Cultural anthropologists explore the varying beliefs and practices of the world's societies, both non-Western and Western, in contemporary and historic times. Biological anthropologists investigate the interaction of culture and biology in the evolution of and current biological diversity within the human family and our nearest relatives. Archaeologists reconstruct the ways of life of past societies by excavating and interpreting their artifacts and other material remains. Thus, anthropology bridges the natural sciences, the social sciences and the humanities.

The study of anthropology can broaden students' perspectives on and understanding of other people and cultures as well as their own. Courses in the discipline are valuable components of an education designed to prepare students for a future characterized by growing social and global interdependence.

Students majoring in anthropology take a core of preliminary courses followed by seminars that survey anthropology's particularly rich historical and theoretical insights. Students may use electives to specialize in one of the three major sub-areas and in a particular culture area of the world (e.g. native North America, Africa, Europe, Asia, South America). At the philosophical level, students are guided toward an awareness of the ethnocentrism implicit in our own Western ways of thinking as well as toward a sensitivity to the traditions of other, non-Western cultures. In addition, all students are encouraged to master the more practical anthropological skills in courses dealing directly with field, museum, lab, computer and other analytical methods.

The department offers a number of special opportunities: a field school in archaeological excavation; off-campus programs in other countries; courses, training and exhibitions dealing with the many unique collections of North American Indian artifacts found in The Yager Museum of Art & Culture; and the Hardy Chair Lecture Program featuring world-renowned anthropologists. Students especially interested in museum work can complete Hartwick's Museum Studies concentration in addition to the Anthropology major or minor.

Hartwick's anthropology graduates have successfully taken on a diverse range of career challenges from law and medical school, business, education, international relations and government service to archaeological excavation, public health careers, and doctoral programs in anthropology. They have used their understanding of people and their similarities and differences to pursue careers in museums, community relations, journalism, human resources management and social services. Whatever their specific goals, however, anthropology students emerge with a conscious appreciation of and sensitivity to the critical issues of cross-cultural differences, as our society engages in increasingly intensive relationships with peoples of other cultures and languages.

Faculty

Michael Woost, Chair; Connie Anderson; David Anthony; Jason Antrosio

Courses

105 Introduction to Anthropology (4 credits) An introduction to anthropology and the study of human culture. Basic concepts, aims and methods of biological, archaeological and cultural anthropology. Emphasis on the origins of humankind, human biological variation, the relationship of the human past to present and the comparative study of contemporary cultures. Required preparatory course for anthropology majors.

223 Cultural Anthropology (3 credits) The comparative study of cultures and societies. The nature of culture and its relation to society; patterns, similarities and differences found in material culture, language, kinship, economic, political and religious institutions of different peoples; and their interpretations. Required core course for anthropology majors. Prerequisite: ANTH 105.

225 Fundamentals of Archaeology (3 credits) The systematic study of the fundamental principles of method and theory in archaeology: establishing cultural chronologies, reconstructing extinct life ways and interpreting the archaeological record. General theory in archaeology. Contemporary archaeology. Required core course for anthropology majors. Prerequisite: ANTH 105.

235 Biological Anthropology (4 credits) A review of current evolutionary theory as it applies to the fossil evidence of human evolution; human genetics and natural selection today; genetics and environmental factors in the origin of the human family; introduction to primate behavior and ecology. Required core course for anthropology majors. Lectures and laboratory. Prerequisite: ANTH 105. (EL, QFR)

237 Peoples and Cultures (of selected areas) (credits vary by specific course, 3 to 4 credits) Survey of peoples and cultures of different regions of the world including: Native North America, Mesoamerica, South America, Africa, the Middle East, Asia. Specific emphases vary by instructor. May be taken more than once for credit. Prerequisite: ANTH 105.

239 Old World Prehistory (3 credits) A survey of major developments in Old World prehistory including: the origin of technology, food production and complex civilizations. Emphasis on Near East and Europe.

241 Native North American Prehistory (3 credits) Survey of major developments of the prehistory of North America from the peopling of the continent to the arrival of Columbus. Emphasis on the origins of domestication and development of complex societies.

250 Topics in Anthropology (credits vary by specific course, 3 to 4 credits) Special topics of current interest are considered in depth. Examples: Language and Culture; Political Anthropology; Anthropology of Development; Ethnic Conflict; Subcultures; Pop Archaeology; etc. More than one topics course may be taken for credit. Prerequisite: ANTH 105 or as specified.

305 Hunters and Gatherers (3 credits) Comparative analysis of hunting and gathering societies in today's world as well as the prehistoric past. Emphasis on specific cultural groups and environments to demonstrate diversity and continuity; examination of such societies as exemplars of "human nature." Prerequisite: ANTH 105. (ILS)

307 Sex and Gender (3 credits) A critical examination of anthropological data and theory on sex and gender, comparison of biological and social explanations, stereotyping of sex roles in different societies and the gender component in social relations. Prerequisite: ANTH 105.

322 The Anthropology of War (4 credits) Cross-cultural description of warfare and organized violence, and critical evaluation of explanations of the causes of war. Consequences of war for demography, biology and culture. Peaceful and violent means of conflict resolution. Prerequisite: ANTH 105. (ILS)

325 Material Culture Analysis in Anthropology (4 credits) Firsthand experience in laboratory and quantitative analysis and interpretation of prehistoric and contemporary ethnographic artifacts: implements of chipped stone, bone, wood, pottery, basketry, ritual objects. Three perspectives will be emphasized: technology, function and style. The behavioral and cultural implications of the analyses will allow students to see for themselves how economic, stylistic, symbolic and chronological interpretations are made from material culture. Prerequisite: ANTH 105. (ILS)

326 The Anthropology of Religion (3 credits) The relation of religious belief and practice to patterns of culture and society; mythology, magic, sorcery, witchcraft, sacrifice, supernatural beings, shamanism, divination, and totemism in traditional and modern societies with focus on non-Western traditions; religion and culture change. Prerequisite: ANTH 105.

327 Psychological Anthropology (3 credits) A study of personality development in cross-cultural and historical perspective: an examination of the biosocial basis of the self; socialization patterns, life cycle characteristics and configurations of adult personality in various cultures; contrasts in primitive and modern cognitive styles; contrasts in definitions of mental health and illness. Prerequisite: ANTH 105.

335 Third World Studies (3 credits) Studies of selected areas such as: Africa south of the Sahara, China, India, the Islamic world, Latin America, the Pacific and Southeast Asia. An examination of the pre-colonial kinship, economic, political and religious systems and related ecological and population patterns; the impact of European expansion upon them; the rise and fulfillment of independence movements; and contemporary political, economic, social, ecological and population patterns—all viewed in the perspective of the world as a system of interdependent societies and states. Prerequisite: ANTH 105. May be taken more than once for credit. (ILS)

340 Primate Behavior and Ecology (4 credits) Comparative analysis of non-human primates, and application to questions of human evolution and biological bases for human behavior. Primate taxonomy, evolution and ecology are studied for their relevance to primate behavior and adaptation. Prerequisite: ANTH 105. (ILS)

341 Cultural Ecology (3 credits) Analysis of the relationships between culture and environment: the ways in which populations adapt to and transform their environments; ways in which environments condition cultural development. Prerequisite: ANTH 105. (ILS)

346 Race and Human Variability (3 credits) Scientific and popular conceptions of “race.” Genetics and adaptation to environmental (and social) stress, including intense cold and heat, high altitudes and disease. Survival through natural and cultural selection. Prerequisite: ANTH 105.

347 Human Evolution (3 credits) Human biological and cultural evolution from 5 million to 20,000 years ago: what happened, why, and what kinds of evidence are appropriate and available? A review of the evidence and the interpretations drawn from it. Prerequisite: ANTH 105.

348 Anthropology of Development (3 credits) The analysis and interpretation of the historical expansion of the world economic system and its cultural foundations. The notion of development also is examined from a variety of critical perspectives. The relation of development practices to the problems currently facing the global system such as environmental degradation, population expansion, Third World debt, famine, etc., are also explored. This exploration ultimately leads to questions about whether prevailing notions of development have any relevance in the contemporary world system, particularly for members of the underdeveloped world. Prerequisite: ANTH 105. (ILS)

350 Topics in Anthropology (credits vary by specific course, 3 to 4 credits) For description see ANTH 250. (ILS)

361 Medical Anthropology (3 credits) Anthropological approach to the study of health problems. The use of clinical, ecological, and ethnographic material to study the causes and effects of disease on humans. The impact of population growth and migration; human contact through time and space on societies around the world. A bridge between the health sciences and anthropology. Prerequisite: ANTH 105. (ILS)

387 Ethnographic Methods (4 credits) Problems, theories and techniques of anthropological fieldwork. Students conduct field studies in the local area. Methods of building rapport with subjects. Data collection, analysis and interpretation. Cross-cultural comparisons. Class presentations. Prerequisite: ANTH 105.

388 Classics of Anthropological Thought (3 credits) The history and integration of anthropological theory as social science. An introduction to anthropology’s great thinkers; major issues of 19th and 20th century thought. Required core course for anthropology majors. Prerequisites: ANTH 105, 223, and 237. (ILS)

405 Capstone in Anthropological Issues (3 credits) This course focuses on contemporary anthropological theory, seeking to introduce students to the process and emergence of anthropological discovery and debate. The emphasis is on process rather than content, with three primary features: (1) concentrating on anthropology that has been produced in the last decade; (2) relating student interests to this material through an independent research project or commentary; and (3) discussing materials that have been assembled by students, especially in the latter portions of the course. Each version of the course will be individually titled under a broad contemporary issue theme. It is therefore possible that students could take this course two times, with instructor permission. It is assumed that students will already be familiar with the history of anthropological thought, as well as an understanding of the theories and

methods from the major anthropological subdisciplines. Prerequisites: Junior standing and at least 20 completed credits in Anthropology.

421 Field Research in Archaeology (4 credits) Excavation and analysis of archaeological materials. Prerequisites: ANTH 105, ANTH 225, or permission of instructor. (EL)

487 Research Seminar/Cultural Dynamics (3 credits) Seminar focused on the application of classical and modern theories of social change and continuity. At the end of the course, each student submits a research proposal for their senior thesis for departmental approval. Required core course for anthropology majors. Prerequisite: Near completion of major in anthropology, especially 223 and 388.

490 Senior Thesis in Anthropology (3 credits) Student-initiated project of substantial scope done under faculty guidance. Integration of theory, method, and fact in cultural, biological or archaeological anthropology. Prerequisite: Consent of Anthropology faculty supervisor.

Anthropology

Requirements for the Major

With an advisor, design a program with a minimum of 35 credit hours distributed as follows:

One preparatory course:

Introduction to Anthropology (ANTH 105)

Three subfield courses of at least three credits each, from the listed courses or as approved by the department:

- 1) A course in Archaeology such as
 - Fundamentals of Archaeology (ANTH 225)
 - Language and Archaeology
- 2) A course in Biological Anthropology such as
 - Biological Anthropology (ANTH 235)
 - Primates
- 3) A course in Cultural Anthropology such as
 - Cultural Anthropology (ANTH 223)
 - Environmental Anthropology
 - Ethnographic Methods (ANTH 387)

One course of at least three credits concentrated in a specific geographic area, such as

- Peoples and Cultures of ... (ANTH 237)
- Old World or Native American Prehistory (ANTH 239 or ANTH 241)
- Third World Studies... (ANTH 335)

Two courses in Anthropological Theory

- Classics of Anthropological Thought (ANTH 388)
- Capstone in Anthropological Issues (ANTH 405)

(Note: Each Capstone course will be titled individually; students may take more than once with instructor permission.)

At least four additional anthropology courses with at least two courses (of at least six credits) at or above the 300 level.

Requirements for the Minor:

With an advisor, design a program with a minimum of 20 credit hours distributed as follows:

One preparatory course:

- Introduction to Anthropology (ANTH 105)

Two subfield courses of at least three credits each, from the listed courses or as approved by the department:

- 1) A course in Cultural Anthropology such as
 - Cultural Anthropology (ANTH 223)
 - Environmental Anthropology
 - Ethnographic Methods (ANTH 387)
- 2) Choose (a) or (b)
 - a. A course in Archaeology such as
 - Fundamentals of Archaeology (ANTH 225)
 - Language and Archaeology
 - b. A course in Biological Anthropology such as
 - Biological Anthropology (ANTH 235)
 - Primates

One course of at least three credits concentrated in a specific geographic area, such as

- Peoples and Cultures of ... (ANTH 237)
- Old World or Native American Prehistory (ANTH 239 or ANTH 241)
- Third World Studies... (ANTH 335)

A course in Anthropological Theory, either (1) or (2)

- 1) Classics of Anthropological Thought (ANTH 388)
- 2) Capstone in Anthropological Issues (ANTH 405)

At least two additional anthropology courses with at least three credits at or above the 300 level.

Art and Art History

Producing art as a means of personal expression and studying art in its historical context enriches the life of every student. Although each approach can be pursued independently, study of links between the two provides valuable insight into our cultural roots, both Western and global. Art challenges each of us to discover and invent ways to communicate ideas through visual forms. Further, art speaks to us about the past and helps us to confront the present and prepare for the future. Art encourages us to understand and explore a vast range of traditional and non-traditional ideas, materials and forms.

Students may choose from two major programs: a major in Studio Art or a major in Art History. Both of these programs culminate in a Bachelor of Arts degree. The department also offers a Studio minor, Art History minor, minor in Documentary Photography, and Graphic Communications.

The Major in Art

The major in Art includes core courses in Studio Art and Art History, which are to be taken during the first two years. In addition to the core program, the Studio Art emphasis includes upper-level work in Art History and concentrations in two of the following studio areas: painting, photography, printmaking, digital art and design, ceramics, sculpture, and glassblowing. Special opportunities to study papermaking, letterpress, and book arts are available as well.

During the second year, declared Art majors are required to participate in the sophomore review, which helps them assess their individual progress and goals within the major. The core courses in Studio Art must be completed successfully before the student majoring in Art may participate in the Junior Review, a one-week exhibition with group critique held in Foreman Gallery, Anderson Center for the Arts. Successful completion of the Junior Review is required before an Art major may begin the Senior Project. Junior Review is scheduled for Spring Term; students considering a full junior year abroad may petition the department by spring of their sophomore year to postpone their Junior Review to fall of their senior year. The senior project, an exhibition of original works, normally earns four credits and the exhibition is held in the Foreman Gallery at the end of the Spring Term senior year.

The Major in Art History

The major in Art History is designed for the student interested in researching and writing about the history of ideas through the study of works of art and their makers. This program includes three core Art History survey courses, normally taken in the first three terms. The surveys serve as the foundation for six additional Art History courses required for the major, which introduce the student to the discipline of Art History through an investigation of a variety of historical styles, techniques, and ideas. Art History majors also are required to take eight credits of Studio Art courses. This experiential learning enables the student to directly engage skills and concepts used by artists, and to understand how different materials and tools affect the creative process. Art History majors will also achieve reading competency in a foreign language. This is generally achieved through a two-course beginning language sequence (culture courses do not fulfill this requirement).

The required art history capstone comprises a Research and Methods course (taken in the Spring of the junior year) and the Senior Thesis (completed in the Fall of the senior year), and culminates in a symposium in which seniors present their research to the Art and Art History faculty.

The department also offers a varied schedule of art events, including visiting artist and art historian lectures, art films and art exhibitions, which are designed as part of the student's education. Studio and Art History majors are required by department policy to attend out-of-class events sponsored by the department.

A number of special study opportunities offered by the department further enrich the art program at Hartwick. Individualized instruction in studio classes gives students the opportunity to work closely with professional artists. The full-time faculty is joined each semester by resident artists-specialists who teach courses in such areas as glassblowing, letterpress and drawing—and by prestigious visiting artists who conduct occasional workshops or lectures. Past visiting artists have included Kay WalkingStick, Duane Michaels, James Luna, Ik Jung Kang, and Sandy Skoglund.

Other special opportunities include department-sponsored study programs in Europe. In addition, students may do advanced work or independent study with a professional in a medium or area of special interest. They also may intern with professional artists or art historians in a variety of fields including book illustration, advertising, photojournalism, gallery and museum management, and art history research. Students interested in curating exhibitions for museums or galleries are encouraged to gain experience through internships supervised by appropriate department faculty, or by taking museum studies courses offered through The Yager Museum of Art & Culture. Students are encouraged to consider completing the interdisciplinary Museum Studies Minor.

All majors in the department take courses in other disciplines as part of their liberal arts and sciences education. The background and experience gained by students of art and art history at Hartwick has enabled them to begin careers in a wide range of art-related fields. Others pursue graduate study at such institutions as Otis Art Institute, Columbia University, Rochester Institute of Technology, Syracuse University, Washington University, Pratt Institute, Rutgers University, Massachusetts College of Art, New York University, Hunter College, the University of Pittsburgh, American University, St. Andrew's University and the State University of New York at Albany.

Potential Studio Art majors are required to submit a portfolio for review, either as prospective students applying for admission to the College, or later as “undeclared” students selecting a major course of study.

Faculty

Elizabeth Ayer and Terry Slade, Co-Chairs; Fiona DeJardin; Katharine Kreisher; Stephanie Rozene; Joseph von Stengel; Phil Young; Douglas Zullo

Adjunct Instructors

Erik Halvorson, Jo Mish, Barbara Ardan, June Tyler, Kevin Gray, Annie Gohde, Ken Havenstein

Courses

Studio Art Courses

ART 113 Drawing 1 (2 credits) Using black and white media as well as color media, students work on advanced skills and development of content in drawing during this seven-week course. Because the formal elements (line, shape, value, texture, color, etc.) are investigated more deeply, emphasis is placed upon creative pursuit of compositional variety, visual cohesiveness, and the significant issues of content. Images and issues from a wide range of cultural, historical, and contemporary contexts are examined. Professional presentation of completed work is included. This is a core course offered for art majors. Those who declare later should take Art 113 as soon as possible in their academic career. (EL) A section of this course is offered as a FYS for incoming declared majors as a core course and it should be taken in combination with Art 115 2D Design.

ART 115 2-Dimensional Design (2 credits) Using black and white media as well as color paint, students explore basic concepts in 2D design during this seven-week course. The formal elements, their qualities and interactions (line, shape, value, texture, mass, color, pictorial space, etc.) are investigated in the creative pursuit of compositional variety, visual cohesiveness, and issues of meaningful content. Images and issues from a wide range of perceptual, cultural, historical, and contemporary contexts will be examined. Recommended for non-majors or those with little previous experience as well as those who declare the studio major after their first semester at Hartwick. (EL) A section of this course is offered as a

FYS for incoming declared majors as a core course and it should be taken in combination with Art 113: Drawing I.

ART 116 Digital is Fundamental (2 credits) This art fundamental covers issues such as image manipulation, time, virtual space and presentation of one's art work in the virtual sphere. The course explores the creative possibilities of online Web 2.0 sites such as blogs, Cafepress, Youtube, and free software like Frammed for stop-motion animation and Audacity for sound manipulation. Image creation and manipulation will be explored through the use of online Web applications. This is a core Art course. Art majors should take this course during their first year or immediately following the declaration of a studio art major or minor. More information at www.hartwickdigital.com (EL)

ART 165 3-Dimensional Design (2 credits) In this course, students investigate basic three-dimensional design components such as line, color, mass, form, structure, and surface. Students experience the design process through the synthesis of drawing and fabrication of three-dimensional forms using paper, wood, plaster and mixed media. Participants learn to use hand tools and power equipment in the execution of the projects. This is a core course. Art majors should take this course during their first year or immediately following the declaration of a studio art major or minor. (EL)

ART 212 Drawing/The Figure (4 credits) Drawing from the human form, students interpret the structure, anatomy, movement, mass, volume, and weight of the human figure in various two-dimensional media, emphasizing expressive and design elements. Offered alternate years. Prerequisite: Art 113 and 116 or by permission of the instructor. This course is an alternative core requirement for studio art majors.

ART 213 Digital Art & Design I: Intro to Digital Media (4 credits) This is an introductory course to digital media with an emphasis on the medium as a vehicle for creative expression. The course introduces the three main aspects found within digital media; Print media, Time based media and Interactive media. During the term we will investigate image, video and web applications such as Adobe Photoshop, Final Cut Express, Adobe Flash, and Macromedia Dreamweaver. The class will consider digital media's effect on society through appropriation, the loop, remixing, the mashup, truth vs. perception and virtual memory, as well as other contemporary and traditional ideas that apply to the sphere of digital media. Central to these issues, and the focal point of this course, is the impact of digital media on American culture. Digital images, video and the web are important devices for communication across all disciplines. The information obtained in this course will be invaluable for anyone who wishes to present information through the digital medium. More information at www.hartwickdigital.com. (EL)

ART 214 Papermaking Workshop (4 credits) Students make images on and with handmade paper. A wide range of techniques of manipulating handmade paper are explored: sheet-forming, laminations, use of vacuum table, casting and spraying of three-dimensional forms, and handmade paper books. Students are expected to produce both individual works and editions.

ART 215 Illustration (4 credits) This course focuses on the creation of provocative visual images that are able to compete in the commercial market. It begins with analyses of illustrators past and present and proceeds to outline professional methods for executing and presenting work. Through exposure to a variety of media and techniques, practical studio assignments, slide presentations and field trips, students gather the knowledge and experience to prepare them for employment in the field. Also covered are methods of production, avenues for expression and preparation of one's resumé and portfolio. Appropriate for students with drawing and/or painting skills seeking commercial direction to market their talents, as well as further development of basic skills. Prerequisites: ART 113 or 115. Offered as needed. Can be used as one of the courses in the drawing concentration with special permission. (EL)

ART 216 Digital Art & Design II: Digital Print Media (4 credits) An intermediate course in digital media with an emphasis on the printed image as a vehicle for creative expression. Visual issues covered in assignments will include composition, subject matter, design and context. Theoretical discussion will consider truth vs. perception, individual vs. corporate view, politics and media ethics, image history and the creation of reality, along with copyright issues. This course will investigate the mass proliferation of images in western, consumer culture and reprocess that information into art. Students will explore how these images are created, reasons for their creation, and the functions they serve. Students will appropriate, capture and create images through digital processes involving the use of scanners, digital cameras, and industry standard image manipulation software including Adobe Photoshop and Adobe

Flash. This course will encourage hands-on investigation into the techniques used for the manipulation of images and how these manipulated images affect and construct our every day realities. Projects include poster design, package design, stencil tagging, and image manipulation. More information at www.hartwickdigital.com. Prerequisite: ART 213. (EL)

ART 217 Drawing/Works on Paper (4 credits) Students explore a variety of media, scale, and more advanced concepts in works on/with paper. Course focuses on investigations into contemporary issues, and includes some drawing from the figure and other sources, with a goal of developing stronger and more personal visual statements. This is an alternative core requirement for studio art majors. Prerequisite: ART 113 and 115, or by permission of instructor. (EL)

ART 221 Painting I: Acrylics (4 credits) This course examines the fundamentals of painting as a language, utilizing a wide range of acrylic possibilities and surfaces. Explorations will include the use of mediums and gels, flow release, molding pastes, and other experimental inclusions. Students will work from observation and conceptually based assignments to expand their personal use of this versatile medium. Prerequisite: ART 113 and 115. (EL)

ART 222 Painting: Oils (4 credits) This course, based primarily on the use of oils, offers instruction in a range of materials and techniques from early Western historical processes to the present. Various supports, scales, color and other formal elements are examined in light of compositional explorations and development of content. By means of direct observations (e.g. the figure) and other conceptual problems, students begin to examine the possibilities of this painting medium in the expression of personal statements. Examples are taken from different cultural, historical, and contemporary settings. Prerequisite: ART 221 or by permission. (EL)

ART 223 Painting: Watercolor and Gouache (4 credits) Students explore a variety of water-based painting techniques and conceptual ideas to expand their understanding of these painting media. Materials include watercolor, gouache, and water-soluble pencils and crayons. Prerequisite: ART 113, 115, 116 with permission of instructor. (EL)

ART 231 Printmaking: Relief (2 credits) Students learn the Relief process (linoleum and woodblock) in this seven-week course, which runs during the first half of the term. Editions (limited series of identical prints on paper) are required. There is no prerequisite but drawing or design experience is strongly encouraged. (EL)

ART 233 Printmaking: Intaglio (2 credits) Students learn the Intaglio process (drypoint and etching on inked metal plates) in this seven-week course, which runs during the second part of the term. Collagraphs and unique monoprints may be included as experimental projects. There is no prerequisite but drawing or design experience is strongly encouraged. (EL)

ART 234 Printmaking: Lithography (2 credits) Students learn the lithographic process (Litho stones and plates) in this seven-week course, which runs during the first half of the term. Editions (limited series of identical prints on paper) are required. There is no prerequisite but drawing or design experience is strongly encouraged. (EL)

ART 235 Printmaking: Silkscreen (2 credits) Students learn the Screenprinting process in this seven-week course, which runs during the second part of the term. Editions (limited series of identical prints on paper) are required. There is no prerequisite but drawing or design experience is strongly encouraged. (EL)

ART 241 Photography I (4 credits) Students learn the fundamentals of camera handling, film development, and black and white printing in the traditional wet darkroom, as well as a brief introduction to color and digital. The emphasis of the course is on decision-making, image-making and the development of ideas. Students provide their own 35mm film cameras with variable aperture and shutter speed. Yellow and red filters are recommended, and flash may be used. Tripod is recommended. Digital point-and-shoot camera may be used for certain assignments. For majors and non-majors. No prerequisite, but ART 113, 115, or 116 are recommended. (EL)

ART 250 Ceramics: Raw Materials (4 credits) (Cross-listed as GEOL 250) This is a cross-disciplinary course investigating ceramics and its geological origins. It encompasses the geology of clay, clay in the white-ware industry, and clay and glaze chemistry. Art and Geology students are paired together to work through labs and solve studio problems using a scientific approach to problem-solving. Through field

work students will have the opportunity to collect samples of local materials to create their own clay and glazes. Students enrolled in ART 250 will have a studio space in which to make work throughout the semester. Offered every other fall semester. Prerequisite: ART 271.

ART 250 Topics in Art (3 or 4 credits depending upon course) The topic is announced prior to registration. Previous topics have included “History of the Print,” “Commercial Photography.” Offered occasionally. Prerequisites depend on the topic. Please see schedule for current offerings and LAiP designations.

ART 250 Clay (4 credits) (Cross-listed as GEOL 250) This is a cross-disciplinary course taught across Ceramics and Geology. It encompasses the geology of clay, clay in the white-ware industry, and clay and glaze chemistry. Art and Geology students are paired together to work through labs and solve studio problems using a scientific approach to problem-solving. Through field work students will have the opportunity to collect samples of local materials to create their own clay and glazes. Students enrolled in ART 250 will have a studio space in which to make work throughout the semester. Offered every other fall semester. Prerequisite: ART 271.

ART 250 Wheel Throwing: Dinnerware (4 credits) Functional ceramics are often taken for granted. We use them every day, without reflecting on their origins, how they are made, or the culture that surrounds them. In this course students will explore objects for the table and their ability to communicate meaning by creating two sets of dinnerware that represent particular ideas, concepts, or visual languages. The course will culminate in a dinner party prepared by students and faculty.

ART 250 Ceramics: Claystallation (4 credits) Claystallation explores hand-building techniques in order to develop site-specific installations of clay that address scale, weight, concept, place, communication, and interaction. By looking at contemporary ceramic artists working in installation using both raw and fired clay, students will create their own installation. The course will culminate in an exhibition of site-specific work.

ART 250 Digital Art & Design Special Topics: Interactive Spaces (4 credits) This special topics course explores the history of videogames and their place within American Society. The class will review the birth of videogames and catalogue aspects found with videogames, consider changes in videogame technology over time, and research where videogames’ aesthetic and story-lines appear outside of the screen. This class requires a lot of video game playing and writing. All information will be submitted into a database to be analyzed and research information will be presented online. (EL)

ART 262 Sculpture I (4 credits) The course teaches basic skills in sculptural processes and introduces students to the language and concepts associated with sculpture. Students make sculptures using the following processes: modeling (clay, wax, and plaster), carving, mold-making (plaster, silicone and latex), metal fabrication and lost wax bronze casting. Prerequisite: ART 165. (EL)

ART 264 Foundry (4 credits) The focus of this course is to explore and execute sculptural forms cast in bronze using the ancient technique of lost wax casting. All students participate in foundry operating procedures. (EL)

ART 271 Ceramics: I: Hand Building (4 credits) This course introduces students to hand building techniques used in forming clay and its various applications (including wedging, slab building, coil building, carving, etc.). Students will explore both sculptural and functional approaches to hand building and learn to mix clay and glazes, load and fire kilns, and basic glaze and slip application. They will also begin to develop a historical and contemporary knowledge of the field of ceramics.

ART 276 Glass I (2 credits) This course focuses on the introduction of glass as a material for artistic expression, as well as elementary technical skills for working with hot glass. Students will be introduced to the basics of glass blowing, sand blasting on glass, the history of glass, and other processes used in glass making. Aesthetic and conceptual concepts associated with object-making will be presented and discussed. Prerequisite: permission of instructor.

ART 307 Off-Campus Study in Art History or Studio (4 or 5 credits) Students study various topics on location, for example: The Art and Architecture of Rome and Florence and Museums of London and Paris are currently offered during January terms on an alternate year basis. Prerequisites depend on the topic. Permission of instructor required for enrollment.

ART 316 Digital Art & Design III: Interactive Media Web (4 credits) This course emphasizes interface design and artistic approaches to the Internet. Students will consider the Internet as a medium for expression, communication and as a space for conceptual works and creative inquiry. Works that use the Internet as a medium for artistic production will be encouraged through projects that stimulate students' individual interests. Students will investigate the potential for artistic experimentation through the consideration, use and design of Blogs, Web pages, RSS feeds, Web Apps, and commercially oriented sites. Software covered includes Adobe Dreamweaver and Adobe Flash. This class culminates with a portfolio-worthy showcase of students' work through an allocated online exhibition space at www.hartwickdigital.com. More information at www.hartwickdigital.com. Prerequisite: ART 213 May be repeated for additional credit, addressing additional interactive media. (EL)

ART 317 Digital Art & Design IV: Time Based Media (4 credits) This digital course addresses linear time through audio and video. The class will explore visual time through the study of linear imaging conventions including natural life cycles, historical progressions, storyboard mapping of space and time, stop motion, animation, projection, film, and video. Audio will be considered through the creation of loops, mashups, remixes and as a spatial experience. Software includes Final Cut Express, Adobe Flash, Audacity, and Quick Time. All the work from this class is broadcast on the hartwickdigital.com Web site. This course is extremely useful and strongly recommended for students interested in filmmaking, video art, TV production, web casting and installation art. More information at www.hartwickdigital.com. Prerequisite: ART 213 May be repeated for additional credit, addressing additional time based media. (EL)

ART 321 Painting II: Oils (4 credits) This course, based primarily on the use of oils, offers instruction in a range of materials and techniques from early Western historical processes to the present. Various supports, scales, color and other formal elements are examined in light of compositional explorations and development of content. By means of direct observations (e.g. the figure) and other conceptual problems, students begin to examine the possibilities of this painting medium in the expression of personal statements. Examples are taken from different cultural, historical, and contemporary settings. Prerequisite: ART 221 or by permission. (EL)

ART 341 Photography IIA: Black and White (2 credits) This half semester intensive intermediate course allows the student to expand skills in traditional black and white photography using a straightforward or documentary approach. Projects include archival processing of fiber based prints, use of larger format cameras as well as some work in the lighting studio. Prerequisites: ART 113 or 115, and ART 241. (EL)

ART 342 Photography IIB: Manipulated Image (2 credits) This half semester intensive intermediate course includes an introduction to some processes by which the artist alters an original black and white image or simply "draws with light." Projects may include collage, photogram, pinhole, ortho film, digital negatives, solarization, cyanotype, painted photograph, and more. Prerequisites: ART 113 or 115 or 116, and 241 (as well as 213 if one plans to work digitally). (EL)

ART 343 Photography IIC: Color (2 credits) This half-semester intensive course allows the student to explore color in photography through a variety of means which may include color negatives, color slides, printing using chemical processing, digital printing, and hand-tinting. Prerequisites: ART 113 or 115 or 116, and 241 (as well as 213 if one plans to work digitally). (EL)

ART 350 Topics in Art (3 or 4 credits depending on the course) The topic is announced prior to registration. Offered occasionally. Prerequisites depend on the topic. Permission of instructor required for enrollment. Please see schedule for current offerings.

ART 361 Sculpture II (4 credits) Students continue to explore basic sculptural methods. Emphasis is placed on realizing sound three-dimensional concepts, experimenting with diverse materials and improving skills. Traditional and contemporary sculptural concepts involving construction, mixed media and environmental works are presented. Students are encouraged to manipulate various materials such as wood, metal, plaster, clay, fiber, etc. Prerequisite: ART 262. (EL)

ART 371 Ceramics II: Wheel Throwing (4 credits) This course is an introduction to the process and skills of wheel throwing and its various applications (including wedging, centering, throwing, and trimming) and will build upon the knowledge gained in ART271. By exploring the wheel as a tool,

students will create work in a variety of contexts both sculptural and functional while expanding their knowledge of clay, glazes, and firing techniques. Additionally students will continue to develop their historical and contemporary knowledge of the field of ceramics. Prerequisite: ART 271.

ART 376 Glass II (4 credits) Students continue to explore glass-making possibilities with the introduction of more advanced glass-making techniques. Emphasis is placed on refining form and simplifying ideas to fully understand and clarify concepts. Students will be encouraged to continue to develop personal expression. They will also be required to demonstrate an understanding of more advanced skills and procedure as well as to monitor and assist with equipment and studio maintenance. Prerequisites: Glass I and permission of instructor. (EL)

ART 401 Digital Art & Design Studio (4 credits) Digital Art & Design Studio is an advanced-level class that contains both a studio and teaching component. The studio aspect allows for investigation and creation of intensive student driven projects. The second component of the class has students participating as Teaching Assistants for Art 213 Digital Art & Design I, Intro to Digital Media. Advanced students will help Introductory students during studio time and will participate in critiques of introductory students' projects. Introductory students will experience and participate in critiques of advanced students projects. This class is limited to 3 students. Instructor approval is required. Prerequisites: ART 116, ART 213, and one upper-level Digital Art & Design class (ART 216, 316, 317, or 250). (EL)

ART 411 Art Theory & Practice (2 credits) Art Theory & Practice is a course centered around navigating the art world after graduation. Topics covered will include writing artist statements, grants, and gallery proposals; applying for residencies and grad schools; creating a CV; finding venues to present your art; and how to use new media to promote and display one's art. The class is for Art seniors only and requires instructor approval. Prerequisite: completion of the Junior Art Review.

ART 421 Painting III (4 credits) Students work toward evolving personal, individual approaches to painting on an advanced level. The imaginative manipulation of formal ideas and concepts is emphasized. Philosophical and theoretical issues about painting are addressed. Can be repeated as Painting IV. Prerequisite: ART 321.

ART 431 Printmaking III (4 credits) Each participant selects one of the major printmaking methods as a means to create images. Instruction emphasizes individual concerns. Students are expected to produce portfolios, which demonstrate advanced levels of both technical and aesthetic expertise. Can be repeated as Printmaking IV. Prerequisites: ART 113 and 115 and ART 231 or 331. (EL)

ART 441 Photography III: Portfolio (4 credits) In this advanced full semester course, each student explores a unified personal vision by proposing and completing a thematic project that culminates in an exhibition quality portfolio. Art 441 can be repeated for credit as Photography IV. (Note: generally offered fall term.) Prerequisite: two of the following three intermediate photo courses, ART 341, 342, and 343. (EL)

ART 450 Topics in Art (3 or 4 credits depending on the course.) The topic of this advanced seminar is announced prior to registration. Previous courses included "Advanced Foundry." Prerequisites depend on topic. Permission required. Please see schedule for current offerings.

ART 461 Sculpture III (4 credits) The course is designed to broaden the advanced art students' knowledge of three-dimensional aesthetic concepts, materials and techniques. Students concentrate on refining individual attitudes through involvement with sculptural form and process. In class, students explore current issues and trends through art periodicals and field trips. Completed projects are expected to exhibit high-quality workmanship and profound treatment of aesthetic issues. Can be repeated as Sculpture IV. Prerequisite: ART 361. (EL)

ART 471 Advanced Ceramics (4 credits) Students will begin to develop their own language as artists by creating four bodies of work over the course of the semester. Students will choose to work functionally or sculpturally to further develop their skill. Studio work will be complemented by development of an artist's statement and a digital portfolio of work. This course may be repeated twice. Prerequisites: ART 165 and 371.

ART 476 Glass III (4 credits) Students explore glass as a medium on its own as well as in sculptural combinations at an advanced level. Emphasis is placed on developing personal artistic expression. Students should assist with equipment and studio maintenance. Prerequisites: Glass II and permission of instructor. (EL)

ART 490 Senior Project in Art: The Senior Project (4 credits) required of all studio art majors, represents a culmination of the student's studies. A proposal conceived and written in consultation with the student's academic advisor and two project advisors, must be reviewed by the entire department before work is begun on the project. An exhibition of the completed studio work is presented in the late spring at the Senior Projects Exhibition in Foreman Gallery. Questions about developing a Senior Project should be directed to the student's advisor. Prerequisite: Successful completion of Junior Review. (EL)

ART 495 Senior Internship in Art (credit variable probably 3 or 4 credits) An internship in an art-related field. The student should arrange to do this internship with the appropriate faculty supervisor.

ART 250 Letterpress Letterpress students learn the basics of typography, typesetting, page design, book design, and the operation of two presses. Students also learn the various forms of illustration that are compatible with letterpress work. Past projects designed by students include books of original poetry, short stories, and graphics. Other ephemeral projects include work on posters, calendars, invitations, portfolios, and a wide variety of smaller printed items. No prerequisite.

Art History Courses

ARTH 102 World Art History I: Ancient Art (3 credits) This course surveys major monuments in architecture, painting, sculpture in Western Europe, the Near East, Egypt, China, India and the Americas from prehistory through 1000 C.E. Using a chronological framework, students are introduced to the fundamentals of art history, including developing skills in formal analysis, iconography, and the comparative method. Emphasis will be on the social, political and cultural context of objects. Suitable for non-majors.

ARTH 103 World Art History II: Middle Periods (10th-17th Centuries) (3 credits) As a continuation of Art 102, this course surveys the major monuments of art history from 1000 C.E. through the 17th century. Architecture, painting, sculpture and printmaking created in countries and cultures throughout the world, including Japan, China, Islam, Africa, the Americas and Western Europe are investigated. This course introduces students to art historical methods, concepts and definitions and stresses the relation of objects to their political, social and cultural context. Suitable for non-majors.

ARTH 104 World Art History III: Art of the Modern World (3 credits) This course is the final part of a three-part survey of the history of art, a major goal of which is understanding human cultural diversity. We will examine some of the major monuments, artists, and artistic developments from the 18th to the late 20th century in Europe, China, Japan, North America, and Sub-Saharan Africa. The purpose of the course is to foster an understanding of the relationship between works of art and the historical, political, religious, and philosophical context of the societies that produced and made use of them, and to build the fundamental skills of visual analysis and the critical concepts and vocabulary necessary for discussing works of art verbally and in writing. Suitable for non-majors.

ARTH 203 Arts of the Americas (3 credits) This course surveys the arts of the Americas from prehistory through the present. The course emphasizes the native arts of the Americas in the broadest sense by examining the work of native cultures, immigrant cultures with special attention to Latino art, and the dominant white culture after the 15th century. Hence the course contrasts Western arts with non-Western art in order to show how different cultures make art for very different reasons. The course, like the other art history surveys, addresses art historical methods and approaches, definitions and concepts.

ARTH 204 Women and Art (3 credits) This course studies women's various roles in the history of western and non-western art with special emphasis placed upon underlying issues of racism and sexism in the modern and contemporary eras. Although it focuses on women as artistic producers, it also addresses the way in which women have been imaged by men. Various art historical approaches are applied in order to examine the cultural, economic, political, and social restrictions that have shaped women's relationship to the visual arts in the past 200 years.

ARTH 206 History of Chinese Imperial Art (3 credits) The survey of Chinese Imperial Art begins with Shang Dynasty pottery and bronzes from the second millennium BCE and continues through 1912 and the fall of the Ch'ing Dynasty. Chinese history, literature and religion will be discussed in order to explain the works of art, their meaning and the society in which they were produced.

ARTH 207 History of Photography (3 credits) This lecture course examines key developments in the history of photography from its invention in 1839 to the rise of postmodernism in the 1970s. Arranged chronologically, the course examines recurrent debates in modern Europe and the U.S. regarding photography's dual status as an expressive fine art medium and objective historical document. It likewise charts ongoing aesthetic disputes between proponents of "straight," unmediated photographic production and those who champion the expressiveness of the manipulated image.

ARTH 209 The History of Architecture (3 credits) The course is designed to address major architectural developments in world architecture with a concentration on Western architecture. Students examine the monuments in a cultural, social, and political context.

ARTH 250 Topics in Art History (3 or 4 credits depending upon course) The topic is announced prior to registration. Previous topics have included "History of the Print," "Commercial Photography," and "20th Century Black Art and Visual Culture." Offered occasionally. Prerequisites depend on the topic. Please see schedule for current offerings.

ARTH 280 Topics in Buddhist Art (3 credits) This course is an intermediate-level introduction to the art of Buddhism from the religion's inception in the 6th century BCE through the present day. The emphasis is on the painting, sculpture, and sacred architecture of India, China, Japan, Southeast Asia, Indonesia, the Himalayas, and beyond. New trends and scholarship will allow for variation from semester to semester. Required textbooks will be supplemented with readings of Buddhist scriptures and current articles.

ARTH 290 Topics in World Cinema (4 credits) In this course, students will take an in-depth look at what makes film one of the most powerful artistic media of our time. Everyone is familiar with the experience of watching a movie that tells us a story. By the end of this course, students will have ventured beyond the narrative to explore the relationships between form and content in films in our pursuit of an understanding of how they communicate ideas and persuade us. Students will cover some of the basic terminology and concepts necessary to view a film critically and analyze examples of films outside of the American cinematic mainstream to look at how diverse cultures use the medium of film. Specific films vary from semester to semester and include the cinematic production of Asia, Africa, Europe, Australia, and the Americas.

ARTH 301 Greek & Roman Art History (3 credits) The study of ancient art begins with Bronze Age civilizations from around the Aegean Sea and continues to the age of Constantine, around C.E.

315. Course content includes architecture, painting, sculpture, ceramics and minor arts, all studied in relation to the philosophies and histories of the civilizations that produced them. Offered alternate years.

ARTH 302 Medieval Art History (3 credits) The course assesses iconographic and stylistic developments in Christian art from the Late Antique/Early Christian period through Romanesque and Gothic. Monuments from Western Europe as well as Byzantine and Islamic art forms will be examined. Documenting changes in architectural principles, in elaborate pictorial programs and in preferences for certain media serves as evidence for understanding the particular circumstances surrounding the execution of the works. Offered alternate years. Prerequisite: ARTH 102 or ARTH 103. (ILS)

ARTH 303 Italian Renaissance Art History (3 credits) The study of Renaissance art in Italy includes the Proto-Renaissance of Tuscany, the early Renaissance in Florence, and the arts of the High Renaissance in Rome and Northern Italy. Course content includes works by Giotto, Brunelleschi, Leonardo da Vinci, Michelangelo and Titian. Their art, and others, will be explored in the context of concurrent social, religious, and artistic developments. Offered alternate years. Prerequisite: ARTH 103. (ILS)

ARTH 304 Baroque Art History (3 credits) This course explores concepts of the baroque in its broadest sense through the investigation of recurring ideas, themes and media. Major 17th and 18th century artists such as Bernini, Caravaggio, Rembrandt, Rubens, Poussin, Velasquez, Vermeer, and Watteau are included in the course content. Works of art of astonishing variety document not only contemporary artistic trends but also advances in philosophy, science, economics and the development of the modern state. Offered alternate years. Prerequisite: ARTH 103. (ILS)

ARTH 306 20th Century Art History (3 credits) The course begins in the 1880s and concentrates on the vast variety of “isms” that occur in the first half of the 20th century. From Fauvism through Abstract Expressionism, the course covers the work of such artists as Matisse, Picasso, Duchamp, Kahlo, Dali and Pollock, among others. All artistic movements are studied within their social, political and cultural contexts. Prerequisite: ARTH 104. (ILS)

ARTH 307 Art and Architecture of Rome, Florence and Venice (4 credits) This off-campus J Term course is conducted primarily in Rome, Florence, and Venice which will allow students to experience the artworks and monuments of ancient, Renaissance, Baroque, and modern Rome, Florence, and Venice as well as medieval and Renaissance Orvieto. The trip will give students a more intimate understanding of both the monuments and the culture that produced them. Issues of iconography, politics, religion, scale, placement, and interactions between monuments will be highlighted. Students will be responsible for providing much of this information as they research their topics and historical figures and discuss them in meetings and on site. Students will also be expected to reflect on their experiences with the cultural differences they encounter in contemporary Italy. Prerequisite: ARTH 250 Art and Architecture of Rome, Florence, and Venice, (a 2-credit prep course offered the Fall before the J Term off-campus course.)

ARTH 308 Contemporary Art: 1965 to the Present (3 credits) In this course, students will examine the major figures and movements of art in Europe and the United States from 1965 through the present day. Readings will be drawn mostly from primary sources written by artists and critics, as well as new exhibition catalogue essays and articles and reviews from newspapers and current and recent issues of major art journals. Prerequisite: ARTH 104.

ARTH 350 Topics in Art History (3 or 4 credits depending on the course) The topic is announced prior to registration. Offered occasionally. Prerequisites depend on the topic. Permission of instructor required for enrollment. Please see schedule for current offerings.

ARTH 380 Controversies in American Art (4 credits) This seminar examines painting, sculpture and architecture that have either generated major conflicts in U.S. history, or raise controversial issues regarding representation. Works of art will be discussed from the 19th century through to the present with the emphasis being mainly on the past century, and especially since the early 1960s. Primary areas for investigation will involve patriotism, religion, race, modernism, feminism, sexuality and obscenity, public art and memorials, “sacred space,” and the changing place of museums in American life particularly in regard to controversial exhibitions. The role of media, art critics, corporate sponsors, and public opinion will be examined along with censorship and First Amendment issues. Prerequisite: ARTH 104. (ILS)

ARTH 401 Northern Renaissance Art History (3 credits) The art of the 15th and 16th centuries in the Netherlands and Germany represents a transitional period between the Middle Ages and the Baroque. The course traces shifts in patronage and the status of the artist, along with new developments in media (oil painting, graphics). From van Eyck to Bruegel, differing artistic expressions reflect the move to the modern world. Offered alternate years. Prerequisite: ARTH 103 and one other upper level art history course. (ILS)

ARTH 403 19th Century Art (3 credits) In this course, students will examine the major figures and movements of 19th century art in Europe and the United States. Our focus will be on developing the skills of seeing and analyzing works of art and placing them within their historical and cultural contexts. The sweeping changes this period saw in politics, philosophy, technology, and social reform make the nineteenth century a particularly rich period in which to explore artistic reactions to turmoil and cultural interchange. Prerequisites: ARTH 104 and one other upper-level art history course. (ILS)

ARTH 450 Topics in Art History (3 or 4 credits depending on the course.) The topic of this advanced seminar is announced prior to registration. Offered occasionally. Prerequisites depend on topic. Permission required. Please see schedule for current offerings.

ARTH 487 Art History Research and Methods (3 credits) The art history capstone consists of two courses: A research and methods course taken during the spring of the junior year and the Senior Thesis completed and presented during the fall of the senior year. Art History Research and Methods is designed to improve the Art History major’s critical, analytical, writing, and research skills. Throughout the course, students will discuss readings on the history and various methods of doing and writing art history,

including current trends and controversies. Students also will formulate a topic, amass a bibliography, create an outline, and plan a method for researching and writing their senior theses. Students will make regular presentations on the progress of their theses in class. This course is mandatory for all Art History majors during the spring of their junior year and is the prerequisite for ARTH 490. Prerequisites: ARTH 102, 103, 104, and permission of the instructor.

ARTH 490 Art History Senior Thesis (3 credits) Required for all majors during the fall of their senior year, the Senior Thesis is the capstone art history project combining demonstrable knowledge in the history of the field and its methods, original and critical thought, extensive research, and advanced writing. The semester culminates in the completion of the written thesis and its presentation at a mini-symposium to the art and art history faculty and students. Prerequisite: ARTH 487.

ARTH 495 Senior Internship in Art History (credit variable, probably 3 or 4 credits) An internship in an art-related field. The student should arrange to do this internship with the appropriate faculty supervisor.

Art and Art History

Requirements for the major in Studio Art: Minimum of 51 credits, distributed as follows:

Five core courses in Art:

ART 113 Drawing I, ART 116 Digital is Fundamental, ART 115 2-D Design, ART 165 3-D Design, ART 212 Drawing/The Figure or ART 217 Drawing/Works on Paper

Three core courses in Art History (to be taken in the first two years): ARTH 102 World Art History I: Ancient Art, ARTH 103 World Art History II: Middle Periods, (10th-17th Century), ARTH 104 World Art History III: Art of the Modern World

Two courses in Art History above the 100 level

It is required that one course be either ARTH 306 20th Century Art History or ARTH 308 Contemporary Art **Two courses in same studio area** at 200 and 300 level

Three courses in another studio area at 200, 300, and 400 level

Upper-level occasionally done by directed study

Sophomore Review (not a course, but an assessment)

Junior Review (not a course, but an assessment)

ART 490 Senior Project in Art: Junior Review must be successfully completed before beginning the Senior Project

Requirements for the major in Art History: Minimum of 41 credits, distributed as follows:

Three core courses in Art History (to be taken in the first year):

ARTH 102, 103, and 104 (World Art History I, II, III)

Eight credits in Studio Art

Six additional Art History courses, distributed as follows:

Two courses selected from:

ARTH 301 Greek & Roman Art History, ARTH 302 Medieval Art History, ARTH 303 Italian Renaissance Art History, ARTH 401 Northern Renaissance Art History

Two courses selected from:

ARTH 207 History of Photography, ARTH 304 Baroque Art History, ARTH 306 20th Century Art History, ARTH 308 Contemporary Art: 1965 to the Present, ARTH 380 Controversies in American Art, ARTH 403 19th Century Art History

Two additional courses; one must be at the 400 level unless the student already has a 400-level course, in which case, any level above the 100 level is acceptable. (Courses listed above that have not already met the above requirement may be used in this respect)

ARTH 487 Art History Research and Methods: Must be taken during Spring Term of the junior year

ARTH 490 Art History Senior Thesis: Must be taken during Fall Term of the senior year, and includes a Senior Thesis and thesis presentation.

Requirements for a double major in Art and Art History: The student of Art or Art History is invited to complete a double major within the Art Department in consultation with his or her advisor. 21 courses are required.

Requirements for the minor in Studio Art (with a major in another department): A minimum of six courses, distributed as follows:

Eight credits selected from the following core courses:

ART 113: Drawing I ART 116 Digital is Fundamental ART 115: 2-D Design ART 165: 3-D Design

Three additional studio courses above the 100 level

One Art History course:

Any Art History course without a prerequisite

Requirements for the minor in Art History (with a major in another department): A minimum of six courses, distributed as follows:

Three core courses:

ARTH 102, 103, 104 (World Art History I, II, III)

Two additional Art History courses above the 100 level

Four credits in Studio Art, selected from:

ART 113: Drawing I, ART 116 Digital is Fundamental, ART 115: 2-D Design, ART 165: 3-D Design, ART 231 Printmaking I or ART 331 Printmaking II, ART 241 Photography I, ART 262 Sculpture I, ART 271 Ceramics I

Requirements for the minor in Art which accompanies a major in Art History: majors are encouraged to complete a minor within the department. The significant overlap between the two majors requires the student to complete the major as described in the catalog and then, in consultation with his or her advisor, complete six additional courses in the minor beyond those required to fulfill the major.

Requirements for the minor Art History which accompanies a major in studio art: the student will complete the studio art major as described in the catalog and then complete six additional credits in art history beyond those required to fulfill the major.

Requirements for the minor in Documentary Photography:

A minimum of 24 credits in Art and Art History, distributed as follows:

ART 115 2-Dimensional Design (2 credits) **OR ART 116 Digital is Fundamental** (2 credits)

OR ART 113 Drawing I (2 credits) **ARTH 207 History of Photography** (3 credits; offered every other year at Hartwick; also can be taken at the SUNY Oneonta or elsewhere; plan ahead carefully)

ART 241 Photography I (4credits) (traditional darkroom) **AND ART 216 Digital Art and Design II** (4 credits) (digital training in Photoshop)

4 additional INTERMEDIATE credits in photography selected from traditional and digital courses:

ART 213 Digital Art and Design I (4 credits) suggested if student did not choose ART 116 at the fundamental level ART 341 Photo IIA Black and White (2 credits)

ART 341 Photo IIB Manipulated Image (2 credits)

ART 342 Photo IIC Color (2 credits)

ART 441 Photography III: Portfolio (4 credits) (exhibit work and prepare portfolio)

One Internship: At magazine, newspaper, publications, public relations office, or an A-V department. (3 credits)

Generally the Documentary Photography Minor is NOT designed for studio art majors. Decisions about course selection can be adjusted to support each student's particular professional goals.

Students interested in the Documentary Photography Minor should contact Katharine Kreisher, Professor of Art, kreisherk@harwick.edu.

Grades for all courses taken in Art and Art History are used to calculate the average in the major for Departmental Distinction.

Biochemistry

Biochemistry, the interface between chemistry and biology, is concerned with the chemistry of biological reactions, and the regulation of these reactions. This rapidly growing field of study includes the investigation of chemical changes in disease, drug action, and other aspects of medicine as well as in nutrition, genetics and agriculture. The work being done in biochemistry in terms of medical, pharmaceutical and genetic engineering research will have increasing impact on our society. It is imperative, therefore, that people involved in research and businesses in these areas not only are capable scientists, but are educated to deal with moral and ethical questions arising from the advance of biochemical knowledge.

The study of biochemistry as part of a liberal arts and sciences education fosters the development of the broad perspective and analytical abilities necessary to deal with such questions. Biochemistry functions under the direction of the departments of biology and chemistry, and students seeking additional information should contact the chair of either department. Requirements for a major in biochemistry include courses in biology, chemistry, and biochemistry as well as auxiliary courses in mathematics and physics. A required senior research project involves laboratory and library work, interpretation of data, and oral and written reports of the results. In addition to the independent research required for their senior project, biochemistry majors often assist with faculty research or do collaborative research with a professor.

Biochemical advances in the knowledge of the action of natural hormones and antibiotics promise to aid in the further development of pharmaceuticals. In addition, discoveries resulting from biochemical research, including work being done in medical, pharmaceutical and genetic engineering, continue to open up new frontiers. Hartwick's major in biochemistry offers excellent preparation for entry-level positions in biochemistry research or for graduate work in the field. Students interested in attending medical school also obtain an exceptionally good science background through a major in biochemistry.

Faculty/Coordinator

Andrew J. Piefer

Courses

405, 406 Biochemistry I, II (3 credits) An in-depth study of the organic chemistry of the molecular components of cells including proteins, enzymes (kinetics and mechanisms), coenzymes, nucleic acids, lipids and carbohydrates. The metabolism and biosynthesis of these constituents including glycolysis, Krebs cycle, pentose shunt, electron transport, glycogen synthesis, and lipid oxidation and synthesis will be studied. The energy transformation involved in and the regulation of these pathways will also be discussed. Special topics to be included are hormone biochemistry, biochemical genetics (replication, transcription and translation of genetic material), recombinant DNA, photosynthesis and membrane chemistry. Prerequisites: CHEM 202 and BIOL 203 or the equivalent. BIOC 405 is prerequisite for BIOC 406.

405L, 406L Biochemistry Lab I, II (2 credits) Laboratory experiments in isolation and purification of enzymes/proteins, enzyme kinetics, and the identification and properties of nucleic acids, carbohydrates and lipids. Techniques include spectrophotometry, centrifugation, dialysis, PCR, various forms of chromatography and electrophoresis. Corequisites: BIOC 405, 406.

490 Senior Thesis Research Fall (2 credits) The first part of a year-long research project. The student must develop an original research idea into an oral and written research proposal to be approved by the chemistry department and must begin working on the research project.

490 Senior Thesis Research January (4 credits) A full-time research course. Each student shall work full time on a senior-level laboratory research project developed in collaboration with a member of the chemistry faculty.

490 Senior Thesis Research Spring (2 credits) The third part of a year-long research project. The student must complete the experimental portion of the project, interpret data collected, and report the findings of the research orally in an open forum and as a written thesis.

Biochemistry

Requirements for A.C.S. approved major: All of the requirements listed below for the Biochemistry major including 404 Instrumental Analysis (CHEM) and 210 Inorganic Chemistry (CHEM)

Requirements for the major: 23* courses distributed as follows:

Eight* courses in Chemistry:

- 107, 108 General Chemistry I, II (with lab) or
- 109 Accelerated General Chemistry
- 201, 202 Organic Chemistry I, II (with lab)
- 203 Analytical Chemistry (with lab)
- 303, 304 Physical Chemistry I, II (with lab)

Four courses in Biology:

- 101, Biology in Practice (BIOL)
- 202, 203 Concepts in Biology I, II (BIOL)
- 312 Molecular Biology of the Cell (BIOL)

Five courses in Biochemistry:

- 405, 405L Biochemistry I, Biochemistry Lab I
- 406, 406L Biochemistry II, Biochemistry Lab II
- 490 Senior Thesis Research (Fall, January, Spring)–4 or 8 credits total

Two courses in Mathematics:

- 121, 233 Single Variable and Multiple Variable Calculus (MATH)

Two courses in Physics:

- 201, 202 General Physics I, II (PHYS)

Two additional courses selected from the following:

Science:

- 344 Pathophysiology

Chemistry:

- 404 Instrumental Analysis
- 405 Physical Organic Chemistry
- 410 Inorganic Chemistry

Biology:

- 300 Animal Development
- 302 Plant Physiology
- 304 Medical Physiology
- 306 Microbiology
- 313 Genetic Analysis
- 314 Immunology
- 401 Neurobiology
- 428 Comparative Physiology

Physics:

- 265 Electronics
- 305 Atomic and Nuclear Physics
- 314 Thermodynamics and Statistical Physics
- 318 Optics
- 401, 402 Electricity and Magnetism

Mathematics:

- 308 Mathematical Probability and Statistics
- 311 Differential Equations

*Number of courses required for the major is reduced by one if Accelerated General Chemistry is taken in place of General Chemistry I, II.

The major in Biochemistry is a demanding program. In order to ensure that all required courses are completed within four years, the following sequence is recommended:

Freshman year

General Chemistry I, II or Accelerated General Chemistry

Single Variable and Multiple Variable Calculus

Biology in Practice

Concepts in Biology I or II

General Physics I

Sophomore year

Organic Chemistry I, II

Concepts in Biology I or II

General Physics II

Molecular Biology of the Cell

Analytical Chemistry

Junior year

Biochemistry I, II

Physical Chemistry I

Senior year

Physical Chemistry II

Two additional courses selected from list provided

Senior Research

Grades for all courses taken in Biochemistry, Biology, Chemistry, plus courses from Physics or Mathematics, if selected from the additional courses list, are used to calculate the average in the major for Departmental Distinction (MATH 121, 233 and PHYS 201, 202 are not included).

Biology

To study biology is to explore the amazing diversity of life from the fundamental processes taking place among the molecules of cells to the interaction among populations of living creatures throughout the biosphere. For students majoring in other disciplines, courses in biology can acquaint them with the language and methods of scientific inquiry and provide knowledge for life in a future that will be increasingly influenced by science and technology.

Students who major in Biology at Hartwick will be engaged in a program that uses research as a teaching tool to encourage the development of broadly trained biologists. The program is designed to provide students with a background in the main biological disciplines including anatomy, physiology, genetics, embryology, molecular biology, cell biology, microbiology, immunology, microscopy, neurobiology, zoology, botany, conservation biology, ecology, and evolution, and to acquaint them with the biological characteristics of a variety of organisms from microbes to mammals.

As an introduction to the field of biology, entering majors must successfully complete three foundation courses. The first is any one of a series of courses entitled Biology in Practice (BIOL 101). These are topics-based laboratory courses that are designed to emphasize the processes by which biological knowledge is discovered and analyzed in a variety of contemporary topics. Biology majors build on this foundation by taking a pair of 4-credit lab courses (BIOL 202 Concepts of Biology: Biological Energy and BIOL 203 Concepts of Biology: Biological Information) that provide them with the prerequisite knowledge necessary for upper-level Biology course work (one of the Concepts in Biology courses may be replaced by a Biology Advanced Placement test score of 4 or 5, together with a grade of A in BIOL 101). These three courses are prerequisites, or co-requisites, for all upper-level (300- and 400-level) courses in the biology curriculum.

Upper-level biology courses are split into three core areas: Cell and Molecular Biology, Organismal Biology, and Ecology and Evolution. Students must complete a minimum of 21 credits of upper-level coursework that includes at least 4 credits from each core area. These courses can be taken in any sequence and we recommend students take at least one 400-level course that best suits their interests and goals. In addition, Biology majors must complete courses in general chemistry and organic chemistry, physics and mathematics. They may also do internships in fields related to their special interests and career plans.

Our laboratory facilities, which are fully accessible to students, contribute to the high quality of Hartwick's biology program. A variety of research tools used routinely by students include spectrophotometers (general and research), phase/fluorescence microscopes with photomicrography and image analysis capability, electrophoresis and chromatography equipment, PCR thermocyclers, growth chambers, computer-interfaced physiographs, a photosynthesis apparatus, and a variety of field equipment that permits the capture and handling of wild animals. A three-room greenhouse, the Hoysradt Herbarium, an electron microscope facility, a tissue culture laboratory, a histology laboratory and a molecular genetics laboratory also are available for student use. Our science facility includes centers for biotechnology, environmental science and policy, science communications, a graphics-imaging laboratory and dedicated laboratories for collaborative student/faculty research projects. The Robert R. Smith Environmental Field Laboratory at the Pine Lake Environmental Campus and adjacent State Parks provide an opportunity for the study of relatively undisturbed terrestrial and aquatic ecosystems.

A major in Biology prepares students for a broad range of careers, including jobs in applied research and technical work, and for graduate work in biology and for professional study in medicine, dentistry, veterinary science, physical therapy, and other pre-allied health fields. By taking the required education courses in addition to their major requirements, students are eligible for secondary school teacher certification.

Tropical Biology

Biology majors can gain experience in field studies of several tropical ecosystems. The geographical locations that are presently visited include: The Bahamas, Costa Rica, Thailand, and Madagascar.

Expertise among the biology faculty in tropical biology includes ecology, vertebrate and invertebrate biology, natural history, conservation biology, medicinal plants, and marine biology. One or more of these courses are usually offered every year, and students who take the beginning course in one of these locations may return a second time to perform a special project or their senior research under the direction of the returning faculty member.

Robert R. Smith Environmental Field Laboratory at Pine Lake

The research facility at the Pine Lake Environmental Campus provides an excellent opportunity for the study of local ecosystems in close proximity to the main campus. These ecosystems include more than 1,000 acres of a mixed northeastern deciduous forest, a 12-acre kettlehole lake, a bog, and streams. The state-funded R.R. Smith Field Laboratory provides laboratory space for classes as well as student-faculty collaborative research projects. As a Hartwick Biology major, you can carry out research on birds, mammals, reptiles, amphibians, fish, insects, other invertebrates, plants, fungi, and microorganisms as part of our biology courses or as individual research projects.

Faculty

Mary E. Allen, Chair; Eric Cooper; Allen R. Crooker; Peter T. Fauth; Douglas A. Hamilton; Mark L. Kuhlmann; Stanley K. Sessions; Linda A. Swift; Laura Gray Malloy, Faculty-At-Large; A.J. Russo, Visiting Assistant Professor

Courses

100 (SCIE) Introduction to Environmental Science (3 credits; 3 one-hour lectures weekly) The purpose of this course is to learn about ecosystems and the effects that human activities have on them. Emphasis will be on exploration of ways to find lasting solutions to basic ecological imbalances that have accompanied the expansion and technological development of human populations throughout the world. This course satisfies one of the requirements in the Environmental Science and Policy Program. The course includes lectures, class discussions, research projects, and field trips. (SCIE)

101 Biology in Practice: (Topic varies) (4 credits; 3 one-hour lectures and 1 three-hour laboratory weekly) The Biology in Practice series of introductory Biology courses is designed to teach students to find, understand, and communicate scientific information, construct and test hypotheses, and make connections between science and society, in the context of a particular scientific topic. Laboratories will stress hands-on participation in topic-related experimental design and procedures. Successful completion of one of these courses will fulfill a Biology Laboratory credit. (LAB)

112 Ecology and the Environment (4 credits; 2 one-and-one-half hour lectures and 1 three-hour laboratory weekly) Study of the basic principles of ecology including energy flow, nutrient cycling, population dynamics, and succession. Four major topics of concentration are ecosystems, communities, populations, and comparative ecosystems. Environmental issues are also presented within the course context. The laboratory component is either a field or laboratory investigation. Nearly all aspects of the course are taught at Pine Lake. This course satisfies one of the requirements in the Environmental Science and Policy Program. (LAB)

150 Topics in Biology Seminar (normally 3 credits) Discussions for non-majors in areas of biology of specific interest to the individual instructor. A student may take only one 150 topics course except as otherwise authorized by the instructor. Those courses that have a laboratory will fulfill the general College laboratory requirement.

202, 203 Concepts of Biology: Biological Energy, Concepts of Biology: Biological Information (4 credits; 3 one-hour lectures, 1 two-hour laboratory weekly) The conceptual foundations for advanced study in biology emphasizing characteristics unifying all living organisms. The central theme of evolution will be used to study cell structure and function, genetics, organismal anatomy and physiology,

development, and ecology. BIOL 101 is a prerequisite for this course, and BIOL 202 and 203 may be taken in any order. BIOL 202 and 203 are prerequisites or corequisites for 300- and 400-level biology courses. Alternative ways of meeting this requirement are possible with approval of the biology faculty. One of these courses may be replaced by a Biology Advanced Placement test score of 4 or 5, together with a grade of A in BIOL 101.

206, 207 Human Anatomy and Physiology I and II (4 credits each; 3 one-hour lectures and 1 three-hour laboratory weekly) These courses emphasize the important concepts, terminology, and interrelationships of human structure and function. Introductory concepts as well as the skin and musculoskeletal and nervous systems are covered in BIOL 206; BIOL 207 emphasizes the interdependence of endocrine, cardiovascular, lymphatic, respiratory, digestive, urinary, and reproductive systems. BIOL 206 is a prerequisite for BIOL 207. (LAB)

210 Microbiology of Disease (4 credits; 3 one-hour lectures, 1 three-hour laboratory weekly) The study of Bacteria and viruses related to infectious disease in humans and standard methods for working with bacteria in the laboratory. Topics include principles of infectious disease and epidemiology; bacterial cell structure, physiology, genetics, and reproduction; viral reproduction; immunology; and control of microbial growth. Prerequisites: BIOL 206, BIOL 207 and CHEM 105. (LAB)

211 Women and Science (3 credits) In her article “Building Two Way Streets: The Case of Feminism and Science,” developmental biologist and science studies scholar Anne Fausto-Sterling makes the case that scientists and scholars of women’s studies can enrich their teaching and research by understanding and using each other’s knowledge and methodologies. The purpose of this course is to start building two-way streets by studying both the process of science and women’s roles in science. The course emphasizes perspectives on the meanings of science and feminism, opportunities in and experiences of science for women, and the ways in which socially embedded understandings of gender can shape scientific theories and the practice of science. Topics for discussion include the work of women scientists; the biological basis of sexual differentiation; social constructions in reproductive physiology; and scientific process: experimental design and interpretation of statistical analyses.

223 Horticulture (P) (4 credits; 3 one-hour lectures and 1 three-hour laboratory weekly) A study of cultivated plants including studies on plant growth and development and techniques of horticulture. Laboratories will include work in the greenhouse to learn various techniques of horticulture and to conduct physiological experiments relevant to the propagation and care of plants. (LAB)

240 Island Biogeography (D) (4 credits, off-campus J Term) Biogeography is the scientific study of the patterns and causes of the distribution of organisms using a combination of ecological and evolutionary theory, geology, and geography: what species are where, and why? Islands have been the subject of important biogeographic work and have contributed substantially to existing biogeographic theory. The course covers the important elements of biogeographic theory within the context of islands using the marine and terrestrial flora and fauna of San Salvador Island. Students spend three weeks in residence at the Gerace Research Centre on San Salvador Island. (LAB)

241 Natural History of Costa Rica (D) (4 credits, off-campus J Term) The goal of this course is to introduce students to tropical biodiversity and its conservation in Central America. We will live and study at Organization for Tropical Studies (OTS) biology field research stations in tropical rain forests, cloud forests, and dry forests, on both the Atlantic and Pacific sides and up in the mountains of Costa Rica, as well as at a Marine Biological Field Station at Cabo Blanco, Costa Rica’s first and only absolute reserve. Most of our activity will be centered on observing and analyzing communities of organisms—population densities, feeding, movement, reproductive and other interactions—in their natural environment. The emphasis will be on vertebrates, including mammals, birds, reptiles, amphibians, and fish. We will also examine invertebrates (including a vast array of beetles, butterflies, spiders, and other arthropods), including intertidal marine invertebrates, and a huge variety of plants. In addition, we will explore volcanoes, museums, national parks, and historical sites. (LAB)

242 People and Plants of Thailand (4 credits, off-campus J Term) The hills of Northern Thailand provide a home for many different ethnic peoples, who have for centuries lived in harmony with their environment. This interdisciplinary course offers a unique opportunity to learn from the villagers by staying with families in the villages. We will learn about their culture and beliefs from the spiritual leader and village elders. We will take forest walks with the Shaman to identify useful medicinal plants, learn to

make traditional crafts and to perform tribal dances, gather food and other supplies from the forest, and help cultivate food crops. We in turn will teach the villagers about optimal nutrition; protein and micronutrient rich crops to grow on limited land; how to treat water pollution; and how to attain personal and village hygiene, which will help them attain optimal growth and health in their environment. (LAB)

243 Madagascar: Culture, Conservation, and Natural History (1 credit seminar) Madagascar is a living laboratory of extraordinary natural environments with 80 percent of its plants and animals found nowhere else in the world. The island, the world's fourth largest, is probably best known for its lemurs, chameleons, and many medicinal plants. With its history, belief systems, and emphasis on the supernatural, the culture of the island is as unique as its nature. This course will explore some basic facts about the economy and political environment of Madagascar as well as the origin of its people and their culture. The more unique plants and animals, especially the lemurs and chameleons, will be studied as well as the causes for Madagascar's extremely high biodiversity. Finally, the delicate balance between human needs, culture, conservation, and natural resources will be examined. This one-credit course is a prerequisite for the off-campus January Term program BIOL 244 Madagascar: Culture, Conservation, and Natural History.

244 Madagascar: Culture, Conservation, and Natural History (4-credits, off campus) Madagascar, the world's fourth largest island, is a living laboratory of extraordinary natural environments with almost 80% of its flora and fauna found nowhere else in the world. The course will concentrate on exploring the natural history and ecology of native habitats (dry sandstone to rainforest), plants (especially medicinal plants), and animals (such as the lemurs and chameleons) while seeking to explain Madagascar's uniqueness and extremely high biodiversity. The delicate balance between human needs, development, and conservation will be observed and the influence of Malagasy culture on natural resource management practices will be assessed. Participants will obtain a global perspective on the integration of humans with the environment at an indigenous level. Prerequisite: BIOL 243. (LAB)

250, 350, 450 Topics in Biology (normally 3 credits) Courses for non-majors and majors in biology that address topics of specific interest to the individual instructor. An individual may take only one topics course during the year except as otherwise authorized by the instructor. Recent Topics courses include Insects, Arachnids and Man; and Evolution for Everyone; Endocrinology; Physiological Biochemistry.

300 Animal Development (4 credits; 3 one-hour lectures and three-hour laboratory weekly) Study of the patterns and processes of animal growth and development, from fertilization to adulthood, including aging and death. The topics include embryology and morphogenesis, regeneration, cell differentiation, gene expression, growth factors and cell signaling, pattern formation, and the evolution of development. The laboratory portion is designed to enable students to obtain experience with living embryos, tissues and cells, and develop such skills as microsurgery, tissue culture, cytogenetics, histology, immunocytochemistry, and microscopy. Prerequisite: BIOL 101, BIOL 202. Prerequisite or corequisite: BIOL 203. (LAB)

301 Plant Development (P) (4 credits; 3 one-hour lectures, 1 three-hour laboratory weekly) Structure of the principle plant tissues and their origins. Topics covered include the molecular genetics, embryology and development of vegetative and reproductive organs, as well as their control by hormones, light and environment. The laboratories include plant tissue culture and other procedures that emphasize the lecture material. Prerequisite: BIOL 101, BIOL 202. Prerequisite or corequisite: BIOL 203. (LAB)

302 Plant Physiology (P) (4 credits; 3 one-hour lectures, 1 three-hour laboratory weekly) Basic concepts of plant growth, metabolism and transport. Topics covered include the movement of water and food in plants, mineral nutrition, photosynthesis, plant hormones, photomorphogenesis, and flowering. Laboratories consist of experiments designed to emphasize lecture material. Prerequisite: BIOL 101, BIOL 203. Prerequisite or corequisite: BIOL 202. (LAB)

303 Ecology (4 credits; 3 one-hour lectures, 1 three-hour laboratory weekly) Study of abiotic and biotic factors controlling the distribution and abundance of organisms in terrestrial and aquatic environments. Major topics covered include physiological population, and community ecology. Laboratories are conducted in the laboratory and at Pine Lake using natural populations of animals and plants. Prerequisites: BIOL 101, BIOL 202, BIOL 203. (LAB)

304 Medical Physiology (4 credits; 3 one-hour lectures, 1 three-hour laboratory weekly) Study of the major physiological processes of mammalian tissues, organs and systems in animals, including the nervous system, circulation, movement, digestion, respiration, excretion, hormonal regulation and reproduction. Topics with medical applications will be discussed. Laboratory will emphasize use of a computer-interfaced physiological workstation for data collection, experimental design, data analysis and scientific report writing. Prerequisite: BIOL 101, BIOL 202. Prerequisite or corequisite: BIOL 203. (LAB)

305 Plant Biology (P, D) (4 credits; 3 one-hour lectures and 1 three-hour laboratory weekly) A survey of major classical groups of the Plant Kingdom with a focus on their reproductive biology. Groups include cyanobacteria, fungi, algae, mosses, ferns, gymnosperms, and flowering plants. The structures and characteristics of flowering plants will be examined in detail, emphasizing the characteristics of the major families. Laboratories will involve microscopic and macroscopic analysis of members of the groups discussed in lecture. Prerequisite: BIOL 101, BIOL 202. Prerequisite or corequisite BIOL 203. (LAB)

306 Microbiology (D) (4 credits; 3 one-hour lectures, 1 three-hour laboratory weekly) The study of Bacteria, Archaea and viruses and standard methods for working with bacteria in the laboratory. Topics include evolutionary origins of microorganisms and cell structure, physiology, genome organization and regulation, and reproduction. Also covered are some principles of infectious disease and control of microbial growth. Prerequisites: BIOL 101, BIOL 202, 203. (LAB)

307 Vertebrate Zoology (D) (4 credits; 3 one-hour lectures, 1 three-hour laboratory weekly) Study of evolution of adaptive diversity in form and function among living and extinct species of vertebrate animals, including fishes, amphibians, reptiles, birds and mammals. Includes a survey of the local vertebrate fauna and associated ecosystems. The laboratory portion includes comparative anatomy, morphometric and functional analyses of vertebrate body designs, field expeditions to Pine Lake and other nearby areas, and visits to museum collections. Prerequisites: BIOL 101, BIOL 202, BIOL 203. (LAB)

308 Aquatic Ecology (4 credits; 3 one-hour lectures, 1 three-hour laboratory weekly) Study of the ecology of communities and ecosystems using examples drawn from the study of aquatic (freshwater and marine) habitats. Topics include community structure and diversity, species interactions, ecosystem function, and human impacts on communities and ecosystems. Laboratories are conducted mainly at the Pine Lake campus and surrounding aquatic communities. Prerequisite: BIOL 101, BIOL 203; prerequisite or corequisite BIOL 202. (LAB)

309 Medicinal Plants (P) (3 credits) A study of the physiology of disease states and the Native American and imported European medicinal plants used to treat the disease. Discussions include how the plant works to alleviate symptoms or the disease. Course includes three field trips for identifying medicinal plants in New York State. Prerequisite: BIOL 101, BIOL 202. Prerequisite or corequisite: BIOL 203.

311 Invertebrate Zoology (D) (4 credits; 3 one-hour lectures and 1 three-hour laboratory weekly) An introduction to the biology, diversity, and evolution of form and function in the major invertebrate phyla. Defining characteristics of major taxa are stressed. Attention is given to the phylogenetic relationships, classification, comparative morphology and physiology, development, life history strategies, and behavioral ecology of representative invertebrates. Laboratories involve the macroscopic and microscopic examination of exemplary members of the groups discussed in lecture. Prerequisites: BIOL 101, BIOL 202, BIOL 203. (LAB)

312 Molecular Biology of the Cell (4 credits; 3 one-hour lectures, 1 three-hour laboratory weekly) This course covers the functional relationships of cellular components by integrating molecular biology, biochemistry, and cell biology. We will examine how proteins know where to localize in the cell, the structures and functions of organelles and the cytoskeleton, the relationship between the cell cycle, signaling pathways and cancer, how cells move and communicate with each other, and how cells utilize energy, build membranes, and respond to the environment. The laboratory emphasizes the current techniques used in cellular studies, including cell culture, PCR, and immunochemical techniques. Prerequisites: BIOL 101, BIOL 202, BIOL 203. (LAB)

313 Genetic Analysis (4 credits; 3 one-hour lectures, 1 three-hour laboratory weekly) Advanced study of the science of heredity: what genes are, how they are transmitted from generation to generation, how they are expressed, and how this expression is regulated. Specific topics include the mechanics of inheritance, cytogenetics, molecular genetics, molecular cloning, genetic engineering, and population genetics. The laboratory portion is designed to introduce experimental methods used in the study of modern genetics. Prerequisite: BIOL 101, BIOL 202, BIOL 203. (LAB)

314 Immunology (4 credits; 3 one-hour lectures, 1 three hour laboratory weekly) We will examine the cellular and molecular basis of the immune response, including communication between the innate and adaptive immune systems, the response to infection with pathogens, mechanisms used by pathogens to evade the immune system, and what defects in the immune system, such as immune deficiency diseases and autoimmunity, can tell us about the function of the immune system. Prerequisites: BIOL 101, BIOL 202, BIOL 203. (LAB)

316 Endocrinology (3 credits; 3 one-hour lectures weekly) A study of the basic principles of endocrinology emphasizes the physiology and regulation of endocrine secretions. Neuroendocrine, reproductive, growth and metabolic aspects of endocrinology secretions are included. Examples are drawn from a wide range of animal species, including humans. Prerequisites: BIOL 101, BIOL 202, BIOL 203.

317 Exercise Physiology (4 credits: 3 one-hour lectures, 1 three hour laboratory weekly) A study of the principles of physiology that explain exercise performance and the dynamic interdependence of physiological systems during exercise. The course considers the responses of cells, tissues, organ systems, and people to both short-term and long-term exercise and makes connections, where they are possible, between performance strategies and the biological mechanisms upon which they are based. Topics include muscle function and biomechanics, nutrition, the biochemistry of aerobic and non-aerobic metabolism, respiratory, cardiovascular and endocrine responses to exercise and training, thermoregulation and hydration for exercise, exercise in extreme environments and the role of exercise in medical therapy. Prerequisite: BIOL 101, BIOL 203; prerequisite or corequisite BIOL 202. (LAB)

318 Evolution (D) (3 credits; 3 one-hour lectures weekly) Study of the patterns and processes of organismal evolution. Topics include the historical development of the current theory of evolution, population genetics, molecular evolution, adaptation by natural selection, speciation and biodiversity, phylogenetic reconstruction, and the evolution of development. Prerequisites: BIOL 101, BIOL 202, BIOL 203.

321 Electron Microscopy (4 credits; 3 one-hour lectures and 1 three-hour laboratory weekly) The theory and practice of the preparation and examination of biological specimens by light microscopy, transmission and scanning electron microscopy, x-ray microanalysis and image analysis. Lecture will emphasize the theory behind specimen preparation, instrumentation, and interpretation of subcellular ultrastructure. In the laboratory, students will prepare specimens that they will examine and photograph with the electron microscopes. Prerequisites: BIOL 101, BIOL 202, BIOL 203. (LAB)

340 Tropical Biology (1 credit seminar) The purpose of this course is to become familiar with tropical biology, what it is, how it is studied, and the major issues involved. This course is specifically intended to provide background for biology majors who wish to have the off-campus course BIOL 341 Natural History of Costa Rica count toward their major as a biology core course. This course meets 1 hour per week and will be run like a Directed Study or Seminar. Prerequisites: BIOL 101, BIOL 202, BIOL 203.

341 Natural History of Costa Rica (D) (4 credits, off-campus J Term) The goal of this course is to introduce students to tropical biodiversity and its conservation in Central America. We will live and study at Organization for Tropical Studies biology field research stations in tropical rain forests, cloud forests, and dry forests, on both the Atlantic and Pacific sides and up in the mountains of Costa Rica, as well as at a Marine Biological Field Station at Cabo Blanco, Costa Rica's first and only absolute reserve. Activities include observing and analyzing communities of organisms—population densities, feeding, movement, reproductive and other interactions—in their natural environment. The emphasis will be on vertebrates, including mammals, birds, reptiles, amphibians, and fish. We also will examine invertebrates (including a vast array of beetles, butterflies, spiders, and other arthropods), including intertidal marine invertebrates, and a huge variety of plants. In addition, we will explore volcanoes, museums, national parks, and historical sites. Prerequisite: BIOL 340. (LAB)

392 Research Methods in Biology (2 credits) Research methods preparing students for the Senior Project. Offered every Fall Term; normally taken during the junior year and must be taken before BIOL 490. Prerequisites: BIOL 101, BIOL 202, BIOL 203.

401 Neurobiology (4 credits; 3 one-hour lectures and 1 three-hour laboratory weekly) An introduction to cellular and integrative neurobiology, this course offers a comprehensive overview of the anatomy, chemistry, physiology, and biophysics of the nervous system. The course begins with the study of neurons and associated cells and progresses to the examination of the ways these cells are organized into functional circuits that process information and mediate behavior. Topics include neuroanatomy, electrical properties of nerve cells, neurochemistry and synaptic mechanisms, neural systems, motor and sensory systems, learning, memory, behavior, and developmental neurobiology. Prerequisite: BIOL 101, BIOL 202; prerequisite or corequisite: BIOL 203. (LAB)

403 Biodiversity and Conservation (D) (3 credits; 3 one-hour lectures weekly) In this course, we will explore research, theory, and issues related to conservation biology, the multidisciplinary science of preserving biological diversity. We will investigate topics such as distribution patterns of biodiversity, causes of extinction, value of biodiversity, problems of small populations, habitat fragmentation, and ex situ conservation by reading the primary literature (about 40 articles in the semester). The primary objectives for this course are to gain a basic understanding of the principles of conservation biology, learn to read, evaluate, and discuss primary literature, appreciate the value of biodiversity, and become familiar with some of the research 'tools' used in this multidisciplinary science. Prerequisites: BIOL 101, BIOL 202, BIOL 203 and one of the following 300-level BIOL courses: 303, 308, 313, or 318.

415 Microbial Ecology (4 credits; 3 one-hour lectures and 1 three-hour laboratory weekly) An exploration of the biotic and abiotic factors that determine the distribution and abundance of microorganisms in natural systems. Topics include physiological limitations of growth, intra- and interspecific interactions amongst microorganisms and interactions of microorganisms with animals and plants as well as microbial contributions to biogeochemical cycles and usage of microorganisms for environmental and biotechnology purposes. The laboratory emphasizes methods for studying microorganisms from, or in, environmental systems. Prerequisites: BIOL 101, BIOL 202, BIOL 203 and one of the following 300-level BIOL courses: 303, 306 or 308. (LAB)

420 Developmental Genetics (3 credits; 3 one-hour lectures weekly; seminar format) Advanced study of current research on the molecular and cellular mechanisms that control growth, development and regeneration in organisms. Topics include the control of gene expression, cell-cell interactions, the cell cycle and growth control, oncogenesis, homeobox genes and homeotic mutations, pattern formation and the role of development in evolution. Prerequisites: BIOL 101, BIOL 202, BIOL 203 and one of the following 300-level BIOL courses: 300 or 301. (LAB)

428 Comparative Physiology (3 credits; 3 one-hour lectures weekly) Advanced study emphasizing comparative physiology of animals taken from all phylogenetic levels, with an emphasis in the area of environmental adaptations. Topics covered include temperature regulation, mechanisms of salt and water exchange, circulation, mechanisms of gas exchange, metabolic and physiological responses to oxygen deficiency, regeneration, and metamorphosis. Prerequisites: BIOL 101, BIOL 202, BIOL 203.

435 Behavioral Ecology (3 credits; 3 one-hour lectures weekly) An advanced examination of animal behavior that is set in an ecological/evolutionary context. The underlying theme of the course is that behavior cannot be understood without placing an organism in its past and present environment. The subjects covered include the inheritance of behavior, feeding behavior, dispersal and migration, territoriality, the evolution of mating systems, and the evolution of complex animal societies. Prerequisites: BIOL 101, BIOL 202, BIOL 203 and one of the following 300-level BIOL courses: 303 or 318.

490 Senior Project (Arranged individually; 4 credits: may be taken as 2 credits per term Independent field, laboratory or library studies on selected topics in biology. Students will participate in a symposium, where study results will be presented. Before beginning the study, departmental approval must be obtained. Prerequisite: BIOL 101, BIOL 202, BIOL 203 and BIOL 392.

Biology

Requirements for the Major: Students entering the Biology major must complete one **Biology in Practice course (BIOL 101)** and two **Concepts in Biology** courses (**BIOL 202 and 203**). BIOL 202 or 203 may be replaced by a Biology Advanced Placement test score of 4 or 5, together with a grade of A in BIOL 101. The three introductory courses (BIOL 101, 202 & 203) provide students with the foundational skills and knowledge necessary for upper-level biology courses and are therefore prerequisites, or in some cases co-requisites, for all 300- and 400-level courses in Biology. Students desiring to take a course for which they do not have the prerequisites may be admitted with permission of the instructor. The upper-level courses are distributed among three areas: **Cell and Molecular Biology, Organismal Biology, and Ecology and Evolution**. Biology majors must take the following:

A minimum of seven credits from each area OR a minimum of 10 credits from one area, a minimum of 7 credits from a different area and a minimum of 4 credits from the third area.

At least one course from each subject area must be a lab course.

At least one course must have a significant plant component (P).

At least one course must have a significant Biological Diversity component (D).

Courses in the three areas are as follows:

Cell and Molecular Biology:

300 Animal Development (D)
301 Plant Development (P) (D)
306 Microbiology (D)
312 Molecular Biology of the Cell
313 Genetic Analysis
314 Immunology
321 Electron Microscopy
420 Developmental Genetics
405 Biochemistry + Lab (BIOC)
405 & 406 Biochemistry (lectures only) (BIOC)

Organismal Biology:

206 & 207 Human Anatomy and Physiology
302 Plant Physiology (P)
304 Medical Physiology
306 Microbiology (D)
307 Vertebrate Zoology (D)
309 Medicinal Plants (P)
311 Invertebrate Zoology (D)
317 Exercise Physiology
401 Neurobiology
428 Comparative Physiology
305 Biopsychology (PSYC)

Ecology and Evolution:

303 Ecology
305 Plant Biology (P)
308 Aquatic Ecology
318 Evolution (D)
340, 341 Tropical Biology and Natural History of Costa Rica
403 Biodiversity and Conservation (D)
415 Microbial Ecology
435 Behavioral Ecology

Senior Research Project

The Biology Research Project begins no later than the Fall Term of the junior year when students take the Research Methods in Biology course (2 credits), at which time they develop a formal research project

proposal. Although they may begin during spring semester of the junior year (or earlier), most students conduct the bulk of the research (including write-up) during the following Fall and Spring terms (4 credits: may be taken as 2 credits fall, 2 credits spring, or some other combination). The research must be completed and written up (in scientific journal format) by the end of Spring Term, and presented at the annual Biology Symposium.

Internships and Off-Campus Experiences

Biology majors are encouraged to do internships or other significant educational programs off campus. Most internships are graded and one internship may count toward the GPA in the major, but internships cannot be used to substitute for biology major requirements.

Additional requirements

CHEM 107/107L & 108/108L General Chemistry or CHEM 109 Accelerated General Chemistry

CHEM 201/201L Organic Chemistry

PHYS 140 & 141 Principles of Physics or PHYS 201 & 202 General Physics

MATH 108 Statistics or PSYC 291 Experimental Statistics or MATH 121 Single Variable Calculus

Senior Comprehensive Examination

Grades for all courses taken in biology plus courses required for the major from other departments are used to calculate the average in the major for Departmental Distinction.

Requirements for the Minor: With the assistance of an advisor in the Biology Department, students may design a minor program based on the following format:

Five BIOL courses (minimum 19 credits) consisting of: 101 Biology in Practice, 202 & 203 Concepts in Biology, and two upper-level (300-, or 400-level) courses (7 credits minimum).

Requirements for a Minor in the Environmental Science and Policy Program: Please see page 86 for requirements for this minor.

Business Administration

Hartwick's Business Administration Program helps students prepare themselves for life after college by building the skills and competencies needed in the workplace—intellectual, technical and interpersonal. Students learn that business management involves multiple elements, in surprising mixtures, at any moment. A finance problem may well include elements of strategy and decisions about new business locations—traditionally material covered in other separate courses. A manufacturing problem may include issues of human resources, accounting, and organizational development.

Many of our courses feature business simulations, case studies and projects—all of which require much thought and effort. Successful students learn how to face challenges, analyze risky situations and make informed decisions. Most importantly, they learn the implications of living with the outcomes of their decisions and that decisions made in today's business environment often do not turn out as expected.

Much of a student's work occurs in teams. Business administration trends suggest that teamwork and intense interaction with co-workers is essential; interpersonal skills, team building, communication, leading and following help students learn how to work with their colleagues. The traditional approach to business education, which depends on theories focused at specific parts of business administration, is not the approach we take. We believe that students will better understand how business works if they learn it as it is lived-in an interrelated and unpredictable way.

The major begins with Introduction to Business, normally taken in the freshman year. Here, students learn the major functional areas of business by running a simulated company and competing against other student-run companies. Also required are introductory courses in Accounting and Economics, usually taken in the freshman year. In the sophomore year, students are encouraged to take core courses in Marketing, Finance, and Organizational Behavior.

In the junior and senior years students complete four electives of their choice (at least three of which must be 300- or 400-level BUSA courses; one may be a 300- or 400-level course in ACCO, FINA, or ECON). Finally, students take BUSA 480, Business Policy and Strategy, the program's capstone course.

Hartwick offers a dual degree program with Clarkson University and Union University, where students earn a B.S. from Hartwick and an M.B.A. or M.S. from Clarkson or Union.

Faculty

Priscilla Z. Wightman, Chair; John K. Clemens; Thomas Devaney; Stephen A. Kolenda; Theodore Peters; Thomas G. Sears; Pinki Srivastava; Anthony Vennero

Courses

101 Introduction to Business (4 credits) Introduction to the various functional areas of business, including marketing, finance, operations, organizational behavior, and strategy. Specific topics covered include basic financial analysis, forms of business ownership, managerial decision making, and business ethics in a local, national, and international context. Includes a significant experiential learning component. No prerequisite. (EL)

230 Organizational Behavior (3 credits) Explores the behavior of individuals and groups within the organizational context. Topics include decision-making, organizational culture, communication, group behavior, and change management. Prerequisite: at least a C in BUSA 101.

240 Marketing (3 credits) Students learn and apply basic marketing principles and statistical, financial and economic analyses to design and market products and services to meet customer needs and ultimately achieve target market share, revenue, and profit objectives. Prerequisite: at least a C in BUSA 101.

280 Finance (4 credits) Exploration of the interrelationship of risk and ethical strategic planning to financial value in a business environment. The sources, uses, and cost of capital are identified and investigated using quantitative analysis applied to financial information. Prerequisites: at least a C in

BUSA 101, and a C in ACCO 101 or successful completion of ACCO 142. (QFR)

310 Business Law I (3 credits) An introduction to business law's major concepts. Beginning with the major sources of law (common law, statute, and administrative/regulatory), the course then identifies the major forms of business organizations (such as corporations and partnerships) and the powers and liabilities associated with each. Contracts and personal property law (with emphasis on the Uniform Commercial Code) also are addressed, as well as an overview of debtor/creditor law and bankruptcy law as they relate to business. Prerequisites: junior or senior standing.

311 Business Law II (3 credits) An introduction to business law's major concepts. Traditional (e.g. intangibles, intellectual property, real estate/real property law, labor and employment law, agents and fiduciaries, monopoly, antitrust) and Contemporary (e.g. environmental regulation; negligence, torts, product liability, dispute resolution, arbitration, cyberlaw) legal issues are discussed using case analysis. Prerequisite: junior or senior standing.

348 Statistical Analysis in Operations (3 credits) This course focuses on providing products and services and includes an analysis of the production/operations function in manufacturing, service and other nonmanufacturing firms. Topics include productivity, competitiveness, quality, forecasting, product and service design, facilities layout and location, work environment design, and inventory management. Prerequisites: BUSA 280 or ACCO 142.

381 Human Resources (3 credits) A survey course of Human Resource Management (HRM) functions, including strategic HRM planning, job analysis, staffing, compensation, training and development, performance assessment, benefits, and labor relations. Discusses the interrelationships and ethical dimensions of human resource decisions within HR and across other functional areas within the organization. Prerequisite: BUSA 230

395, 495 Internship in Business Administration (3-6 credits) This course provides an opportunity to further the professional career development of students. Placements are designed to utilize academic concepts in a work setting and to bring practical knowledge of a functioning business back to the classroom. Prerequisites: junior or senior standing, Business Administration majors or minors only, permission of the department, and satisfactory internship qualifications. One internship of 3 or more credits may count as one elective toward the BUSA major or minor.

410 Service Industries (3 credits) Students integrate basic finance, operations, human resource management and marketing concepts to achieve planned service delivery and profit objectives. Industry analysis, demand forecasting, capital budgeting, and strategic planning concepts also are emphasized. Prerequisites: BUSA 230,240,280.

440 Entrepreneurship (3 credits) Students explore the role of entrepreneurship in today's business environment. This course integrates macro-economic analysis, marketing research, financial planning, strategy formulation and other functional business considerations. Topics include opportunity identification and analysis, acquisition assessment, identification of financing alternatives, deal structuring, business plan development and harvesting strategies. Prerequisites: BUSA 230,240,280. (EL)

441 International Business (3 credits) Students assume the role of general manager of a multinational business. In addition to learning the international aspects of the production, marketing, human resource and financing functions, students gain new knowledge related to dealing with foreign currencies, customers, workers and cultures. Prerequisites: BUSA 230,240,280.

480 Business Policy and Strategy (3 credits) Students take the role of top management of a complex, multinational organization. Students draw upon their experiences as managers in various functional areas to deal with the larger organizational issues of corporate strategy, policy formulation, values, and vision. Prerequisites: BUSA 230,240,280 and senior standing.

490 Senior Thesis (3 credits) This course requires completion, in consultation with an business faculty member, of a research paper that demonstrates the ability to investigate and analyze some current business issue/topic and effectively communicate the results of that research. The thesis integrates business theory with practice, and should include the formulation of a hypothesis, complete with ethic considerations, capable of public defense. Prerequisites: BUSA 230, 240, 280 and senior standing.

Business Administration

Requirements for a major in Business Administration: Minimum of 36 credits: 24 credits in required courses; 12 credits in electives:

Five core courses in Business Administration:

- BUSA 101 Introduction to Business (4 credits)
- BUSA 230 Organizational Behavior (3 credits)
- BUSA 240 Marketing (3 credits)
- BUSA 280 Finance (4 credits)
- BUSA 480 Business Policy and Strategy (3 credits)

Four 300- or 400-level electives in Business Administration

Note: An approved BUSA internship of 3 credits or more (BUSA 395 or 495) may count as one of the four electives. A *total* of one 300- or 400-level course in ACCO, FINA, or ECON may be counted as an elective for the BUSA major; i.e., at least three electives must be in BUSA.

One specified accounting course or equivalent:

ACCO 101 Financial Accounting (4 credits). ACCO 141 and 142 are equivalent.

One course in economics: ECON 101 or 102 (minimum 3 credits)

Suggested sequence of courses for students majoring in Business Administration:

Freshman Year

- BUSA 101 Introduction to Business
- ACCO 101 Financial Accounting
- ECON 101 or 102 Topics

Sophomore Year

- BUSA 230 Organizational Behavior
- BUSA 240 Marketing
- BUSA 280 Finance

Junior Year

- 300/400 level Electives

Senior Year

- 300/400 Electives, BUSA 480

Requirements for a minor in Business Administration: Minimum of 21 credits: 18 in required courses; 3 in an elective:

Five courses in Business Administration:

- BUSA 101 Introduction to Business (4 credits)
- BUSA 230 Organizational Behavior (3 credits)
- BUSA 240 Marketing (3 credits)
- BUSA 280 Finance (4 credits)
- One BUSA elective at the 300- or 400-level (3 credits)

One specified accounting course or equivalent:

ACCO 101 Financial Accounting (4 credits). ACCO 141 and 142 are equivalent.

Grades for courses taken in economics, business administration, and accounting that are required for the major are used to calculate the average in the major for Departmental Distinction.

Chemistry

Chemistry, the study of matter, focuses on how substances are formed and transformed by chemical reactions. The study of chemistry gives students a working knowledge of chemical principles allowing them to perform chemical experiments; initiate and sustain research projects; and to think abstractly, conceptualizing reactions and relationships as they analyze data and draw conclusions. The student gains an appreciation for the methods and spirit of modern science.

The Chemistry Department, whose program is approved by the American Chemical Society's Committee on Professional Training, offers Chemistry majors two tracks of study: *Bachelor of Science*: This track is recommended for students anticipating graduate study in chemistry or careers in industrial chemistry and normally is taken for departmental certification to the American Chemical Society. *Bachelor of Arts*: this track offers a broader general education, which has fewer required courses in the major program. It is recommended for students desiring careers in areas where chemistry knowledge is useful but not necessarily the main focus, like secondary education, health professions or law.

Students pursuing either track obtain a broad base in chemistry through required courses in analytical, inorganic, organic and physical chemistries, biochemistry, mathematics and physics. Upper level courses, including an original senior research project, enable students to probe more deeply into specific areas.

Majors in the B.S. and B.A. programs complete a year-long senior thesis research project, which culminates in oral and written reports of their findings. The senior research project is full-time during January Term. The research projects may be carried out on campus or at an approved off-campus research facility.

The department faculty believe strongly that experimental work and research are central in the development of a scientist and regard laboratory study as the strongest aspect of the Chemistry program. To facilitate such study, modern equipment and instruments are used by all Chemistry students in laboratory work beginning in their first year and continuing throughout their college career.

To further promote the development of research skills, students are encouraged to participate as early as possible in ongoing faculty research projects and to design their own projects as their abilities increase. In addition, there are opportunities for collaborative research or internships in nearby university, hospital, and industrial laboratories. Majors also may take advantage of internships in a variety of career fields that require a knowledge of chemistry.

Chemistry majors have a wide range of career options available to them. Bachelor of science majors may opt directly for careers in industry in areas such as chemical analysis, pollution control, research and development in manufacturing, and product quality control. They also may pursue advanced study in chemistry, which can lead to a wide range of careers in research, college teaching or industrial management.

Majors with a bachelor of arts may choose such careers as environmental analysis, industrial sales, business administration, geochemistry, secondary school teaching, art conservation, and political consulting. Alternately, one may pursue professional studies in optometry, dentistry, medicine, engineering, and law.

Faculty

Susan M. Young, chair; Zsuzsanna Balogh-Brunstad; Richard L. Benner; John Dudek; Mark S. Erickson; Andrew J. Piefer

Courses

100 Chemistry in Today's Society (3 credits) (3 one-hour lectures weekly) Selected areas of chemistry designed to enable the student to understand better the role of chemistry and technology in modern society. The course will examine such areas as polymers, and their role in everyday products; acids and bases in household products; radioactivity, its use and abuse; and petrochemicals, energy and other uses. Open only to students with no college chemistry credit. (SCI)

102 Chemistry in Today's Society with 2-hour lab (4 credits) (3 one-hour lectures and 1 two-hour laboratory weekly) Selected areas of chemistry designed to enable the student to understand better the role of chemistry and technology in modern society. The course will examine such areas as polymers, and their role in everyday products; acids and bases in household products; radioactivity, its use and abuse; and petrochemicals, energy and other uses. This course also includes a laboratory component where students will explore and apply chemical concepts in a laboratory setting. Open only to students with no college chemistry credit. (LAB)

105 Fundamentals of General, Organic, and Biological Chemistry (4 credits) (3 one-hour lectures and 1 three-hour laboratory weekly) An introduction to those basic principles and facts needed for an understanding of the chemistry of the human body, in particular, and of life systems, in general. This course is designed primarily for nursing majors or persons in the humanities or social sciences who are interested in health-related topics and who desire a broader survey of chemistry than is usually provided by a traditional chemistry course. Major areas include some background principles that apply to all chemistry, some background chemistry of carbon compounds (organic), and the fundamentals of human biochemistry. Prerequisites: permission of instructor. (LAB)

107, 108 General Chemistry (3 credits) (3 one-hour lectures weekly) Basic principles and calculations of chemistry. Topics include major reaction types, reaction stoichiometry, thermodynamics, chemical kinetics, atomic and molecular structure and properties, chemical equilibrium, electrochemistry, and selected topics in descriptive inorganic chemistry. The main emphasis is on problem solving and the interpretive application of principles. Corequisites: CHEM 107L, 108L. Prerequisites: high school chemistry and at least Level 3 on MATH Placement Exam, or with permission of instructor. CHEM 107 is a prerequisite for CHEM 108. (LAB)

107L, 108L General Chemistry Lab (1 credit) (1 three-hour laboratory weekly) Students perform weekly laboratory experiments to explore and apply concepts covered in the lecture component of the course. A passing grade in CHEM 107L and 108L is required for completion of CHEM 107 and 108. Corequisites: CHEM 107, 108

109 Accelerated General Chemistry (4 credits) (3 two-hour integrated lab-lectures weekly) This course is designed for students who have a strong high school chemistry background, and will consolidate the more challenging aspects of CHEM 107 and 108. It therefore satisfies the 107/108 prerequisite for enrollment in upper level science courses, and is not open to students who already have completed 107-108. Topics include atomic and molecular structure, stoichiometry, thermodynamics, equilibrium, and kinetics. Prerequisites: high school chemistry, three years of high school mathematics and permission of the Department of Chemistry. (LAB)

150 Topics in Chemistry Special topics of interest are presented through lecture/discussion for non-majors. These topics may vary from semester to semester. If the course has a laboratory included, it will fulfill the general College laboratory requirement.

201, 202 Organic Chemistry (3 credits) (3 one-hour lectures weekly) A study of the preparation and properties of the compounds of carbon. Modern theories are used to interpret structures and reactions. Corequisites: CHEM 201L, 202L. Prerequisites: CHEM 107 and 108, or 109; CHEM 201 is prerequisite for 202. (LAB)

201L, 202L Organic Chemistry Lab (2 credits) (1 four-hour laboratory weekly) Students perform weekly laboratory experiments to explore and apply concepts covered in the lecture component of the course. A passing grade in CHEM 201L and 202L is required for completion of CHEM 201 and 202. Corequisites: CHEM 201, 202.

203 Analytical Chemistry (3 credits) (3 one-hour lectures weekly) Analytical Chemistry is a study of the art and science of determining the presence and concentration of chemical compounds in diverse samples.

This course covers the modern practice of analytical chemistry. Corequisite: CHEM 203L. Prerequisite: CHEM 108 or CHEM 109. (LAB)

203L Analytical Chemistry Lab (2 credits) (1 four-hour laboratory weekly) Students perform weekly laboratory experiments to explore and apply concepts covered in the lecture component of the course. A passing grade in CHEM 203L is required for completion of CHEM 203. Corequisite: CHEM 203.

210 Inorganic Chemistry I (3 credits) (3 one-hour lectures weekly) This course focuses on the chemistry of the elements, including electronic structure, bonding and molecular structure, ionic solids, coordination compounds, the origins of the elements, and the descriptive chemistry of the elements. Topics also include inorganic synthesis, materials science, industrial chemistry, and an introduction to bioinorganic chemistry. Corequisite: CHEM 210L. Prerequisite: CHEM 108 or CHEM 109. (LAB)

210L Inorganic Chemistry Lab (2 credits) (1 four-hour laboratory weekly) Students perform weekly laboratory experiments to explore and apply concepts covered in the lecture component of the course. A passing grade in CHEM 210L is required for completion of CHEM 210. Corequisite: CHEM 210.

292 Sophomore Year Research (2 credits) Each student shall work the equivalent of one afternoon per week on a laboratory research project associated with a member of the Chemistry faculty. Prerequisite: permission of the Department of Chemistry.

301 Advanced Laboratory Methods (3-4 credits) (5 seven-hour labs and lecture weekly, January Term) A study of laboratory methods used in modern research situations. Equipment and methods such as catalytic hydrogenation, vacuum-line techniques, electrochemical and photochemical synthesis that are inappropriate for large general courses will be studied. Offered on petition of at least four students. Prerequisites: CHEM 201, 202, 203. (LAB)

303, 304 Physical Chemistry (3 credits) (3 one-hour lectures weekly) Advanced theories, laws and principles of chemistry. The course will include thermodynamics, electrochemistry, molecular structure, kinetics and spectroscopy. Corequisites: CHEM 303L, 304L. Prerequisites: CHEM 108 or 109; MATH 233; PHYS 140, 141 or 201, 202 (or by permission of the instructor). CHEM 303 is a prerequisite for 304. (LAB)

303L, 304L Physical Chemistry Lab (2 credits) (1 four-hour laboratory weekly) Students perform weekly laboratory experiments to explore and apply concepts covered in the lecture component of the course. A passing grade in CHEM 303L and 304L is required for completion of CHEM 303 and 304. Corequisites: CHEM 303, 304.

390 Junior Seminar (1 credit) (1 one-hour meeting weekly) This course is designed to give each student a basis for understanding and beginning the planning process to perform a senior research project. Should be taken before CHEM/BIOC/ENCH 490.

391 Junior Research (3-4 credits) (5 seven-hour labs weekly, January Term) A full time research course. Each student shall work full time on a laboratory research project at the junior level, developed in collaboration with a member of the chemistry faculty, or a person approved by the chemistry faculty, at some outside research agency. The project includes laboratory work, reading and oral reports on papers in the primary chemical literature, oral and written reports on the work done. Prerequisite: permission of the Department of Chemistry. (LAB)

392 Junior Year Research (2 credits) Each student shall work the equivalent of one afternoon per week on a laboratory research project associated with a member of the Chemistry faculty. Prerequisite: permission of the Department of Chemistry.

404 Instrumental Methods of Analysis (3 credits) (3 one-hour lectures weekly) The theory and use of modern instrumentation in analytical chemistry. Topics include methods based upon absorption of electromagnetic radiation, chromatographic separations and mass spectrometry. Laboratory emphasizes hands-on use of analytical instrumentation. Corequisite: CHEM 404L. Prerequisites: CHEM 203, 303. (LAB)

404L Instrumental Methods of Analysis Lab (2 credits) (1 four-hour laboratory weekly) Students perform weekly laboratory experiments to explore and apply concepts covered in the lecture component of the course. A passing grade in CHEM 404L is required for completion of CHEM 404. Corequisite: CHEM 404

405 Physical Organic Chemistry (5 credits) (3 one-hour lectures, 1 four-hour lab weekly) Methods of determining reaction mechanisms. The principles of thermodynamics, kinetics and quantum mechanics are used to determine the reaction pathways of organic chemicals including concerted electrocyclic reactions, acid and base catalyzed reactions, substitution reactions and elimination reactions. Prerequisites: CHEM 201, 202, 303, 304. Offered on petition of at least three students. (LAB)

410 Advanced Inorganic Chemistry (3 credits) (3 one-hour lectures weekly) Modern theoretical and descriptive inorganic chemistry with emphasis on physical and chemical principles. Prerequisites: CHEM 303, 304.

450 Selected Topics in Advanced Chemistry (3 credits) (3 one-hour lectures weekly) Topics studied selected according to interest and needs of individual students. Topics could be in any field of chemistry covered by our faculty including analytical, biological, environmental, inorganic, organic, or physical chemistry. Possible topics include polymer synthesis, natural compounds, medicinal products, quantum mechanics, chemical applications of group theory, electrochemistry, radiochemistry, contaminant remediation, hazardous waste treatment, toxicology, and atmospheric chemistry. Subjects examined in depth by discussions, reading, and problems with emphasis on current literature. Prerequisites: Based on topic and in consultation with instructor. Offered on petition of at least three students.

490 Senior Thesis Research Fall (1 credit) The first part of a year-long research project. The student must develop an original research idea into an oral and written research proposal to be approved by the chemistry department and must begin working on the research project.

490 Senior Thesis Research January (4 credits) A full-time research course. Each student shall work full time on a senior-level laboratory research project developed in collaboration with a member of the chemistry faculty.

490 Senior Thesis Research Spring (1 credit) The third part of a year-long research project. The student must complete the experimental portion of the project, interpret data collected, and report the findings of the research orally in an open forum and as a written thesis.

Chemistry

Requirements for A.C.S.-approved chemistry major: 12* courses in Chemistry and 4 in Mathematics and Physics, distributed as follows:

107, 108 General Chemistry I, II (with lab) or 109 Accelerated General Chemistry

Six core courses

201, 202 Organic Chemistry I, II (with lab)

203 Analytical Chemistry (with lab)

210 Inorganic Chemistry (with lab)

303, 304 Physical Chemistry I, II (with lab)

Four advanced-level courses

404 Instrumental Methods (with lab)

410 Advanced Inorganic Chemistry

490 Senior Thesis Research (Fall, January, Spring) – 6 credits total

405 Biochemistry I (Biochemistry 405L is optional)

Two courses in Mathematics

121, 233 Single Variable and Multiple Variable Calculus (MATH)

Two courses in Physics

201, 202 General Physics I, II (PHYS)

Requirements for the B.A. major: 9* courses in Chemistry and 4 in Mathematics and Physics, distributed as follows:

107, 108 General Chemistry I, II (with lab) or 109 Accelerated General Chemistry

Five core courses

201, 202 Organic Chemistry I, II (with lab)
203 Analytical Chemistry (with lab)
210 Inorganic Chemistry (with lab)
303 Physical Chemistry I (with lab)

Two senior-level courses

405 Biochemistry I (Biochemistry 405L is optional)
490 Senior Thesis Research (Fall, January, Spring) – 6 credits total

Two courses in Mathematics

121, 233 Single Variable and Multiple Variable Calculus (MATH)

Two courses in Physics

201, 202 General Physics I, II (PHYS) or 140, 141 Principles of Physics I, II (PHYS)

Requirements for the minor: Nine* courses distributed as follows:

Six* courses in chemistry

107, 108 General Chemistry I, II (with lab) or 109 Accelerated General Chemistry
201 Organic Chemistry I (with lab)
202 Organic Chemistry II (with lab) or 210 Inorganic Chemistry I (with lab)
203 Analytical Chemistry (with lab)
303 Physical Chemistry I (with lab) or 315 Environmental Chemistry or 405 Biochemistry I

One course in Mathematics

121 Single Variable Calculus (MATH)

Two courses in Physics

140, 141 Principles of Physics I, II (PHYS)

Pre-Engineering Hartwick B.A. degree (3 years at Hartwick and 2 at Columbia University College of Engineering and Applied Sciences or at Clarkson University): 17* courses distributed as follows:

B.A. track with General Physics I, II and substitution of 391 Junior Research for 491 Senior Research

Three additional Mathematics courses:

220 Linear Algebra (MATH)
235 Advanced Single Variable Calculus (MATH)
311 Differential Equations (MATH)

One course in Computer Science:

135 Visual Programming (CISC) Course equivalent to BIOC 405 must be completed at Hartwick or cooperating institution.

Recommended sequence of courses for the A.C.S.-approved major:

B.A. students follow the same sequence, substituting electives for courses that are not required in their program.

Freshman year

General Chemistry I, II (with lab) or Accelerated General Chemistry
Analytical Chemistry (with lab) (if Accelerated General Chemistry taken)
Single Variable and Multiple Variable Calculus
General Physics I

Sophomore year

Organic Chemistry I, II (with lab)
Analytical Chemistry (with lab) (if not taken freshman year)
General Physics II

Junior year

Biochemistry I
Inorganic Chemistry I (with lab)
Physical Chemistry I (with lab)

Senior year

Physical Chemistry II (with lab)

Instrumental Methods (with lab)

Advanced Inorganic Chemistry

Senior Thesis Research

Requirements for a Minor in the Environmental Science and Policy Program: Please see page 86 for requirements for this minor.

*Number of courses required is reduced by one if Accelerated General Chemistry is taken instead of General Chemistry I, II.

Grades for all courses taken in Chemistry and Biochemistry are used to calculate the average in the major for Departmental Distinction.

Cognitive Science Minor

There has always been a fascination with how the mind works. How are information and knowledge represented in the mind? What is the nature of intelligence? How do we acquire and use language? How do we learn and reason? Can we build robots that perceive, solve problems, and make decisions like humans? How do brain lesions affect cognition? How is the human brain different from the brain of other animals? Questions such as these drive the field of cognitive science. In recent decades, researchers from a variety of disciplines have joined forces to tackle these topics, acknowledging the limitations of each discipline in isolation, and recognizing the value in interdisciplinary contributions. The five primary contributing disciplines in the study of cognitive science include:

Cognitive Psychology Cognitive psychologists use controlled experimental research to study human mental processes. They contribute to the field of cognitive science by developing formal theories and sophisticated models of human cognition in areas such as perception, concept formation, attention, language understanding, memory, problem solving, decision making, reasoning, intelligence, etc. They often test and modify these theories by means of computer simulations, comparing the “minds” of humans and machines. Neurological evidence also provides important contributions to their theory and model development; for example, one popular model of the mind is analogous to neurons firing in the brain.

Computer Science Computer science fits into the cognitive science field in a unique way. It provides a mechanism to test alternative theories of how intelligence works through experimentation. Researchers can build computer models based on theories provided from psychology, philosophy, biology, linguistics, and other disciplines to see how they work.

Linguistics Each time we utter a phrase, we are performing a complex operation that sets us apart from other living beings. Linguists study the ways in which human beings acquire language; the structure of words and sentences; the levels of meaning within language; and language’s effect on human relationships. Linguists also examine language to understand how a particular people organize reality and their surroundings, and how they create meaning and culture.

Neuroscience Neuroscience is the study of the organization and function of the nervous system. Study can be undertaken at the molecular, cellular, systems, behavioral, and cognitive levels. Molecular neuroscience examines molecules and the roles they play in nervous system function. The study of how molecules work together to give the neuron and associated cells their special properties is cellular neuroscience. Systems neuroscience examines the way cells are organized into functional circuits that process information and mediate behavior. The manner in which cells and neural systems work together to produce integrated behavior is behavioral neuroscience. Understanding the neural mechanisms responsible for the higher levels of mental activity, such as memory, language, and self-awareness is the domain of cognitive neuroscience, in essence how the brain creates the mind.

Philosophy From its inception in ancient Greece, Western philosophy has been concerned with “mind/body problems” and questions of what counts as knowledge. For contemporary philosophers many of the terms in cognitive science are problematic. For instance, what do we mean by “mind” or “mental states?” Does pain count as a physical or a mental state? What is the difference, if any, between a brain and a mind? What does an adequate model of consciousness have to include? Students interested in the minor should contact the coordinator of the program, Lisa Onorato, or any of the cognitive science faculty. Students who minor in Cognitive Science will find it has unlimited potential for future careers in industry as well as in academia in areas

such as: computer industry (robotics, artificial intelligence, expert systems, language understanding, virtual reality, computer graphics, programming, analysts, etc.), biotechnology companies (e.g., cognitive neuroscience, biomolecular/genetic computing), medicine/medical research, clinical psychology/psychiatry (learning disabilities, dyslexia, autism, learning and memory, psycho pharmacy, psychotherapy,) education (curriculum, language acquisition, cognitive development, learning disabilities), human-computer interface design, human factors (tool design, telecommunications, work-place safety), language (speech pathology, language instruction), language translation and cross-cultural interpretation, lexicography (building dictionary databases, search engines, etc.), business, art, music, etc.

Faculty

Susan Carbone (Computer and Information Science), KinHo Chan (Psychology), Alan Crooker (Biology), Sandy Huntington (Religious Studies), Stan Konecky (Philosophy), Larry Nienart (Physics), Lisa Onorato (Psychology), Jean-Paul Orgeron (Philosophy), Stefanie Rocknak (Philosophy)

Cognitive Science

Required Courses for the Cognitive Science Minor: To appreciate the contributions of an interdisciplinary approach to the study of the mind, the Cognitive Science minors must take at least one course from each of the following five disciplines. An introductory course and a capstone course round out the minor.

498 or 499 COGS Capstone Experience (1-4 credits). Under the close supervision of a faculty advisor, students undertake an independent or directed study, engaging in an individual research project that applies knowledge gained throughout the minor to a topic of special interest.

305 PSYC Biopsychology (3 credits) (prerequisite: 290 PSYC or by permission)

110 CISC Lego Robotics, OR 120 CISC Introduction to Programming OR CIS 118 Game Programming

370 PHIL Philosophy of Mind (4 credits) (prerequisite: one other philosophy course)

304 PSYC Cognitive Psychology (3 credits) (prerequisite: 290 PSYC or by permission)

At Least Three Elective Credits, selected from the following courses:

CISC 135 Visual Programming

PHIL 236 Logic

PHIL 249 Existentialism

PHIL 250 Language and Perception

PHIL 350 Analytic Philosophy

PHYS 129 Physics of Everyday Objects

RELS 250 Philosophy of Consciousness/India

Computer and Information Sciences

An understanding of computers, as well as of the world in which they are being used, will be essential in the technologically and culturally complex world of the 21st century. As computers become valuable tools in nearly every field, it is important that those involved in their development and use understand not only the technology but the human needs it can serve and the implications for society. The study of computers within the framework of a liberal arts and sciences education can provide this understanding. In addition, students majoring in other disciplines will find a knowledge of computers useful in their future careers—whether they plan to become educators or scientists, artists or economists. And working with computers can strengthen logic and problem-solving skills that will prove valuable in both their personal and professional lives.

The Department of Computer and Information Sciences offers major programs in computer science and information science, as well as a minor in each area. While the two major programs differ in focus, each provides students with a solid technical background and a broad, general foundation that prepares them for a variety of career opportunities rather than one specific job. At the same time, their study of computers within the context of a broader liberal arts and sciences education prepares majors to evaluate the potential and limitations of future advances in technology, and to adapt to changes within their profession.

The **major in computer science** emphasizes the scientific and mathematical dimensions of the field. It is for the student who wants to work on the cutting edge in developing the software necessary to run the computers of tomorrow. Students develop proficiency in programming by learning several commonly used programming languages, and they develop a broad and deep understanding of operating systems, computer architecture, programming languages and advanced programming techniques. Electives are chosen from exciting topics such as computer graphics, parallel processing, artificial intelligence, microprocessors, computer networks, and optimization techniques.

The **major in information science** is geared toward students who want to use computers effectively in the modern business world. It is designed to produce skilled and creative individuals to manage the information, computer systems and people needed by businesses in the 21st century. Building on a solid foundation in programming, information science majors learn how to analyze and solve the complex data processing problems of modern organizations. In advanced courses in systems analysis and design students use advanced computer assisted software engineering (CASE) tools which automate the software design process. Elective courses are chosen from a diverse list including Web programming, computer networks, programming languages, artificial intelligence, computer security, and data structures. Courses in information science emphasize projects where students learn by doing real-life projects.

Each major program culminates with a required senior project that involves independent study in a selected area related to the focus of a student's major and future career plans. Courses in the humanities and social and behavioral sciences complement study in both major programs. Students graduate understanding not only computers, but people, and how people and machines can work together to solve problems. Majors in each program also are encouraged to do internships that provide experience in the application of theoretical knowledge to real-life situations. (While strongly recommended by the department, internships normally may not be counted as one of the courses required for the major or minor.)

To enhance the study of computer and information sciences at Hartwick, students in the major have access to the CISC Resource Center, which contains powerful servers loaded with lots of RAM, large hard drives, fast graphics cards, and the latest operating systems and software. The Resource Center is used for upper level class work and advanced development projects.

Some Hartwick graduates with a major in computer science or information science have gone on to do graduate study in their fields before beginning their careers. Others have begun work immediately in a variety of industries and businesses, in careers such as systems analysis, applications programming, computer security, database management, and project management.

Violation of the College Computer Use and Abuse Policy or misuse of College or Departmental computing resources can result in disciplinary action, including, but not limited to, dismissal from the major.

NOTE: Double majors in Computer Science and Information Sciences, or a major in one and a minor in the other, is not permitted because of the high degree of overlap in requirements.

Faculty

Susan R. Carbone, Chair; Robert C. Gann; Howard Lichtman

Adjunct Faculty: Davis B. Conley

Courses

106 Business Computing (3 credits) A literacy course providing an introduction to the nature and use of computers and software in a business environment. Topics include information processing and the use of computers in problem-solving in the business world. Students learn to use a word processor, a spreadsheet, a database, and presentation software to solve business problems and present their findings. This course is for students not planning to major or minor in computer or information science. (QFR)

110 Lego Robotics Programming (4 credits) An introductory course in robotics programming for students with no prior programming background. Covers the fundamentals of programming then moves to the special topic of robotics programming. Robots must adapt their behavior based on input from the environment and simple algorithms. Students will build their own robots and modify them to handle more sophisticated problems as the student progresses in programming ability. This course is not for students planning to major or minor in computer science or information science. Prerequisites: Attain Level III or above MATH proficiency. (QFR)

115 Introduction to Web Development (4 credits) A comprehensive and dynamic introduction to Web programming that assumes no prior programming experience. The course begins with HTML and moves progressively to more complex languages. Topics include Web design technologies, usability, and human computer interaction. Students will be encouraged to use their imagination when developing Web pages, which must also conform to current usability standards. Each student will develop and publish a Web page project. This course is not for students planning to major or minor in computer science or information science. Prerequisite: Attain Level III or above MATH proficiency. (QFR)

118 Game Programming (4 credits) An introductory course in computer programming with an emphasis on game programming. Students will learn to program while creating simple computer games. Structured programming and object-oriented programming will be stressed. Students will learn how to deal with graphics, sound, and handle mouse and keyboard events. There will be a project at the end of the course. Prerequisite: Attain Level III or above MATH proficiency. (QFR)

120 Introduction to Programming (4 credits) An introductory course in computer programming. Emphasis is placed on problem solving, and the implementation of solutions using

a modern programming language. Computer programming skills are enhanced through individual and student projects. Topics include the structure of programs; data types; input and output; operators and expressions; control of flow; methods and arrays. Prerequisite: Attain Level III or above MATH proficiency. (QFR)

135 Visual Programming (4 credits) An introduction to visual programming. Programming assignments will utilize object-based, event-driven programming techniques. Emphasis will be placed on program design, form design, file processing, and data validation. Prerequisite: At least a C in CISC 120. (QFR)

180 Survey of Computer Systems (4 credits) An introduction to information processing and the use of computers for algorithmic problem solving. Covers the scope, major contributions, tools, and current status of information science. Topics include computer hardware, operating systems, networks, database systems, and artificial intelligence. Prerequisite or co-requisite: CISC 120.

215 PC Systems (4 credits) An introduction to PC hardware. This course will provide the student with the opportunity to explore the inner workings of a modern PC through lab assignments and lecture presentations. Topics include computer architecture, I/O subsystem, video system, microprocessors, memory, motherboards, secondary storage devices, system resources, networking hardware, as well as a survey of modern operating systems and their role in controlling hardware. Prerequisites: CISC 120 and sophomore standing. Offered alternate years. (QFR)

225 Advanced Programming Techniques (4 credits) An advanced course in programming emphasizing object-oriented programming, data structures, and algorithms. Topics covered include object-oriented programming, stacks, queues, linked lists, searching, sorting, recursion, and binary search trees. Prerequisite: At least a C in CISC 135. (QFR)

240 Computer Organization and Assembly Language (4 credits) An introduction to computer organization, machine language, and assembly language programming. Topics covered include the representation of data and instructions in the computer, processors, memory and input/output devices in current and future computers. Student will write numerous programs in machine and assembly language. Prerequisite: at least a C in CISC 225. Offered alternate years. (QFR)

305 Artificial Intelligence (4 credits) An introduction to machine intelligence. Topics include search techniques, game playing, automating reasoning, problem solving, natural language understanding, knowledge representation, expert systems, pattern recognition, computer vision, robotics, machine learning, and neural networks. Prerequisite: CISC 225. Offered when there is sufficient student interest. (QFR)

310 Systems Analysis and Design (4 credits) An introduction to software engineering and the system development life cycle. Topics include techniques for describing process flows, data flows, file design, input/output design and program specification. Emphasis will be placed on information gathering and reporting activities, on the analysis phase and the interaction of the various participants in the system process. There will be a group project. Prerequisite: CISC 315. Offered alternate years. (QFR)

315 Database Management (4 credits) An overview of database systems particularly relational and object databases. Topics covered will include principles of good database design, query languages, file and system structure, database security and integrity. Programming assignments and projects will use native SQL and SQL embedded in a higher level programming language. Prerequisites: CISC 135, 225 or permission of the instructor. (QFR)

320 Programming Languages (4 credits) Concepts of programming languages. Topics include the history of programming languages, syntax and semantics, data types, and data abstraction, control structures, subprograms, concurrent programming, and object-oriented programming. There will be examples from several programming languages and a major project involving writing a simple compiler. Prerequisite: CISC 225. Offered alternate years. (QFR)

325 Data Structures (4 credits) An advanced course in data structures, algorithm design, and analysis. Data structures covered include stacks, queues, linked lists, binary trees, graphs, heaps,

hash tables, and B-trees. Algorithms include searching, sorting, hashing, and other algorithms for information storage and retrieval. Prerequisites: at least a C- in CISC 225, MATH 121. Offered alternate years. (QFR)

330 Computer Networks (4 credits) An overview of data communication and computer networking. Course will provide an introduction to the concepts, terminology, and technology of electronic communications. Local and wide area networks, the Internet, intranets, and extranets, as well as the PSTN will be examined and discussed in detail. Topics include the OSI and TCP/IP models, digital and analog signals, modulation techniques, multiplexing, routing, protocols, network structure and architecture. Prerequisite: CISC 225. Offered alternate years. (QFR)

335 Computer Graphics (4 credits) Concepts of computer graphics. Topics include graphics devices and systems, interactive graphics, ray tracing, raster graphics, three-dimensional viewing and transformation, light and color theory, and hidden line and surface elimination. Prerequisites: MATH 121 and CISC 225. MATH 220 suggested. Offered when there is sufficient student interest.

340 Microprocessors (4 credits) Software and hardware considerations in using a microprocessor. Machine language, registers, addressing modes, stack manipulations, subroutines, interrupts, computer architecture, types of memory, data buses, and input/output. Prerequisite: CISC 240. Offered when there is sufficient student interest.

345 Computer Security (4 credits) A comprehensive introduction to computer security. Topics covered include network reconnaissance, network scanning, application attacks, operating system attacks, network attacks, denial-of-service attacks, Trojan Horses, backdoor programs, rootkits, computer viruses. Students will learn how vulnerabilities are exploited, and how to prevent, detect, and respond to an attack. Prerequisite: CISC 225 or permission of the instructor. Offered when there is sufficient student interest.

350 Topics in Computer Science (4 credits) Possible topics include computer simulation, automata theory, parallel programming, distributed systems, neural networks, robotics, and expert systems. CISC 225 or permission of the instructor. Offered when there is sufficient student interest.

371 Numerical Analysis (Same as MATH 371) (4 credits) The development of numerical methods and their associated error analysis. Nonlinear equations, systems of linear equations, interpolation, numerical differentiation and integration. Programming of appropriate algorithms with emphasis on accuracy and efficiency. Prerequisites: MATH 220, 223, 235, and CISC 120. Offered alternate years.

375 Optimization Techniques (Same as MATH 375) (4 credits) A survey of the methods used to obtain optimal solutions to linear problems. Emphasis on linear programming, simplex algorithm, duality transportation and assignment problems, shortest route and maximum flow problems, game theory decision trees. Additional topics may include integer programming, dynamic programming, PERT-CPM, graph theory, and queuing theory. Prerequisites: CISC 120 and MATH 220. (QFR)

380 Web Development (4 credits) Addresses programming for the Web as a business tool. Primary emphasis is on learning the tools required to build a professional quality Web site. There are many different technologies available and they change regularly. Languages for client side and server side programming will be covered. The course builds on knowledge of Systems Analysis & Design, Database systems and traditional programming techniques as a starting point. Prerequisites: CISC 225, CISC 315, CISC 310. Permission of the instructor is required. Offered alternate years. (QFR)

385 Theory of Computation (3 credits) An advanced survey of the theory of computation. Topics include regular languages, context-free languages, the Church-Turing Thesis, decidability, reducibility, time complexity, space complexity, and intractability. Prerequisites: CISC 225, MATH 220 and 221. Offered when there is sufficient student interest.

425 Language Design and Implementation (4 credits) Design and implementation of compilers. Topics covered include lexical analysis, parsing, semantic analysis, code generation, and optimization. Prerequisite: CISC 320. Offered when there is sufficient student interest.

430 Operating Systems (4 credits) An advanced course covering the principles of modern operating systems. Topics covered include history of operating systems, operating system design, resource management, processor scheduling, memory management, and file systems. There will be numerous programming projects. Offered alternate years. Prerequisite: CISC 225. (QFR)

460 Systems Design and Implementation (4 credits) An advanced study of systems design and implementation. Emphasis will be placed on the use of structured analysis and design techniques to produce design specifications. Student projects will focus on the programming and testing of information systems that satisfy user requirements. Prerequisites: CISC 135, 310, and 315 or permission of the instructor. Offered alternate years. (QFR)

490 Senior Project (3 credits) Supervised independent study with oral and written presentations. Provides students the opportunity to complete a major software or research project. Students may select topics from such areas as computer security, programming languages, compilers, systems analysis and design, dynamic Web site creation using JSP or ASP, pocket PC programming, network design and implementation, robotics programming, database systems, server clustering and encryption, and artificial intelligence. May involve a programming project. Prerequisites: CISC 325 for computer science majors, CISC 310 and 315 for information science majors, plus permission of the department.

Computer and Information Sciences

Requirements for the major in Computer Sciences: 14 courses in Computer and Information Sciences and Mathematics, as follows:

Four core courses in Computer and Information Sciences:

- 120 Introduction to Programming
- 135 Visual Programming
- 225 Advanced Programming Techniques
- 315 Database Management

Five upper-level courses in Computer and Information Sciences:

- 240 Computer Organization and Assembly Language
- 320 Programming Languages
- 325 Data Structures
- 430 Operating Systems
- One additional three or four credit course at or above the 200 level

Four courses in Mathematics:

- 121 Single Variable Calculus
- 220 Linear Algebra
- 233 Multivariable Calculus
- 235 Advanced Single Variable Calculus
- 490 Senior Project

Requirements for the major in Information Science: 14 courses in Computer and Information Sciences, Mathematics, and Business Administration, distributed as follows:

Four core courses in Computer and Information Sciences:

- 120 Introduction to Programming
- 135 Visual Programming
- 225 Advanced Programming Techniques
- 315 Database Management

Six upper-level courses in Computer and Information Sciences:

- 310 Systems Analysis and Design
- 330 Computer Networks
- 380 Web Development
- 460 Systems Design and Implementation
- Two additional three or four credit courses at or above the 200 level

One course in Business Administration:

- 101 Introduction to Business (BUSA)

Two courses in Mathematics:

- 108 Statistics (MATH)
- 121 Single Variable Calculus (MATH)

490 Senior Project

Requirements for the minor in Computer Science: Six courses in Computer and Information Sciences, distributed as follows:

Two core courses in Computer and Information Sciences:

- 120 Introduction to Programming
- 315 Database Management

Three of the following:

- 240 Computer Organization and Assembly Language
- 320 Programming Languages
- 325 Data Structures
- 330 Computer Networks
- 430 Operating Systems

One additional 3- or 4-credit course at or above the 200 level

Requirements for the minor in Information Science: Six courses in Computer and Information Sciences, distributed as follows:

Four courses in Computer and Information Sciences:

- 120 Introduction to Programming
- 135 Visual Programming
- 310 Systems Analysis and Design
- 315 Database Management

One of the following:

- 330 Computer Networks
- 380 Web Development
- 460 Systems Design and Implementation

One additional three or four credit course at or above the 200 level

Grades for all courses taken in Computer and Information Sciences are used to calculate the average in the major for Departmental Distinction.

Violation of the College Computer Use and Abuse Policy or misuse of College computing resources can result in disciplinary action, including but not limited to dismissal from the major.

Economics

Hartwick students who choose to major in Economics learn to apply the theoretical principles and statistical methodologies of the discipline to a wide range of contemporary issues. A complement to the Hartwick liberal arts education, the economics major develops in students both analytical expertise and a deep appreciation for the diversity of areas in which economic inquiry is relevant. Departmental offerings promote collegial working and personal relationships among faculty and students through collaborative research and peer-critical learning. Off-campus study, whether via an internship or study-abroad program, is promoted to help students understand economic issues through firsthand experience.

Students who earn the B.A. in Economics are well-prepared for careers in a variety of fields. Recent graduates have put their knowledge to work in for-profit corporations and not-for-profit organizations such as Merrill Lynch, KPMG, Microsoft, and the Urban Institute, and federal and state government agencies such as the Federal Reserve and the Bureau of Labor Statistics as research analysts, consultants, securities and commodity traders, international bankers, and lobbyists. Others have pursued an M.A. or Ph.D. in economics, or advanced study in law, public policy, education, and business administration.

Faculty

Kristin Roti Jones, Chair; Carlena Cochi Ficano; Laurence Malone; Karl Seeley

Courses

101 Topics in Microeconomics (3 credits) A series of microeconomic topics courses designed to introduce students to the theories and principles economists have devised to understand exchange relationships and markets. These principles and theories are applied to analyze economic issues and problems. Topics for investigation are drawn from the subfields of the discipline, including: government policy, markets, law and economics, race and gender, labor.

102 Topics in Macroeconomics A series of macroeconomic topics courses designed to introduce students to the basic models and concepts used in analyzing the economy as a whole. Core elements include the process of long-run growth, determinants of the business cycle, and policies for promoting growth and moderating the business cycle. Topics are broad-ranging, including war, food, natural resources, and social insurance.

221 Microeconomic Theory (4 credits) Focuses on the theoretical depiction of decision-making processes of firms and consumers. Topics are considered in a context that includes mathematical and game-theoretic applications and perspectives. Competitive and cooperative behavior associated with markets is explored in detail. Prerequisite: ECON 101. (QFR)

222 Macroeconomic Theory (4 credits) Investigates the causes and consequences of inflation and unemployment and how these problems are described and theoretically analyzed through national income and product accounts. Monetary and fiscal stabilization policies are emphasized in an international context, with careful consideration given to balance of payments issues, trade deficits and the effect of changes in the value of the dollar and other currencies. Prerequisite: ECON 102. (QFR)

223 Econometrics (4 credits) The method by which real world data is used to test economic theory and/or to make predictions about future economic events. Presents regression analysis as a tool with which the statistical relationship between economic variables may be rejected or validated. Equal time is devoted to understanding econometric theory and to the direct application of that theory to analysis. The course culminates with students preparing an analytical research paper on a specific question of personal interest. Prerequisites: ECON 101 or 102; MATH 108, MATH 121 or a MATH course at the 200 level. (EL, QFR)

311 Economic History (3 credits) Explores economic causes and consequences pertaining to the development of markets in a research seminar setting. Recent topics for investigation have included: the origins of plantations, the emergence of multinational corporations from 1850 to 1900, and 19th and 20th century labor history. Common readings are initially discussed and then each student undertakes a substantial project to investigate a specialized theme. Prerequisites: ECON 101, 102. (ILS)

312 Financial Economics (3 credits) Provides a critical understanding of choice under uncertainty, portfolio formation, and equilibrium asset pricing (such as the CAPM and APT) with an eye toward financial market efficiency and stability and a reliance on basic mathematical tools. Prerequisites: ECON 221, ECON 222. (ILS)

313 Classical Political Economy (4 credits) Contemplates the economic, political and philosophical “visions” in Adam Smith’s *Wealth of Nations*, Karl Marx’s *Capital*, and John Maynard Keynes’ *General Theory*. The development of the liberal ideal of unrestrained individual freedom is traced through the ways these economists interpreted the social reality of their time. The evolution of neoclassical economics is also considered, and the contemporary relevance of these works is discussed throughout the course. Prerequisites: ECON 101, 102. (ILS)

314 Development and Transition (3 credits) Considers various explanations for the disparate levels of economic well-being among nations, both historically and currently. Issues include the potential tradeoff between economic growth and societal equity, miracles and failures, the sustainability of certain development plans, the feasibility of “trickle-down” development, and innovative development techniques at both the grassroots and macro levels. The course includes issues of post-communist transition as a subset of causes for current economic difficulty. Prerequisites: ECON 221, 222. (ILS)

315 Government Policy (3 credits) A critical look at contemporary domestic policy issues using the tools of theoretical and empirical economic analysis, institutional analysis and the history of social policy. Potential topics include crime, child care, healthcare, education, social security and long term care for the elderly. A significant portion of the course will be devoted to independent student assessment of current policy initiatives—specifically their costs and benefits—and the design of policy reform initiatives. Prerequisites: ECON 221, 223. (ILS)

316 Race and Gender (3 credits) Utilizes economic analysis to shed light on the social issues of race and gender in contemporary United States society. Potential topics include labor and credit market discrimination, employment and housing segregation, the male-female and black-white wage gap, labor market participation, divorce and domestic violence. While neo-classical economic theory will serve as a point of departure for each issue, the assumptions behind the theory will be carefully scrutinized and empirical evidence in support of and/or against the theory will be brought to bear. Prerequisites: ECON 221, 223. (ILS)

317 Labor Economics (3 credits) Economic theory is applied to analyze topics related to employment. The processes by which businesses determine the quantity, quality and compensation levels of their employees and individuals decide whether, how much and where to work are examined. The course begins with the primary building blocks of labor economics: labor supply and labor demand. It then narrows its scope to look more closely at policy-relevant issues such as welfare reform, labor unionism, unemployment and the minimum wage and appropriate investments in education. A significant portion of the class will be devoted to independent student research on a relevant topic of personal interest. Prerequisites: ECON 221, 223. (ILS)

318 Environmental Economics (3 credits) Applies economic logic to an issue of ongoing importance. The analysis includes externalities and market failure, comparison of command-and-control strategies with market-incentive strategies, evaluation of costs and benefits of alternative proposals, consequences of court decisions to resolve environmental disputes, and the effects of public policies on environment quality. Prerequisites: ECON 221, 222. (ILS)

319 Mathematical Economics and Game Theory (3 credits) Focuses on the application of mathematics and game theory to economics. Topics include unconstrained and constrained maximization, comparative statics, Nash equilibrium, simultaneous and sequential games, and games with asymmetric information. Prerequisites: ECON 221, MATH 120 or equivalent. (ILS)

320 International Economic Policy (3 credits) Evaluates contemporary policy issues and concerns in the international economy. Topics for consideration include; trade relations and managed trade, protectionism, balance of payments disparities, wage inequalities, trading blocs, exchange rate regimes, and the causes and consequences of volatility in financial markets. Students will discuss common readings and undertake a substantial research project on a particular area of interest. Prerequisites: ECON 221, 222. (ILS)

325 Industrial Organization (3 credits) Analyzes firm organization and behavior using microeconomic theory and game theory. Topics include vertical integration, asset-specificity, monitoring, monopoly, natural monopoly, price-discrimination, entry deterrence, mergers, oligopoly, monopolistic competition, limit pricing, and collusion. Prerequisite: ECON 221. (ILS)

326 Monetary Economics (3 credits) Explores the organization of banking and other financial systems, including the operation of central banks such as the U.S. Fed, and their interaction with the macro-economy. During the semester students will examine connections between financial instruments, institutions, and markets and the intent and operation of monetary policy. Prerequisites: ECON 221, 222. (ILS)

350 Advanced Topics in Economics (3 credits) Advanced topics of current interest. Subjects of these courses will be announced before registration. Prerequisite: ECON 221, 222.

395, 495 Internships in Economics (3-6 credits) Opportunities for career development and applied work for Economics students. Placements are designed to test academic concepts in a work setting and to bring the practical knowledge of a functioning business or institution to the classroom. Prerequisites: Economics major or minor, permission of the department and satisfactory internship qualifications. May be taken for 3 to 6 credits, but only 3 credits may count toward the major or minor requirements.

490 Senior Thesis and Seminar in Economic Research (3 credits) The Senior Thesis Seminar is the capstone to the major in Economics, and represents a substantial research project on a topic of interest. Students will meet periodically with faculty and peers to present work in progress. The seminar is required of all majors, and concludes with submission of the completed thesis.

Economics

Requirements for the major: A minimum of 11 courses, distributed as follows:

Two Introductory Topics courses:

101 Topics in Microeconomics

102 Topics in Macroeconomics

One course in Mathematics, selected from MATH 108, MATH 121, or any MATH course at the 200 level

Three core courses in economic theory:

221 Microeconomic Theory

222 Macroeconomic Theory

223 Econometrics

Senior Seminar and Thesis:

490 Senior Seminar and Thesis

Four additional courses from among Economics 300- or 400-level offerings, FINA 360

Investment

Analysis and FINA 381 Financial Institutions. One 3-credit internship in Economics may count toward this requirement.

Requirements for the minor: Seven courses, distributed as follows:

Two Introductory Topics courses:

101 Topics in Microeconomics

102 Topics in Macroeconomics

One course in Mathematics: selected from MATH 108, MATH 121, or any MATH course at the

200 level

Two core courses in economic theory:

221 Microeconomic Theory

222 Macroeconomic Theory

Two additional courses from among Economics 300- or 400-level offerings, FINA 360

Investment

Analysis and FINA 381 Financial Institutions

One 3-credit internship in Economics may count toward this requirement

Requirements for a minor in Environmental Science and Policy program:

Recommended courses for Economics majors as part of their major requirements:

318 Environmental Economics (ECON) and

315 Economics of Government Policy (ECON)

Courses for the minor:

1. One introductory course:

230 Introduction to Environmental Science (BIOL) or

110 Environmental Geology (GEOL)

2. Two science lab courses outside the major, chosen from:

235 Ecology and the Environment (BIOL)

250 Limnology (BIOL)

250 Tropical Biology (BIOL) (Bahamas, Costa Rica, or the Galapagos)

303 Ecology (BIOL)

325 Forest Ecology (BIOL)

102 Chemistry in Today's Society (CHEM)

215 Environmental Chemistry (CHEM)

Education

The Hartwick College Teacher Education Program prepares future teachers for certification in Childhood (1st-6th grade), Middle Childhood (5th-9th grade), Adolescence Education (7th-12th grade) in 23 teacher certification content areas, a dual certification program in Special Education/Childhood Education, Special Education/Adolescence Education, Music Education (K-12), and Visual Arts (K-12). The program is selective, as it aspires to train future leaders in education. Hartwick's education program is based on four axioms: 1) Effective pre-service teachers show competence in their academic major by maintaining a GPA of 3.0 or better, 2) Hartwick's Liberal Arts in Practice curriculum firmly grounds students in the liberal arts, 3) Effective teacher training operates from research-based principles of teaching-learning, and 4) Effective teachers integrate those principles into meaningful experiences in classrooms.

Hands-on teaching experiences are a central part of Hartwick's education program. There are many effective ways of learning and the Department of Education offers a variety of options to education students including: internships, study abroad, volunteer service work, the education work-study program, alternative/multicultural/urban/special education mini-practicum, field experience, and directed studies with professors. We encourage students to design, develop, and implement an educational program that is consistent with their interests and preparation, and long-term professional goals.

Our Mission: A commitment to social justice.

Our program attempts to train educators who are committed to being agents for social change, particularly through educational policy and practice. Our department takes for granted that education is the primary means to life success. Therefore, schools must mitigate against the conditions that threaten equal opportunity and academic achievement due to irrelevant reasons (ethnicity, class, gender, religion, ability). If schools are to adequately fulfill this responsibility then teacher training programs play an important role in exposing prospective teachers to issues and views relevant to the task.

Beyond developing a commitment to social justice, students are expected to maintain academic excellence, display a passion for teaching, exhibit leadership qualities, and possess high professional standards.

The Education Department aspires to prepare...

Competent scholars who:

1. demonstrate competency in their chosen subject area and have mastered their content area.
2. possess skills for critical, reflective thinking and knowledge of the social, political, cultural, psychological, philosophical and moral dimensions of teaching.
3. possess a broad, interdisciplinary liberal arts and sciences education which provides the foundation for competent teaching.

Progressive educators who:

4. utilize varied teaching techniques and have acquired the skills and abilities for competent teaching.
5. are prepared to teach in diverse educational settings and to a diverse population of students.
6. demonstrate a disposition toward lifelong learning.
7. demonstrate technological skills and possess technological competency which will aid them in teaching.

8. believe in the right of every student to receive an equal education and are committed to accommodating students' full range of abilities.

Faculty

Mark Davies, Chair; Joseph Abramo; Betsy Bloom; Johanna Mitchell; Jeffrey Pegram; Greg Smith

Adjunct Faculty

Patricia Brannigan, Jeff Hahn, William Lister, Carol Pierce, Larry Bobnick

Coordinator of Student Teaching and Service Learning

Jennifer Brislin

Areas of Certification

At Hartwick, students do not major in education but complete a program for certification coupled with a content major or major/minor combination. Hartwick offers education programs leading to certification in Childhood (grades 1-6), Middle Childhood (grades 5-9), Adolescence Education (grades 7-12), Music Education (K-12), and Art Education (K-12) and dual certification in Special Education and Childhood, Middle Childhood or Adolescence education. The Childhood Program requires a major and a minor (chosen from each A, B column below). Students also may create their own minor, which must be approved by the Department of Education.

CHILDHOOD CONTENT AREAS

Majors/Minors (must select one from both columns)

Column A	Column B	Other possible minors (no majors offered)
Art	Biology	Environmental Science and Policy (Column B)
Anthropology	Chemistry	U.S. Ethnic Studies (Column A)
English	Computer Science	Women's Studies (Column A)
History	Geology	
Languages	Math	
Philosophy	Physics	
Political Science		
Psychology		
Sociology		
Theatre Arts		
Economics		
Music		

Dual Certification in Special Education is available and requires additional pedagogy and content courses.

MIDDLE CHILDHOOD AND ADOLESCENCE CONTENT AREAS

- English
- Art (K-12)
- Math
- Music (K-12)
- Biology, Chemistry, Physics, Earth Science (with Geology/Env. Science)
- French, German, Spanish
- Social Studies (majors in Anthropology, Economics, History, Political Science, Psychology, or Sociology)

Dual certification in Special Education is available and requires additional pedagogy and content courses.

Admission into the Teacher Education Program

Admission into the Teacher Education program requires a formal application at the completion of the core education courses (EDUC 220, 304, 320) that will be reviewed by the Department Faculty. Successful applicants must demonstrate a commitment to education and academics, and possess academic and professional integrity.

Specific academic criteria that are used for admission into the program include:

- a cumulative GPA of at least 2.75;
- a minimum GPA of 3.0 in core education courses (EDUC 220, 304, 320);
- no grade in education courses of less than C (courses can only be taken twice and extenuating circumstances must be petitioned to the department);
- no grade in any course of less than C;
- a review of student's Application for Admission into HCTEP by Department of Education.

Students who meet most of the criteria but fall below in some areas may be placed on academic probation by the Department of Education and will have one semester to show growth toward the minimum requirements.

We seek students with diverse interests and experiences, with a passion for the content subject matter, with a clear academic orientation, and with demonstrated or potential leadership ability.

Requirements for Mini-Practicum Teaching

Students seeking to enroll in J Term mini-practicum teaching opportunities must be accepted into the Hartwick College Teacher Education Program and be in good academic standing.

Students wishing to participate in mini-practicum opportunities in locations other those chosen by the Department of Education must submit a petition the department faculty. Only students accepted into the Hartwick College Teacher Education Program will be considered for mini-practicum opportunities in other locations. All proposals must be submitted electronically to the Chair of the Department of Education.

Maintain high academic standing while in the program

In order to be in good standing within the program all HCTEP students must:

- maintain a 3.0 GPA in education courses;
- maintain a 3.0 GPA in major courses;
- maintain an overall GPA of 3.0 (or showing steady improvement toward a 3.0);
- not earn a grade below a C in any course (NYSED rules);
- be actively working toward 150 hours of Service Learning.

Any student who fails to maintain a high academic standing required for continuation within the program will be placed on probation. The Education Faculty will meet and discuss the academic record of the student and will make recommendations for improvement. Students who have been placed on probation will be notified in writing by the Department Chair. Each probationary student will meet with a member of the Department of Education faculty to identify academic weaknesses and create an academic plan to address these weaknesses. Probationary students will have one year to correct their academic weakness. Students who fail to correct the academic weakness will be removed from the program and will not be eligible for student teaching.

Student Teaching Requirements

Admission to the College does not ensure good standing in the program of childhood, middle childhood, or adolescence education, nor does good standing in the education coursework ensure admission to student teaching. Students must maintain the required academic record and must apply for student teaching in accordance with the program guidelines through the Junior Review process. Successful candidates will be recommended to advance to the student teaching practicum.

Admission to the College does not ensure good standing in the program of childhood, middle childhood, or adolescence education, nor does good standing in the education coursework ensure admission to student teaching. Students must maintain the required academic record and must apply for student teaching in accordance with the program guidelines through the Junior Review process. Successful candidates will be recommended to advance to the student teaching practicum.

Student teaching requirements include:

1. Completion of 150 hours of departmentally approved service learning or equivalent school internship;
2. Departmental approved Junior Review Portfolio;
3. Completion of foundational and pedagogical courses (no grade below a C);
4. No grade less than a C in any education, major or LAiP course (NYSED rules);
5. A 3.0 GPA in both content major, education, and overall;
6. A 3.0 GPA in core foundation courses (EDUC 220, 304, and 320) and education program; and
7. A written endorsement from department chair of content area.

Recommendation for Certification to NYSED

Upon successful fulfillment of the curricular and service learning requirements of the Teacher Education Program and passing scores on the teacher certification examinations required by New York State, students qualify to be recommended for Childhood (1st-6th grade), Middle Childhood (5th-9th grade), or Adolescence (7th-12th grade) Initial Certification or dual special education Initial Certification. Reciprocity exists with many states. Students should check with specific state education departments with regard to certification requirements.

Requirements: To qualify for Childhood, Middle Childhood, Adolescence, or Dual Special Education teacher certification through the Hartwick College Department of Education, an individual must satisfactorily complete the following:

1. Course requirements in approved academic major (and minor for Childhood level) with a cumulative GPA of 3.0
2. Overall GPA of 3.0 or higher
3. No grade in any course less than a C (NYSED rules)
4. Liberal Arts in Practice curriculum requirements
5. Additional extra-departmental course requirement (vary by major and level)
6. Log 150 hours of service learning or equivalent school internship—20 of these must be in special education
7. Education course work with a cumulative GPA of 3.0 or above and no single grade below a C
8. Child Abuse Identification Seminar
9. Substance Abuse Seminar
10. Violence Prevention Seminar

11. Passing NYSED battery of tests (see www.NYSED.gov for dates and details)
- Liberal Arts and Science Test (LAST)
 - Assessment of Teaching Skills Test (written) (ATS-W)
 - Content Specialty Test (CST) (Childhood takes Multi-subject test)

New York State Regulation: Teacher certification programs at Hartwick College are subject to the rules and regulations of the State Legislature, Commissioner of Education, Board of Regents, and State Education Department of New York State. Institutional recommendation for certification is not guaranteed upon completion of the above courses without demonstrating competent teaching and professionalism in the field.

Teacher education general information sessions are held frequently throughout the year. To attend one, or to receive more detailed information on your options for an education program, contact the Department Chair, Mark Davies: 313 Clark Hall, 607-431-4235, daviesm@hartwick.edu or Coordinator of Student Teaching and Service Learning, Jennifer Brislin: 320 Clark Hall, 607-431-4841, brislinj@hartwick.edu.

Course Requirements

The education sequence, normally begun in the first year, includes foundation courses, pedagogical courses in which students study the art and science of teaching-learning, and in-school field experiences, culminating in student teaching during the fall or spring semester of one's senior year.

<u>Foundational Course Work</u>	<u>Credits</u>
Education in Contemporary American Society (FYS 150, elective)	3
Philosophy and Sociology of Education (220)	4
Educational Psychology (304)	4
Curriculum and Instruction (320)	4
Reading, Writing and Literacy (340)	3
Approaching Developmental Literacy Skills (341, Childhood)	3
Language and Literacy in the Content Areas (342, Middle Childhood and Adolescence)	3
<u>Pedagogical Course Work</u>	
Specialty Methods of Instruction for All Learners (3xx)	3 (or 6)
Introduction to Special Education (371)	3
Lyceum Series (372)	2
Creating a Positive Learning Environment (380, elective)	3
Educational Technology (382)	2
<u>Special Education Course Work (for Dual Certification)</u>	
Specialty Methods of Instruction for All Learners (3xx)	--
Introduction to Special Education (371)	--
Including Students with Disabilities (375) *	3
Behavior Management with Exceptional Learners (376)*	3
Special Education Mini-practicum (391)*	3
* Additional courses required for dual certification	
<u>Field Practica</u>	
Alternative/Multicultural/Urban Mini-practicum (390)	3
Supervised Student Teaching—Practicum Childhood (490)	12
Middle Childhood (491)	12

Adolescence (492)	12
Interdisciplinary Reflective Seminar (480)	2

Check with content major department for additional requirements

Courses

EDUC 150 Education in Contemporary American Society (3 credits, elective) This course examines the challenges facing K-12 schools in America today. The issues and controversies covered in class include: school financing, creationism vs. evolution in the classroom, bilingual education, multicultural education, sexual education, moral education, affirmative action in education, desegregation and school busing, curriculum standards, homosexuality in the classroom, and religion in the classroom. Students are expected to read assigned papers and outline their stances on the controversies/issues. The class centers on structured debates. Student assessment is based on class participation, essays, and a portfolio. Offered Fall Term.

EDUC 220 Philosophy and Sociology of Education (4 credits, required) The course explores how philosophy and sociology inform educational practice. Critical philosophical and sociological analyses are used to dissect fundamental educational issues of school organization, curricular development, and instructional practice. The course explores the variety of philosophical stances and the sociocultural forces that have shape and constrain K-12 grade education. The course targets three outcomes for students: (1) to gain an understanding of the complex forces that influence contemporary American schools (2) to critically question prevailing notions of teaching and schooling; and 3) to begin to develop and articulate a personal philosophy of education. Offered every semester.

EDUC 304 Educational Psychology (4 credits, required) Students examine educational and psychological principles and theories applicable to early childhood, childhood, and adolescence age learning. Particular attention is given to human growth and development, motivation, and theories of learning and instruction. Students examine the major learning theories derived from psychological research and explore their implications for educational practice. This exploration focuses on three areas: (a) development, (b) learning theory, and (c) instructional theory. The course is designed to help pre-service teachers use psychological research to make informed decisions in educational practice. Prerequisite: EDUC 220 or permission of instructor. Offered every semester.

EDUC 320 Interdisciplinary Curriculum and Instruction: Theory & Practice (4 credits, required) Students investigate curricular and pedagogical issues in 1-12 education. Through an examination of both curriculum and instruction theory and practice, each student will have opportunities to strengthen her/his philosophical base prior to student teaching. Presented in seminar style, this class requires active student participation through reaction writings and dialogue on assigned readings; debates and discussions; and formal presentations. The overall objectives for this course is to challenge each student to: (1) understand the writings and ideas of various curricular theorists, (2) gain knowledge, comprehension, and application skills to understand traditional and non-traditional education paradigms, (3) analyze and evaluate contemporary curricular and instructional themes related to current educational trends, and (4) understand, analyze and evaluate variables that affect curriculum and instruction, including community, diversity, politics, culture, place, environment, and facilities/materials. Prerequisites: EDUC 220 and EDUC 304, permission of the instructor, and declaration of content major. Offered every semester.

EDUC 3XX Specialty Methods of Instruction for All Learners (3 credits, required) Students are required to enroll in one course that corresponds with their certification field and level. The courses cover the study, development, and implementation of curriculum. Students explore and practice alternative curriculum and instruction models; lesson design; best instructional and assessment practices, integration of cross-curricular planning; and national and state learning

standards. The courses have an interdisciplinary orientation and address instructional approaches for culturally, developmentally, and cognitively diverse student populations. Specialized instruction for students with special needs is also covered. At least 10 hours of field practice and observation are required, typically at several levels: childhood education courses requires observations at the 1st-3rd and 4th-6th grade levels; the middle childhood and adolescence courses require observations at the 5th-9th and 10th-12th grade levels. EDUC 331 offered in fall and EDUC 332 offered in spring. Prerequisite: EDUC 220, EDUC 304, EDUC 320, and acceptance into Teacher Education Program. Other methods offered spring or fall semesters.

EDUC 325 Specialty Methods of Instruction for All Learners: English (3 credits) The English Methods course is designed to provide English education students opportunities to more deeply explore and understand the specific skills, strategies, and techniques used by secondary English teachers in the classroom. We will cover effective teaching methods for middle school language arts classes as well as high school English classes and our focus will be on teaching literature and reading, designing and evaluating effective writing assignments, exploring the teaching of critical thinking in the English classroom, understanding the role of grammar in writing instruction, implementing literature circles, and utilizing various reading and writing strategies to enhance student learning. Prerequisite: EDUC 220, EDUC 304, EDUC 320, and acceptance into Teacher Education Program. Offered every fall.

EDUC 328 Specialty Methods of Instruction for All Learners Social Studies (3 credits) This seminar style class is designed to promote reflection and broaden the scope of pre-service Social Studies teachers' perspectives on and knowledge of the process of teaching Social Studies at the middle childhood (5-9) and adolescence level (7-12) settings. The field component of the class is designed to give students observation time to be with in-service teachers and to review best practices for teaching Social Studies as demonstrated in actual class settings. Prerequisite: EDUC 220, EDUC 304, EDUC 320, and acceptance into Teacher Education Program. Offered every fall.

EDUC 326 Specialty Methods of Instruction for All Learners: Math (3 credits) The course explores fundamental applied issues in methods of math and science education and in the students field of specialty. Readings, one-on-one discussions with the faculty, and visits to the classroom will provide the knowledge necessary to develop a curriculum and lesson plan book. Students are also expected to do a series of classroom observations, make a video of a lesson, and attend to a regional or national professional meeting. By the end of this course students have: developed a philosophy of science/math education; reviewed the history of science/math education; articulated a one-semester curriculum with lesson plans, activities, and assessment methods; coordinated this curriculum with state and national standards; examined state, national, and Advanced Placement curricula; become familiar with the misconception literature; become familiar with the "Best Practice" literature; developed familiarity with computer based instructional resources and software; and become familiar with the professional teacher organizations. Prerequisite: EDUC 220, EDUC 304, EDUC 320, and acceptance into Teacher Education Program. Offered every fall.

EDUC 330 Specialty Methods of Instruction for All Learners: Science (3 credits) The course explores fundamental applied issues in methods of math and science education and in the students field of specialty. Readings, one-on-one discussions with the faculty, and visits to the classroom will provide the knowledge necessary to develop a curriculum and lesson plan book. Students are also expected to do a series of classroom observations, make a video of a lesson, and attend to a regional or national professional meeting. By the end of this course students have: developed a philosophy of science/math education; reviewed the history of science/math education; articulated a one-semester curriculum with lesson plans, activities, and assessment methods; coordinated this curriculum with state and national standards; examined state, national, and Advanced Placement curricula; become familiar with the misconception literature; become familiar with the "Best Practice" literature; developed familiarity with computer based instructional resources and

software; and become familiar with the professional teacher organizations. Prerequisite: EDUC 220, EDUC 304, EDUC 320, and acceptance into Teacher Education Program. Offered every fall.

EDUC 331, EDUC 332 Methods of Teaching Elementary/Inclusive (6 credits for 2-semester sequence) The course explores fundamental issues in methods of instruction and assessment at the elementary level. The course is interdisciplinary covering developmentally appropriate, best practice methods of instruction in the creative arts, math and science, social studies, English language literacy, and non-English languages. The course uses New York State's Learning Standards to organize instructional approaches and curriculum in 7 areas: the Arts; Career Development and Occupational Studies; English Language Arts, Health, Physical Education, & Family and Consumer Sciences; Languages Other than English; Mathematics, Science, and Technology, and Social Studies. Students develop a semester long curriculum with daily lesson plans for a 1-6 grade course that is correlated to the State Learning Standards, and construct a portfolio of instructional activities and assessment instruments. Prerequisite: EDUC 220, EDUC 304, EDUC 320, and acceptance into Teacher Education Program. EDUC 331 offered every fall. EDUC 332 offered every spring.

EDUC 335 Teaching Middle Childhood and Adolescence Level Foreign Language (3 credits) The course examines language acquisition theories, methods of second language instruction, current best practice teaching methods, lesson plan organization, and curriculum development issues. Students explore a variety of instructional approaches using sample materials derived from a variety of sources including internet based, textbooks, state and national curriculum guides and specialized professional journals. Students become familiar with state and national standards, professional organizations and journals. The course includes 10 hours of classroom observations. Prerequisite: EDUC 220, EDUC 304, EDUC 320, and acceptance into Teacher Education Program. Offered every other fall.

EDUC 350 Teaching Methods for Art The course examines art theories, methods and current best practice teaching methods, lesson plan organization, and curriculum development issues. Students explore a variety of instructional approaches using sample materials derived from a variety of sources including internet based, textbooks, state and national curriculum guides and specialized professional journals. Students become familiar with state and national standards, professional organizations and journals. The course includes 10 hours of classroom observations. Prerequisite: EDUC 220, EDUC 304, EDUC 320, and acceptance into Teacher Education Program. Offered every other fall.

EDUC 340 Reading, Writing, and Literacy Across the Curriculum(3 credits) This course is a theoretical and practical introduction to literacy instruction for teachers of all grade levels and subject areas. Through examining the social, cultural, political, and personal aspects of literacy, we will explore what it means to be a literate person in our society and why all teachers must consider themselves literacy educators. Issues related to education and teaching that will be covered in this class include exploring and understanding the various definitions of literacy, how literacy is acquired and developed, academic literacy, elementary literacy, adolescent literacy, family literacies, content literacy, and critical literacy. In addition to these theoretical perspectives, we will reflect on and discuss how each of us can draw on our students' multiple literacies to enhance their learning experiences in all subject areas and grade levels. Prerequisites: EDUC 220, EDUC 304, and EDUC 320, acceptance into Teacher Education Program, and Writing Level 3. Offered every semester

341 Approaching Developmental Literacy Skills (3 credits) This course is designed to give prospective elementary teachers experience in using literacy teaching and learning tools in all content areas in 1st through 6th grade classrooms. We will explore the vital and influential role reading, writing, speaking, and listening skills and strategies play in effective teaching and learning through course readings, discussion, assignments and class activities. Students will engage in several activities and assignments that are both theoretical and practical in nature, thus preparing them for work in real life classrooms and making them more effective new teachers.

The course is considered a methods course; therefore, much emphasis will be placed on planning lessons as well as incorporating and utilizing literacy strategies in various contexts to enhance student learning. Prerequisites: EDUC 220, EDUC 304, and EDUC 320, acceptance into Teacher Education Program, and Writing Level 3. Offered every spring

342 Language and Literacy in the Content Areas (3 credits) The course focuses on how and why *every* teacher is a literacy teacher, no matter what subject is taught. Through examining events, activities, experiences, instructional and curriculum design approaches that affect literacy in middle and high school in the content areas, we will contemplate what it means to be a literate person and what it means to be a literacy teacher – in general and in our individual content areas. The course will address issues in content area literacy and learning such as constructing meaning through reading, using writing to learn, vocabulary instruction, and various ways to help struggling readers. Students will also learn a variety of reading, writing, and discussion/speaking strategies that they can use and/or adapt for their own teaching. Prerequisites: EDUC 220, EDUC 304, and EDUC 320, acceptance into Teacher Education Program, and Writing Level 3. Offered every fall.

371 EDUC Introduction to Special Education (3 credits) This course provides an orientation to the characteristics and categories of exceptionality, and the Federal and State laws that regulate special education and related services. Emphasis will be placed on the educational, medical, social, emotional, and behavioral considerations of individuals with disabilities and their families. Prerequisites: EDUC 220, EDUC 304, and EDUC 320, and acceptance into Teacher Education Program. Offered every semester.

375 EDUC Including Students with Disabilities (3 credits) This course explores the effective instructional methods that meet the academic needs of all students in inclusive settings. Students will be provided with an opportunity to utilize practical applications, and address critical issues relating to the inclusive classroom. Emphasis will be placed on the individualized education program (IEP), instructional adaptations, student assessment, teacher collaboration, high-incidence disabilities, and low-incidence disabilities. Offered in fall.

376 EDUC Behavior Management with Exceptional Learners (3 credits) The purpose of this course is to provide an overview of strategies and techniques designed to help manage challenging classroom behaviors with exceptional learners. Emphasis will be placed on positive behavior support, applied behavior analysis, functional behavior assessment, cognitive behavior management, social skills training, cultural influences on behavior, and the current legal policy issues that relate to behavior management in schools. Offered in spring.

372 Educational Lyceum Series (2 credits, required). Prerequisites: EDUC 220, EDUC 304, and EDUC 320, and acceptance into Teacher Education Program. Offered in fall and spring.

Substance Abuse Mini-course (required by NYSED)

Violence Prevention Mini-course (required by NYSED)

Child Abuse Mini-course (required by NYSED)

380 Creating a Positive Learning Environment (3 credits, elective) This course examines philosophies and methods for creating a healthy learning environment. Issues such as child-abuse, apathy, self-discipline and self-concept, motivation, violence prevention, power struggles, rebellion, and challenges of diverse student populations, are examined from developmental, multicultural, humanistic perspectives. Prerequisite: EDUC 320.

381 Assessment and Evaluation (2 credits, elective) This course explores the theory and practice by which learning is assessed and evaluated. A variety of traditional and alternative assessment and testing practices are reviewed. Students develop an assessment toolbox in their particular subject specialty. The use of computers to facilitate and enhance evaluation and assessment is emphasized. Prerequisite: EDUC 320.

382 Educational Technology (2 credits) This course explores the diversity of software and hardware available to teachers for enhancing instruction and facilitating course administration. Students learn to use a variety of software to produce instructional materials, develop multimedia

presentations, and facilitate administrative duties. Students become familiar with the use of graphic and presentation (Photoshop, PowerPoint), spreadsheet (Excel), database (Access) software, and educational software pertinent to their content specialty. Prerequisites: EDUC 220, EDUC 304, and EDUC 320, acceptance into Teacher Education Program. Offered every semester. Prerequisite: EDUC 320 and acceptance into Teacher Education Program.

390 Multicultural/Urban/Alternative Educational Experience—Minipracticum (3 credits, required) This course places students in non-traditional educational settings with students from diverse cultural, socioeconomic and geographic backgrounds. Students are required to observe, interact, supervise and/or teach for a minimum of 20 school days (120 hours). Readings on diversity, multicultural education and the sociological dimensions of schools, students and teachers, provide a formal context for reflecting on the field experience. Writing a brief proposal and approval by Department of Education are required for special requests. Internship may be during summer or January Term. Prerequisites: EDUC 220, EDUC 304, and EDUC 320, and acceptance into Teacher Education Program.

391 Special Education Minipracticum (3 credits, required) This course places students in inclusive or special education educational settings with students with a diverse range of educational needs. Students are required to observe, interact, supervise and/or teach for a minimum of 20 school days (120 hours). Readings on special education/inclusive education, students and teachers, provide a formal context for reflecting on the field experience. Writing a brief proposal and approval by Department of Education are required for special requests. Internship may be during summer or January Term. Prerequisites: EDUC 220, EDUC 304, and EDUC 320, and acceptance into Teacher Education Program.

480 Interdisciplinary Reflective Student Teaching Seminar (2 credits, required) Reflective seminar concurrent with 490, 491, 492.

Student Teaching Practicum (Fall/Spring Terms) Prerequisites: EDUC 220, 304, 320, 3XX (Specialty Teaching Methods), 340, 341/342, 371, 372, and 390, and satisfactory Junior Review with content department and Department of Education approvals.

490 Childhood Level Student Teaching Seven weeks in grades 1-3, and seven weeks in grades 4-6.

491 Middle Childhood Student Teaching Seven weeks in grades 5-7, and seven weeks in grades 7-9.

492 Adolescence Level Student Teaching Seven weeks in grades 7-9, and seven weeks in grades 10-12.

English

Our mission is to lead students to a deep appreciation of literature and the quality of writing that ensures its beauty and endurance.

The love of words and joy in the creative use of language form the basis of literary study. That study emphasizes the rich heritage and diversity of American and British literature and includes works from other cultures. The department teaches a disciplined approach to reading this literature and writing about it, from a wide range of critical perspectives.

Students come to realize that language and the imagination can create worlds which, like ours, delight, disturb, and challenge. The study of literature, therefore, helps students understand the world in which they live and their places in it. Exploring our diverse literary heritage requires students to engage in a sensitive, subtle search for meanings. Through analysis, debate, critique, and dissent, they become better able to formulate and express their own ideas.

The study of literature reminds us that all people have voices and that much of our greatest literature has challenged prevailing cultural norms. The individual's encounter with literature has always been a crucial part of the process of transformation, of self-definition; for poems, stories, novels and plays record our blindness, our follies, and our crimes just as surely as they record our insights, our virtues and, occasionally, our genius. We study literature, literary theory, writing, and culture-history not just to affirm our beliefs and traditions, but to examine them critically.

In keeping with its emphasis on written expression, the department offers a variety of courses in creative and expository writing. Creative writing courses use literary study, workshops, and individual conferences to help student poets, novelists, essayists and playwrights understand the creative process and create afresh imagined worlds. Courses in the Writing Competency Program employ several rhetorical and pedagogical strategies to ensure that students graduate knowing how to write well. The Writing Center works in concert with writing and literature courses and across the disciplines, helping students from all majors achieve skill, precision, and grace in their writing.

Our mission includes maintaining and staffing the following programs:

Program I Literature Courses for Majors: a wide range of courses, including period surveys, major author courses, and topic-oriented courses.

Program II Intermediate and Advanced Expository Writing: courses in essay writing, business writing, and journalism for students who aspire to become professional writers. These courses support a writing minor and the English major with emphasis in writing.

Program III Creative Writing: basic, intermediate, and advanced courses in the writing of fiction and poetry, which meet the Experiential Learning requirements of the general education curriculum. They support the writing minor and English major with a concentration in creative writing or an emphasis in writing. They also prepare students for M.F.A. programs in creative writing.

English majors are strongly advised to attain an intermediate-level competence in a foreign language, especially if they plan to do graduate work in English. Other recommended courses include Introduction to the Bible; courses in art, music, history, and philosophy; and literature courses in the Department of Modern and Classical Languages.

In the spring of junior year, each English major meets with his or her advisor and another department faculty member of the student's choosing to complete the Junior Review, a formal

review of the student's course selections, plans for a senior project, and post-graduation aspirations. The Junior Review helps to ensure that majors will complete all College and department requirements on time and will have taken a variety of period and genre courses, as well as the "Approaches" course in critical methodologies prerequisite to writing a Senior Project. These approaches or methodologies might include close reading, textual analysis, scholarly research, and literary criticism and theory. The minimal paper requirement for Approaches courses is a properly documented ten-page essay making use of primary and secondary texts and employing one or more approaches or methods. Enrollment is limited to 15. Majors with a Concentration in Creative Writing will declare that concentration at the Junior Review. English majors must complete a senior project, usually during January Term. The project consists either of a long paper exploring a particular author or subject in depth or an original manuscript of creative writing, and an oral review by the student's study advisor and another department member selected by the student.

English majors who plan to earn teaching certification in secondary English are required to take Advanced College Writing before student teaching and to have earned a 3.0 average in their major by the start of the semester before they student teach, with allowance for exceptions in extraordinary circumstances. Such students should obtain a copy of the department's "Policy on Student Teachers" from the Department Chair no later than their sophomore year. Students must meet the requirements outlined in this policy statement to qualify for student teaching.

The department offers various other opportunities for special study outside the classroom. Students meet and interact with prominent writers through the Visiting Writers Series and up-and-coming writers through the New American Writing Festival. Nobel laureates Joseph Brodsky and Derek Walcott, Pulitzer prize winners Donald Justice and M. Scott Momaday, Poet Laureate Robert Pinsky, and such well-known authors as Jamaica Kincaid and Joyce Carol Oates have given readings and led student workshops. English majors also write for and edit *Word of Mouth*, the College literary magazine, and *Hilltops*, the student newspaper. Recommended students work as tutors at the Writing Center, gaining valuable experience and academic credit, as well.

The department encourages its majors to do internships in fields such as journalism, law and publishing. Hartwick English majors graduate with verbal and analytical skills that serve them well in a wide variety of occupations, including law and medicine, libraries and museums, corporate and government agencies, and publications and communications.

Faculty

Thomas J. Travisano, Chair; Robert R. Bensen; David C. Cody; Lisa Darien; Brent Delanoy; Julia Suarez Hayes; Susan Navarette; Kim H. Noling; Robert H. Seguin

Adjunct Faculty

Lisa Jo Bezner, Martin Christiansen, Eva Davidson, Mare Adams Fallon, Richard Gary, Alice Lichtenstein, Douglas MacLeod, Brian Madden, Adrienne Martini, Jo Mish, Irene McManus, Raymond McPhail, Mary Miller, Dan Pelletier, Carol Silverberg, Karyn Zapach

Courses

101 Writing Tutorial (2 credits) Practice in writing short compositions and review of English grammar. Required of, and open only to, students placed at Level 1 of the Writing Competency Program as preparation for Level 2. Does not count toward majors or minors in English. Offered fall and spring.

110 Composition (3 credits) Basic expository writing taught as a process leading to a product, with ample opportunity for the professor to intervene in, and the student to practice, the stages of

the process. Includes assigned readings, conferences with the instructor (at least two per term), peer review and rewriting. Instruction in how to do library research, how to prepare a bibliography and how to document sources. One paper based on intensive investigation of a single subject required. Students write a minimum of 20 finished pages, including the investigative paper. Does not count toward majors or minors in English. Offered fall and spring.

111 Composition Workshop (2 credits) Emphasis on the writing and particularly the revision of various short compositions in preparation for successful participation in a Level 3 (W) course. Open to Level 2B students and to transfer students who have taken composition elsewhere but have been placed at Level 1 or 2. Does not count toward major or minor in English. Permission required.

115 Principles of Public Speaking (3 credits) Psychological, physical, and intellectual problems involved in speaking before an audience; classroom experience in various types of formal speaking; constructive criticism from the instructor and fellow students. Does not count toward majors or minors in English. Offered fall and spring.

150 Topics in Literature for Freshmen (3 or 4 credits) These courses, designed especially for the first year student, approach the understanding of literature through topics and themes, such as "Masculinities," "Reading American Poetry," "The Rhythms of Poetry," "Children in War," and "Imperial Nightmares." Fundamental skills of reading, writing, and interpreting literature are emphasized. Open to first year students and to others by permission of the instructor. Offered fall and spring.

190 Introduction to Literature and Criticism (3 credits) The course is designed to teach students ways to explore, interpret, and appreciate texts by reading closely, writing critical essays, and applying critical approaches deliberately. Required texts will include poetry, fiction, and drama, and class discussions will familiarize students with critical terms relevant to each genre. English majors must take this course within one semester of declaring their major.

200 Business Writing (3 credits) Extensive practice in writing memos, letters and brief reports as solutions to communication problems encountered by managers. Study of the strategies of effective, tactful writing and the theory on which they are based. Covers writing within a business, organization or governmental agency as well as external communications with customers, clients or other firms or agencies. Open to students at Level 4, to others by permission of the instructor. Limited to 20. Does not count toward the English major or toward the minor in literature. Offered yearly.

205 Journalism (3 credits) Theory and practice of writing news stories, editorial opinion, feature articles and columns. Comparative study of current newspapers and news magazines. Introduction to copy editing, design, layout and production of news publications. Does not count toward the English major or toward the minor in literature. Prerequisite: Level 4 writing ability. Offered yearly in the fall.

208 The Anatomy of English (3 credits) A systematic, practical, and analytic study of the structure and function of words, phrases, and clauses in the English language with emphasis on the recognition of form and the analysis of function. This basic syntax course is designed for those students who wish to enrich their knowledge of and satisfy their curiosity about the English language through an in-depth study of authentic materials by authors from diverse backgrounds. It is recommended to English majors and minors, those planning to tutor at the Writing Center or student teach, and those serious about writing as a career.

210 Advanced College Writing (3 credits) Emphasis on developing a clear, engaging style through a rigorous study of the elements of college writing. Several papers will be drafted, critiqued, and thoroughly revised to empower students to write cogently and confidently in academic situations. Prerequisite: Level 4 writing ability. Limited to 20. Does not count toward the English major or toward the minor in literature. Required for writing emphasis, writing minor, and student teaching. Offered yearly.

213 Introduction to Creative Writing (3 credits) The course will approach reading as a way to develop the imagination of the writer of both poetry and short fiction. Students will read widely in both genres, write poems and short stories in response to the readings, and participate in workshop discussions of their writing. The class will also consider relations between poetry and fiction, in terms of both their historical development and contemporary practice. Several short analytical essays on the assigned readings as well as the students' original poetry and fiction will be expected. (EL)

221 Classical Mythology (3 credits) (Same as CLAS 221) An introductory survey of the myths and legends of the Greek and Roman gods and heroes most commonly encountered in the art, architecture, and literature of these two peoples. The vital place which these tales occupied in the fabric of the Greek and Roman societies will be emphasized. May be taken for either English or Classics credit.

231 British Literature: Romanticism to Realism (3 credits) A survey of major works, figures and movements in English literature from the early 19th century through the 20th including such Romantic authors as Blake, Wordsworth, Coleridge, and Keats; such Victorians as Tennyson, Browning, and Arnold; and such moderns as Yeats, T.S. Eliot, Joyce, Woolf, and Lessing.

232 The Warrior and the Poet: Gender and Identity in the Middle Ages (3 credits) An introductory course focusing on exploring the complex nature of gender and identity in the Middle Ages through a close examination of two figures found in a number of literary works and genres from the medieval period in Western Europe: the warrior and the poet. In the Middle Ages, both of these figures were more complex and contested than the modern stereotypes imply. Through close reading of a number of major works—including the Celtic epic *The Tain*, the Old English poem *Beowulf*, the Old French *Lais* of Marie de France, the Middle English lai *Sir Orfeo*, and the Icelandic saga *Egil Skallagrimsson's Saga*—students will explore some of the rich and complex cultural diversity of societies in the Middle Ages.

233 The Fury of the Northmen: Outlaws, Gods, Kings, and Other Vikings (3 credits) An introductory survey of one of the great literary traditions of the world, that of medieval Scandinavia and Iceland. The barbarian pagan invaders from the Scandinavian peninsula astonished and terrified the medieval Christian societies of the late 8th and 9th centuries, raiding and settling throughout Western Europe and beyond, from Nova Scotia to Byzantium. After their conversion to Christianity in the 10th and 11th centuries, however, the erstwhile Vikings performed a second astonishing feat: they created a body of vernacular literature that is virtually unparalleled in its imagination, breadth, and beauty. This course examines a small piece of this rich heritage through readings (in translation, of course) of examples of the major genres of Old Norse-Icelandic literature: eddic poetry, skaldic poetry, and saga. Recurrent themes and emphases will include the importance of revenge, the law, the varying roles of women, and the evolving influence of Christian ideology.

235 Issues in British Literature and Culture before 1660 (3 credits) A study of selected issues in British literature and culture through the early modern period. The course will examine the way in which literature is shaped by and, in turn, helps to shape cultural context. Topics may include Women in the Middle Ages, Neoplatonic Love and its Discontents, The Warrior and the Poet, and Shakespeare's England. May be repeated with different course content.

236 Shakespeare: Page, Stage, and Screen (4 credits) An introductory course studying a range of Shakespeare's plays in his four favored genres: comedy, history, tragedy, and romance. Three modes of the plays' reception will be explored: close reading with attention to what can be interpreted from the page, such as character types, plots, imagery, motifs, and themes as they recur in variations throughout Shakespeare's career; the interpretation in the theatre by actors and directors throughout the plays' stage histories; and film interpretations by which directors, screenwriters, and cinematographers have transformed fundamentally aural works into stories for a primarily visual medium. Plays studied may include *Richard III*, *Henry V*, *The Comedy of Errors*, *A Midsummer Night's Dream*, *Romeo and Juliet*, *Othello*, and *The Winter's Tale*. (EL)

237 Reconstructing Shakespeare's Company (4 credits) (Same as THEA 237) A simulation of the workings of Shakespeare's theatrical company as it prepares to produce one of his comedies for the Elizabethan public theatre. Students take on roles both as characters in the comedy, to be produced in a workshop performance at the end of the course, and as members of the acting company. Activities include script analysis, discussions of Elizabethan culture and theatrical practice, and improvisations based on research into the period. Laboratory sessions are devoted to rehearsal. Counts in the theatre major as a course in theatre history. (Cross-listed as THEA 237) (EL)

239 Transcultural Studies (3 credits) A study of the diverse literary, aesthetic, and philosophical expressions of cultures and countries beyond England and the United States. Rather than reproducing center/periphery models of cultural exchange, this course adopts a transnational and interdisciplinary approach to cultural and postcolonial studies, examining a wide range of works that may fruitfully be considered either in their relations to or as independent of traditional British and American contexts. May be repeated with different course content.

241 American Literature: Civil War to the Present (3 credits) A study of selected works of leading American authors since the Civil War, such as Dickinson, Twain, Gilman, Wharton, Cather, Frost, Hemingway, Faulkner, Hurston, and Wright. Stress is on major cultural and literary movements.

243 Novellas and Short Novels (3 credits) An introductory course focusing on novellas and short novels as forms of fiction that may be distinguished from their cousins, the novel and short story, by subject matter, style, and length. The course may include such authors as Leo Tolstoy, Italo Calvino, Katherine Anne Porter, William Maxwell, Stanley Elkin, George Saunders, Jane Smiley, Gabriel Garcia Marquez, Andrea Barrett, and Laurie Colwin, among others. Students will engage in a series of close readings of the texts and will conclude the course with a larger research project.

245 African American Literature (3 credits) A study of the narrative construction of black identity in major works in key African American literary forms: slave narratives, autobiographies, and fiction. Includes works by such writers as Frederick Douglass, Harriet Jacobs, Richard Wright, Ralph Ellison, and Toni Morrison.

250 Topics in Literature (3 credits) A study of various authors, themes, movements, genres, with attention to their historical context. Topics include African American Women Dramatists, The Short Story, Supernatural Horror in Literature, and Children's Literature. Offered yearly.

255 Women and Fiction (3 credits) Close reading of novels and short stories by women writers such as Atwood, Chopin, Gilman, Morrison, Walker, Welty, and Woolf, with a focus on both aesthetic elements and women's issues.

260 Caribbean Literature (3 credits) The course will introduce students to a major body of literature written in the Caribbean region. The course will focus on the engagement of the literature with Native American life, European colonialism, the African diaspora, the formation of Creole language and society, and the problems and potential of the hybrid cultures of the Caribbean. Readings include the literature of discovery and exploration, as well as contemporary writers from the French and Spanish Caribbean, such as Césaire, Glissant, Garcia Marquez, and Carpentier. Writers in English include Brathwaite, Goodison, Jamaica Kincaid, Lovelace, and Walcott.

268 Issues in British Literature and Culture since 1660 (3 credits) A study of selected issues in British literature such as marginality, gender, sexuality, and colonialism, with emphasis on a text's relation to ideology and British culture. Topics may include "Imperial Nightmares" and "Unruly Women." May be repeated with different course content.

When a 300-level course is offered as an Approaches (A) course, it may carry an additional hour of credit.

300 Teaching Assistant in Composition (2 credits) Training and practice in the teaching of writing. Students will serve as tutors in the Writing Center under supervision of the coordinator.

Open to students of strong writing ability regardless of major. Consent of coordinator required early in term preceding enrollment. May be taken twice. Offered every term. (EL)

305 Advanced Journalism (3 credits) Using the basic skills of reporting and writing, students will progress to a more complex storytelling in individual and group projects. Types of news projects include participatory journalism, interpreting data, features, profiles and localizing U.S. and international news. Students will compile a portfolio of their work and design a resumé for use in future job searches. Does not count as a literature or creative writing course. Prerequisite: ENGL 205 or permission of the instructor. Offered alternate Spring Terms.

310 Creative Writing: Nonfiction (3 credits) Practice in writing a variety of kinds of non-fictional prose. Readings in the New Journalism, study of professional writing in such periodicals as *The Atlantic Monthly*, *The New Yorker*, and *The New York Times*. Prerequisites: Level 4 writing ability and permission of the instructor. Does not count as a literature course. (EL)

311 Creative Writing: Fiction (4 credits) Practice in the writing of fiction; exercises in theme and technique. Workshop and conference. Readings in the short story and the theory of fiction. Prerequisite: ENGL 213 or 214. Does not count as a literature course. (EL)

312 Creative Writing: Poetry (4 credits) Practice in the writing of poetry; exercises in form. Readings in prosody poetics and contemporary poetry. Prerequisite: ENGL 213 or 214. Does not count as a literature course. (EL)

320 Classical Theatre and Drama (3 credits) The tragic and comic plays of classical Greece and Rome will be studied first as products of the cultures that produced them and the stages for which they were intended and second as continuing influences on European thought and theatre. English translations of plays by Aeschylus, Sophocles, Euripides, Aristophanes, Menander, Plautus, Terence, and Seneca will be read.

321 Drama to 1850 (3 credits) European plays from the late Middle Ages to the beginning of the modern era will be studied either as part of a broad survey or as representative examples of a particular time or place. Shakespeare will not be included, and all plays will be in English.

322 Modern Drama (3 credits) European and American plays written after 1850 and before the last quarter of the 20th century will be studied. Genres and movements such as realism, expressionism, and the Theatre of the Absurd will be considered when reading plays by such writers as Ibsen, Strindberg, Chekhov, Shaw, Giraudoux, O'Neill, Brecht, Ionesco, Beckett, and Williams.

323 Contemporary Drama (3 credits) Plays written since the middle of the 20th century will be examined. Attention may be given to the rise of theatres of protest, experimentation, ethnic and sexual identity, and the influence of non-Western theatres.

325 The British Novel I (3 credits) A study of the evolution of this "novel" form of literary expression, from its emergence in England in the 18th century to its development as the paramount literary genre in the 19th. While focusing on the salient features of the genre, the course also will consider the historical and cultural influences that shaped the works of novelists such as Defoe, Fielding, Sterne, Mary Shelley, Austen, the Brontës, and Dickens.

326 The British Novel II (3 credits) A study of the English novel from the mid-19th century through its later incarnations in the early decades of the 20th century to the present, with particular emphasis on the ways in which it shaped itself in response to the advent of a "modernity" that was historical, literary, and scientific. Readings will include the novels of authors such as Dickens, Eliot, Hardy, Wells, Conrad, Lawrence, Woolf, and Joyce.

329 British Literature: Beginnings through Milton (3 credits) Examines the sweep of British literature from the Anglo-Saxon period through the works of Milton and his contemporaries. Emphasis will be on the characteristics of specific literary works and of the favored forms within an historical period, as well as the interactions between literature and culture during a historical period. Designed for English majors. Offered yearly. Prerequisite: ENGL 190 with a grade of C or above.

330 Old English Literature (4 credits) An exploration of the literature, language, and culture of the Old English period (c. 500-1100). An examination of the complex and multi-linguistic culture of England in the Anglo-Saxon period will be coupled with intensive study of Old English prose and poetic works such as “The Life of St. Edmund,” the *Anglo-Saxon Chronicles*, “The Dream of the Rood,” “The Wanderer,” “The Seafarer,” and selections from *Beowulf*. Offered alternate years.

331 Chaucer (4 credits) Intensive study of the works of Chaucer. Special attention will be paid to gaining fluency in reading Chaucer’s Middle English (both silently and aloud), cultural context, and critical reception. Some of Chaucer’s shorter works may be studied, but the main concentration of the course will be on his two masterpieces, *Canterbury Tales* and *Troilus and Criseyde*. Offered alternate years.

333 Middle English Literature (4 credits) Intensive study of the literature, language, and culture of the Middle English period (c. 1100-1500). The rich variety of Middle English literature will be explored through readings in different genres—romance, lyric, saints’ lives, drama, epic, dream vision—and by practice in reading different dialects.

335 English Renaissance Literature (3 credits) Advanced study of the poetry, drama, prose, fiction, and song of 16th century England, primarily works of the late Elizabethan era. With an eye always to the focal point of all Elizabethan circles, the Queen herself, students examine some notable models for success in court circles, study Elizabethan sonnet cycles, pastoral romance, revenge tragedy, and lyric comedy, and sample the literature of exploration and colonization. Authors include Hoby, Wyatt the Elder, the Sidney circle, Marlowe, Spenser, Kyd, Shakespeare, Elizabeth I, Greene, Raleigh.

336 Shakespeare I (4 credits) Advanced study of plays from the first half of Shakespeare’s career as a dramatist, with attention to the development of Shakespearean comedy, to the playwright’s achievement in dramatizing English history in the *Richard II-Henry V* tetralogy, and to the interpenetration of these genres. The plays will be considered as scripts for a particular theatre in a particular place and time, as well as texts of enduring critical controversy, cultural interest, and iconic significance.

337 Shakespeare II (4 credits) Advanced study of Shakespeare’s later works, beginning with *Hamlet*, that is, the major tragedies and romances. Special attention will be paid to cultural context, critical reception, and stage history. Offered yearly.

340 Empire and Revolution in 17th Century British Literature and Culture (3 credits) In this century of revolution, reformation, and imperial expansion, England’s writers participated in its political, religious, domestic, and personal upheavals. We will examine these conflicted areas in the work of Shakespeare, Donne, Jonson, and Milton, and in the increasingly important work of women writers, including Wroth, Philips, and Cavendish.

345 18th Century British Literature (3 credits) A concentrated study of the several interlocking cultural contexts—historical, political, literary—that situate such quintessentially “18th century” genres as the epistolary, picaresque, and Gothic novels, travel and crime narratives, the Newgate pastoral, ballad-operas and mock-georgics, satire and the burlesque, and mock-epic poetry. The literary productions of writers such as Defoe, Swift, Sterne, Pope, Johnson, Burney, and Austen will be considered as a response to and an expression of the tremendous social and political transformations marking the period spanning roughly 1660 through 1818, as England lurched toward modernity.

350 Selected Topics (3 or 4 credits) Advanced study of a wide range of literary topics. Recent examples include Contemporary Southern Writers, Emily Dickinson and her World, The Return of King Arthur, and Women and Poetry.

355 English Romantics (3 credits) Blake, Wordsworth, Coleridge, Byron, Shelley, Keats and such essayists as Lamb, DeQuincey and Hazlitt. Offered alternate years.

360 Victorian Literature (3 credits) Major themes and figures in poetry and fiction, 1832-1900, including Tennyson, Browning, Arnold, Carlyle, Ruskin, and Emily Brontë. Offered alternate years.

365 Modern British Literature (3 credits) Major trends and writers of British poetry and prose from 1914-60, including Forster, Joyce, Lawrence, Thomas, Woolf, and Yeats. Offered alternate years.

367 British Authors (3 credits) Courses under this heading focus on the works of one to three British authors read closely within the context of their lives, culture, and critical reception. Possible authors include John Milton, Jane Austen, Charlotte Brontë, Oscar Wilde, Virginia Woolf, and James Joyce. May be repeated with different course content.

368 Issues in British Literature and Culture (3 credits) Advanced study of selected issues in British literature and culture, such as the politics of gender and sexuality; imperialism and post-colonialism; and ideologies of race, class, and gender. May be repeated with different course content.

369 Studies in British Poetry (3 credits) Advanced study of various aspects of British poetry. Courses may trace the evolution of a certain genre (e.g., the epic), explore the interactions and influence of a particular group of poets (e.g., the metaphysical poets), or examine the poetic response to a particular cultural and political moment (the French Revolution). May be repeated with different course content.

370 American Literature: Beginnings through Civil War (3 credits) Traces the development of American literature from its roots in the 17th century to the 19th century flowering of the "American Renaissance," with a primary emphasis on major works by authors such as Bradstreet, Poe, Emerson, Thoreau, Hawthorne, Melville, Whitman, Douglass, and Dickinson. Emphasis throughout is on the development of a distinctively American voice, sense of identity, and awareness of social complexity. Designed for English majors. Offered yearly. Prerequisite: ENGL 190 with a grade of C or above.

372 The American Romantics (3 credits) Concentrated study of such major 19th century American writers as Hawthorne, Poe, Emerson, Thoreau, Melville, Whitman. (Ordinarily no more than three authors are covered.) Offered alternate years.

373 The Gilded Age (3 credits) Concentrated study of such major American writers of the late 19th and early 20th centuries (1865-1917) as Jewett, Twain, James, Dreiser, Norris, and Cather. Offered alternate years.

374 Modern American Literature (3 credits) A close study of major American authors of the 20th century to 1945. A balance between poets and novelists is maintained. Includes such major poets as Frost, Eliot, Stevens, Pound, Moore and Williams; and such major novelists as Hemingway, Faulkner, Fitzgerald, Wright, and Welty. Offered at least every other year.

375 Contemporary American Literature (3 credits) A close study of American authors since 1945 including such poets as Lowell, Roethke, Ginsberg, Plath, Bishop, and Rich; and such fiction writers as Nabokov, Bellow, Cheever, Updike, O'Connor, Barth, and Morrison. Offered at least every other year.

378 American Indian Literature (3 credits) American Indian literature has been shaped by ancient tradition and the historical experience of American Indian life. Readings will include such early writers as Eastman, Winnemucca, McNickle and E. Pauline Johnson to help us understand the growth of literature as an Indian expressive art. Works by such writers of the American Indian Renaissance (1969 to the present) as Momaday, Silko, Erdrich, Harjo, Revard, Welch, and Alexie address contemporary problems in reservation and urban life, and the place of traditional cultures in sustaining Indian community and identity.

380 Major American Authors (3 credits) Courses under this heading seek to enhance our understanding of the life and works of one or more important American authors such as Hawthorne, Melville, Whitman, Dickinson, Faulkner, Frost, Stevens, Bishop, Lowell, Oates, and

Morrison. In general the emphasis is on the close reading of a body of work within a framework of cultural contexts, theoretical constructs, and critical traditions.

382 Issues in American Literature and Culture (3 credits) Advanced study of selected issues in American literature and culture, exploring the incisive, imaginative responses of American writers to their times, and examining the way literature is shaped by, and helps us to shape, cultural contexts. Courses taught under this heading include the Civil War in American Literature, American Ethnic Literature, African American Women Writers, and New England Women Writers. May be repeated with different course content.

384 Studies in American Poetry (3 credits) Advanced study of an aspect of American poetry. Specific courses will explore an important circle of poets, a period, an artistic form, or a historical issue or cultural problem confronted by American poets. Courses taught under this heading include Four Modern Poets, Four Contemporary Poets, Contemporary Poetry, and American Women Poets. May be repeated with different course content.

386 The American Novel (3 credits) An exploration of central issues of American culture, history, and consciousness in the developing American novel, as well as its generic features. Includes works by such writers as James, Dreiser, Wharton, Cather, Steinbeck, Faulkner, and Ellison.

390 Using Contemporary Theory (4 credits) An introduction to some recent approaches to literature, such as deconstructive, reader-response, psychological, feminist, cultural, and materialist theories. The course offers practical experience in using these methodologies in reading and writing about literature. Offered as an Approaches (A) course.

391 Modes and Methods of Scholarship (4 credits) This course serves as an introduction to the art of scholarship, a guided tour of the tools of the scholarly trade, and a prelude to the process of writing a Senior Thesis. Particular emphasis is placed on research methods and technologies that will facilitate critical analysis of a wide range of important texts. Offered as an Approaches (A) course.

411 Fiction Workshop (4 credits) Practice in writing longer forms of fiction and in producing the finished short story. Workshop and conference. Prerequisites: ENGL 311 or permission of instructor. Offered alternate years. (EL)

412 Poetry Workshop (4 credits) Practice in writing poetry. Students will be expected to produce a manuscript of finished poems. Workshop and conference. Prerequisites: ENGL 312 or permission of instructor. Offered alternate years. (EL)

470 Seminar in Selected Topics (4 credits) Concentrated study of a limited literary subject, such as a single author, a particular movement, a theme or, occasionally, a single work. Recent examples: The 1890s; Anglo-Scandinavian England; Creation in Literature and Art; Elizabeth Bishop and Robert Lowell; The Family in Shakespeare; New England Women Writers; and Victorian Women Novelists. Open to junior and senior English majors. Limited to 15. Offered fall and spring. (ILS)

489 Senior Project Methods (1 credit) Guided group preparation prior to the individual directed study of English 490, Senior Project in English. Working from a topic approved in the preceding term, students preparing for literature projects will read their primary works and explore them in informal writing, develop a research question and a working thesis, prepare a full proposal in consultation with their project supervisor, consult with a research librarian to locate secondary sources, and discuss possible critical approaches. Creative writing students will read and annotate models appropriate to their projects, develop a full proposal in consultation with their project supervisor, workshop a preliminary section of the manuscript, and read writers' essays on their craft. Offered Fall Term. Permission is required.

490 Senior Project (4 credits) During January Term of their senior year, majors must complete a directed study resulting in a critical essay of at least 20 to 30 pages on an author or topic or producing a manuscript of poetry, short stories, or a novella prefaced by an essay. Students will arrange for an informal oral review of the paper involving themselves, the study advisor, and one

other member of the department. Open only to senior English majors. Prerequisites: Level 4 writing ability, ENGL 489, and one Approaches (A) course with a grade of C or above. Additional prerequisites for a senior project in creative writing: a concentration in creative writing that includes ENGL 311 or 312 with a grade of C or above, and at least one 400-level workshop, preferably in the genre chosen for the senior project.

English

Requirements for the major Minimum of 13 courses, distributed as follows:

One gateway course

190 Introduction to Literature and Criticism

English majors must take this course within one semester of declaring their major.

Nine courses at the 300/400 level, including one Approaches course, distributed as follows:

Two foundational courses in literary antecedents:

329 British Literature: Beginnings through Milton

370 American Literature: Beginnings through the Civil War

Two courses in literature before 1800, selected from:

320 Classical Theatre and Drama

321 Drama to 1850

325 The British Novel I

330 Old English Literature

331 Chaucer

333 Middle English Literature

335 English Renaissance

336 and 337 Shakespeare I and II

340 17th Century British Literature

345 18th Century British Literature

350 Selected Topics in Literature Before 1800

367 British Authors Before 1800

368 Issues in British Literature and Culture Before 1800

369 Studies in British Poetry Before 1800

450 Seminar in Literature Before 1800

Two additional courses in literature at the 300 level

450 Seminar in Selected Topics

489 Senior Project Methods (1 credit)

490 Senior Project

Three elective literature courses, at least two at or above the 200-level

In the major in literature, one creative writing course is allowed, but expository writing and public speaking courses are not, with the exceptions that student teachers and students with an Emphasis in Writing may substitute English 210, Advanced College Writing, for one literature elective.

Requirements for the major with a concentration in creative writing: Minimum of 14 courses

Thirteen courses, distributed in the same fashion as those for the major, except that the electives must be distributed as follows:

213 Introduction to Creative Writing **or** 214 Making Literature

Two 300-level creative writing courses

One 400-level workshop, either 411 Fiction Workshop or 412 Poetry Workshop.

Requirements for the major with an emphasis in writing: Minimum of 17 courses, distributed as follows:

Thirteen courses, distributed in the same fashion as those for the major, with 210 Advanced College Writing in place of one literature elective at that level.

Four additional courses in writing, at least two at the 300/400 level, selected from the following. Three semester hours of 300 Teaching Assistant in Composition may be counted toward the emphasis:

- 200 Business Writing
- 205 Journalism
- 213 Introduction to Creative Writing
- 214 Making Literature
- 250 Topics in Creative Writing
- 300 Teaching Assistant in Composition
- 305 Advanced Journalism
- 310 Creative Writing - Nonfiction
- 311 Creative Writing - Fiction
- 312 Creative Writing - Poetry
- 411 Fiction Workshop
- 412 Poetry Workshop
- 295, 395, 495 Internship

Grades for all courses taken in English above 111 are used to calculate the average in the major for Departmental Distinction.

Requirements for the minor in Literature: Minimum of six courses, distributed as follows:

One gateway course

- 190 Introduction to Literature and Criticism

One 300-level course in Literature before 1800:

- From list under major in Literature, plus 329.

One 300-level course in Literature after 1800, selected from:

- 322, 323, 326, 355, 360, 365, 370, 372, 373, 374, 375, 377, 378, 380, 382, 384, and 386

- Also ENGL 350, 367, 368, 369, and 450 in literature after 1800

Three additional Literature courses to be selected in consultation with student's advisor

Requirements for the minor in Writing: Minimum of six courses, distributed as follows:

Five courses in Writing:

- 210 Advanced College Writing

- Four additional courses in writing, at least two at the 300/400 level, selected from the list under the major with an emphasis in writing

One Literature course above the 100 level

With the exception of English 489, only courses bearing 3 or more semester hours of credit satisfy requirements in the major, minor, and emphasis.

Environmental Chemistry

Hartwick College offers an American Chemical Society (ACS) approved B.S. degree in Environmental Chemistry. The word environment in its broadest sense means an individual's or community's surroundings. Environmental Chemistry is thus the study of the composition and changes in composition of our surroundings. Environmental Chemistry applies chemistry to a wide variety of situations including, but not limited to, the broad categories of natural water, air, and soil chemistry; water, air, and soil pollution; pollution remediation; water, waste water, air, and hazardous waste treatment; pollution prevention (also known as green chemistry); toxicology; and resource availability and use. Some specific issues you may be familiar with that fall under these broad categories include ozone depletion, global warming, indoor air pollution, availability and use of fossil fuels, alternative energy sources, acid rain, and many others.

Requirements for a major in Environmental Chemistry include courses in Biology and/or Geology as well as in chemistry and auxiliary courses in math and physics. A required senior research project involves laboratory, library, and possibly field work, interpretation of data, and oral and written reports of the results.

In addition to the independent research required for their Senior Project, Environmental Chemistry majors often collaborate with faculty on ongoing research and/or complete internships with state and federal agencies, environmental consulting firms, or other universities.

Hartwick's major in Environmental Chemistry prepares students for entry-level positions in consulting firms, industry, state and federal government agencies, and research laboratories or for entry into graduate school to pursue a master's or doctoral degree.

Faculty

Zsuzsanna Balogh-Brunstad, Richard L. Benner

Courses

315 Environmental Chemistry (3 credits) (3 one-hour lectures weekly). This course examines the transport, reactions, and effects of chemical species in aquatic, terrestrial and atmospheric environments. Topics will include the application of chemical principles to current environmental problems such as: acid precipitation, water pollution and treatment, hazardous waste treatment, soil chemistry, pesticide behavior, global warming and photochemical smog formation.

Prerequisite: CHEM 108 or 109. (LAB)

315L Environmental Chemistry Lab (2 credits) (1 four-hour laboratory weekly). The laboratory introduces basic procedures in environmental monitoring (air, water, and soil sample collection and analysis). The laboratory must be taken concurrently with 315 Environmental Chemistry.

490 Senior Thesis Research Fall (1 credit) The first part of a year-long research project. The student must develop an original research idea into an oral and written research proposal to be approved by the chemistry department and must begin working on the research project.

490 Senior Thesis Research January (4 credits) A full-time research course. Each student shall work full time on a senior-level laboratory research project developed in collaboration with a member of the chemistry faculty.

490 Senior Thesis Research Spring (1 credit) The third part of a year-long research project. The student must complete the experimental portion of the project, interpret data collected, and report the findings of the research orally in an open forum and as a written thesis.

Environmental Chemistry

**Requirements for the A.C.S.-approved environmental chemistry major:
107, 108 General Chemistry I, II (with lab) or 109 Accelerated General Chemistry**

Eight core courses:

- 201, 202 Organic Chemistry I, II (with lab)
- 203 Analytical Chemistry (with lab)
- 210 Inorganic Chemistry (with lab)
- 303, 304 Physical Chemistry I, II (with lab)
- 404 Instrumental Methods (with lab)
- 405 Biochemistry I (Biochemistry 405L is optional)

Two courses selected from:

- 303 Ecology (BIOL)
- 305 Hydrology (GEOL)
- 308 Aquatic Ecology (BIOL)
- 415 Microbial Ecology (BIOL)
- 435 Behavioral Ecology (BIOL)

ENCH 315, 315L Environmental Chemistry and Environmental Chemistry Lab

ENCH 490: Senior Thesis Research on an environmental topic – 6 credits total

Two courses in Mathematics

121, 233 Single Variable, Multiple Variable Calculus (MATH)

Two courses in Physics

201, 202 General Physics I, II (PHYS)

Requirements for a Minor in the Environmental Science and Policy Program:

Please see page 86 for the requirements for this minor.

Grades for all courses taken in Environmental Chemistry, Chemistry, Biochemistry, Biology, and/or Geology are used to calculate the average in the major for Departmental Distinction (MATH 121, 233, and 235 and PHYS 201 and 202 are not included).

Environmental Science and Policy Minor

Sustaining the natural world and the human condition will require an active, engaged, and informed population to address the critical environmental problems we face. Our program of study in Environmental Science and Policy focuses on educating broadly trained professionals who can apply critical, creative, and interdisciplinary thinking to understanding and generating sustainable solutions to local and global problems. Environmental science and policy professionals must approach problems from many perspectives and require an educational background that is firmly rooted in the physical and life sciences as well as in economics, political science, social sciences, and the humanities. Our program is designed to provide students with the theoretical and experiential foundation that prepares them for either graduate school or employment in environmental occupations in both public and private sectors. The program of study begins with an introductory course, followed by a selection of courses chosen from a wide variety of offerings including Anthropology, Biology, Chemistry, Economics, Geology, History, Physics, Political Science, Philosophy, and other relevant courses. Particular departments also may advise students to take courses relevant to the minor as part of the major requirements (see description of individual major departments).

Opportunities for students in the program include internships, off-campus courses, directed and independent studies, conferences, and summer research. Off-campus courses, in particular, offer unique and valuable opportunities for students interested in environmental issues, and include studies in the Bahamas, Costa Rica, Hawaii, and Madagascar. In addition to the curriculum, our location on the western edge of the Catskill Mountains near the headwaters of the Susquehanna River is favorable for field-based study of many ecosystems. Students in the program benefit from the Robert R. Smith Environmental Field Station on Hartwick's Pine Lake Environmental Campus, which has access to over 2,000 acres of mixed deciduous forests, lakes, swamps, and streams and is only eight miles from the main campus. Pine Lake is the site of very active student and faculty environmental research, field and laboratory courses, leadership training, and summer research scholarships, and includes residential housing for 30-35 students. Students interested in the minor should consult with Brian Hagenbuch, Coordinator of the ES&P program and Director of the Pine Lake Institute for Environmental and Sustainability Studies.

Environmental Science and Policy

Requirements for the minor in Environmental Science and Policy: A total of six courses (minimum of 18 credits) distributed as follows:

1. Required Foundation Course (choose one)

SCIE 100: Introduction to Environmental Science

GEOL 110: Environmental Geology

2. Three Science Courses (We strongly recommend that BIOL 303 Ecology be chosen as one of the three courses by science majors. At least one course must be outside the major. Only one of these three courses may be an off-campus course. Some examples are:

For Science majors: (these courses are also accepted for Social Science and Humanities majors)

BIOL 203: Concepts in Biology: Energy Resources

BIOL 240: Island Biogeography

BIOL 241: Natural History of Costa Rica

BIOL 243/244: Madagascar: Culture, Conservation, and Natural History

BIOL 303: Ecology

BIOL 308: Aquatic Ecology

BIOL 318: Evolution

BIOL 403:	Biodiversity and Conservation
BIOL 415:	Microbial Ecology
CHEM 203:	Analytical Chemistry
CHEM 303:	Physical Chemistry
ENCH 315:	Environmental Chemistry
GEOL 200:	Oceanography
GEOL 202:	Meteorology
GEOL 275:	Geology and Natural History of Hawaii
GEOL 302:	Surficial Geology
GEOL 305:	Groundwater Hydrogeology
GEOL 416:	Geochemistry
PHYS 314:	Thermodynamics

For Social Science and Humanities majors: (these courses may or may not be accepted for science majors)

BIOL 101:	Biology in Practice: Environment theme topic
BIOL 235:	Ecology and the Environment
BIOL 240:	Island Biogeography
BIOL 241:	Natural History of Costa Rica
BIOL 243/244:	Madagascar: Culture, Conservation, and Natural History
CHEM 102:	Chemistry in Today's Society (lab)
GEOL 110:	Environmental Geology
GEOL 200:	Oceanography
GEOL 202:	Meteorology
GEOL 275:	Geology and Natural History of Hawaii

3. Two Social Science or Humanities courses outside the major. Social Science and Humanities majors must take at least one course at the 300 level or higher. Some examples are:

ANTH 341:	Cultural Ecology
ANTH 350:	Environmental Anthropology
ECON 101:	Economics of Sustainability
ECON 102:	Resources and Growth
ECON 318:	Environmental Economics
HIST 240:	American Environmental Relations
HIST 241:	Environmental Injustice
HIST 271:	Changes in the Land
INTR 150:	Idea and Practice of Sustainability
INTR 310:	America's Energy Addiction
PHIL 271:	Values and Society
PHIL 336:	Ethics
POSC 290:	Environmental Politics and Policy
POSC 325:	Global Environmental Governance
RELS 346:	Religion and Nature

Each semester, many disciplinary Topics courses (150, 250,350) are offered. Topics courses may substitute for the above requirements if they have an environment-related theme.

Credit for independent studies, internships, etc. may be arranged with approval from the coordinator of the minor.

French

To learn a new language is to open a door to the ideas and insights of another culture and to fresh insights into one's own language and culture. Hartwick's French program, offered through the Department of Modern and Classical Languages, introduces students to the rich Francophone world through courses in French literature and civilization as well as in French language. Whether students pursue courses in French as part of their liberal arts and sciences education, or complete a major or a minor program in the language, they gain a breadth of perspective and useful skills that will prove valuable in the coming years.

Students who have never studied French should register for Elementary French 101; French 101, 102 and 201 constitute the introductory sequence. After consulting with the French staff, students majoring in other disciplines may enroll in any French course for which they are qualified.

Students who wish to pursue an in-depth study in French may major solely in French, or combine it with a second major in another discipline. French majors also may earn teacher certification in the language. Students with a strong interest in more than one discipline also might choose to combine a major in that discipline with a minor in French. Requirements for the major, as well as the minor, in French are designed to assure that students receive a balanced program of courses in language, culture and civilization, and literature. Course choices within these areas, and the need to select additional courses to complete their programs, offer students the flexibility to tailor their studies to their interests and career plans.

Because study abroad enhances and reinforces classroom learning, allowing students to use their language skills and experience the culture firsthand, the French faculty also recommends that all students majoring or minoring in the language participate in at least one study-abroad program. The department conducts a January Term program in France every year; students also may enroll in affiliated study-abroad programs administered by other colleges.

Language graduates are prepared for a range of career opportunities in a variety of fields, as well as for graduate and professional study. Recent Hartwick graduates with a major in French are employed in careers in banking, teaching, international relations, import-export business, government, travel, and translation.

An agreement with the University of Nice-Sophia Antipolis has in recent years allowed one graduating French major per year to spend a year in Nice as a paid lecturer in English.

Faculty

Mark Wolff

Courses

101, 102 Elementary French I and II (3 credits) The Elementary French I and II sequence is designed to help students develop basic communicative skills in listening, speaking, reading, and writing while introducing students to the culture of France and the francophone world.

Prerequisite: consult with French staff except where student has had absolutely no prior French, in which case there is no prerequisite. (101 LN1, 102 LN2)

105 Intensive Elementary French (4 credits) This course is offered during January Term in Tours, France. It is designed to help students develop basic communicative skills in listening, speaking, reading, and writing while introducing students to the culture of France and the francophone world. Prerequisite: placement test, unless student has had absolutely no prior

French. (LN3: this course alone fulfills the LAiP language requirement; no other course is required) (OCL, EL)

160 French Civilization (3 credits) An introduction to the civilization, history, culture, art, architecture and geography of France. Recommended course for students participating in an off-campus program to France. Taught in English. (LNC)

201 Intermediate French I (3 credits) This course offers students the opportunity to reinforce and expand previous learning in vocabulary, grammar and comprehension. Unlike earlier courses, this one focuses upon giving the student an idiomatic grasp of French. Oral practice, language laboratory. Prerequisite: FREN 102 or equivalent. (LN3)

202 Intermediate French II (3 credits) This course continues the focus upon the fluency and idiomatic use of French. Selected readings will be used to study literary tenses and to increase vocabulary. The course will include conversations, discussions, compositions to improve language skills and comprehension. Prerequisite: FREN 201 is normally taken before 202.

NOTE: All courses beginning with 230 and after have the prerequisite of FREN 201, 202 or their equivalent.

205 Intensive Intermediate French (4 credits) This course is offered during January Term in Tours, France. Students learn to create ways through oral and written communication to handle a wide variety of topics in social, cultural, and historical contexts. Prerequisite: placement test. (LN3, OCL, EL)

210 Conversation and Composition (3 credits) A beginning conversation course to develop fluency, vocabulary and pronunciation. Where needed, occasional grammar review. Conversation topics will relate to French life and culture. Some use of language laboratory. A useful preparation for off-campus programs in French-speaking locations. Taught in French. Prerequisites: FREN 202 or permission of instructor.

212, 215, 218 Literature courses taught in English Each of these may be repeated for credit when offered with a different topic. Offered on an occasional basis.

212 Literary Movements (3 credits) An in-depth study of a particular movement, period or school in French literature. Possible topics: the classical theatre, surrealism, existentialism, etc. Taught in English. May be repeated for credit. When repeated, this course bears the numbers 213 or 214.

215 Major Authors (3 credits) A study of representative works by one or more authors. Possible topics: Camus and Sartre, Voltaire and Rousseau, Malraux, Stendhal, Montaigne, etc. Taught in English. May be repeated for credit. When repeated, this course bears the number 216 or 217.

218 Themes or Genres (3 credits) A study of a recurrent theme or specific genre. Possible topics include: Novels of Adventure and Imagination, Psychological Novels, Philosophical Tales, The Short Story, Selected Essayists, The Literature of Commitment, etc. Taught in English. May be repeated for credit. When repeated, this course bears the numbers 219 or 220.

235 French for Business (3 credits) A study of French business practices, commercial writing and terminology. Readings, videos and class discussion will address French commerce and business etiquette, France's role in the European Union and its attempts to face future economic challenges. Taught in French. Prerequisite: FREN 202 or permission of the instructor. Offered on an occasional basis.

285 French Term Abroad (4 credits) The French term abroad is usually offered on alternate years during January Term.

302 Francophone Cultural Analysis (2 credits) French-language section accompanying Language 301: Introduction to Cultural Analysis. Required for majors and minors. (OCL, LNC, EL)

305 Intensive Advanced French (4 credits) This course is offered during January Term in Tours, France. Students will develop skills in manipulating more sophisticated grammar and vocabulary to support opinions on a variety of cultural, social and historical issues. Prerequisite: placement test. (OCL, EL, LN3)

321, 322 Survey of French Literature (3 credits) A chronological introduction to the major authors, movements, genres and themes in French literature. Taught in French. These courses should, if possible, be taken in sequence. Prerequisite: FREN 202.

321 The Middle Ages, The Renaissance and the 17th and 18th Centuries (3 credits)

322 The 19th and 20th Centuries (3 credits)

341, 344, 347 Literature courses taught in French (3 credits) These courses correspond to FREN 212, 215, 218. As with other courses for the major readings, papers and exams are in French. Each of these may be repeated for credit when offered with a different topic. Taught in French. Prerequisite: FREN 202.

341 Literary Movements (3 credits) An in-depth study of a particular movement, period or school in French literature. Possible topics: the Pléiade, the classical theatre, romanticism, realism and naturalism, symbolism, surrealism, existentialism, etc. Taught in French. May be repeated for credit. When repeated, this course bears the number 342, 343.

344 Major Authors (3 credits) A study of representative works by one author: Rabelais, Montaigne, Racine, Molière, Voltaire, Diderot, Stendhal, Balzac, Flaubert, Zola, Gide, Claudel, Proust, Sartre, Camus, Beckett, etc. Taught in French. May be repeated for credit. When repeated, this course bears the numbers 345 or 346.

347 Themes or Genres (3 credits) A study of a recurrent theme or a specific genre. Possible topics are: Novels of Adventure and Imagination, Psychological Novels, Philosophical Tales, The Short Story, Selected Essayists, The Literature of Commitment, Exile and Alienation in 20th Century Fiction, etc. Taught in French. May be repeated for credit. When repeated, this course bears the numbers 348 or 349.

348 Modern French Theatre (3 credits) This course will explore representative works in French theatre from the end of the 19th century, with an emphasis on the influence of avant-garde movements during the early 20th century. Students will read works by Jarry, Artaud, Sartre, Ionesco, Beckett, Genet, and Arrabal. The course will emphasize skills in close reading and dramatic interpretation of plays. Students will write several short papers and perform selected scenes. Taught in French.

400 Advanced Literary Studies (3 credits) A reading, discussion and literary analysis course for seniors and other highly qualified students. This course will focus on one or more authors, a topic or period. Taught in French. Prerequisites: FREN 321 and 322. Offered on an occasional basis.

485 French Term Abroad (4 credits) The French term abroad is usually offered on alternate years during January Term. (OCL, LNC)

490 Senior Project (3 credits) Required of all majors. A thesis or other appropriate work that demonstrates the student's proficiency in French.

French

Requirements for the major:

Students must earn a total of 31 credits from courses at the 200 level or higher. Literature in translation courses (FREN 212, 215, 218) are excluded.

Any credits earned off-campus as part of an affiliated study abroad program approved by the department will count toward the major, regardless of level.

Students must complete FREN 490, Senior Project in French.

Requirements for the minor:

Students must earn a total of 22 credits from courses at the 200 level or higher. Literature in translation courses (FREN 212, 215, 218) are excluded.

Any credits earned off-campus as part of an affiliated study abroad program approved by the department will count toward the minor, regardless of level.

Grades for all courses taken in French are used to calculate the average in the major for Departmental Distinction.

Geology and Environmental Sciences

Geology includes the study of Earth's crust, interior, water, atmosphere, magnetic fields, and gravitational fields. Along its own unique concepts, geology incorporates and integrates aspects of the physical, chemical and biological sciences. It is also concerned with the Earth's history and the processes operating in and on the Earth, including the formation of its surface features, and the erosion and deformation of this surface. The more that is known about the Earth's materials, formation and structure the better we can appreciate, use and preserve our planet. This understanding is at the heart of many economic, social and environmental issues such as oil and mineral exploration, safe disposal of industrial and municipal wastes, preservation of groundwater supplies, and the choice of sites for dams, nuclear power plants and high-rise buildings. These issues will become more complex as demands on Earth and its resources increase.

In addition, study in the discipline can help students develop reasoning and analytical skills that can prove useful throughout their lives. Geology is an inductive science that requires creativity—geologists develop hypotheses, sort through the available data, and determine the most logical hypothesis supported by that data. As they look at the evolution of Earth (its life and its environments, the formation of microscopic crystals, the global movement of continents) over millions of years—they are constantly asking: What were the conditions when this occurred? Why did it happen? How?

The study of geology as part of a broader liberal arts and sciences education prepares students to become better informed citizens, able to make reasoned judgments that will guide the regulation, protection and development of our environment in the coming century. In addition, a minor in Geology can complement major study in a variety of other disciplines, from Chemistry to Political Science.

Courses required for a major in Geology are selected to give students a broad background in the field. Introductory courses cover the origin, composition, structure and history of the Earth. In subsequent courses, students study: 1) minerals, 2) igneous and metamorphic rocks, 3) fossils and the sedimentary rocks in which they are found, 3) the deformation of rocks, 4) the flow dynamics and chemistry of groundwater, 5) the physical and chemical effects of surface pollution, and 6) the way in which data are gathered and recorded in the field. An understanding of basic concepts necessary for work in geology is gained through required courses in chemistry, physics, and calculus.

During the junior year, majors present to the department study proposals for the required Senior Thesis project (490). The project typically includes both laboratory and field work. Majors are encouraged to go beyond the minimal requirements, taking additional courses in chemistry, computer science and mathematics. Students interested in teaching secondary school earth science can obtain certification by fulfilling requirements for the Geological Education Track combined with a program of courses from the Education Department.

Careers are available in several areas for students with undergraduate degrees in geology. Graduates of the program are typically employed at the entry level of the energy, mineral, and environmental science industries, as well as some government agencies. However, supervisory- and research-level employment is typically available to individuals with a graduate degree. Consequently, some geology majors at Hartwick go on to attend graduate school in the geosciences.

Faculty

David Griffing, Chair; Zsuzsanna Balogh-Brunstad; Eric Johnson; Robert Titus

Courses

107 Physical Geology (4 credits, 3 one-hour lectures weekly plus one 1 two-hour lab weekly, one weekend day field trip) Origin, composition, and structure of Earth. Also covers the rock cycle, identification of common minerals and rocks, formation of igneous, sedimentary, and metamorphic rocks, determination of rock ages, plate tectonics, local geology, earth resources, and climate change. (LAB)

108 Historical Geology (4 credits, 3 one-hour lectures, 1 two-hour lab weekly) A history of Earth since its origin. Topics include the origin and development of the continents, the origin and evolution of life, the appearance of evolution of man, and major climate changes and their effects on man. (LAB)

109 The Global Environment (4 credits, 3 one-hour lectures, 1 two-hour lab weekly) This course focuses on the whole environment, from the center of the Earth's core to the top of its atmosphere. We examine the scientific aspects of processes thought to be responsible for global change, with emphasis on interactions between the lithosphere, hydrosphere, atmosphere and biosphere. Topics include the history of global change from the formation of the Earth to the present, the magnitude and rate of change, the processes of plate tectonics and the physical environment as driving mechanisms for change, global catastrophes as catalysts for change, and human intervention and how it affects the rate and magnitude of change. (LAB)

110 Environmental Geology (3 credits, 3 one-hour lectures) This course is a general survey of the role geology plays in the environmental sciences. A description of the major geologic hazards, earthquakes, volcanoes, landslides, erosion, etc. An introduction to hydrogeology from the point of view of water use problems. A discussion of energy, mineral and soil resources. Problems of air, soil, and water pollution.

200 Oceanography (3 credits, 3 one-hour classes weekly). This non-lab course is intended for both introductory-level science students and science majors. The course covers the complex physical, chemical, and biological interactions involving Earth's oceans using an "Earth Systems" approach. Topics will be covered through a mixture of lecture, in-class exercises, and student presentations. Upon successful completion of this course, students will be able to: 1) develop simple models of Earth systems; 2) evaluate the relationships between physical, chemical, and biological components of the Ocean System; 3) predict how natural disturbances and human impact will affect the system; and 4) be able to evaluate and critique ocean-related news stories from a scientific perspective. No prerequisites.

202 Meteorology (4 credits, 3 one-hour lectures, 1 two-hour lab weekly) This course covers the structure and dynamics of the Earth's atmosphere. Topics include the development and prediction of weather systems, thermodynamics of atmospheric stability, and dynamics of global climate change. Students will learn to use the Hartwick College weather station to collect and analyze atmospheric data and use these data along with forward atmospheric modeling programs (NCAR, NWS) to construct forecasts.

203 Planetology (3 credits, 3 one-hour classes weekly) This course covers the geology, chemistry, and physics of the sun, planets, meteorites and moons of our solar system. The course focuses on the origin and evolution of the solar system and the geologic development of the planets and their moons. Hands-on lab activities (some of them outdoors) explore the size of the solar system, the role of plate tectonics and volcanism in the development of moons and planets, and the possibility of discovering life on other worlds. Offered during January Term.

205 Paleontology (4 credits, 2 two-hour classes weekly) Introduction to the morphology, paleontology, and evolution of fossil organisms with emphasis on the invertebrates. (LAB)

208 Historical Geology (4 credits, 3 one-hour lectures, 1 two-hour lab weekly) A history of Earth since its origin. Topics include the origin and development of the continents, the origin and evolution of life, the appearance of evolution of man, and major climate changes and their effects on man. (LAB)

220 GIS Digital Geologic Mapping (2 credits, 2 one-hour classes weekly). This course is a practical treatment of the application of Geographic Information Science (GIS) to geologic mapping using a variety of software platforms. Students will learn to collect field data and translate that data into the GIS environment. Students will learn to manipulate USGS digital elevation data files to create base maps and overlay geologic data onto these maps. Permission of instructor required.

227 Experiential Field Studies (1 credit, 1 one-hour weekly during pre-trip period, plus one 4-8 day field trip excursion). This course is for majors, who attend a yearly department field excursion. Students will be evaluated on their participation in pre-trip research exercises, a brief group presentation, and the quality/content of field journal entries. Permission of instructor/excursion leader required.

230 Forensic Geology (3 credits, 3 one-hour classes weekly) This non-lab course will cover scientific investigative techniques involving trace evidence collection and analyses of Earth materials. During the duration of the course students will be trained on how to analyze geologic evidence (soil samples, rock fragments, and paint pigments) and maintain a chain of custody in an effort to solve hypothetical criminal cases. Students in this course will use petrographic microscopic, X-ray diffraction and X-ray fluorescence analyses, along with Ground Penetrating Radar to collect evidence and then present this evidence in a courtroom setting. In addition to the hands-on analyses, students will study case files where geologic evidence was used to solve real crimes to learn how these data were applied and the forensic tools used to obtain this evidence. Permission of instructor required.

275 Off-Campus Field Studies (4 credits, January Term) Field courses include study of the geology, geography, and natural history of destinations such as the Bahamas, Hawaii, Texas, and Switzerland. All aspects of Earth Science may be covered during these trips including surficial geology, geomorphology, sedimentology, petrology, mineralogy, structural geology, climatology, hydrology, and geochemistry. These trip-based courses offer exceptional opportunities to practice field techniques in all areas of geology. Prerequisite: Permission of instructor. GEOL107 is strongly recommended.

288 Geomorphology (3 credits, 5 two-hour lectures weekly, January Term) A study of the classification and development of landforms. The landforms of various climatic belts will be discussed and compared. Particular attention will be paid to glacial geomorphology including a general discussion of glacial and Pleistocene paleoclimatology.

302 Surficial Geology (4 credits, 2 two-hour classes weekly) This course focuses on the modern environmental science of the Earth's surface. Many of the environmental problems faced by a technological society involve surface geological materials. The course addresses the needs of the geology student preparing for a career in the environmental sciences. The course emphasizes major elements of glacial geology and soils science. In addition, there is considerable discussion of geological engineering problems associated with erosion and unstable slopes.

304 Tectonics (3 credits, 3 one-hour classes weekly) This course is intended for Geology majors. The course covers details of plate tectonics; the single most important theory to be established in the geological sciences in the past 50 years. The course will be conducted in a seminar style with limited lecture and maximum individual participation. We will investigate most of the major topics in tectonics by examining specific modern and ancient examples. There will be a strong component of regional geology in this course, yet many of the regions are ones with which you are not yet familiar. Some of the readings are designed with undergraduates in mind. Other readings are directed at research geologists and will take some extra effort. In the process,

students will gain experience in analyzing and critiquing scientific arguments and writing styles. Prerequisites: GEOL 107 or 110, GEOL 208.

305 Groundwater Hydrology (4 credits, 3 one-hour lectures weekly) (One three-hour lab weekly) The course covers the geological and physical aspects of hydrology. Study of the hydrologic budget, hydraulics and material properties of geologic materials are integrated to develop the concepts of groundwater formation and movement. Groundwater contaminant transport and treatment are introduced. Use of practical problem-solving techniques with quantitative methods is stressed. Offered alternate years. Prerequisites: MATH 233 or permission of instructor. (LAB)

306 Mineralogy (4 credits, 3 one-hour lectures plus one 3 hour lab weekly, one weekend field trip) Physical properties, chemical properties, crystal structure, and geological occurrences of minerals. Introduction to optical properties of minerals and modern techniques of identifying and analyzing mineral chemistry, structure, and surface properties. Offered alternate years. Prerequisites: Introductory Geology course and CHEM or permission of instructor.

307 Petrology (4 credits, 3 one-hour lectures, 1 three-hour lab weekly, weekend field trip) The origin, classification and interpretation of igneous and metamorphic rocks. Emphasis on tectonic settings and processes by which various rock types form, and the study of origins and evolution of rock suites through observation, chemical analysis, basic thermodynamics and phase diagrams. Laboratory emphasizes thin section and hand sample petrography. Offered alternate years. Prerequisites: GEOL 206, CHEM 108 or 109. MATH 121 recommended. (LAB)

309 Stratigraphy and Sedimentation (W) (4 credits, 3 one-hour lectures, 1 four-hour field trip each week) Study of sedimentary rocks and their use in correlation and analysis of sedimentary processes. (LAB)

311 Field Geology (4 credits, 1 three-hour lecture, 1 four-hour lab weekly, 1 four-day field trip) Teaches the field techniques for collecting geologic data using Brunton compass, GPS, and surveying equipment. Covers an introduction to data handling using stereographic projections, rose diagrams and GIS software. Most lectures and labs will be held outdoors. A complete geologic map and written report are required (LAB).

406 Petroleum Geology (4 credits, 3 one-hour lectures & one 3 hour lab weekly) This course is intended for Geology majors at the junior or senior level and covers the formation, maturation, and accumulation of petroleum resources. Exploration for petroleum (oil and gas) using seismic, gravity, magnetic, petrophysical log interpretation, and geochemical techniques will be explored in depth. In addition, this course will cover petroleum production and the basic economics of a petroleum play.

Prerequisites: GEOL 309, 408, CHEM 108.

408 Structural Geology (4 credits, 3 one-hour lectures, 1 three-hour lab weekly, 1 three day field trip) Covers the dynamics and deformation of the Earth with emphasis on Tectonic processes responsible for mountain building. Students learn techniques used to study and interpret deformed rocks both in the field and in the laboratory. Prerequisites: GEOL 107, MATH 121 (LAB).

416 Geochemistry (4 credits, 3 one-hour lectures weekly. 1 three-hour lab weekly) This course samples many aspects of geochemistry including biogeochemical cycles, aqueous geochemistry, carbonate systems (such as surface waters and caves), oxidation-reduction equilibria (such as acid mine drainage), weathering and isotope geochemistry. Emphasis will be placed on the application of thermodynamic principles. Offered alternate years. Prerequisites: MATH 121, CHEM 107, 108, or CHEM 109, or permission of instructor. GEOL 107 and MATH 233 recommended.

450 Topics in Geology (3 credits) Seminars or tutorials in geological topics selected according to the interests and needs of students.

489 Pre-Thesis Research (1 credit, 1 one-hour meeting weekly) This course is intended for senior Geology majors in the process of organizing and beginning their thesis research projects. This course requires independent guided research with one one-hour meeting per week or the equivalent. Student achievement will be evaluated by: 1) weekly progress on the research and by

2) the quality/content of a draft of the project introduction (featuring the problem and purpose of study, geologic background, previous study and methods sections), as well as an initial project bibliography. Permission from the faculty project advisor required.

490 Senior Thesis (4 credits) Required project arranged individually for all majors.

Geology and Environmental Sciences

Requirements for the major: A minimum of 16* courses, distributed as follows:

Core Curriculum

Seven courses in Geology:

- 107 Physical Geology or 110 Environmental Geology
- 208 Historical Geology
- 306 Mineralogy
- 309 Stratigraphy and Sedimentation
- 311 Field Geology or off-campus Field Camp
- 408 Structural Geology
- 490 Senior Thesis Project

In addition, a student must choose one of the following program tracks, depending on the student's future plans:

Track I Geology

- 307 Petrology
- 416 Geochemistry
- One elective in geology; course must be at the 200 level or higher.
- 107, 108 General Chemistry or 109 Accelerated General Chemistry (CHEM)*
- 141, 142 Principles of Physics I, II or 201, 202 General Physics I, II (PHYS)
- 121, 233 Single and Multiple Variable Calculus (MATH)

Track II Environmental Geology

- 305 Hydrogeology
- 416 Geochemistry
- One elective in geology; course must be at the 200 level or higher.
- 107, 108 General Chemistry or 109 Accelerated General Chemistry (CHEM)*
- 141, 142 Principles of Physics I, II or 201, 202 General Physics I, II (PHYS)
- 121, 233 Single and Multiple Variable Calculus (MATH)

Track III Geological Education †

- 109 The Global Environment (GEOL), or 230 Introduction to Environmental Science, or 235 Ecology of the Environment (BIOL)
- 202 Meteorology
- 307 Petrology
- 163 Astronomy (PHYS)
- 107, 108 General Chemistry or 109 Accelerated General Chemistry (CHEM)*
- 141 Principles of Physics I or 201 General Physics I (PHYS)
- 121 Single Variable Calculus (MATH)
- One field practicum (student teaching)

* Course load is reduced by one if 109 Accelerated General Chemistry is taken instead of General Chemistry 107, 108.

† The student also must complete the Education program to the satisfaction of the Education Department.

Requirements for the minor: Minimum of seven courses, distributed as follows:

Five courses in Geology, at least three at 200 level or above

One of the following:

107, 108 General Chemistry or 109 Accelerated General Chemistry (CHEM)
140, 141 Principles of Physics I, II or 201, 202 General Physics 1, 11 (PHYS)
235 Ecology and the Environment (BIOL)

One course in Mathematics or Computer Science

108 Statistics, 120 Pre-Calculus, 121 Single Variable Calculus (MATH), or
120 Introduction to Programming (CISC)

Grades for all courses required for the major (including those from other departments) are used to calculate the average in the major for Departmental Distinction.

German

German, Austrian, and Swiss contributions to the various sciences, arts, literature, music, archaeology and philosophy demonstrate the significance of German studies in a liberal arts and sciences curriculum. The German program, offered by the Department of Modern and Classical Languages, provides students with a range of opportunities from general introductory experience in the German language and/or culture, to in-depth concentration in language and literature.

Culture and literature courses are offered in English as well as the regular literature courses taught in German, enabling interested students who have had little or no language preparation to gain some insight into German cultural and literary accomplishments. Students majoring in other disciplines may further enrich their academic programs and expand their career options by completing a minor in German.

Course requirements for the major in German assure that students receive a broad background in German language, literature and culture. The major culminates in the senior project, a thesis or other appropriate work which demonstrates the student's proficiency in the language.

Students are encouraged to go beyond the minimal requirements in German, and to develop an academic program that enriches their knowledge and understanding of the language and culture. Along with additional courses in the discipline, it is suggested that majors begin the study of another foreign language in addition to German, and take a basic course in philosophy and courses on Shakespeare and English literature. In addition, students planning to enter the teaching profession are required to take Composition and Grammar Review (306) as part of their preparation in German, while for students considering a career in business, German in Commerce (235) is highly recommended.

While not mandatory most German majors at Hartwick spend at least a semester, if not an entire year, abroad. The department regularly offers a program in Vienna, Austria, open to other interested students as well as majors, where students become immersed in a German-speaking environment. The College also is a cooperating institution of Central College, which administers a Junior Year Abroad program.

Hartwick graduates with a major in German have gone on to do graduate work at various institutions, including as Fulbright Scholars at universities in Germany and Austria. They are employed as high school teachers, and have entered the world of business and government in such positions as translators and writers, and as employees of import-export firms, banks, travel firms and branches of the German and Austrian government.

Faculty

Wendell W. Frye

Courses

101 Beginning German I (3 credits) This course presupposes no or minimal preparation in the German language. Basic grammatical concepts are introduced, elementary readings are assigned and vocabulary is stressed. Simple conversational patterns are practiced, and aspects of German life and society are treated. No prerequisite. (LN1)

102 Beginning German II (3 credits) This is a continuation of the first semester of basic German. The remainder of the basic grammatical concepts are treated. Readings of increasing difficulty are undertaken and vocabulary building is stressed. More complex conversational

patterns are practiced, as well as having further discussions of German life and society.

Prerequisite: GERM 101 or its equivalent. (LN2)

160 Austro-German Culture (3 credits) This course is a brief survey of the salient aspect of Austro-German culture. The historical development of both Prussia and the Hapsburg Monarchy are touched upon. The major movements in architecture and music are treated as well as some of the principal literary works. *The Nibelungenlied*, *Adventures of a Simpleton*, *Faust I*, and *Indian Summer* will be read in their English translation. No prerequisite. Taught in English. (Regular preparatory course for the Vienna Program.) (LNC)

161 20th Century Germany and Austria (3 credits) This course will provide an overview of the major political, social and artistic developments of 20th century Germany and Austria. Within this framework, the works and lives of four exemplary authors—Kafka, Hesse, Brecht, and Boll—will be examined in their social and political context. *The Trial*, *Mother Courage*, and *The Lost Honor of Katharine Blum* will be read in English translation. Taught in English. (LNC)

214 Intermediate German (3 credits) This is a course designed to bridge the gap between the second semester of Beginning German and several intermediate level courses. The remaining grammatical concepts are covered. Students further increase active and passive vocabularies and develop their ability to communicate both orally and in writing. A considerable amount of time will be given to readings. Issues and problems of German-speaking countries will be taken up again. (LN3)

215 Readings in German (3 credits) This is an intermediate-level course. Selected readings taken up with particular emphasis on vocabulary expansion of idiomatic expressions. Grammatical points will be reviewed as the need arises. Prerequisite: GERM 214 or its equivalent.

220 Introduction to Literature (3 credits) This is the intermediate level course that introduces the student to the periods and genres of German literature. Topics of discussion will be the salient characteristics of the various periods from the Middle Ages to the present, as well as the Roman, Lyrik, Novelle and Drama. Selected readings will be taken from each period. Required for German majors and minors. Prerequisite: GERM 214.

222 Scientific German (3 credits) This course deals with basic readings in the various natural sciences. A reading knowledge and the ability to translate original articles are emphasized. The basic vocabulary of each discipline will be treated, and each student is expected to complete a translation of an original work of about five pages in his or her science. Prerequisite: GERM 214. Offered alternate years.

235 German for Commerce (3 credits) This course deals with readings in the commercial writings in the German language. Practice in writing business documents in German as well as basic conversation will be undertaken. Particular attention will be given to the esoteric vocabulary of commerce. Prerequisite: GERM 214. Offered alternate years.

260 The German Novel in Translation (3 credits) This course treats major works of the German novel in translation such as works by Grimmelshausen, Novalis, Stifter, Mann, Kirst, Remarque, Boll, Grass, Hesse. Particular attention is given to the concept of the Bildungsroman. Taught in English. No prerequisite. Offered alternate years.

261 The Oral Narrative in Germany (3 credits) This course is a treatment of the folktales and legends in German-speaking lands. Primary emphasis is given to the work of the Brothers Grimm and the theories of the origin of the Marchen. The regional role of the legend and its historical significance will also be discussed. Taught in English. No prerequisite. Offered alternate years.

285 German Term Abroad in Vienna (4 credits) This is the on-site experience of German culture for students who have not yet participated in a Hartwick German program. Various places of interest will be visited and discussed in conjunction with a classroom program. Integration into Austrian life through living with families is an important feature. Offered in English and German. Prerequisite: GERM 214 or 160. Offered alternate years. (OCL, LNC, EL)

- 302 Germanic Cultural Analysis** (2 credits) German-language section of Language 301: Introduction to Cultural Analysis. Required for majors and minors.
- 305 Phonetics and Conversation** (3 credits) Conversational practice at an advanced level. Complex spoken patterns are practiced with emphasis put on the student's ability to express himself in a variety of situations. Included also is an introduction to the phonetic structure of the German language. Taught in German. Prerequisite: GERM 215 or its equivalent. Offered alternate years.
- 306 Composition and Grammar Review** (3 credits) Through a series of compositions, the student is given practice in written German on an advanced level. Classroom discussions will also be concerned with various aspects of German grammar with attention not only to the basics but also the various nuances of the language. Taught in German. Required of majors seeking teacher certification. Prerequisite: GERM 215 or its equivalent.
- 360 Medieval and Baroque Literature** (3 credits) A treatment of the major works of the Medieval and Baroque periods treating the chivalric lyrics and the various Baroque phenomena. Excerpts from such works as Das Nibelungenlied, Parzival, Simplicissimus will also be treated. Taught in German. Required of German majors. Prerequisite: GERM 220. Offered alternate years. (ILS)
- 361 Rationalism to Romanticism** (3 credits) This course embraces what is frequently referred to as the Goethezeit. Works by Lessing, Goethe, Schiller, Kleist as well as some of the Romantic writers will be treated. Taught in German. Required of majors. Prerequisite: GERM 220. Offered alternate years. (ILS)
- 362 Biedermeier to Naturalism** (3 credits) This course treats the various movements of most of the 19th century and includes such authors as Stifter, Keller, Meyer, Storm, Heine, Grillparzer, Raimund, Nestroy, Hauptmann and Holz. Taught in German. Required of German majors. Prerequisite: GERM 220. Offered alternate years. (ILS)
- 363 The 20th Century** (3 credits) Salient movements of the century such as impressionism, expressionism, exile literature and post-war period are treated and includes such authors as Rilke, von Hoffmannsthal, Kafka, Mann, Kayser, Brecht, Dürrenmatt, Frisch, Boll. Taught in German. Required for majors. Prerequisite: GERM 220. Offered alternate years. (ILS)
- 450 Topics of German Literature** (3 credits) For Seniors Detailed study of a particular author, genre, theme or period in German literature. Topic will be announced in advance. Taught in German. Prerequisite: Permission of instructor.
- 485 German Term in Vienna** (4 credits) This course is designed for the student with a knowledge of German who is participating in a second Vienna program. Various aspects of the culture will be discussed in depth, and each student will be expected to complete a special project mutually agreed upon by the student and instructor. Prerequisite: GERM 220. (OCL, LNC, EL)
- 490 Senior Project** (3 credits) Required of all majors. A thesis or other appropriate work that demonstrates the student's proficiency in German.

German

Requirements for the major: 31 credits, distributed as follows:

Intermediate Level (3 credits)

German 214

Preliminary Assessment (3 credits)

German 215

Skills Courses (3 credits) Any of the following:

German 222

German 305

German 235

German 306

Common Cultural Studies Course + FLAC Course (4 credits)

Methods of Cultural Analysis (Language 301) +
German 302 (Germanic Cultural Analysis)

Topics in Culture/FLAC Courses (9 credits) Any of the following:

German 360	German 450
German 361	And/or FLAC credits (6 credits
German 362	maximum)
German 363	

Any Language Course above 200 (6 credits)

Senior Thesis (3 credits)

German 490

Requirements for the minor: 22 credits, distributed as follows:

Intermediate Level (3 credits)

German 214

Preliminary Assessment (3 credits)

German 215

Skills Courses (3 credits) Any of the following:

German 222	German 305
German 235	German 306

Common Cultural Studies Course (4 credits)

Methods of Cultural Analysis (Language 301) +
German 302 (Germanic Cultural Analysis)

Topics in Culture/FLAC Courses (6 credits)

Any of the following:

German 360	German 450
German 361	And/or FLAC courses (6 credits
German 362	maximum)
German 363	

Any Language Course above 200 (3 credits)

Grades for all courses taken in German are used to calculate the average in the major for Departmental Distinction.

Graphic Communications Minor

The minor in Graphic Communications complements study in such areas as Art History, Business Administration, Education, English, Museum Studies, and Theatre Arts, for which an understanding of mass communication techniques is often needed. The combination of the minor with a major in many of these areas also can prepare students for careers in advertising, printing, publications, and public relations.

Students pursuing the minor gain a basic foundation in the field of graphic communications through selected courses offered by the Departments of Art and Art History, English, Business Administration, Psychology, and Sociology. The specific courses each student chooses to complete the minor will depend on his or her interests and career goals. As part of the minor program, at least one field experience in an area of communications must be completed.

The minor in Graphic Communications is offered through the Committee on Interdisciplinary and Non-Departmental Curricula.

Interested students should contact the Coordinator of the program, Assistant Professor of Art Joe von Stengel.

Graphic Communications Minor

Requirements for the minor in graphic communications: Seven courses in the following areas:

Visual Arts: Three courses in Art, distributed as follows:

111 or 112 Drawing and Two-Dimensional Design A or B (ART)

Two courses selected from:

213 Digital Art & Design I (ART)

216 Digital Art & Design II (ART)

241 Photography I (ART)

Writing: Two courses in English, from:

200 Business Writing (ENGL)

205 Journalism (ENGL)-offered yearly

210 Advanced Composition (ENGL)

310 Creative Writing, Non-Fiction (ENGL)

Social and Behavioral Sciences: An appropriate course as approved by the program coordinator from one of the following departments: Business Administration, Psychology, or Sociology.

Field Experience: At least one credit of field experience in some area of communications: advertising, public relations, newspaper or magazine production, printing, broadcasting or other communications media. Can be arranged as an internship or directed study. Consult the program coordinator when selecting a field experience.

History

We use the word 'history' to define both past events and accounts of those events. All past and current cultures throughout the world made and make sense of their experiences within historical perspectives, whether genealogical, mythic, magical, or analytical. In Western traditions the ancient Greeks saw history as a form of knowing based on inquiry of particular things. Since the classical era, Western historians have sought to understand the past through careful analysis of evidence in the form of documents and other physical remains of past cultures with the assumption that the past and the present are closely linked and that in understanding the past we might avoid previous mistakes and fashion a better future. Within this framework, learning history is first and foremost learning the methodologies for studying the past and mastering the discipline to apply these methodologies effectively. The faculty members in the History Department are committed to the students learning the discipline and practicing it.

Recent scholarly debate among historians around the globe, however, has challenged the presumptions of objectivity and scientific disinterest implied by the traditional model of the discipline. The new perspective argues that practicing historians are engaged in their subjects with a political commitment and passion that guides research agendas and our understanding of documents. Nevertheless, rather than making historical analysis impossible, this recognition of the personal involvement of anyone who tries to understand the past places even more emphasis on applying the discipline with care and self-awareness. We cannot learn the truth about past cultures, but we can develop hypotheses about their values and legacies. Even with tentative conclusions, we can come to a fuller and more critical understanding of our own cultures and an appreciation of the cultures of others. This is the goal for learning that is supported by the department's faculty members.

The Program: Hartwick's History program (courses, opportunities for individual study, off-campus experiences) is intended to heighten students' understanding of the complexities of the cultural roots of contemporary America and the historical forces that have produced the increasing interdependency of cultures across the globe. Exploring history, whether as part of a liberal education or as a major, engages students to question the historical 'truths' offered as justifications of current systems of power and inequality. Students also learn to analyze information critically and to test generalizations (including their own).

Departmental offerings cover American, Latin American, European, and Global histories. Classroom experience emphasizes active student learning through class discussion, group work, peer critiques, and individual presentations. Regularly offered courses cover topics as diverse as Slavery and Abolition in the United States, Gender and Power in Latin America, The Renaissance, World War II and the Home Front, and the History of Western Medicine since 1500. Special topics courses can cover themes ranging from the religious lives of medieval women to Environmental Injustice. The History faculty also participate in interdisciplinary minors, such as Women's and Gender Studies, Latin American Studies, Environmental Science and Policy, U.S. Ethnic Studies, and Museum Studies. Many History majors apply their growing disciplinary understanding for their work in these minors and programs. Many students in other disciplines choose to broaden their academic programs by completing the department's minor in History.

The Major: Students majoring in History complete a program of study with an emphasis on doing history. A required course in historical methods (HIST 322) orients the students to the fundamental skills of historical research, while working with primary and secondary source materials in the archives, online, and in print. The skills acquired in this seminar provides the

student with the methodological foundation needed to conduct research in any course that involves historical analysis. This course in historical methods also prepares majors for the significant and focused research necessary for their thesis. The critical skills acquired in this seminar, however, can carry over to all of their coursework. In addition to the methodological core of the major, students build their understanding from a required introductory survey in American and in Global histories. These surveys approach the broad scope of their subject from the perspective of a particular critical lens to provide an analytical focus. From this base students deepen their knowledge in two of four areas of history: American, Latin American, European, or Global history. The major culminates with a Senior Seminar (HIST 489) and Thesis (HIST 490) which is an in-depth research project built on primary sources and reflective of the historical literature on the subject. Students share research progress in a regularly scheduled seminar setting, work closely with an individual faculty mentor, and present their completed work in a public defense. For History majors the challenge of the Senior Thesis is one of the most memorable and satisfying aspects of their Hartwick education.

Off-Campus Experiences: Students further enrich their academic programs through a variety of learning opportunities offered by the department outside of the classroom. Students can design independent reading and research projects with faculty approval that explore subjects outside their regular curriculum or allow them to delve more deeply into an area of particular interest. The department has offered off-campus programs in France, England, and the Czech Republic. Future programs may explore Appalachian history, the borderlands of the American Southwest, or the cosmopolitan culture of Brazil. Some majors have pursued semester long programs at universities in France, Greece, Mexico, Russia, and Spain. Others have pursued individual off-campus study in January or during the summer under a faculty member's guidance. Majors also undertake internships in areas that relate to their academic field and future career goals. During January Term, history majors have served as teaching aides, clerks at law firms, or as members of museum staffs. Semester long programs in Washington, DC, Boston, Philadelphia, or New York also mix classroom experience in urban universities with internships in Congress or other institutions in the public and private spheres. One recent graduate pursued her internship as a Foreign Service officer in El Salvador.

Career preparation: In all, the diverse coursework and other opportunities offered by the history department are designed to meet the needs and intellectual interests of a variety of students, including those who want to become professional historians. A major in history is also excellent preparation for a variety of other careers. The analytical, research, and writing skills acquired through the study in the discipline are excellent preparation for law school. Many of our graduates teach, while others pursue careers in business administration, law, government, libraries, museums, and many more fields.

Faculty

Cherilyn Lacy, Chair; Vicki Howard; Sean Kelley; Mieko Nishida; Edythe Ann Quinn, Peter G. Wallace

Courses

Perspectives in U.S. History: These foundational courses examine the full sweep of American history from the perspective of a particular critical lens.

103 American Political History (3 credits) This course examines politics in British North America/United States up to the present day. Topics include: the politics of empire and independence; the emergence of an American political culture; the Confederation era and the

drafting of the U.S. Constitution; the origins and workings of the party systems; the changing concept of citizenship especially in regard to race, class, and gender; and the liberal state.

104 Race and Ethnicity in American History (3 credits) This course is a survey of the dynamic of race and ethnicity from the colonial era to the present day. Topics include: Native Americans and the project of colonization; the rise of slavery and the birth of African American culture; race and republican citizenship; the politics of “whiteness,” labor and immigration; the operation of a black/white racial binary in a multiethnic society; the rise of scientific racism; and strategies of opposition and resistance. For their course projects (papers/presentations), students conduct research on their family’s and their community’s ethnic history. (EL)

240 American Environmental Relations (3 credits) This broad overview covers our country’s environmental history from pre-conquest to current, sampling history from each region, and from a diversity of views. Throughout the course, we strive to understand our individual and our nation’s relationship to the environment/nature. We not only examine changing historical interpretations and relationships, but race, ethnicity, class, and gender as well, as they influenced and were influenced by environmental forces. While our focus is the historical record and its analysis, we do not ignore nature writing and art/photography, past and present. Because environmental history is as current as today’s newspaper headlines, we consider current environmental issues. Throughout our readings, we will analyze the historical connection between the degradation of people, e.g., communities of color, and degradation of the environment, that is the link between racism/poverty and pollution. To insure that we each understand that we are part of our country’s, our community’s, our family’s, and our own environmental history, we have two research projects/papers: “Family Environmental History” and “Community Environmental History.” (EL)

241 Environmental Injustice (3 credits) This course analyzes the historical connection between the degradation of people, e.g., communities of color, and degradation of the environment, that is the link between racism/poverty and pollution. We begin with an analysis of the conditions of enslaved Blacks and the soil in the tobacco and cotton South. In the modern period, we analyze environmental and social issues in migrant agricultural labor, as well as environmental degradation in communities of color and/or poverty. We utilize the analytical lenses of race, ethnicity, regionalism, gender and class. However, in our analysis we were very careful NOT to portray the community members or agricultural workers as simply “victims.” Thus, we also focus on their diverse responses, e.g., protesting and organizing, for example, forming the United Farm Workers (UFW), etc. Also, more subtle forms of environmental injustice will be discussed, e.g., the economically privileged nature of many environmental “solutions” and campaigns. For our research project (paper/presentation), students conduct research on evidence of environmental injustices and organized responses in their home community/area. EL

242 Women in American History (3 credits) This course is a survey of the history of women in America from the colonial period to the modern era. With specific attention to the intersecting analytical categories of gender, race, class, and ethnicity, we will spend time analyzing time women’s political, economic, and social role in a developing nation. Topics to be covered include: war, citizenship, slavery, suffrage, labor, industrialization, immigration, gender spheres, consumerism, civil rights, marriage, and family.

243 Weddings, Marriage, and the Family: Historical Perspectives (3 credits) (J Term) This course examines weddings in their larger context of the institution of marriage and the family from the colonial period to the present, covering changes in courtship practices, wedding preparations, ceremonies, honeymoons, and marriage. The course pays particular attention to the rise of the wedding industry in the twentieth century. One focus is the way in which weddings and their related commercial activities reproduced prevailing gender and racial ideologies, and mirrored social concerns about class and ethnic identity.

246 Popular Culture and the Media: Historical Perspectives (3 credits) (J Term) This course surveys the history of American popular culture from the late nineteenth century through the

1970s. Adopting an historical perspective, we will focus on fiction, film, television, and radio, with some discussion of vaudeville, popular dance, sports, popular architecture, material culture, and music. The course analyzes the concept of “low” and “high” culture and attempts to understand why different popular cultural forms resonated in the past. The course also focuses on the intersecting analytical categories of race, class, ethnicity, and gender in the media.

Perspectives in Global History: These foundational courses examine the eras in global history from the perspective of a particular critical lens.

161 Pre-Modern Roots of Cultural Diversity (3 credits) This course will introduce students to the diverse cultures of the pre-modern world. The descriptions and analyses of these cultures will highlight their distinct religious and ethical systems and their definitions of political identities. Following a survey of the historical roots of these cultural and political systems, the course will examine their distinct responses to world-wide crises in political and social order from the third to tenth centuries C.E. The final section of the class will survey the world in the century prior to the era of European overseas expansion.

162 Human Civilization and the Natural World since 1500 (3 credits) A survey of social, political, cultural and economic developments in world history, focusing on the diversity of cultural perspectives on humanity’s relation to the natural world, the use of material resources, and the organization of production. Major themes will include exploration; trade routes and global economy; comparative systems of explaining the place of human beings in the world (science, philosophy, religion); and the relationship between these scientific, philosophical, religious systems, and dominant political and social orders.

164 Race and Identity (3 credits) How do you define “race” in the United States? How do you identify yourself? Are you aware how other people (and society) label you as a member of a certain racial group? Are there any critical conflicts between society’s categorization and individual identities? How can the notion of race differ in a specific historical context? Could your individual racial identity change in a different time and space? This course discusses various important issues of race and identity not only in the U.S. but also in other parts of the New World with a comparative historical perspective.

165 Free and Unfree Labor (3 credits) This course is a survey of world labor history, focusing on the period 1500-present. The first unit examines the various forms of unfree labor, including serfdom, slavery, servitude, and peonage. The second unit surveys the ways in which laboring people resisted and sought to shape their own worlds. The final unit examines labor during and after the Age of Revolution, focusing on the rise of wage labor and its attendant problems, as well as workers’ movements. Special attention will be paid to the connections between class, race, and gender.

201 Colonial Latin America (3 credits) This course is intended to survey the history of Latin America from the Iberian conquest in the early 16th century to the emergence of new states during the nineteenth century. We will discuss historical processes by which both the powerful and the powerless actively participated in making Latin America as a part of the New World. We will also examine how race, ethnicity, gender, and class were interwoven into colonial Latin American history.

202 Modern Latin America (3 credits) This course is structured around the imposing and extraordinary changes that have taken place in Latin America and the Caribbean from independence until the present day. We will increase our knowledge and understanding of Latin America and the Caribbean. Furthermore, the course will place the region within the economic, political, social, and cultural complex of the entire hemisphere.

207 History of Ancient Greece (3 credits) This course offers an introduction to the history of the Greeks from their beginnings up to the death of Alexander. The class examines the values and the

ideas of these people; and their literature and art are used in this undertaking as instruments of discovery.

208 History of Republican and Imperial Rome (3 credits) This course offers an introduction to the history and culture of the ancient Romans from their origins up to the death of Constantine. The class explores the life, beliefs, and institutions of these people through an examination of their cultural and political achievements.

209 Medieval Europe (3 credits) This course traces the emergence of Europe through the synthesis of Greek, Christian, Roman and Germanic cultures. The survey will begin with the collapse of the Pax Romana in the third century and conclude with the crisis of the 14th century and its immediate aftermath. The survey will focus on Western Europe, but the class will discuss Byzantium and Islam as unique civilizations, which profoundly influenced European culture.

210 Early Modern Europe (3 credits) This course first examines the birth of modern Europe in the Italian Renaissance. It then considers the religious and political forces, which shredded the fabric of Christian unity and ushered in an age of religious and dynastic warfare that produced the modern constitutional and absolutist states. The survey will then examine the cultural, economic and political impact of overseas exploration, the Scientific Revolution and the Enlightenment. The survey culminates with a close examination of the French and Industrial Revolutions.

212 Europe, 1815-1914 (3 credits) Pivotal events in 19th century European History, including: Industrialization and its consequences; political revolutions and ideologies: nationalism; the labor question; and cultural and intellectual movements such as Romanticism. Attention will also be devoted to the prevailing cultural assumptions about race, class and gender which defined Europeans' sense of identity and their place in the world, as well as scientific and economic theories which were used to justify European imperialism.

213 Europe in 20th Century (3 credits) Major events in 20th century European history, including the origins and catastrophic nature of World War I; the Russian revolution and Communist and Fascist challenges to strained democratic societies; economic depression; World War II and the Holocaust; the Cold War and the eclipse of Europe by the Superpowers; the loss of colonial empires; reform and revolution in Eastern and Western Europe, and the gradual formation of a more cooperative European community; and emerging challenges of globalization in the 21st century (economic conflict, immigration, sustainable development).

215 Tudor-Stuart History (3 credits) A survey of Tudor-Stuart English history (ca. 1485-1688), one of the most important periods of Western European history as it shaped much of English society into the present even as it served as a baseline for much of what would be reinforced, continued, or altered as the English confronted the complexities of the "New World."

219 Imagined Communities in France (4 credits) An interactive, cross-cultural study of the historical construction of the French sense of identity and the different forms of "community" (national, historical, cultural, and religious) in which the identity of being "French" is either invented or challenged. France will serve as a test case for some of the broader issues in the formation of community throughout Europe. Although the program will be based in the Loire valley city of Tours, students will visit Paris, the chateaux of the Loire Valley, and other historic and cultural centers.

225 History of Brazil (3 credits) Through lectures, readings, and discussions, together with movies and videos, this course is intended to examine changes and continuities in Brazilian history from "discovery" to the present. Special emphasis will be placed on race, class, gender, and ethnicity. We will discuss how colonial heritages determined the "fate" of modern Brazil; and how various forms of power relationship emerged, evolved, disappeared, and/or transformed in Brazilian history.

244 Baseball in American History (3 credits) This course is not a history of baseball; rather, it uses baseball to examine important issues in American history. Among these themes are industrialization and the rise of leisure time, race and segregation, immigration and ethnicity, gender, labor, and national identity.

245 World War II on the Home Front (3 credits) When students enroll in this course, they enlist “for the duration,” in order to “reconstruct” the Home Front from Pearl Harbor to “V-J” Day. This course is normally taught in January Term with its daily classes in only one subject, giving students the opportunity to solely and totally concentrate their attention on this goal, making it easier to reconstruct the home front. Daily exercises in recreating the home front include music of the period, letters, diary entries, columns by war correspondent Ernie Pyle, excerpts from oral histories, and incorporation of WWII home front artifacts. Besides this “hands-on” approach to history, students critically analyze WWII as “The Good War” and the debate over WWII as a “watershed” in the 20th century, addressing the question, was WWII’s impact on society an “example of continuity or change?” For their course projects (papers/presentations), students conduct research on their family’s and their community’s WWII history. (EL)

247 The Sixties (3 credits) While this course includes tie-dye, counterculture studies and 60s era movies, it also involves the same serious, historical analysis as any history course, being equally READING & WRITING intensive. In studying the Sixties, we study the Cold War, the Vietnam War, Civil Rights and Black Power Movements, and the various other Movements which sprouted from the fertile soil of The Sixties, such as the Women’s Movement, Red Power, and Environmentalism. Students engage in a research project (paper/presentation) on their family’s history during The Sixties. Class participation is always guaranteed in the “Found Sixties Objects” days (paper/presentation). EL

248 Vietnam War (3 credits) Course examines Vietnam War as a Cold War war, with a strong emphasis on U.S. foreign relations over the course of the Eisenhower, Kennedy, Johnson, Nixon/Ford administrations. The second emphasis is on the experiences of the “grunts” on the battlefield, including the book, Tim O’Brien’s *The Things They Carried*. Who fought/who didn’t will be considered. The War at Home (i.e., anti-war protests) and the intersection of the Vietnam War and Civil Rights/Black Power Movements will be examined, especially Rev. Martin Luther King’s opposition to the war. Students will research their family’s history during the Vietnam War Era for a paper and presentation. EL

249 Civil Rights Movement (3 credits) After setting the stage in the late 19th and early 20th centuries concerning the social, economic, and political conditions of African Americans in the South and North, we will examine the Civil Right Movement (CRM) in the mid-20th Century. We will also analyze the Black Power Movement, the complex and changing ideology of Malcolm X, and the radicalization of Martin Luther King, Jr. An ongoing topic is the role of the media in the CRM & Black Power. Other issues include the influence of the CRM on U.S. foreign policy during the Cold War, the intersection of the Vietnam War and Black Power and CRM, and the CRM/Black Power on other ’60s-’70s movements, e.g., the Chicano Movement. We will consider the arts—music and graphics arts—in the CRM and Black Power. In order to understand larger issues of discrimination and recognize the presence of discrimination around us, each student will conduct a major research project (paper/presentation) on the history of race relations and the current presence of racism and other forms of discrimination in their home communities. This project is designed to open our eyes to the subtle forms of discrimination in the world around us and inspire us to actively oppose discrimination in all its forms. EL

250 Topics in History (3 credits) From time to time the department will offer courses in particular topics in history. Students may elect HIST 250 more than once, provided they do not repeat the same topic.

261 Indian Ocean World, 1300-1800 (3 credits) An introduction to the history of the peoples and societies of India, Arabia, and East Africa, with an emphasis on the role of trade, religion, and cultural exchange in shaping the civilizations of the Delhi Sultanate, the Mughal Empire, cities of the East African Swahili Coast and the Ottoman Empire. The course will examine the thriving indigenous shipping and other exchange networks before the arrival of Europeans in 1498, with a primary focus on the Indian Ocean as a hub of human exchanges between India, Arabia, and Africa in the era of the classical Islamic world.

262 Politics of Identity: Globalization, Diaspora, and Cultural Diversity (3 credits) In our “global” age identity continues to be an extremely fascinating as well as complicated phenomenon. By utilizing journalistic accounts on contemporary issues, narratives, theoretical readings, feature movies, and documentary films, this course seeks to understand who and what we are, both at individual and collective levels, with special emphasis on globalization, Diaspora, and cultural diversity.

270 Revisiting Roots (3 credits) The primary objective of this course, combining historiography and genealogy, is to expose the similarities and differences in the portrayal of the slavery system and its impact upon the family structure of the enslaved Africans and their descendants in Great Britain, the British West Indies, and the United States. This is done by critiquing required readings, analyzing an American television series, class discussions, and research labs, including possible off-campus visits. (EL)

271 Changes in the Land (3 credits) This course introduces students to Changes in Land Use in this Central New York and Catskill Mountain region from the late 1700s to the present, through an analysis of forces of change; for example, decline or increase of natural resources, technology, demographics, urban influences and market demands, as well as their socioeconomic impact. For example, there is a unit on Hunting as Economic Development. Besides history texts, the course materials include songs, poems, folk tales, interviews, photographs, and newspaper articles. The first unit analyzes the changes in land use from the 1700s to the present of the area now encompassing Hartwick College’s Pine Lake Environmental Campus. The course usually is taught in the fall semester in a classroom at Pine Lake and includes field trips. (EL)

273 The American South (3 credits) This course examines that part of the United States bounded by the Edwards Plateau, the Red River, the Ohio River, and the Mason-Dixon Line. Our starting assumption is that Southernness is essentially a historical creation. Course themes include: conceptualizing the South; the place of the Southern colonies in the Atlantic World; the place of the Southern states in the early republic and antebellum period; race, class, and gender in Southern life; the question of change and continuity in Southern history; and the various New Souths.

275 American Indian History to 1700 (3 credits) From the peopling of the New World some 20,000 plus years ago to 1700, the rise of civilizations, the differentiation of cultures and the impact of European civilization on Indian America are mapped out and probed. The first third of the course will emphasize Indians’ world views and their relationships with each other and their varying environments. The course will examine the social, religious, technological, ecological and political changes that impacted Indian societies between 1492 and 1700.

276 American Indian History since 1700 (3 credits) The interaction between Native Americans and the U.S. from 1700 to the present. The topics covered include: wars and alliances, trade patterns, revitalization movements, federal-Indian relations, philanthropic and missionary activities, the reservation period, Red Power, etc.

283 Western Medicine since 1500 (3 credits) The history of Disease and its treatment in Europe and the United States since the reform of the study of anatomy by Andreas Versalius. While the overall theme will be the development of medicine as a science and a profession, attention will also be given to traditional medicine, women as healers, epidemics and the 19th century public health movement, and the vexed relationship between the State commercialism and the delivery of healthcare after 1880.

305 The Renaissance (4 credits) This course will not be a chronological survey; instead it will cover the origins of the idea of the “Renaissance” and how this concept has framed Western perceptions of modernity. It will investigate the functional practicality of applying this concept to Italian culture and society between 1350 and 1550. The course has two goals: to provide an understanding of the world of the Italian Renaissance and to critique the values we have associated with that world. Students will be required to complete a major primary source-based

research paper on a topic of their choosing. Prerequisites: 209, 210 or instructor's permission. (ILS)

306 Reformation Europe 1450-1600 (4 credits) This course examines the dissolution of Medieval European culture as a system of regulated religious beliefs and established political relations between the Roman church and secular powers. It also will consider the economic dislocation and social tensions that animated the Reformation passions, and examine the reintegration of these dynamic factors into new systems of belief and power during the age of confessional struggles. Students will be required to complete a major primary source-based research paper on a topic of their choosing. Prerequisites: HIST 209, 210 or instructor's permission. (ILS)

308 Enlightenment and Revolution (4 credits) This course examines the efforts of 18th century intellectuals to rationalize the experiences of the 17th century European crises. It analyzes the political and social fabric of the Old Regime and the growing friction among the powerful nation-states in Europe and overseas. Finally it considers the social, economic and political pressures which culminated in the French and Industrial revolutions and traces the trajectories of those revolutions. Students will be required to complete a major primary source-based research paper on a topic of their choosing. Prerequisites: HIST 210, 212, or instructor's permission. (ILS)

313 Europe and the World Wars (4 credits) World War I and World War II have long held a morbid fascination for many who have been both amazed and appalled at the scale of devastation that left millions dead and much of the continent in ruins. However, the impact of these wars extended beyond the battles to transform European views about the government, about women, about technology, and even about the nature of good and evil. This upper-level seminar will engage these issues through a critical examination of the historical debates about totalitarian dictatorships in Europe, the "failures" of the Versailles Treaty, anxieties about femininity, masculinity, and identity during the inter-war period, as well as other topics. Although there are no pre-requisites for this seminar, it is strongly recommended that students have some background in 20th century European history. Students will be required to complete a major primary source-based research paper on a topic of their choosing.

320 Travels to the "Third World" (4 credits) This seminar focuses on diverse Western writings on the "third world" (Latin America, Africa, and Asia) at various historical points for four centuries from the beginning of the sixteenth century to the present. Half of the class meetings treat the following themes: the Old World's encounters with the New World; conversion of the "pagan" population; Western tourism to the "exotic"; professional baseball players in and from the "third world," and Orientalism. The rest of the course deals with specific authors and their writings on the "third world." Students will be required to complete a major primary source-based research paper on a topic of their choosing. (ILS)

322 Historical Methods (4 credits) This course introduces the students to the fundamental skills of historical research. Students work with primary and secondary source materials in the archives, online, and in print. They learn to distinguish primary from secondary sources, to understand the problems that various sources pose to interpretation, and to identify the types of questions particular sources can answer. They learn to read these sources critically and to think historically. Students learn the identifying characteristics of monographs and are introduced to historiography. They learn how to quote properly, to summarize, and to annotate sources. Finally they apply their skills in both a series of short writing assignments, including review essays, interpretive source critiques, précis, and a substantial research paper based on primary and secondary sources. From the skills acquired in this course, the student should have the methodological foundation needed to conduct research in any course that involves historical analysis, and to be prepared for senior thesis. (NOT offered in January Term.) Prerequisite: registration limited to History Majors and Minors. We recommend that this course be taken in the spring semester of the student's first year or the fall semester of the second year.

324 Slavery in Latin America and the Caribbean (4 credits) This course examines how the institution of slavery was transplanted in Latin America and the Caribbean during the 16th century, why slavery developed in some parts of Latin America and the Caribbean (and why not in other regions), and how the institution was eventually abolished by the last decades of the 19th century. It also examines other important topics, such as the transatlantic slave trade; gender and ethnicity; family and kinship; uprisings and rebellions; and the historical formation of the Black Atlantic. (ILS)

326 Gender and Power in Latin America (4 credits) This course discusses various topics concerning gender and power in Latin American history from the late colonial period to the present time. By reading articles and monographs written by historians, life histories, women's narratives, as well as by viewing four Latin American films, we will be able to relate our own experiences to women and men in Latin America. We also will compare and contrast the experiences of different groups of women according to such factors as race, ethnicity, and class. (ILS)

327 Revolutions in Latin America and the Caribbean (4 credits) This course examines four cases of attempts to change fundamentally the social structure and the social basis of political power in Latin America and the Caribbean. They are: Haiti, 1789-1820; Mexico, 1910-34; Bolivia, 1952-60; and Cuba, 1959-95. The four revolutions represented attempts—not always entirely successfully—to alter the fundamental ways the social basis of political power operates. The course attempts to ascertain the degree of indelible change imposed by the revolutionary experience. (ILS)

330 North American Slavery (4 credits) This course examines African slavery in British North America/the United States from 1619 to 1865. Topics include the historiography of slavery; the origins of New World slavery; Africa and its relation to the slave trade; the various regional plantation/slave systems; African cultures in North America; resistance and rebellion; slavery and the American Revolution; the 19th century expansion of slavery; the Civil War and emancipation; research methods; and historical writing. Students will be required to complete a major primary source-based research paper on a topic of their choosing. (ILS)

332 Colonial America (4 credits) This course examines North America, with an emphasis on the region that became the United States, from the time of Columbus to 1763. Topics include the historiography of early America; encounters between Europeans and native peoples; European settlement; the development of regional economies and societies; gender and women's lives; the emergence of slavery and the roots of racism; imperial politics; resistance and dissident movements; research methods; and historical writing. Students will be required to complete a major primary source-based research paper on a topic of their choosing. (ILS)

333 Revolutionary America (4 credits) This course will examine the American Revolution and the Early Republic, 1763-1815. Topics include the historiography of the American Revolution; the imperial crisis; republicanism(s); the War of the Revolution; the Confederation Era and Constitution; the first party system; slavery and race; women and gender; research methods; and historical writing. Students will be required to complete a major primary source-based research paper on a topic of their choosing. (ILS)

334 Jacksonian America (4 credits) This course examines the United States between 1815 and 1848. Topics include the historiography of the period; Native and white America; the construction of "democracy" and citizenship; transformations in labor; evangelical religion; the emergence of reform movements; expansionism; women's lives and the woman movement; the growth of plantation agriculture; slave resistance; research methods; and historical writing. Students will be required to complete a major primary source-based research paper on a topic of their choosing. (ILS)

337 Civil War and Reconstruction (4 credits) This course examines the United States between 1848 and 1877. Topics include the Civil War historiography; slavery and sectional politics; the major military campaigns; wartime politics; African American resistance and the collapse of

slavery; the transformation of household and gender relations; Reconstruction and the realignment of the American political system; and labor in the post-emancipation South. Students will be required to complete a major primary source-based research paper on a topic of their choosing. (ILS)

341 American Consumer Culture, 1900-Present (4 credits) This upper-division seminar analyzes American society from the late nineteenth century to the present, focusing on historical consumption styles and practices. The history of consumer culture encompasses not only the study of advertising and shopping but also, in a broader sense, how most Americans have commodified nearly all of their experiences. We will pay special attention to race, class, gender, and ethnicity as we consider the ways that consumer culture has operated in America. Working through the late 19th and the early 20th century, we will explore the different ways that men and women took part in, and helped shape, the mass culture that flourished in an industrializing nation. As we move into the mid-twentieth century, we will look at how a rising standard of living and a national consumer culture defined American identity, with wide-reaching social, environmental, economic, and political implications that in many cases only became clear in later decades. The course will analyze the intellectual movements and ideologies that resisted materialism and mass culture in American culture. It will also study those groups who worked within the system to use their “buying power” to effect social change. Students will be required to complete a major primary source-based research paper on a topic of their choosing. (ILS)

342 The View from 9/11: U.S. Security before and after 9/11. (4 credits) This seminar is designed around the theme of national security, especially foreign threats to national security and their ramifications on the domestic scene, from post-World War II to present. Our major question is whether our responses to the 9/11 attacks and our current foreign policy represent continuity or change in American history. In addressing this question, we will examine the Cold War, the Cuban Missile Crisis, and issues in the Vietnam War as examples from our foreign policy. Likewise, we will examine selected issues on the home front, i.e., the domestic scene, especially McCarthyism, the perception of the Reverend Martin Luther King, Jr., Malcolm X, and Black Power as threats to security and the impact of the Civil Rights Movement on foreign policy. We will also consider financial, environmental and medical threats. Students will be required to complete a major primary source-based research paper on a topic of their choosing. Prerequisite: Permission of the instructor. ILS

343 Issues in 20th Century U.S. Women’s History (4 credits) This upper-division seminar focuses on women’s changing role in the twentieth century United States. The course looks at women’s changing economic, social, cultural, and political role, paying particular attention to the intersection of race, class, gender, ethnicity, and sexuality. Particular topics of study include the modern feminist movement, legal reform, politics, women and business, women’s labor, and popular culture. Feminist theory will be a major component in the course. Students will be required to complete a major primary source-based research paper on a topic of their choosing. (ILS)

344 American Business History (4 credits) Starting with the question of whether the nation has always been capitalistic, this course traces the rise of big business in the late nineteenth century through de-industrialization and globalization in the late twentieth century. Course issues or debates may include: public/private, local/national, small/big, regulation/free market, democracy/capitalism, to name just a few. The course evaluates to what degree American culture has given American enterprise its particular national character, and analyzes the ways in which business has shaped American labor systems, its environment, its social relations, and its popular culture. To this end, the course will look at the role of gender, race, class, and ethnicity in business and will examine the often close relation between big business and the state. Students will be required to complete a major primary source-based research paper on a topic of their choosing. (ILS)

345 America Between the Wars, 1919-1941 (4 credits) This course examines the era between World War I and World War II, a time of great cultural, political, and economic change. During this period, the rise of the modern state changed the way Americans thought about and related to their government. Ideas about individual rights, social welfare, racial justice, gender equality, and the role of the nation in world affairs changed rapidly. In part because of this transformation, it was a period of tremendous conflict as well between different cultural groups and classes, and between different belief systems. Students will be required to complete a major primary source-based research paper on a topic of their choosing (ILS)

350 Advanced Topics in History (4 credits) From time to time the department will offer advanced courses in particular topics in history. Students are required to complete a major primary source-based research paper. Students may elect HIST 350 more than once, provided they do not repeat the same topic. (ILS)

361 European Imperialism (4 credits) Examines the interaction between Europeans, Africans and Asians from 1750 to the present. Issues addressed will include the European use of science and religion to justify their rule over other societies; how the culture of imperialism shaped perceptions of gender and race; how certain Indian and African nationalists argued against imperial rule; and the challenges of the post-colonial era. Because of the scope of the subject, a substantial portion of the course will focus on British and French imperialism in Africa and India from 1850 to 1970. Students will be required to complete a major primary source-based research paper on a topic of their choosing. Prerequisites: HIST 212, 213, or permission of the instructor. (ILS)

362 Becoming National (4 credits) Students will survey the development of the nation as a modern cultural identity and the foundation for appropriate political association and representation. The course will consider the pre-modern forms of cultural identity and political organization to emphasize the relatively recent historical appearance of the nation in political discourse. The readings will show the problems with juxtaposing this European model on the colonial and post-colonial worlds. Finally, the students will consider the political alternatives for nations as viable political agents in the 21st century world. Students will be required to complete a major primary source-based research paper on a topic of their choosing. Prerequisite: a global history survey (HIST 160-9).

378 American Foreign Relations, 1898 to the Present (4 credits) The goal is to better understand the underlying philosophies, concepts, and tensions present in our foreign relations; the domestic and international context of events and policies, and the continuity and change over more than a century. Students analyze patterns, concepts/theories and the historians' changing interpretations of foreign relations, i.e., historiography. Students learn to employ lenses/perspectives to analyze topics: Liberal Commercial World Order and Mission; National Security, Core Values, and Power; Bureaucracy and Politics; World Systems and Hegemony; Race and Ethnicity; Gendering of Peoples and Nations; and Cultural Interactions and Personality. Students will be required to complete a major primary source-based research paper on a topic of their choosing. Prerequisite: By permission of the instructor. (ILS)

383 Disease and the Social Body (4 credits) The period from 1850 through 1945 was marked by nationalist obsessions with the physical and mental fitness of a state's citizens, so much so that this could be termed the "Age of Eugenics". This course will explore how and why industrialized nations in Europe and the U.S. elevated the body in "body politic" to such prominence, and how metaphors of disease were used to justify the marginalization (and even criminalization) of groups such as women, Jews and other racial minorities, homosexuals, and the mentally disabled. Students will be required to complete a major primary source-based research paper on a topic of their choosing. (ILS)

489 Senior Thesis Seminar (1 credit) This course must be taken in the same term as HIST 490 (3 credits). This course is designed to assist the student enrolled in his/her senior thesis (HIST 490) with designing, researching, writing and presenting the History senior thesis. The emphasis is on

working in a timely, orderly and scholarly fashion in a community of scholars. The students enrolled in HIST 490 will meet together regularly with the HIST 489-designated professor; and, at selected times, all the History Department faculty will join the meeting. The students and professor(s) will discuss topics such as the thesis question and focus, the literature review, historiography, research method, and data collection. The students are encouraged to discuss their research problems and progress with the group to facilitate mutual understanding and development in the research and writing process. Under the sponsorship of this seminar, the students present their completed work in a public defense. Prerequisite: HIST 322 Historical Methods, with a grade of C or better; and registration for HIST 490 (3 credits) in the same semester as HIST 489. (NOT offered in January Term.)

490 Senior Thesis (3 credits) Required of all majors. For the senior thesis, students draw upon their knowledge of historical subject areas and research methods, as well as their particular interests and general curiosity about the past, to craft their own piece of original research on a topic of historical significance. This capstone research project and essay entails the development of a hypothesis or argument, which is then supported or revised, based on an analysis of the relevant primary source evidence. It is expected that each student will develop the initial idea for his or her senior thesis out of a 300-level history seminar in the same area, and in consultation with a thesis advisor. As part of this crowning achievement of the history major, students are required to present an oral defense of their senior thesis before the history faculty and their peers. This course must be taken in the same term as HIST 489 (1 credit). Failure in HIST 490 requires the student to repeat BOTH HIST 489 and HIST 490. Prerequisite: HIST 322: Historical Methods with a grade of C or better. Offered in Fall and Spring.

History

Requirements for the major (38 credits):

- 1 Perspectives in U. S. History course (3 credits)
- 1 Perspectives in Global History course (3 credits)
- 322 Historical Methods (4 credits)
- 489 Senior Thesis Seminar (1 credit)
- 490 Senior Thesis (3 credits) The thesis must be on an approved topic on which the student is prepared through at least one, relevant 300-level seminar.
- 7 additional courses: Of these three must be at the 300-level. Students must take at least two courses each in any two of the following four areas: U.S., Europe, Latin America, or Global; at least one of the two courses in each area must be at the 300-level.

Requirements to Minor in History (20 credits)

- 1 Perspectives in U. S. History course (3 credits)
- 1 Perspectives in Global History course (3 credits)
- 322 Historical Methods (4 credits)
- 3 additional courses in history with at least one at the 300 level (10 credits)

Grades for all courses taken in History are used to calculate the average in the major for Departmental Distinction.

Interdisciplinary and Non-Departmental Courses

The following courses which do not fit the disciplinary focus of a single department are available on a regular basis. The purpose of these interdisciplinary, non-departmental courses is to enable students to participate in the sharing of ideas which extend beyond the limits of a single academic department and which emphasize the interdependence of all academic disciplines.

In addition to the courses that follow, the College offers other interdisciplinary courses, which are of a more experimental nature and tend to be proposed and offered for one term only. This is especially true of interdisciplinary courses designed for January Term. A list of these can be found in the schedule of courses available at registration for each term.

Interdisciplinary Course

320 College Honors Seminar (3 credits) The seminar, interdisciplinary in focus, provides honors students with the opportunity to examine “an issue of significance” by interacting with faculty in a setting that transcends the boundaries of a particular academic discipline and encourages the nurturing of holistic patterns of thinking. (ILS)

Non-Departmental Courses

166 Introduction to Women’s and Gender Studies (3 credits) This course introduces students to feminist scholarship and acquaints them with the intellectual, ethical, social, political, historical and cultural forces constructing gender. The class is interdisciplinary and grounded in feminist pedagogy.

360 Seminar in Women’s and Gender Studies (3 credits) This seminar explores a broad range of classical and contemporary feminist theory and contrasts it with existing, normative theoretical paradigms. A feminist framework is used to focus on a specific academic field, i.e., history, literature, labor, science. Emphasis is placed on cultivating self-development through student participation in pedagogical experimentation, project creation and reading choices. Prerequisite: two of the courses listed above or permission of the instructor.

410 Senior Seminar in Environmental Assessment (3 credits) A number of studies in the 1960s suggested that the exploitation of natural resources for the purpose of economic development and meeting the demands of growing populations was having additional second and third order effects that were detrimental to global ecological systems. In the 1970s many of the nations of the developed world attempted to regulate the rate of development and protect the environment. During the past two decades, the need for international cooperation has been recognized, but the results have been realized slowly. This seminar gives students an opportunity: (1) to evaluate the state of the environment at global, national and local levels of analysis, (2) to survey methods of environmental assessment, and assessment in the U.S. and its member states.

Latin American-Caribbean Studies Minor

The countries of Latin America and the Caribbean are important neighbors of the United States that have made rich contributions to the North via the arts, literature, human migration and diplomatic and economic exchange, among other things. Moreover, these states together constitute an important bloc of the “developing” world and, as such, present a variety of models of socio-economic and political change.

The Latin American-Caribbean studies minor, which includes courses from anthropology, art, biology, English, history, political science and Spanish, provides interested students the opportunity to study the region in some detail. That interdisciplinary study includes such topics as the history and legacies of colonialism and conquest, the conflict and cooperation that has defined United States-Latin American relations, the cultural experience and contributions of the region, current politics and strategies toward economic development and ecological and environmental issues. Students are also strongly encouraged to participate in an off-campus program or internship in the region.

The minor, in sum, aims to enhance both international academic programming at Hartwick and, simultaneously, awareness of hemispheric and global interdependence among states and peoples.

Students interested in the Latin American-Caribbean studies minor should contact the coordinator of the program, Professor Jason Antrosio, at antrosioj@hartwick.edu for more information about opportunities within the minor.

Latin American-Caribbean Studies

Requirements for the minor in Latin American-Caribbean studies:

The minor in LACS requires that students complete 20 credits and fulfill a language requirement as noted. No more than three courses may apply from any one Department. Courses from other disciplines with primary or considerable LACS content/focus and approved by LACS faculty also fulfill the minor. There are courses that might fulfill requirements that are not obviously Latin American courses, for which you should consult with the LACS coordinator.

Required courses and credits

*These specific courses are required:

- * HIST 201 Colonial Latin America or HIST 202 Modern Latin America
- * POSC 268 Latin American/Caribbean Politics
- * SPAN 150 Topics in Hispanic Studies

* Electives from a list of courses which are designed as fulfilling LACS requirements (or which are cross-listed with LACS). Among those courses which will be cross-listed with LACS minor are:

ENGL 260: Caribbean Literature
HIST: LACS topic courses will be offered regularly
SPAN 150 : Topics in Hispanic Studies
ANTH 237: Peoples and Cultures of Latin America

* One 300/400 level broad Latin American survey course, such as:

HIST 326 Gender and Power in Latin America
HIST 327 Revolutions in Latin America and the Caribbean
POSC 327 Politics Through Literature

* Language: It is the expectation that Latin American-Caribbean studies students meet their College language requirement in Spanish or French. However, the interested student may meet this expectation by demonstrating proficiency in Portuguese through examination.

Recommended

* Off-Campus Study: An off-campus internship or program in Latin American-Caribbean countries with considerable cross-cultural or in situ content and approved by the LACS faculty; this option is highly recommended.

See the Latin American-Caribbean studies program coordinator, the LACS program Web page, www.hartwick.edu/LACS.xml, or the Registrar for a current list of courses.

Mathematics

The study of mathematics enables students not only to learn mathematical principles and the application of those principles, but to develop their ability to think logically, solve problems, express themselves precisely and gain a cultural appreciation of the discipline.

Mathematics majors must complete a specified core of courses, beginning with a calculus and linear algebra sequence and an introductory course in abstraction. These courses provide the foundation for upper level courses. To obtain an overview of modern mathematics, majors take courses in two general areas, abstract algebra and real analysis, generally during their junior year. As an introduction to applied mathematics, they must elect one of several courses that stress a modeling/problem-solving approach to using mathematics. During the junior year, majors must participate in a Junior Seminar, which emphasizes supervised seminar study and oral presentations. A required Senior Capstone Seminar involves supervised independent study with written presentations and a final oral presentation. In addition to the required courses, a course in computer programming is strongly recommended.

In addition, mathematics majors are required to complete a term of general physics, which provides them with another problem-solving experience and introduces them to the subject which was one of the primary motivations for the development of the calculus.

Students who wish to pursue a special area of mathematics in greater depth may do so by taking additional courses in that area and by independent study with a faculty member in an area not specifically covered in a course. Among the areas available for such study are numerical methods, mathematical modeling, operations research, statistics, graph theory, combinatorics, and topology. For students who may be interested in engineering, Hartwick offers a Pre-Engineering Program and the opportunity to participate in a combined degree program with Columbia University or Clarkson University in which the student spends three years at Hartwick and two years at one of the engineering schools, earning a bachelor's degree from each in the process.

Students majoring in other disciplines who wish to complete a minor in mathematics should notify the department of their intent as soon as possible, preferably by the junior year.

Incoming students are administered an algebra placement test and, on the basis of the results, are advised which mathematics courses would be most appropriate for their algebra backgrounds. Pre-Calculus Mathematics (120) may be selected by students who need a stronger background in algebra before they begin the calculus sequence. For students with exceptional mathematics backgrounds, advanced placement credit in calculus will be granted on the basis of Advanced Placement Test scores. Advanced placement without credit also may be granted on the basis of consultation with the department faculty.

A Math Center sponsored by the department offers problem sessions and tutoring for students enrolled in any of the department's service courses. Tutoring in math is available through The Loft.

Faculty

Charles H. Scheim, Chair; Ronald M. Brzenk; Min Chung; Gary E. Stevens

Courses

108 Statistics (3 credits) An introduction to basic methods in exploratory data analysis, experimental design, and statistical inference. Included are graphic displays, numeric measures of center and variation, regression and correlation, normal probabilities, fundamentals of experimental design, and confidence intervals and hypothesis tests for means and proportions. Material covered has application to biology, economics, nursing, political science, psychology, sociology and other fields. Use of statistical software is integral to much of the course. Cannot be taken for credit if credit has already been received for MATH 308. Prerequisite: At least Level 2 on MATH Placement Exam. (QFR)

110 Problem Solving with Recreational Mathematics (3 credits) An introduction to strategies of problem solving using recreational mathematics. Analysis of problems arising from logical puzzles, games, card tricks and geometric puzzles will systematically introduce students to a variety of problem-solving techniques and mathematical topics. Topics may include logic, the pigeon hole principle, applications of algebra, mathematical induction, number theory, graph theory and game theory. Students will be encouraged to solve problems on their own using creative strategies. Prerequisite: Level 4 or 5 on algebra placement test. (QFR)

120 Pre-Calculus Mathematics (3 credits) Intended to provide the background necessary for the calculus sequence. Included are topics from algebra, functions, graphs, linear functions, quadratics, conics, trigonometric functions, exponentials, inverse functions, logarithms, and inverse trigonometric functions. The course should be taken only by students who intend to begin the calculus sequence (however, MATH 120 is not a prerequisite for MATH 121). Prerequisite: Permission of the instructor or Level 3 or 4 on the algebra placement test. (QFR)

121 Single Variable Calculus (4 credits) A course in the basic concepts of single-variable calculus. Included are functions and their graphs, limits, derivatives, applications of the derivative, and an introduction to integration. Use of computer algebra software is integral to the course. Prerequisite: Level 5 on the algebra placement test or at least a C in MATH 120. (QFR)

220 Linear Algebra (3 credits) Systems of linear equations, matrix algebra, dependence and independence, vector spaces, transformations. Applications. Prerequisite: at least a C- in MATH 233 or 235. (QFR)

233 Multivariable Calculus (3 credits) Rectangular, cylindrical, and spherical coordinate systems in three dimensions, vectors, functions of several variables, limits and continuity, partial derivatives, optimization techniques, multiple integrals (including alternate coordinate systems). Prerequisite: at least a C- in MATH 121. (QFR)

235 Advanced Single Variable Calculus (3 credits) The second half of the single-variable calculus. Included are techniques of integration, applications of integration, infinite sequences and series, polar coordinates, and complex numbers. Prerequisite: at least a C- in MATH 121. (QFR)

308 Mathematical Probability and Statistics (3 credits) Probability theory, random variables, binomial, Poisson, normal and other distributions, limit theorems and applications to hypothesis testing, estimation, regression. Prerequisites: MATH 233 and 235. (QFR)

311 Differential Equations (3 credits) Basic theory of ordinary differential equations. Equations of first order and first degree, linear differential equations and linear systems, operational methods, numerical methods, solution in series, existence and uniqueness theorems. Prerequisite: MATH 233; Prerequisite or corequisite: MATH 235. (QFR)

320 Introduction to Abstraction (3 credits) A preparation for the more abstract upper-division courses. Included are sets, logic, mathematical proof, mathematical induction, partial orders, equivalence relations, and functions. Prerequisite: MATH 233, 235, and at least a C in MATH 220. (QFR)

326 Discrete Mathematics (3 credits) Included are elementary set theory and logic, mathematical induction, principles of counting including combinations and permutations, distributions, binomial and multinomial coefficients, pigeon-hole principle, and Stirling numbers.

Other topics selected from generating functions, finite state machines and languages, graph theory, Boolean algebra. Prerequisites: MATH 220, 233, and 235. Offered alternate years. (QFR)

333 Advanced Multivariable Calculus (3 credits) Parameterization of curves and surfaces, curves in 3-space, arc length, surface area, gradient, divergence, curl, line integrals, surface integrals, theorems of Green, Gauss, and Stokes. Prerequisite: MATH 233. Offered alternate years. (QFR)

335 Modern Geometry (3 credits) Structure and flaws of Euclidean geometry as an axiomatic system; development of neutral geometry leading to Euclidean and non-Euclidean geometries. Prerequisites: MATH 220, 233, and 235. Offered when there is sufficient student interest.

337 Number Theory (3 credits) Divisibility, primes, congruences, arithmetic functions, quadratic residues, partitions and generating functions. Prerequisites: MATH 220, 233, and 235. Offered when there is sufficient student interest. (QFR)

341 Complex Variables (3 credits) An introduction to the theory of functions of complex variables, derivatives and integrals, Cauchy's theorem, theory of residues, applications to mathematical physics. Prerequisites: MATH 233 and 235. Offered when there is sufficient student interest. (QFR)

371 Numerical Analysis (same as CISC 371) (3 credits) An introduction to the development of numerical methods and their associated error analysis. Included are non-linear equations, systems of linear equations, interpolation, numerical differentiation and integration. Application of appropriate algorithms via appropriate software. Prerequisites: Math 220, 233, and 235. Offered when there is sufficient student interest.

375 Optimization Techniques (same as CISC 375) (3 credits) A survey of some of the methods used to obtain optimal solutions to linear problems. Emphasis on linear programming, simplex algorithm, duality, transportation and assignment problems, shortest route and maximum flow problems, game theory, and decision trees. Additional topics may include integer programming, dynamic programming, PERT-CPM, graph theory, or queuing theory. Prerequisites: MATH 220, 233, and 235. Offered when there is sufficient student interest. (QFR)

381 Mathematical Modeling (3 credits) Selected topics in modern mathematics and operations research that have application to the social, life and managerial sciences. Emphasis on problem solving through model building. Possible topics include Markov chains, linear programming, optimization, graph theory, combinatorics, game theory, decision theory, queuing theory, simulation. Prerequisites: MATH 220, 233, 235. Offered alternate years. (QFR)

390 Junior Seminar (4 credits) Supervised seminar study with oral and written presentations. Seminar groups are assigned topics from areas such as geometry, graph theory, number theory, or applied mathematics. Prerequisites: at least a C in MATH 320 and permission of the department. (Must be taken during January Term on campus.) (QFR)

411 Partial Differential Equations (3 credits) Solution of second order linear equations including the heat, potential and wave equations; initial and boundary value problems; Fourier series; numerical methods. Prerequisite: MATH 311. Offered when there is sufficient student interest. (QFR)

420 Abstract Algebra (3 credits) An introduction to fundamental algebraic structures, focused primarily on group theory. Included are groups, subgroups, cyclic groups, permutation groups, isomorphisms, homomorphisms, direct products, normal subgroups, factor groups, and an introduction to rings, integral domains, and fields. Prerequisites: at least a C in MATH 320. (QFR)

431 Introduction to Real Analysis (3 credits) A study of the theoretical underpinnings of the calculus. Included are the topology of the real line, limits, continuity, differentiation, and Riemann integration.

Prerequisites: at least a C in MATH 320. (QFR)

461 Introduction to Topology (3 credits) Continuity compactness, connectedness, separation, metric spaces, topological spaces, topological invariants. Prerequisite: MATH 431. Offered when there is sufficient student interest.

491 Senior Capstone Seminar (4 credits) All senior Math majors are required to enroll in the Senior Capstone Seminar, convened every spring semester. Seminar topics will vary from year to year, depending on which faculty member is supervising the seminar. The capstone course is intended to be conducted in true seminar style, with its participants responsible for class investigations and presentations, as suggested by the faculty supervisor. In addition to the study of the chosen seminar topic, there will be a significant writing component with an emphasis on clear communication of mathematics. Prerequisites: MATH 390, MATH 420; co-requisite: MATH 431.

Mathematics

Requirements for the major: Minimum of 12 courses in Mathematics and 1 in Physics, distributed as follows:

Five foundation courses:

121, 233 Single Variable and Multivariable
Calculus—normally taken freshman year
220 Linear Algebra
235 Advanced Single Variable Calculus
320 Introduction to Abstraction

Two overview courses:

420 Abstract Algebra
431 Introduction to Real Analysis

One course in applied mathematics, selected from:

311 Differential Equations
375 Optimization Techniques
381 Mathematical Modeling

Two additional Mathematics courses at the 300 or 400 level

Two advanced directed studies:

390 Junior Seminar
491 Senior Capstone Seminar

One course in physics:

201 General Physics I (Phys)

Requirements for the minor: Notify department of intent as soon as possible, and complete a minimum of seven courses, distributed as follows:

Four foundation courses in calculus-linear algebra:

121, 233, 235 Single Variable, Multivariable and Advanced Single Variable Calculus
220 Linear Algebra

Three additional courses in Mathematics:

At the 300 or 400 level

Grades for all courses taken in Mathematics above 120 are used to calculate the average in the major for Departmental Distinction.

Medical Technology

Although medical laboratories are physically located in hospitals, clinics, and physicians' offices, the real location is on the frontier of scientific medicine. Here, the best qualified men and women are building careers in laboratory medicine by applying their expert knowledge and practical skills. Medical technologists, whose broad background of college and clinical laboratory training provides the necessary ingredients for their professional responsibilities, fulfill a prominent role in these laboratories.

Completion of the Medical Technology program as part of a liberal arts and sciences education offers students the breadth of knowledge and experience to handle the responsibilities and decisions they will face in their careers, and to adapt to changes within their profession. In addition, they will be prepared to lead full and satisfying lives.

Students interested in preparing for a career in medical technology pursue a three-plus-one program leading to a bachelor of science degree in medical technology. The program consists of three years of academic work at Hartwick followed by a 12-month clinical internship at the Rochester General Hospital School of Medical Technology in Rochester, NY. Following completion of the internship, students have earned the necessary 120 credits for the B. S. degree in Medical Technology from Hartwick, and a certificate indicating completion of the school of medical technology. They are then eligible to take the National Registry Examination, the passage of which earns the professional certification, MT (ASCP). Hartwick's three-plus-one program fulfills the requirements of the National Accrediting Agency for Clinical Laboratory Sciences.

Medical technologists are licensed professionals within New York State. This reflects recognition of the extensive clinical knowledge, subjective judgment, and critical decision-making skills that are required to practice this challenging profession.

Academic work during the first three years at Hartwick involves an interdepartmental concentration of courses in Biology, Chemistry, and Mathematics (see the course list at the end of this section). In addition, Analytical Chemistry, two courses in Physics, and one course in Computer Science are recommended. Students should maintain a 3.0 grade point average in coursework to be considered for the clinical internship. If the grades are not high enough for admittance to the internship, or if the student changes his or her mind about becoming a medical technologist, he or she can complete the requirements for a major in Biology and graduate with a bachelor's degree in Biology.

The specific requirements of Hartwick's Medical Technology program and the general College requirements for the baccalaureate degree permit sufficient flexibility for students to take advantage of numerous off-campus study programs applicable to the profession. This is in keeping with the multi-faceted responsibilities of professional medical technologists in such areas as computer programming, conducting lab tests, trouble-shooting equipment problems, business and personnel management, teaching, and report writing.

Faculty/Coordinator: Allen Crooker

Medical Technology

Minimum of 13 courses in Biology, Biochemistry, Chemistry, and Mathematics, distributed as follows:

Seven courses in Biology:

- 101 Biology in Practice (BIOL)
- 206, 207 Human Anatomy and Physiology (BIOL)
- 202 Concepts of Biology: Information (BIOL)
- 306 Microbiology (BIOL)
- 313 Genetic Analysis (BIOL)
- 314 Immunology (BIOL)

One course in Biochemistry:

- 405 Biochemistry I (BIOC)

Four courses in Chemistry:

- 107, 108 General Chemistry I, II (CHEM) (First year)
- 201, 202 Organic Chemistry I, II (CHEM)

One course in Mathematics:

- 108 Statistics (MATH)

Completion of a 12-month clinical internship at Rochester General Hospital

Grades for all courses required for the major (including those from other departments) are used to calculate the average in the major for Departmental Distinction.

Museum Studies Minor

Hartwick offers undergraduate work in museum studies for students who are interested in museums as visitors, supporters, life-long learners, or are interested in developing a museum-related career. Coursework for this minor is complemented by the use of the College's Yager Museum of Art & Culture and its exhibitions and permanent collections when appropriate. The program provides students with theoretical and practical courses and experiences that enable them to understand and value the role museums play in our society.

Students take museum studies courses in conjunction with a major or minor in an academic field most often associated with museums, such as anthropology, art, art history, English, education, history, business administration, or one of the sciences. Some students may opt to design their own Individual Student Program. Students who are interested in museum work and need advice about possible combinations of a major field with museum studies are encouraged to consult the coordinator of the program, Dr. Fiona DeJardin.

Students who complete the minor will:

- Understand the many ways museums are used as intellectual resources, preservers and presenters of the world's culture, and places of enjoyment and entertainment
- Have a broader understanding of cultural diversity and the ways that museums reflect positions of power
- Have an intellectual understanding of how museums provide diverse educational opportunities by offering many different modes of learning

Courses: Most museum studies courses will include the following:

- Contemporary museum theory and practice
- Practical experience including hands-on activities using the museums' exhibits, collections and programs
- Field trips
- Community service
- Attendance at the Yager Museum's special events

To complete the program students take a total of six courses that include four required courses and a choice of at least two "hands-on" Yager Museum mini-practica. Because experience is highly valued in museum work, students are strongly encouraged to pursue additional opportunities such as a second internship or volunteer work in another museum. This minor prepares students to be: active supporters of museums; life-long learners who use museums; and possible graduate school attendees. In special cases, the museum studies minor provides opportunities for entry-level museum positions.

Courses

203 Controversies and Dilemmas in Museums (3 credits) This course serves as an introduction to the role of museums in society through the exploration of contemporary issues. Through the use of case studies the course investigates the wide variety of controversies and dilemmas that museums face when working with collections, exhibitions, programs, boards, and administration, etc.

204 Collections Management (2 credits) This course introduces the student to the museum's collection and the management of collections information, accessioning and deaccessioning, cataloguing, conservation needs and storage. The student works closely with a museum staff member who coordinates and supervises the practica and determines a project to be completed by

the student—this may include rehousing of objects, data entry, research, or the development of an educational component. Prerequisite: MUST 203. Instructor permission required.

205 Exhibit Preparation and Design (2 credits) This course introduces the student to the art of exhibit preparation and design. Students work closely with a museum staff member and assist with the design and installation of exhibits either in the Foreman Gallery or in the Yager Museum proper. Students will be encouraged to propose exhibit design ideas for upcoming exhibits including working with graphics, label design, exhibit furniture, and placement. Prerequisite: MUST 203 and permission of instructor.

302 Creative Exhibits: The Power of Display (4 credits) This hands-on course—using the Yager Museum’s collections—examines the theory and practice of researching and developing exhibits. Although all aspects of exhibit development are addressed, students, with assistance from the museum’s staff, will focus on researching a small exhibit that will be installed in one of the museum’s galleries. Teamwork, research, and the writing of interpretive text will be emphasized. (HUM ILS)

304 Places of Learning: Museums and Education (4 credits) This hands-on course examines the community-service aspect of the museum’s mission. Although education theory regarding diverse audiences is examined, the primary emphasis is on implementing and conducting interpretive programs for learners of all ages using the museum’s exhibits and collections.

305 Independent Project (2 credits) For the independent project students are encouraged to discuss with the museum studies coordinator a museum project that they would like to carry out—this may include exhibit development, research, education outreach, marketing, grant writing and other not-for-profit projects. Students must be able to work independently on the project. Instructor permission required.

Museum Studies Minor

Minimum of six required courses as follows:

Four courses for a total of 14 credits:

MUST 203 Controversies and Dilemmas in Museums (3 credits)

MUST 302 Creative Exhibits: The Power of Display (4 credits)

MUST 304 Places of Learning: Museums and Education (4 credits)

An approved Internship in Museum Studies (3 credits).

At least two courses chosen from the following mini practica for a total of 4 credits:

*MUST 204 Collections Management (2 credits)

*MUST 205 Exhibit Preparation and Design (2 credits)

*MUST 305 Independent Project (2 credits)

Optional courses: It is strongly advised that students enroll in some of the following courses:

*A second Internship in Museum Studies

ART 213 Digital Art and Design I: Typography (4 credits)

ENG 310 Creative Writing: Non-Fiction

*An off-campus course that includes extensive trips to museums

*courses preceded by an asterisk must be approved by the coordinator of the minor

Music

PERFORM, CREATE, THINK, IMPART, TEACH

The Department of Music strives to develop the musical abilities of students in many ways, including the areas of performance, scholarship, creativity, communication, and where appropriate, teaching ability. We create an atmosphere that is founded on close faculty- student interaction and collaboration and aids in the development of self-motivated learners who have the ability to apply and transfer concepts and knowledge.

Because of our commitment to student development and to experience-based learning, the Department of Music encourages and often develops special projects that involve student initiative, faculty-student collaboration, and the application of classroom knowledge to real life situations.

In our classrooms, rehearsals, and throughout the department we seek to develop:

- *Musicians of a high level of performing abilities with a solid command of their performance area and of the rudiments of music
- *Intellectuals who think deeply about the music from a range of cultural and geographical regions and throughout historical time in a variety of ways.
- *Creative individuals who can demonstrate content mastery through creative applications and embody the ideals of the liberal arts in practice.
- *Communicators who can impart beliefs and knowledge about music to others with clarity and ease.

In addition, for those students who choose the Music Education degree we seek to develop:

- *Teaching abilities through a study of music education methodology and its application to real-world classroom settings through practicum experiences.

Bachelor of Arts (B.A.)

This degree offers students a liberal arts major in music, which encourages musical discovery, collaborative projects, and hands-on learning. It prepares students for graduate work in music as well as for affiliated careers in music.

Bachelor of Science (B.S.)

The major in music education is an intensive and rigorous pre-professional program. Curricular emphasis is placed on critical thinking and creativity, and students gain competency in vocal, instrumental, and general music, K-12. Student teaching practica take place in the junior and senior year. Education courses required for teacher certification are: EDUC 220 Social and Philosophical Foundations of Education, EDUC 304 Psychological Foundations of Education; EDUC 320 Interdisciplinary Curriculum and Instruction; EDUC 340 Reading, Writing, and Literacy; 371 Teaching Special Needs EDUC; 372 Substance Abuse and the Classroom; and Child Abuse Identification Seminar.

Students are required to complete the NYSED battery of tests in order to be recommended for teacher certification. These include the Liberal Arts and Science Test (LAST), Assessment of Teaching Skills Test (ATS), and Content Specialty Test (CST).

Note: Because of the significant overlap in requirements for the music education and music majors, no student may be credited with both majors.

Affiliations and Memberships

The Department of Music is accredited by the National Association of Schools of Music (NASM) and is a member of the national music honor society, Pi Kappa Lambda.

Student organizations include: CMENC, for music educators, and two music fraternities, Sigma Alpha Iota, for women and Phi Mu Alpha, for men.

Faculty

Diane M. Paige, chair, Joe Abramo; Jason Leo Curley; Jirka Kratochvíl

Resident Artists: All private lesson instructors are professional performers and they include principals from the Catskill Symphony Orchestra, the Catskill Klezmerim, Catskill Woodwind Quintet, Catskill Brass Quintet, Catskill Chamber Players, Glimmerglass Opera, Tri-Cities Opera, and the like.

Ben Aldridge, Johana Arnold, Paul Blake, Karlinda Caldicott, Christine Cumming, John Davey, Cynthia Donaldson, Jered Egan, Heather Forsha, Joanne Grigoriev, Daniel Hane, Timothy Horne, Rob Hunt, Robert Lipari, Stephen Markuson, Greg Norris, Andy O'Dell, Kim Paterson, Rene Prins, Mary-Anne Ross, Charles Schneider, Robin Seletsky, Joel Smales, Uli Speth, Dennis Turechek, Ben Whittenburg.

Courses

102 Basics of Music (3 credits) An introductory course designed to familiarize the student with the basic elements of music. Musical nomenclature and the basics of music harmony, rhythm, and melody will be studied. Oral and written exercises are used. Primarily for non-majors. (EL)

105 Music Theatre/Opera Production (3 credits) (same as THEA 105) Study, rehearsal, and performance of a musical theatre piece. Students will be cast in a role or assigned a production responsibility and will be coached and directed by the staff and faculty. An emphasis will be placed on the development of skills in singing, acting, dancing, and in the design, lighting, and running of a production. The literary, thematic, and historical aspects of the chosen work will be examined as well. (Whether MUSI or THEA, this course may only be taken twice for credit.) (EL)

110 Fundamentals of Guitar (3 credits) A course for the beginning student (including those without any previous musical experience). Designed to provide basic skills in guitar technique and music fundamentals by exploring a diverse repertory that includes classical (course emphasis), folk, country, and popular styles. (EL)

140 Music Theory I (3 credits) An investigation of the basic elements of Western tonal music: major and minor scales, intervals, diatonic triads and seventh chords, cadences, non-harmonic tones, principles of harmonic relationships, fundamentals of part-writing and analysis. Students will also be introduced to the use of various music technologies. This will serve: (1) as a means to complement and enhance student learning about music theory, and (2) as an introduction to the extraordinarily wide range of technological applications to composition, improvisation, and music education in general. Prerequisite: The ability to read music. To determine each student's ability to read music, an entrance test will be administered on the first day of class. Students must receive a grade of C or higher in order to enroll in the next course of the Music Theory sequence (EL)

141 Aural Skills I (2 credits) Sight singing using moveable and fixed "Do" systems, single-voice dictation, interval work on Mm2, Mm3, P4, P5, P8; distinguishing major, minor, diminished, and augmented triads; introduction rhythmic exercises in simple and compound meters; chord progressions using major degrees of the scale. EL

142 Music Theory II (3 credits) A continuation of work completed in Music Theory I. It includes more advanced part writing and analysis, harmonization of melodies, chord inversions, diatonic seventh chords, non-chord tones, phrase structure, small-scale formal structures, and

individual and group projects that focus on various analytical, arranging, and compositional activities. Instruction will be integrated with music technologies. This will serve: (1) as a means to complement and enhance student learning about music theory, and (2) as an introduction to the extraordinarily wide range of technological applications to composition, improvisation, and music education in general. Prerequisite: C or better in MUSI 140. (EL)

143 Aural Skills II (2 credits) Continued progressive work in all areas; incorporating alto clef; increasing complexity in sight singing and melodic dictation; strengthening intervals including Mm6, Mm7; distinguishing triads in inversion; integration of notation of dotted rhythms in compound time and differentiating divisions of 3, 4, 6, 8 to a beat; reading rhythms with a division of 5 or 7 to a beat; the addition of I6, IV6/4, V7, V6, to chord progressions. Prerequisite: MUSI 141. (EL)

150 Topics in Music (3 credits) Offered periodically in special aspects of music, such as Music and American Culture (FYS); Ebony and Ivory: White Society and the Black Musical Experience (FYS).

170 Country Music (3 credits) A survey of the history, fundamental ingredients, and structure comprising the American musical genre nicknamed “country.” This is, in the most general dimension, the music of the American rural dweller, farmer, mountain inhabitant, and the Great Plains states circumventing The Great Depression to the present day. The course will discuss the influence on American country music by its ancestral styles, incorporating folk music of Brittan and Ireland, 18th century rural American folk and religious / secular music, vaudeville, 1930-1940 Swing Band, popular vocal and instrumental styles of the 1950s, in its formation into an expressive and recognized entertainment venue. In addition, the course will emphasize the contributions of diverse ethnic cultures and societies (American and European) in formation of the music, structure, and emotional dimensions of this genre.

172 Progressive Rock (3 credits) This course explores a popular musical genre originating in Britain from approximately 1967-1979, conceptualized in the music of the Beatles and culminating in complex, classical-music based, compositions utilizing traditional orchestral instruments and electronic instrumentation associated with popular musical idioms of the period. Other ingredients of the progressive genre will highlight electronic innovations in instruments and recording techniques, including the use of synthesizers and sound-producing computer-generated synthesized sounds. The influence of youth culture of the mid-20th century will highlight contributions of the Beat Generation (1950) poets and writers, jazz musicians, mirrored in Hippie culture and thought of the 1960s.

174 History of Radio (3 credits) Provides an introduction to the history of radio and its powerful presence as a provider of news, information, and entertainment. Topics include: history of radio broadcasting from its inception in the early part of the 1920s; important individuals involved in radio technology who became the foundation of early broadcasting; the inter-relative facets of radio, its personalities, and effects on entertainment and information with respect to historical happenings and the constantly changing tastes of the listening public; the continued importance of radio in our lives; and radio’s historic role as a mirror of social change and development.

175 Evolution and Mechanics of Broadway (3 credits) Explores the development of American musical theatre from 1840-present, its musical and theatrical elements and those individuals and influences which constitute its characteristics. Contribution of immigrants, ethnic cultures of the late 19th and early 20th centuries, the songs, stories, and stage productions created to express new and ever-changing lifestyles.

176 Rock Music History (3 credits) Surveys American history and its social precepts as viewed through the sound of popular music of the time.

178 History of Jazz (3 credits) An introduction to the principle trends, sounds, and stylistic developments in jazz from ragtime (ca. 1900) to the present. Careful attention is placed on the characteristics and developments within each style and historical era. Major performers,

arrangers, and innovators are studied throughout the semester with the emphasis on sound rather than theoretical principles.

217 Golden Prague (4 credits) (J Term abroad) (Same as History 217) Based in Prague, Czech Republic, this course examines the transitions from its Imperial to the independent and democratic nationhood, and through its Marxist past into the democratic present. Students will survey history and politics of this vibrant cultural city as they relate to the arts, music and culture in general. Several trips will take students into the countryside of the Czech Republic, and abroad to places such as Auschwitz (Poland) and Salzburg (Austria). Many visits to musical performances (Czech Philharmonic Orchestra, National Opera Theatre, jazz and rock clubs, ballet) will be an essential aspect of the course. Permission of instructor required.

232 Fundamentals of Sound Recording (3 credits) Provides an introduction to the techniques of studio sound and music recording. Topics include: acoustics and psychoacoustics; concepts and terminology relating to sound recording; the recording of the voice (both spoken and sung), instrumental music, and “environmental” sound; sound editing; microphone techniques; control board operation; as well as the hands-on experience of supervising a recording session from start to finish. The class culminates in the production of a CD, representing the projects successfully completed during the course of the term. EL

240 Music Theory III (3 credits) A continuation of work completed in the first year of Music Theory. The material includes chromaticism, more advanced elements in part writing, analysis, and melodic harmonization, large-scale formal structures, secondary functions, augmented sixths chords, modulation, and individual and group projects that focus on expanded analytical, compositional and arranging activities. Instruction will be integrated with music technologies. This will serve: (1) as a means to complement and enhance student learning about music theory, and (2) as an introduction to the extraordinarily wide range of technological applications to composition, improvisation, and music education in general. Prerequisite: C or better in MUSI 142.

241 Aural Skills III (2 credits) Increase in the demands of aural acuity in identifying intervals and triads, in particular, as applied to sight singing, 2-voice dictation and chord progressions that will add I6/4, II6, V, V/V, V7/IV; open score Bach chorales are used to strengthen interval and clef study, including the tenor clef; rhythm exercise covers aural and notation aspects of divisions of 5 and 7 to a beat in simple and compound time. Prerequisite: MUSI 143. (EL)

242 Music Theory IV (3 credits) This course primarily concentrates on the music of the 20th century. It begins with an introduction to late 19th century harmonic practices, and then turns its full attention to the rich and broad array of analytical and compositional features found in 20th century music. Analytical and compositional projects, undertaken in individual and small student groups, are structured toward various 20th century music practices. Instruction will be integrated with music technologies. This will serve: (1) as a means to complement and enhance student learning about music theory, and (2) as an introduction to the extraordinarily wide range of technological applications to composition, improvisation, and music education in general. Prerequisite: C or better in MUSI 240.

243 Aural Skills IV (2 credits) Reinforcement of previous materials with the addition of compound intervals; 4-voice triads; chord progressions including IV6 and inversions of V9; playing one voice and singing another voice simultaneously from open score Bach chorales. Prerequisite: MUSI 241. (EL)

250 Topics in Music (3 credits) Offered periodically in special aspects of music such as the Music of World Wars I and II. Generally for majors and non-majors.

264 Music History I: Early Music (3 credits) (Antiquity, Medieval, Renaissance, and early Baroque music ca. 500 B.C.-1700 A.D.) Explores the origins and early development of the Western art tradition. The role of the church in the development of musical genres and styles, the origins and flowering of secular vocal forms, musical notation and criticism, and the impact of

Renaissance religious reforms on music are among topics explored. Primarily for music majors but interested students who read music may enroll with instructor's approval. Prerequisite: MUSI 140.

265 Music History II: The Common Practice Period (3 credits) (Late Baroque, Classical, and Romanticism ca. 1700-1870) The development of large-scale vocal and instrumental works; the role of patronage and public concert life in music making; the lives and contributions of major composers such as J.S. Bach, F. J. Haydn, W.A. Mozart, and Ludwig von Beethoven; and the connections between literary movements (e.g. Romanticism) and music are among topics explored. Primarily for music majors but interested students who read music may enroll with instructor's approval. Prerequisite: MUSI 264.

280 Music of the World's Cultures (3 credits) Study of music outside of the Western art tradition as both cultural and artistic phenomena. Principles of ethnomusicology will be employed within an interdisciplinary framework. Music cultures explored will include Africa, North and South America, the Middle East, Indonesia, and the Far East. Students should have familiarity with Western notation. (EL)

295 Sophomore Internship in Music (3 credits) An internship in a music-related field.

320 Conducting: Choral (3 credits) A practical study of choral conducting through class lectures, hands-on conducting experiences, and the study of basic vocal/choral techniques. (EL)

322 Conducting: Instrumental (3 credits)) This is a course intended to develop fundamental skills in baton technique, score analysis, leadership, rehearsal technique, music interpretation, conducting philosophy, and applications of pedagogical knowledge. Video recording, a laboratory band, a self-generated reference binder, and peer/self-evaluations are among the experiences used to strengthen and document the coursework and experience. (EL)

323 Acting with Your Singing Voice (3 credits) An opportunity for students to prepare vocal literature for performance through an understanding of the drama imbued in the words and music. Emphasis on theatrical expression within a variety of musical styles, from chamber to full stage works. (EL)

324 Foreign Language Diction (3 credits) Covers English, Italian, French, German, and Latin diction and song literature. The rules governing the correct pronunciation of each language and the International Phonetic Alphabet are covered as are their application to vocal literature. Students wishing to enroll must be able to read music. Offered every other spring. (EL)

364 Music History III: Late Romanticism to Neo-Romanticism (3 credits) (Late Romanticism and the 20th Century ca. 1870-1970) The dissolution of diatonic harmony, the emergence of national styles of composition, the styles and influences of modern musical movements such as Impressionism and Serialism, and the growing gulf between composer and audience are among topics explored. Primarily for music majors but interested students who read music may enroll with instructor's approval. Prerequisites: MUSI 264 & 265.

380 World Music Seminar (3 credits) An elective world music course with one geographically chosen music culture. (E.g. Africa, East or West Europe, North America, South America, the Middle East, Southeast Asia, East Asia, Oceania, the Caribbean). Music as a way of life and as a manifestation of certain beliefs, religious and spiritual concepts, thoughts, and customs is the basis for this course. Previous knowledge of music helpful but not necessary. (Ethnic Studies) (EL)

395 Junior Internship in Music (3 credits) An internship in a music-related field.

440 Orchestration and Arranging (3 credits) Designed to help students acquire competence in writing for orchestra and other instrumental groups. The topics covered include the acoustical properties and musical characteristics of the different instruments of the orchestra, and problems dealing with the combination of instruments, balance, standard practices, and style. The course will draw examples from the orchestral literature and it will include several assignments in orchestration, including projects for small ensembles to be realized in class. Competence in music

theory and in score reading/writing is necessary. Offered every other fall. Prerequisite: MUSI 242. (EL)

490 Senior Thesis (3 credits). Entails a public recital on the student's primary instrument/voice as well a large-scale project. Topics for the research project can take on a variety of forms. These might include: issues in performance practice, case studies, analysis, composition, musicology, multimedia, lecture/demonstration, or community based projects. Students must propose a thesis topic and have it approved by faculty by the end of the preceding Fall Term, before beginning work. The research project will culminate in some form of documentation of the research undertaken, (written paper, recording, notated score) as well as a public presentation of the project for faculty and students. (EL)

495 Senior Internship in Music (3 credits) An internship in a music-related field.

Music Education Courses

100 Introduction to Music Education (3credits) This introductory course to music education will address the social, historical, and philosophical foundations of the discipline. An overview and exploration of methods and approaches to teaching and learning in early childhood, elementary and secondary general music, choral, string, and instrumental music settings will be included. The topics of diversity, lifelong learning, alternative contexts for the teaching and learning of music, world musics, and teaching exceptional learners in music and integrating music technology into the curriculum will be introduced. Students will begin to develop a personal philosophy of music education.

221 Keyboard Techniques I (1 credit) Harmonization, transposition, improvisation, part reading from choral works, sight-reading, accompanying, scales, arpeggios, technical exercises. Materials are sequenced to accommodate different backgrounds, but basic keyboard reading skill is required. The course is a four-semester sequence that progresses developmentally through all skill areas. (EL)

222 Keyboard Techniques II (1 credit) Prerequisite: MUED 221. (EL)

223 Keyboard Techniques III (1 credit) Prerequisite: MUED 222. (EL)

224 Keyboard Techniques IV (1 credit) Prerequisite: MUED 223. (EL)

225 Brass Methods (2 credits) Pedagogy, playing, and care of common brass instruments, teaching methods and materials, practice in teaching. Offered alternate years. (EL)

226 Woodwind Methods (2 credits) Pedagogy, playing, and care of common woodwind instruments, teaching methods and materials, practice in teaching. Offered alternate years. (EL)

227 Percussion Methods (2 credits) Pedagogy, playing, and care of commonly used percussion instruments, teaching methods and materials, practice in teaching. Offered alternate years.(EL)

228 String Methods (2 credits) Pedagogy, playing and care of string instruments of the orchestra; bowing effects, fingering problems, approaches to string pedagogy; practice in teaching. Offered alternate years. (EL)

229 Vocal Methods (2 credits) This course explores the basics of the vocal mechanism, vocal hygiene, as well as the principles of singing technique. Important components of this course are class exercises and performances as well as peer-teaching. Offered every spring. (EL)

301 Contemporary Trends in Music Education: Elementary Level (3 credits) This course focuses primarily on developing teaching strategies and skills for the elementary/general music classroom (grades K-5/6), including lesson planning, teaching special needs students, classroom management skills, and other current related topics. Several projects involving music technology and its current applications to music education. In addition, this course provides a historical and philosophical background for teaching music to students in K-5/6. Fieldwork in local schools is an important component of this course. Prerequisite: MUED 100. (EL)

302 Contemporary Trends in Music Education: Secondary Level (3 credits) The course focuses primarily on developing teaching strategies and skills for the secondary music classroom

in general music choral and instrumental specialties including lesson planning/rehearsal planning, teaching special needs students, classroom management skills, and other current related topics. In addition, this course provides a historical and philosophical background for teaching music to secondary students, including techniques for teaching courses such as music technology, history, and theory. The course will include several projects involving music technology and its current applications to music education. It is highly recommended that a student take MUED 301 prior to this course, but it is not required. Fieldwork in local schools is an important component of this course. Prerequisite: MUED 100. (EL)

Music Performance Courses (MUPF) (EL)

Students register for subsections of MUPF courses based on their class year for that semester of registration. For example, to register for MUPF 202-Private Lessons Keyboard use the chart below.

Subsection to register for:	Fall	Spring	January
First-years	202a	202b	202i
Sophomores	202c	202d	202j
Juniors	202e	202f	202k
Seniors	202g	202h	202l

For questions regarding which section(s) to register for MUPF courses, please contact the Department Chair.

Private Lessons (MUPF 202-311) (1 credit) Private lessons are available for majors and non-majors. The fee for lessons is supported in part by the College. Student fees are as follows:
 \$220 for ½ lessons for the semester
 \$440 for hour lessons for the semester

Music and Music Education majors receive increased College support with a resulting fee of \$220 for hour lessons on their primary instrument, per semester.

Fees are nonrefundable at the end of the second week of classes.

- 202-302 Private Lessons: Keyboard**
- 203-303 Private Lessons: Voice**
- 204-304 Private Lessons: Strings**
- 205-305 Private Lessons: Woodwind**
- 206-306 Private Lessons: Brass**
- 207-307 Private Lessons: Percussion**
- 208-308 Private Lessons: Composition**
- 209-309 Private Lessons: Accompanying**
- 210-310 Private Lessons: Conducting**
- 211-311 Private Lessons: World Music**

250 Musical Theatre Production: Pit Ensemble (1 credit) Offered as a chamber ensemble component for those students not enrolled in MUSI 200/TA 105. Students prepare material, participate in rehearsals and performances of the musical theatre productions. (EL)

312 Instrumental Chamber Ensembles (1 credit) Small ensembles that may include any instruments and combination thereof. The faculty member in charge of this course will aid

students in selecting members, determining repertory, and preparing performances. (EL)

313 Chamber Orchestra (1 credit) String ensemble that plays music from the Baroque through modern eras. Auditions are held each September. (Major performance ensemble) (EL)

314 Jazz Ensemble (1 credit) An exploration of contemporary as well as historically important big band literature. The group provides a venue for tight ensemble playing, improvisation, and showcasing outstanding individual talent. Auditions are held each September and when positions become vacant. (EL)

320 Chamber Choir (1 credit). Public performances of choral works, both sacred and secular. Members selected by audition and any qualified student may audition. (EL)

330 College Wind Ensemble/Pride Pep Band (1 credit) A combination of woodwind, brass, and percussion, the College Wind Ensemble is an instrumental performance opportunity that produces several major concerts each semester. Its goal is to facilitate the comprehension and appreciation of the finest repertoire available for the medium while providing an artistic experience for both players and audiences. The Wind Ensemble is also dedicated to campus outreach in that it serves as the Hartwick Pride Pep Band and as a musical feature at any number of events including graduation, homecoming, building dedications, inaugurations, etc. (Major performance ensemble) (EL)

332 College Choir (1 credit) This is a non-auditioned mixed choral ensemble of about 60 members. Any student with singing experience may enroll. Public performances of a wide variety of choral works, including masses, and oratorios, as well as secular works. (Major performance ensemble) (EL)

334 Catskill Symphony Orchestra (1 credit) Exceptional student musicians may be accepted into the symphony orchestra. Audition required. (EL)

Music

All B.A. and B.S. majors must successfully pass an audition on their major instrument/voice for status as a major. The major ensemble for instrumental majors are College Wind Ensemble or Chamber Orchestra; for vocal majors, College Choir.

Requirements for the major in Music (B.A.): 17 courses in music, as follows: 11 courses in theory, aural skills and history:

140, 142, 240, 242 Music Theory I-IV
141, 143, 241, 243 Aural Skills I-IV
264, 265, 364, Music History I-III

One course in conducting, selected from:

320 Conducting: Choral (for vocalists)
322 Conducting: Instrumental (for instrumentalists)

One music internship:

295, 395, or 495 Internship in Music

One course in diction: (Required for vocalists)

324 Foreign Language Diction for Singing

One course in orchestration: (Required for instrumentalists)

440 Orchestration and Arranging

490 Senior Thesis, including recital (minimum 45 minutes of music)

Two elective courses totaling at least 6 credits from either MUSI or MUED.

Performance requirements for the major in Music:

8 semesters of the following:

- MUPF 302-308 Private Lessons on primary instrument/voice
- MUPF 313, 330 or 332: major performance ensemble
- Attendance at weekly Departmental Convocations
- End-of-semester performance on primary instrument (fall) and departmental jury (spring)
(Note: the sophomore jury determines whether a student may continue in the major)
- Attendance at a minimum of 12 concerts each semester, 6 of which are professional

MUPF 202 half-hour piano lessons for four semesters

Senior Thesis, including recital (minimum 45 minutes of music)

Requirements for the major in Music Education (B.S.):

27 courses distributed as follows:

11 core courses in music theory and history:

- 140, 142, 240, 242 Music Theory I-IV
- 141, 143, 241, 243 Aural Skills I-IV
- 264, 265, 364, Music History I-III

Two courses in conducting:

- 320 Conducting: Choral
- 322 Conduction: Instrumental

One course in world music:

- 280 Music of the World's Cultures

12 courses in music education:

- 100 Introduction to Music Education
- 301 Contemporary Trends in Music Education: Elementary Level
- 302 Contemporary Trends in Music Education: Secondary Level
- 221, 222, 223, 224 Keyboard Techniques I-IV
(Note: Keyboard proficiency must be satisfied by the end of the sophomore year)

- 225 Brass Methods
- 226 Woodwind Methods
- 227 Percussion Methods
- 228 String Methods
- 229 Vocal Methods

Performance requirements for the major in Music Education: 7 semesters of the following:

- MUPF 302-308 Private Lessons on primary instrument/voice
- MUPF 313, 330, or 332 major performance ensemble
- Attendance at weekly Departmental Convocations
- End of semester convocation performance on primary instrument (fall) and departmental jury (spring)
(Note: the sophomore jury determines whether a student may continue in the major)

Attendance at a minimum of 12 concerts each semester, 6 of which are professional
 At least one credit of College Choir (MUPF 330) for instrumental majors; and one semester of
 College Wind Ensemble (MUPF 332) or Chamber Orchestra (MUPF 313) for vocal majors.

490 Senior Thesis, including recital (minimum 45 minutes of music)

See *Education* for student teaching and certification requirements.

Requirements for the minor in music:

Minimum of 23 credits, as follows:

2 courses in Music Theory: 6 credits **2 courses in Aural Skills:** 4 credits **2 courses in Music History:** 6 credits **Performance:** Seven credits total: 3 semesters of hour private lessons and 4 semesters of a major performance ensemble.

Grades for all courses taken in music, music education, music performance are used to calculate the average in the major for Departmental Distinction.

**Recommended Sequence of Courses for the
 B.A. in Music**

First year	Fall	Spring
	MUSI 140 Music Theory I MUSI 141 Aural Skills I MUPF 3xx private lessons MUPF 202 lessons private lessons: piano MUPF313, 330 or 332 Major Performance Ensemble	MUSI 142 Music Theory II MUSI 143 Aural Skills II MUSI 324 Foreign Language Diction (Offered every other spring; vocal majors) MUPF 3xx private lessons MUPF 202 private lessons: piano MUPF 313, 330 or 332 Major Performance Ensemble
Sophomore	MUSI 240 Music Theory III MUSI 241 Aural Skills III MUSI 264 Music History I MUPF 3xx private lessons MUPF 202 private lessons: piano MUPF 313, 330 or 332 Major Performance Ensemble	MUSI 242 Music Theory IV MUSI 243 Aural Skills IV MUSI 265 Music History II MUSI 324 Foreign Language Diction (Offered every other spring; vocal majors) MUPF 3xx hour private lessons MUPF 202 private lessons: piano MUPF 313, 330 or 332 Major

Performance Ensemble		
Junior	MUSI 364 Music History III MUSI 322 Conducting: Instrumental (Offered every other fall) MUPF 3xx hour private lessons MUPF 313, 330, 332 Major Performance Ensemble	MUSI 320 Conducting: Choral (Offered every other spring) MUPF 3xx hour private lessons MUPF 313, 330 or 332 Major Performance Ensemble MUSI or MUED elective
Senior	MUSI 440 Orchestration and Arranging (instrumental majors) MUPF 3xx hour private lessons MUPF 313, 330, 332 Major Performance Ensemble MUSI or MUED elective	MUSI 490 Senior Thesis MUPF 3xx hour private lessons MUPF 313, 330,332 Major Performance Ensemble

MUSI 395 or 495: Internship in Music (junior or senior year)

**Recommended Sequence of Courses for the
B.S. in Music**

Fall	J Term	Spring
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First Year	MUSI 140 Music Theory I MUSI 141 Aural Skills I MUED 221 Keyboard Techniques I MUED 100 Introduction to Music Education MUPF 3xx hour private lessons MUPF 313, 330,332 Major Performance Ensemble	MUSI 142 Music Theory II MUSI 143 Aural Skills II MUED 222 Keyboard Techniques II MUED 229 Vocal Methods MUPF 3xx hour private lessons MUPF 313, 330, 332 Major Performance Ensemble EDUC 220 Foundations of Education
Sophomore	MUSI 240 Music Theory III MUSI 241 Aural Skills III MUSI 264 Music History I MUSI 322 Conducting: Instrumental (Offered every other fall) MUED 223 Keyboard Techniques III MUED 225 or 226 Brass or Woodwind Methods MUPF 3xx hour private lessons MUPF 313, 330,332 Major Performance Ensemble EDUC 304 Educational Psychology	MUED 301 Contemporary Trends I MUSI 242 Music Theory IV MUSI 243 Aural Skills IV MUSI 265 Music History II MUSI 320 Conducting: Choral (Offered every other spring) MUED 224 Keyboard Techniques IV MUED 227 or 228 Percussion or String Methods MUPF 3xx hour private lessons MUPF 313, 330,332 Major Performance Ensemble Keyboard proficiency required EDUC 320 Curriculum and Instruction
Junior	MUED 302 Contemporary Trends II MUSI 364 Music History III MUSI 322 Conducting: Instrumental MUED 225 or 226 Brass or Woodwind Methods MUPF 3xx hour private lessons MUPF 313, 330,332 Major Performance Ensemble EDUC 340 Literacy, Reading, and Writing	EDUC 390, 391, or 392 (General Music) MUSI 320 Conducting: Choral MUED 227 or 228 Percussion or String Methods MUPF 3xx hour private lessons MUPF 313, 330,332, Major Performance Ensemble EDUC 371 Special Learners EDUC 372 Educational Lyceum Series
Senior	EDUC two of the following: 490, 491, 492 (Student Teaching Fall Practicum) (Vocal & Instrumental Music) EDUC 480 Interdisciplinary Seminar (Student Teaching Seminar)	MUSI 490 Senior Thesis MUPF 3xx hour private lessons MUPF 313, 330,332 Major Performance Ensemble MUSI 280 Music of the World's Cultures

One semester of choir for instrumental majors; one semester of band or orchestra for vocal majors

Nursing

Preparation for a career in nursing requires more than the specialized scientific knowledge necessary for licensure. Nursing is an applied human science; therefore, in order to promote, maintain, or restore health a nurse must be able to apply critical thinking to a broad range of health concerns. The nurse must understand how individuals, families, and/or communities experience an illness, injury, or developmental crisis. As well, in order to provide safe, quality, compassionate care the nurse must possess excellent communication, analytical, and decision-making skills and be prepared to assume positions of leadership in patient care and healthcare management. Completion of Hartwick's baccalaureate nursing program, as part of a broader liberal arts and sciences education, will enable students to acquire these skills in addition to the discipline-specific nursing skills needed to practice in an increasingly diverse, high-tech, health-conscious society.

Unlike most other baccalaureate programs, Hartwick's professional nursing curriculum begins in the first year with a solid foundation in the biological, natural, social, and behavioral sciences. Electives in the humanities, required throughout the four-year academic program, complement the scientific and technical competencies required for professional practice. The professional component of the program, woven throughout all 4 years of the program, facilitates the acquisition of essential knowledge, attitudes, and skills needed to meet the increasingly complex and diverse needs of patients in today's healthcare environments. In addition, study in the major fosters the potential for leadership and a sense of professional values and accountability. Clinical practice centers on health promotion, risk reduction, and illness and disease management in hospital as well as community-based healthcare settings. By the senior year, the focus is on the development of leadership skills, the application of research, the conduct of evidence-based practice, and professionalism.

Courses in the freshman and sophomore years are sequential. Courses in the junior year must be completed prior to entry in the senior year. Many courses within the major are prerequisites to other courses; this means the prerequisite course must be successfully completed in order for the student to enter subsequent courses in the curricular sequence.

Because of the relationship between safe professional nursing practice and academic performance, nursing majors must meet departmental progression policies, academic standards within the College, and standards for professional accountability and ethical behavior. **Nursing majors are required to maintain a minimum cumulative grade point average of 2.0** and must earn a minimum grade of C in all prerequisite, corequisite, and major courses to progress in the major.

Nursing is an applied science; thus, students must demonstrate mastery of theoretical knowledge and competency in the application of theory to the skillful practice of nursing. Nursing majors must successfully complete both the theoretical and laboratory portion of each nursing course in order to receive credit for the course.

Upon successful completion of Hartwick's major in nursing, students receive a B.S. degree and are qualified to take the NCLEX examination for licensure as a Registered Professional Nurse (RN). The Hartwick College nursing program has full accreditation from the Commission on Collegiate Nursing Education.

Educational Mobility for Registered Nurses

Nurses who have graduated with a minimum GPA of 2.5 from an accredited U.S. institution with an associate's degree in nursing and who possess a license as a Registered Nurse (RN) may be accepted with advanced standing as candidates for a bachelor of science (B.S.) degree in nursing. A maximum of 30 nursing credits can be applied toward the baccalaureate degree. Credit from other accredited colleges usually is given for courses similar to those offered at Hartwick, completed with a grade of C or higher. The maximum number of transferable credits is approximately 80 of the 124 necessary for the B.S. degree in nursing. Courses over the 60 credits taken at another upper-division college for transfer to Hartwick must be approved by the Department Chair prior to the course being taken, in order for the credits to be accepted. This is done to protect the integrity of the student's program and the Hartwick degree. Sixty credits in the student's total educational experience must be taken at an upper-division college and/or university. For the RN Mobility student, a minimum of 40 credits must be taken at Hartwick. Advanced standing course credit cannot be applied toward these 40 credits. Nurses who have graduated from a diploma school of nursing or from an institution in another country and who possess a license as an RN will be reviewed individually. The Chair or Curricular Chair of the Department of Nursing will review the educational and professional background of the applicant. The Department of Nursing recognizes the New York State Education Department's call for articulation agreements with associate degree nursing programs. Graduates with a GPA of 2.5 or above from an accredited school of nursing may transfer to Hartwick. ***All transfer students are required to furnish two letters of recommendation from faculty within their major.***

Partnership for Nursing Opportunities Program (PNOP)

The PNOP is designed to provide on-site education to students employed as Registered Professional Nurses (RNs) by Bassett Healthcare. Typically, participants in this work-study program work three days per week for Bassett Healthcare and take classes from Hartwick faculty two days per week on Bassett's main campus, located in Cooperstown, NY. The PNOP allows the qualified RN to achieve a baccalaureate degree in two calendar years, presuming all prerequisites are met on admission to the program. Through a system of scholarships provided by Hartwick College, Bassett Healthcare, and public and private sources, the entire tuition cost is free to the student. Students enrolled in this program are asked to commit to one year of additional employment at Bassett Healthcare for every year they are supported in the program.

Summer Accelerated Program

This program is designed for those internal and external transfer students who have completed all prerequisite courses expected in the first two years of the Hartwick College Nursing Curriculum with a grade of B- or better. Because of the rigor of this program, students must be in good academic standing in the College with a cumulative GPA of 2.7 or above. ***All transfer students are required to furnish two letters of recommendation from faculty within their major.***

Accelerated Baccalaureate in Nursing Program

The Accelerated Baccalaureate in Nursing Program is an intensive 18 month hybrid educational program designed for adult students who have completed all of the nursing prerequisites as well as the general education requirements necessary for a bachelor of science degree with a major in nursing at Hartwick College. Students with baccalaureate degrees in other disciplines or those with significant college credits and a calculated cumulative GPA ≥ 3.0 are encouraged to apply. Courses are taught in 3-6 week blocks using a blend of distance and on-site education methods. Classes and clinical/laboratory practicum experiences are held in the evenings and/or on weekends. The total number of credits required for the bachelor of science degree with a major in nursing is 124 credits. The academic requirements of the Accelerated Baccalaureate in Nursing Program include a 62 credit curriculum. Upon review, transfer work may be determined

to be equivalent. *All applicants are required to furnish two letters of recommendation.*

Clinical Preparation Requirements for all Nursing Majors

1. Students must hold current Basic Life Support (BLS) Certification for Healthcare Providers (American Heart Association) or CPR for Professional Rescuer (American Red Cross).
2. Professional Liability Insurance Policy (available through the department for pre-licensure students).
3. Health Requirements: each student must complete and submit: (a) a pre-entrance physical examination and subsequent annual physical examination; (b) completed immunization records including documentation of the annual influenza vaccine; (c) specific requirements for the nursing major, e.g., annual mantoux test for Tb. The forms that are required can be found in the New Student Forms. Health requirements are subject to change at the request of the New York State Department of Health and/or our clinical affiliates; students will be expected to comply with those changes.
4. Drug testing and criminal background checks, including fingerprinting, may be required by clinical facilities. Findings from such inquiries may preclude the student from practicing in the clinical facility; in such cases, the Department and the College are not responsible for providing the student with an alternate learning experience.
5. Licensed RNs who are students must submit a copy of their NY State Nurses License, their professional liability policy, and current CPR card.

Transportation

In most cases, students are responsible for providing their own transportation to a clinical site/experience. In cases where the College provides van service transportation fees may apply.

Uniforms and Supplies

Uniforms and name pins are ordered in the fall of the student's first year in the nursing program. As well, students are required to purchase a variety of laboratory and/or clinical supplies (including such items as stethoscope, blood pressure cuff, scissors, penlight, non-digital watch with second hand) for use in clinical courses. Lab fees may apply.

Disclaimer

While the College and the Department recognize and respect the cultural, spiritual, and religious beliefs and practices of others, nurses and, by extension, nursing students are required to provide care to diverse persons and groups. Students will not be excused from participating in the care of any persons and/or groups with diverse needs if it is a required element of the program.

Faculty

Jeanne-Marie Havener, Ph.D., APRN, CNS/FNP, Chair; Penny Boyer, Ph.D., RN, CNE; Lisa Casler, MSN, NPP-BC; Sharon D. Dettenrieder, MS, RN; Peggy Jenkins, MS, CCRN, CNE; Cynthia Ploutz, MS, FNP; Tina Sullivan, Ph.D., APRN, FNP-BC; Theresa Turick-Gibson, M.A., APRN, PNP-BC

Courses

134 Fundamentals of Nursing Theory and Laboratory (4 credits) Introduces nursing as an art and science distinguished by humanistic caring. Study initially focuses on the self and maximization of health and progresses to the concept of "client" in the health system. This conceptual leap requires an understanding of individual differences, personal and professional values, beliefs, culture, interpersonal communication, the healthcare system, baccalaureate

nursing, and the role of the nurse as a change agent in the improvement of holistic health. In the laboratory students are introduced to self assessment tools used to determine an individual's health status and common nursing interventions and actions used to meet the healthcare needs of clients of all ages in structured and unstructured settings. Students have the opportunity to apply therapeutic use of self and basic nursing skills learned in the laboratory and in long term care settings. This course is for majors only. Offered fall semester.

144 (SCIE) Health Assessment Theory and Laboratory (4 credits) Offers the student experience in holistic health assessment. Synthesizing knowledge from the biological and behavioral sciences, students develop further skill in therapeutic communication, interviewing, data collection, psychosocial assessment and physical examination. The course is presented through a body systems approach incorporating age related changes, normal and abnormal variations, and racial and cultural considerations. Practical skills are applied in the laboratory and/or clinical setting. Prerequisites: BIOL 206, NURS 134, or permission of the instructor. Offered spring semester.

234 Medical-Surgical Nursing I (5 credits) This course introduces students to the physical, psychological, and socio-cultural aspects of illness as experienced by the adult client; in particular, the effects of aging are stressed. The focus is on developing critical thinking skills to provide holistic care to adult and aging clients experiencing common health problems. The clinical experience provides students with the opportunity to apply the nursing process and develop basic nursing skills in a variety of acute care medical-surgical settings. Prerequisites: NURS 134, SCIE 144, BIOL 206 & 207. Offered fall semester.

257 Women's Reproductive Health Theory and Practicum (5 credits) This course builds on the conceptual framework of health promotion discussed in previous nursing, science, and co-requisite courses. The course focuses on application of levels of prevention and the nurse's role in health promotion and risk reduction throughout the reproductive life span, particularly as it applies to the needs of the emerging family and persons with reproductive and genitourinary health needs. Included are the normal biologic, psychological, social, and spiritual changes anticipated particularly during periods of pregnancy, childbirth, and human and sexual growth and development. Common deviations from these normal processes, and secondary and tertiary methods of prevention are also explored. Practicum experiences offer the opportunity to apply the nursing process and levels of prevention in a variety of clinical settings. Clientele include the childbearing client, the emerging family, and persons with genitourinary and reproductive health needs. Prerequisites: NURS 234, BIOL 206, BIOL 207, SCIE 144, SCIE 345 or permission of the faculty. This course may be taken out of sequence for the summer accelerated students but must be completed prior to enrollment in senior nursing courses. Offered spring semester.

261 RN to B.S. Transition Seminar (3 credits) This course assists the student in the process of transitioning into baccalaureate education. The focus of this course is on communication skills, information literacy, college level writing, critical thinking, professional practice, political advocacy and therapeutic nursing interventions. Nursing process, nursing research, and nursing theory are addressed. Assessment/intervention skills for the individual and family within the community are included. Physical Assessment skills are reviewed and assessed. In the case of inactive or inexperienced RNs the clinical experience serves to validate the basic acute care abilities expected of an RN and provides an opportunity to use new skills. Offered fall semester. For RNs only.

333 Gerontologic Nursing (3 credits) This course explores the field of gerontological nursing and care of the older adult. Students will be introduced to the theories and myths of aging, aging demographics, social, cultural, ethical, financial, housing and environmental issues as well as societal perspectives on age and aging. The unique healthcare needs (including physiological, developmental, and functional) and nursing approaches with regard to health promotion, prevention, and end of life care will be presented. Prerequisites: NURS 234, SCIE 344, SCIE 345.

Offered spring semester.

334 Medical-Surgical Nursing II Theory and Practicum (5 credits) This course is a continuation of Nursing 234. Students build on a broad knowledge base in medical-surgical nursing by integrating course work from pathophysiology and pharmacology into caring for patients with selected health problems. Students integrate age-related and cultural factors into planning and providing nursing care for adult clients. The focus is on developing proficient critical thinking skills to provide complex holistic client care. The clinical experience provides students with the opportunity to increase nursing skill levels in a variety of acute care medical-surgical settings. Prerequisites: NURS 234 and 357; SCIE 144, 344, and 345, or permission of faculty. Offered spring semester.

336 Rural Health Nursing Theory and Practicum (4 credits; 3 credits for nursing and 1 credit for liberal arts) This course assists the student to recognize the myriad of health beliefs and practices that exist among and between different members of a rural upstate New York culture and how those beliefs and practices have an impact upon the health of its members. This four-week experience is designed to expose the student to the concepts inherent in a rural context, such as isolation, work, and distance. Students will be exposed to different empirical frameworks to assist them in providing holistic, culturally competent care to individuals, families and communities. Clinical experiences will occur in diverse rural community settings with an emphasis on health promotion, disease prevention, risk reduction, and illness and disease management within unique rural cultural environments. Prerequisites: NURS 234 or permission of the faculty. Offered J Term.

Science 344 Pathophysiology (3 credits) This course will examine specific diseases from a physiologic and developmental perspective. Mechanisms of disease, etiology, manifestations, analyses of laboratory data and primary medical and surgical interventions are reviewed. This content will serve as a foundation for addressing therapeutic interventions related to specific disease states. Prerequisites: NURS 134, 234, BIOL 206 & 207, CHEM 105. For science majors or accelerated majors, permission of instructor required. Accelerated students may take BIOL 207 concurrent with this course with the express permission of the instructor. Offered spring semester.

Science 345 Pharmacology (3 credits) The major focus of this course is on the scientific application of drug actions and their effect on an individual's wellness/illness state. Drug classifications are presented within a framework of an individual's physiological and psychological functioning; legal constraints and ethical issues related to drug therapy are explored. Prerequisites for nursing majors: BIOL 206, 207, CHEM 105, SCI 144, NURS 134. Permission of instructor for non-majors. Offered fall semester.

346 Transcultural Nursing Theory and Practicum (4 credits; 3 credits for nursing and 1 credit for liberal arts) Designed to assist the student to recognize the myriad of health-related beliefs and practices that exist among and between members of a culture and how those beliefs and practices impact upon the health of its members. This four-week immersion experience is designed to expand the student's knowledge of transcultural concepts and theories; apply cultural assessment in diverse settings; and provide culturally competent care to individuals, families, and communities. Students are exposed to different empirical frameworks to assist them in providing holistic, culturally competent care. Clinical experiences occur in diverse rural clinic and community settings with an emphasis on therapeutic interventions, health promotion, disease prevention, risk reduction, and health teaching within a unique ethno-cultural environment. Prerequisite: NURS 234 or permission of the faculty. Offered J Term.

357 Pediatric Nursing Theory and Practicum (5 credits) This course provides the student with an opportunity to learn nursing care of the infant/child/adolescent within various contexts. The conceptual base for understanding health and alterations in health and for providing nursing care to pediatric patients is presented. Aspects of health promotion, risk reduction, disease prevention and illness/disease management are addressed. The focus of the course is on normal growth and development, physiology, common pathophysiological conditions, and nursing care of the pediatric

client from infancy through adolescence. A variety of clinical settings will be available for the application of knowledge and critical thinking. Prerequisite: Nursing 234 or permission of the faculty; all co/pre-requisite courses with the exception on NURS 257 and SCIE 345 for students in the Summer Accelerated Program. Offered fall semester.

434 Advanced Medical-Surgical Nursing Theory and Practicum (5 credits) This course focuses on application of the nursing process as it relates to the care of clients with complex, multiple system disorders encountered in critical care settings. Advanced medical, surgical, and pediatric nursing concepts are studied. Clinical experience in critical care settings allows the student to gain insight into the problems of critically ill patients and the management issues that accompany critical illness. Prerequisites: NURS 334, 257, 357 or permission of the faculty. Offered spring semester.

441 Psychiatric-Mental Health Nursing Theory and Practicum (5 credits) This course focuses on the promotion and maintenance of mental health, risk reduction, and alleviation of symptoms of mental illness. Theories of mental health/illness as well as physiologic, psychological, cultural, spiritual and socioeconomic factors that correlate to specific disease entities are addressed. The practicum experience provides an opportunity to gain skill in nursing clients at varying stages of the life cycle with those who live with psychiatric-mental health problems. In the clinical setting students gain an understanding of group dynamics and group facilitation skills. Prerequisite: NURS 257, 334, and 357 or permission of the faculty. Offered fall semester.

443 Community Health Nursing Theory and Practicum (5 credits) Integrates principles of nursing science into the care of well and ill individuals, families, aggregate groups, and communities in a variety of community settings. Students gain advanced skill and achieve independence in applying the nursing process and levels of prevention to the care of a population. Practicum experiences occur in both formal and informal settings. Students engage in the assessment of a community to uncover the healthcare needs of that particular community and develop and implement a problem focused intervention program in the community. Prerequisites for pre-licensure students: NURS 257, 334 and 357; prerequisite for RN students: NURS 261 or permission of the faculty. Offered fall semester.

445 Trends and Issues in Professional Nursing (3 credits) Is designed to explore with students the multiple factors influencing nursing practice, such as history, trends, law, healthcare policies, the nursing shortage, and other selected issues. Through discourse, students gain a better understanding of the professional values in which nurses collectively believe, thus facilitating the transition from student to professional, baccalaureate nurse. Students work on group projects requiring an interface with the broader professional community. Prerequisite for pre-licensure students: NURS 334; prerequisite for RN students: NURS 261; or permission of the faculty. Offered spring semester.

448 Introduction to Research Method and Design (3 credits) Introduces the nursing major to research as scientific inquiry for the purposes of constructing and connecting nursing knowledge. Students are involved in learning experiences that enable them to become knowledgeable consumers of research and creators of research questions. Skills necessary to critically read and evaluate nursing research and how to use it as the basis for evidenced-based practice are emphasized. Students explore the research process including quantitative and qualitative methods. Nursing theories and their impact on the development of nursing knowledge as well as the historical, legal and ethical aspects of nursing research are reviewed. Prerequisite or corequisite: MATH 108 or PSYC 291 or permission of faculty. Offered spring semester.

449 Nursing Leadership and Management Theory and Practicum (5 credits) Focuses on the application of leadership and management principles; students apply the nursing process to organizational problems and the care of groups of acutely ill patients. Clinical experiences take place in acute care settings where students gain skill in managing the care of groups of acutely ill patients, providing leadership skills, functioning as members of a multidisciplinary healthcare

team, and demonstrating critical problem solving. Prerequisites: NURS 257, 334, and 357 or permission of faculty. Offered spring semester.

490 Nursing Senior Theory Seminar/Senior Thesis (3 credits) This course provides a forum for collegial support for senior students as they develop their senior thesis. The thesis provides senior students with the opportunity to analyze a concept/phenomenon of concern to nursing as a means for guiding nursing practice. The thesis is a project of substantial scope which demonstrates the students' ability to integrate theory, research, and practice. Synthesis of the understanding of this relationship will form the basis of the third chapter of the thesis. Some class time is devoted to preparing students for their J Term independent practicum Nursing 495. Prerequisites: NURS 448, Math 108, NURS 261 (RNs only) and attainment of Writing Level 3. Offered fall semester.

495 Nursing Senior Internship (3 credits) provides an opportunity for the student to individually develop and implement a study program in an area of specialized interest in nursing and assists the student in the transition from academe to the realities of professional practice. This four-week, independent internship is planned in collaboration with a faculty member and an on-site supervisor. Prerequisite: One senior level theory and practicum nursing course. Offered J Term. May be done as a Directed Study. Pre-licensure students must complete their thesis prior to the start of this course.

Interdisciplinary Courses

INTR 150 Life's Choices: Ethical Issues in Healthcare (3 credits) Introduces students to a wide array of ethical dilemmas from multiple perspectives. Issues to be investigated during the course will be decided upon by the students, but may include autonomy, euthanasia, resource allocation, abortion, smoking, transplants, and cloning. Finances, laws, policies, patient and family beliefs (cultural and spiritual) will be explored related to their effect on the ethical decision-making process. Offered J Term.

INTR 150 The Magic of Human Animal Bond (3 credits) Animal and human lives have been interconnected for thousands of years. What is the nature of this connection? What is special about this bond? This course examines this relationship between humans and non-humans for a better understanding about the ways that animals enrich peoples' lives. Course work will include discussion of the history of human-animal bond, and various contextual theories, as well as cultural and ethical issues concerning animals. Various ways in which animals are used in today's society will be discussed, and experienced with observational and service learning projects involving domestic animals.

INTR 310 Health, Illness and Healing as Reflected through Film (3 credits) This course allows the student to explore various theories and content related to health, illness, and healing. A variety of theoretical approaches will be examined through readings, discussion, and film. Experiences, as depicted through film (*Wit*, *Philadelphia*, *A Beautiful Mind*) and readings will be analyzed through application of theory and factual content. Various aspects such as culture, economics, values, gender, race, psychological impact, social impact, and ethics will be examined in the context of application to past and present times. Through examination of specific health and illness topics, the student will develop a greater understanding of health/disease entities and demonstrate an appreciation for the multiple components that influence health, illness, and healing. Offered J Term. (EL)

Nursing

Graduation requirement: 124 credits. Requirements for the major: 62 credits in the major and 35 credits in pre or co-requisite courses distributed as follows:

Fifteen courses in Nursing:

- NURS 134 Fundamentals of Nursing - Theory & Lab (4 credits)
- NURS 234 Medical-Surgical Nursing I - Theory & Practicum (5 credits)
- NURS 257 Women's & Reproductive Health - Theory & Practicum (5 credits)
- NURS 333 Gerontology Nursing (3 credits)
- NURS 334 Medical-Surgical Nursing II - Theory & Practicum (5 credits)
- NURS 357 Pediatric Nursing - Theory & Practicum (5 credits)
- NURS 336 Rural Health* (4 credits) OR NURS 346 Transcultural Nursing* (4 credits; * 3 credits for nursing; 1 liberal arts credit)
- NURS 434 Advanced Medical-Surgical Nursing - Theory & Practicum (5credits)
- NURS 441 Psychiatric Mental Health Nursing - Theory & Practicum (5 credits)
- NURS 443 Community Health Nursing - Theory & Practicum (5 credits)
- NURS 445 Trends and Issues in Professional Nursing (3 credits)
- NURS 448 Introduction to Research (3 credits)
- NURS 449 Nursing Leadership & Management - Theory & Practicum (5 credits)
- NURS 490 Senior Thesis (3 credits)
- NURS 495 Senior Independent Practicum (3 credits)

Three courses in Biology:

- BIOL 206 Human Anatomy (4 credits)
- BIOL 207 Human Physiology (4 credits)
- BIOL 210 Microbiology of Disease (4 credits)

One course in Chemistry:

- CHEM 105 Fundamentals of General, Organic & Biological Chemistry (4

credits)

Three Science courses:

SCIE 144 Health Assessment - Theory & Lab (4 credits)

SCIE 344 Pathophysiology (3 credits)

SCIE 345 Pharmacology (3 credits)

One course in Mathematics:

MATH 108 Statistics (3 credits)

One course in Psychology:

PSYC 301 Life-Span Developmental Psychology (3 credits)

One course in Sociology (3 credits)

Sequence in the major:

Freshman Year

<i>Fall Term</i>	<i>J Term</i>	<i>Spring Term</i>
BIOL 110	Elective	BIOL 111
NURS 134		CHEM 105
Elective		SCIE 144
English Comp		Elective

Sophomore Year

<i>Fall Term</i>	<i>J Term</i>	<i>Spring Term</i>
Elective	Elective	NURS 257
NURS 234		SCIE 344
PSYC 310		Sociology
SCIE 345		BIOL 210

Junior Year

<i>Fall Term</i>	<i>J Term</i>	<i>Spring Term</i>
NURS 336	NURS 336	NURS 334
MATH 108	or	NURS 333
NURS 357	NURS 436	NURS 448
Elective		Elective
Elective		

Senior Year

<i>Fall Term</i>	<i>J Term</i>	<i>Spring Term</i>
NURS 441	NURS 495	NURS 434
NURS 443		NURS 445
NURS 490		NURS 449
Elective		Elective

Sequence for 3-Year Accelerated students: to be discussed on an individual basis with the Department Chair.

Sequence for the RN Mobility student:

NURS 261 and all prerequisite courses

NURS 434, 443, 445, 448, 449, 490, 495

Sequence for Summer Accelerated students

Summer: NURS 134, SCIE 144, NURS 234

Fall Term year 1: NURS 357, SCIE 345

J Term year 1: NURS 336 or 346

Spring Term year 1: NURS 257, NURS 334, NURS 448, NURS 333

Year 2: follow senior year sequence

Sequence for the Accelerated Baccalaureate in Nursing Program student:

NURS 134, SCIE 144, NURS 234, SCIE 345, NURS 336, NURS 257, NURS 333, NURS 334,

NURS 357, NURS 448, NURS 443, NURS 490, NURS 441, NURS 434,

NURS 445, NURS 449, NURS 495.

Note: These requirements are in effect for students entering in the fall of 2010 or later.

College language requirement may be waived for Nursing majors entering prior to Fall 2008.

Grades for all courses taken in Nursing are used to calculate the average in the major for Departmental Distinction.

Peace and Conflict Studies Minor

The Program

The Peace and Conflict Studies Minor serves students interested in the interdisciplinary study of the conflicts that characterize our world and the peace efforts that arise in response to these conflicts. Courses are offered across the major academic divisions of the college, drawing on the expertise of faculty in a number of different disciplines. Students pursuing a Hartwick minor in Peace and Conflict Studies will explore the causes of international and domestic conflict, the results of such conflict, and the various ways available to mediate and prevent conflict. Topics included in the broad range of available courses include pacifism and non-violent protest, domestic violence, war, torture, sex, race, sexual orientation discrimination, and peace movements of various kinds.

The Program also offers a one-credit capstone course on an annual basis. This course focuses on some of the major themes in Peace and Conflict research, with a special emphasis on the place of war and nonviolence in political and ethical thought.

Requirements for the Peace and Conflict Studies Minor include the following:

Six 3-4 credit courses from the list approved for the Minor:

- ARTH 306: 20th Century Art History
- ANTH 322: Origins of War and Peace
- ANTH 350: Anthropology of Conflict and Violence
- ECON 102: Hunger and Excess
- ECON 156: Economics of War
- EDU 150: Savage Inequalities
- ENGL 150: Imperial Nightmares
- ENGL 190: Literature of War
- ENGL 190: Children in War
- ENGL 235: Fury of the Northmen
- HIST 104: Race and Ethnicity in American History
- HIST 150: Environmental Injustice
- HIST 213: Europe in the 20th Century
- HIST 251: Civil Rights Movement
- HIST 251: Vietnam War
- HIST 251: Revisiting Roots
- HIST 252: Intro to the Middle East
- HIST 324: Slavery in Latin America and the Caribbean
- HIST 337: Civil War and Reconstruction
- HIST 342: History after the Bomb
- HIST 351: America between the Wars
- HIST 352: Europe and the World Wars
- HIST 324: Slavery in Latin America and the Caribbean
- HIST: Environmental Injustice
- HIST: The Sixties
- INTR 166: Intro to Women's Studies
- INTR 310: Music and War: World War II (CIS)
- INTR 310: Art and Pornography (CIS)
- INTR 310: America's Oil Addiction
- INTR 310: Dams and the Damned
- MUSC 250: Music, Politics, and War
- PHIL 250/POSC 250: The Politics of Torture

PHIL 271: Values and Society
 POSC 105: International Relations
 POSC 107: Freedom, Equality, Justice
 POSC 247: Modern Political Ideas
 POSC 215: International Organizations
 POSC 218: Central Asian Politics
 POSC 248: Middle East Politics
 POSC 250: Authoritarianisms
 POSC 357: Democratic Ideas, Democratic Politics
 POSC 377: Philosophy of Law
 POSC 335: International Law
 POSC 345: Global Issues, Global Crises
 RELS 222: Buddhism
 RELS 243: Religion and Politics
 RELS 350: Philosophy of Consciousness in India
 RELS 239: Islam
 SOC 155: Children's Lives
 SOC 225: Human Rights
 SOC 230: Poverty and Affluence
 SOC 240: Women and Social Change
 SOC 250: Teens and Families
 SOC 251: Race and Ethnicity
 SOC 310: Classical Social Theory
 SOC 350: Food and Social Justice
 SOC 350: Global Feminisms
 SOC 350: Transnational Solidarity: Fair Trade, Social Justice, and Human Rights-
 Chiapas,
 Mexico
 SOC 350: Women and Work
 SOC 350: Social Movements
 SOC 375: Power and Privilege: Social Inequality in Theory and Practice
 SOC 385: Sociological Qualitative Analysis
 SOC 397: Contemporary Theory

A minimum of two courses at the 300 or 400 level

Courses from a minimum of three different disciplines

A one-credit 400-level mini-seminar that will be the capstone for the minor

Philosophy

“Philosophy” literally means “love of wisdom.” It denotes a kind of activity rather than a kind of subject matter; as contemporary philosophers use the term, philosophy is a kind of reflection on and analysis of various other human activities. For example, philosophical analysis distinguishes between moral, religious and scientific discourse and reflects on how religion is related to morals on the one hand, and to science on the other.

Philosophy dates back to the ancient Greeks, when Socrates, Plato, Aristotle and other thinkers explored the nature of reality and the means by which people come to know. Later philosophers such as Descartes, Hume and Kant refined the understanding of human existence. The study of philosophy challenges students to examine very fundamental questions and, in so doing, better prepares them for life. As they become familiar with the teachings of the world’s great philosophers, students also develop their ability to examine, clarify, analyze—and care for—the natural and human worlds.

Hartwick’s philosophy program acquaints students with issues of contemporary philosophical inquiry, as well as the thinking of important philosophers of the past. Major areas of study include epistemology, the study of how we come to know and of the limits of what we can know; metaphysics, the study of reality; and ethics, the study of moral standards and value theories. Departmental offerings include courses in the history of philosophy as well as systematic courses, which introduce students to the chief areas and topics of philosophical investigation. These courses, together with opportunities for directed individual study, permit students to do advanced and specialized work in philosophy and to develop competence in handling philosophical problems.

Students who major in philosophy complete core courses in logic, history of philosophy, ancient and modern philosophy, and ethics. Additional courses in philosophy selected to complete the major requirements depend on a student’s interests and future career goals. The major program culminates in a senior capstone project in an area of philosophical inquiry.

Graduates with a major in philosophy have many options. Those with demonstrated ability who desire to continue in the field may do graduate study in philosophy to prepare for college teaching. Students who have majored in philosophy as undergraduates also may pursue graduate study in other fields; philosophy is a recommended major for students considering law school, for example.

Faculty

Stanley Konecky; Stefanie Rocknak; J. Jeremy Wisniewski

Scholar in Residence: Adrian Kuzminski

Courses

150 Topics in Philosophy (3 or 4 credits) A course with varying content aimed to introduce perennial themes and problems in philosophy. The topic will be announced in advance each time the course is offered. Recent topics have included Relativism, Plato, and the Socratic Project.

201 Classics of Philosophy (3 credits) An introduction to the methods, concepts, and aims of philosophical inquiry through critical study of major philosophers such as Plato, Aristotle, Descartes, and Hume.

227 Classical Political Ideas (4 credits) (same as POSC 227) (3 credits) Students investigate the ideas that shaped and emerged out of pre-modern political life, including arguments about the

nature of justice and of political virtue. Authors may include Plato, Aristotle, Cicero, Seneca, Augustine, Aquinas, Machiavelli, and others. Prerequisite: POSC 101 or 111, or 107 or any Philosophy course. Offered alternate years.

228 Philosophy of History (3 credits) Analysis of history as thinking and writing about the past and its influence on the present Hegel, Marx, Nietzsche, and others.

236 Logic (3 credits) Principles of deductive inference; traditional syllogistic and basic modern symbolic logic. (QFR)

247 Modern Political Ideas (3 credits) (same as POSC 247) Students investigate key political ideas of modernity, including arguments over the legitimacy of revolution and over the nature and scope of individual rights. Authors may include Hobbes, Locke, Rousseau, Wollstonecraft, Marx, Nietzsche, Dewey, Arendt, Fanon, Gandhi, and others. Prerequisite: POSC 101 or 111, or 107 or any Philosophy course. Offered alternate years.

249 Existentialism (3 credits) Critical reading and discussion of selected works of Kierkegaard, Nietzsche, Sartre and others.

250 Topics in Philosophy (3 or 4 credits) A course concentrating on the thought of a single philosopher or school of philosophy, a major philosophical work or a specific problem in philosophy. The topic and the number of credits will be announced in advance, each time the course is offered. Topics in recent years have included Business Ethics, Bioethics, Death, Epistemology, and Philosophy of Language. No prerequisites.

261 Philosophy in Literature (3 credits) (W) Philosophical questions concerning being, self, and choice will be explored in selected novels of authors such as Dostoyevsky, Kafka, Hesse, Camus, and Sartre.

271 Values and Society (3 credits) A critical study of philosophical problems concerning such things as friendship, justice, liberty, freedom, the common good, persons and other social values.

332 Philosophy of Religion (3 credits) What is religion? Is there a God? What is the value of religious experience? Is it possible to be religious without being superstitious? Answers to these and related questions will be examined in the analytical manner appropriate to philosophy. (ILS)

336 Ethics (3 credits) Critical study of the moral theories of major philosophers from the ancient Greeks to the present. Prerequisite: at least one college course in philosophy.

337 Philosophy of Art (3 credits) Analysis of various points of view on such topics as the definition of art; aesthetic experience; the form, matter and content of art; emotion and expression; the psychological function of art; criticism; and evaluation. (ILS)

339 Philosophy of Science (3 credits) Analysis of scientific method, logic of scientific explanation, relations of science and society. Recommended preparation: two terms of laboratory science. Offered when there is sufficient demand.

350 Topics in Philosophy (3 or 4 credits) A course concentrating on the thought of a single philosopher or school of philosophy, a major philosophical work or a specific problem in philosophy. The topic and the number of credits will be announced in advance, each time the course is offered. Recent topics have included Love and Sexual Morality, Phenomenology, and Naturalism. Recent philosophers covered have included Kant, Nietzsche, Heidegger and Sartre. Permission of the instructor required. (ILS)

360 Freedom and Determinism (4 credits) Is human behavior free or determined? When is a person morally responsible for his conduct? What are the relationships between freedom and responsibility? Recent answers to these age-old questions of moralists, lawyers and theologians are analyzed and assessed.

370 Philosophy of Mind (4 credits) What can a science such as psychology tell us about the workings of the mind? What are the philosophies of some of the major psychological movements? While these topics constitute the broader context of the course, we also will explore issues such as the following: To what extent is one born with one's ideas, skills or talents, and to what extent do these depend on one's environment? How does the mind represent the external world? Can computer models and simulations be useful in understanding the mind? How does

understanding of the brain affect understanding of human psychology? To what extent is human intelligence like that of other animals? (ILS)

381 Ancient Philosophy (4 credits) The Pre-Socratics, Socrates, Plato, and Aristotle.

Prerequisite: at least one college course in philosophy; PHIL 201 is recommended.

383 Modern Philosophy (4 credits) 17th and 18th century philosophy; Hobbes, Descartes, Spinoza, Leibniz, Locke, Berkeley, Hume, and Kant. Prerequisite: at least one college course in philosophy; PHIL 201 is recommended.

490 Senior Capstone Seminar (3 credits)

491 Honors Thesis (4 credits)

Philosophy

Requirements for the major: 10 (3 or 4 credit) courses in Philosophy, to include:

At least six courses at 250 or above; at least four courses at 300 or above.

One logic course:

236 Logic

Two History of Philosophy courses, one in Ancient Philosophy and one in Modern Philosophy:

381 Ancient Philosophy

383 Modern Philosophy

This requirement also can be satisfied by taking courses on particular philosophers within these periods (e.g. a course on Plato, Aristotle, Hume, or Kant)

One course in values:

271 Values and Society or

336 Ethics

Two courses in recent Philosophy covering two of the following:

19th or 20th Century Philosophy; Contemporary Approaches to Philosophical Issues; A Major Philosopher of the recent past

Three elective courses in Philosophy

Senior Seminar

Each student must successfully complete the Senior Seminar.

490 Senior Capstone Seminar

Distinction

Upon successful completion of the Senior Capstone Seminar with a grade of A- or better, a 3.5 GPA in the major and 3.0 overall GPA, the student will be awarded departmental distinction.

It is strongly recommended that all majors take *at least* one course with each member of the department.

Requirements for the minor: Minimum of 6 (3 or 4 credit) courses in Philosophy to include:

At least 4 courses at 200 or above

One of the following History of Philosophy courses:

381 Ancient Philosophy or

383 Modern Philosophy

One course in values:

271 Values and Society or 336 Ethics

Four additional courses in philosophy

Grades for all courses taken in philosophy are used to calculate the average in the major for Departmental Distinction.

Physical Education

The coeducational physical education program at Hartwick is designed to develop skills in a variety of physical activities that contribute to the joy of living, to wholesome use of leisure time, and to the development of health and fitness. The program provides each student with an opportunity to develop sufficient physical, mental, social and motor skills to be used in a lifetime of movement related activities.

The physical education program is housed in the Frederick Moore Binder Physical Education Center. The Center houses instructional, recreational, and physical education facilities including the Elting Fitness Center; Moyer Pool, an eight-lane, 25-yard swimming pool and diving complex; handball, racquetball, and squash court; gymnasium; and dance studio. Several off-campus facilities also are utilized for physical education courses: golf at Wood Haven Golf Course, and horsemanship at Hunter's Rein Stable, home of the College's equestrian team.

Physical Education Requirement

All Hartwick students must complete two 1-credit skill courses (PHED) in physical education in order to graduate. Students are urged to do this prior to the senior year. The department offers many 1-credit skill courses and athletic participation situations which may be combined in a variety of ways to meet this requirement. A maximum of one credit may be earned for a specific activity. No course may be repeated for credit.

Only one 1-credit skill course credit may be granted for participation in any traditional season of an intercollegiate sport. Varsity sports participation may be used to fulfill only one credit. Students may receive physical education credit for participation in a course or related sport, but not both.

Theatre Arts 110, 111, 112, or 212 (any one) may count toward the skill-course requirement.

Some skill courses carry an additional fee, which is listed in the course schedule prepared by the Registrar. These fees are non-refundable once the term begins. Courses marked (\$) below require an additional fee, and courses that require equipment (E) or transportation (T) also are marked.

Faculty

Kim Fierke, Chair; Bill Bjorness; Janet Bresee; Ben Bullock; Mark Carr; Rachel Dell; Alan Huckins; David Kerr; Doug Konu; Louise Lansing; Anna Meyer; Joseph Mish; Andrea Pontius; Dale Rothenberger; Colleen Santos; John Scott; Betsey Smith-Price; Dereck Treadwell; Matt Verni

Skill Courses for Physical Education Requirement (PHED)

Physical education skill courses are graded on a passed-not passed basis. The letter Z following a course section number indicates that the course begins in the second half of the term. Courses carry one credit and meet for half the term unless otherwise noted.

Aquatics

110 Beginning Swimming

312*Water Safety Instructor (WSI—meets full term—2 credits)

315*Lifeguarding (Permission of Instructor & Prerequisite: First Aid/CPR—meets full term—2 credits)

The * after Aquatics 312 and 315 indicates that only one of them may count toward the physical education requirement.

Dance (Any 1 Theatre Arts Dance Course may be taken toward the physical education skill course requirement)

TA110 Intro to Movement & Dance for Theatre

TA111 Modern Dance

TA112 Ballet I

TA115 Dance Rehearsal & Performance

TA212 Ballet II

123 Ballroom Dance

124 International Folkdance

Wellness

130 Personal Fitness

131 Aerobics

133 Weight Training

134 Wellness

135 Personal Fitness/Relaxation Techniques

139 Pilates Mat Work

239 Pilates (E)

330 Principles of Personal Fitness Training

Individual/Team Activities

143 Golf (T/\$)

144 Self Defense

146 Racquetball

147 Beginning Tennis

153 Recreational Sports

160 Beginning Horsemanship (T/\$)

260 Intermediate Horsemanship (T/\$) (permission of instructor)

Outdoor Pursuits

151 Outdoor Adventure

152 Hiking/Snowshoe (E)

154 Mountain Biking (E)

251 Project Adventure II

350 Outward Bound/NOLS Program (requires registration in an Outward Bound or NOLS program)

Miscellaneous

155 Line Dancing

163 Karate

164 Responding to Emergencies and Community/CPR (meets full term—2 credits)

265 Adapted Physical Education (limited to students with temporary or permanent physical disability)

Men's Intercollegiate Athletics

411 Basketball

413 Cross Country

417 Lacrosse

419 Soccer

422 Swimming and Diving

423 Tennis

427 Cheerleading

430 Football

Women's Intercollegiate Athletics

411 Basketball

- 413 Cross Country
- 414 Field Hockey
- 417 Lacrosse
- 419 Soccer
- 421 Water Polo
- 422 Swimming and Diving
- 423 Tennis
- 425 Equestrian
- 427 Cheerleading
- 428 Volleyball

Academic courses offered by the Physical Education Department:

PE 203 The Philosophy, Principles and Organization of Athletics in Education (3 credits)

This course will examine the basic philosophy and principles of interscholastic athletics as part of physical education. State, local and national policies and regulations related to athletics will be discussed. Other topics considered will be legal issues, the function and organization of leagues and athletic associations in New York State, personal standards for the coach as educational leader, public relations, and safety procedures, principles of school budgets, record keeping, purchasing and facility usage.

PE 202 Theory and Techniques of Coaching (3 credits) The first phase of this course will review basic philosophy and principles of athletics as an integral part of the total educational experience. Understanding of basic state and national regulations and recommendations related to athletics, legal considerations and other basic coaching responsibilities. The second phase of the course will be concerned with history, objectives, rules, teaching methods, performance skills, technical information (offense, defense, strategy, etc), care and fitting of equipment, training techniques, officiating, etc.

PE 302 Sports Health (Health Sciences Applied to Coaching) (3 credits) Current theory and definitions of sports medicine will be discussed as well as the prevention and correction of accidents in athletic activities. The use of proper personal and field equipment, support methods, conditioning exercises, the medical examination and therapeutic aids will be demonstrated. Laboratory work includes the clinical use of physiotherapy methods. Anatomy and Physiology (BIOL 110, 111) would be helpful.

Coaching Registration Program Requirements

PE 202	Theory and Techniques of Coaching	3 credits
PE 203	The Philosophy, Principles and Organization of Athletics in Education	3 credits
PE 302	Sports Health	3 credits
PHED 164	Responding to Emergencies and Community CPR	1 credit

PHED 164 Responding to Emergencies and Community CPR (meets full term–1 credit)

Course will consist of Responding To Emergencies (RTE) first aid, Adult CPR with AED (Automatic External Defibrillator), along with child and infant CPR. Those completing this course will receive certifications from the American Red Cross for RTE first aid (good for 3 years), Adult CPR with AED, along with child and infant CPR (good for 1 year). Course fee \$100.

Additional Requirements

New York State requires all applicants for teaching, coaching, counseling and administrative certification (provisional and permanent) to have taken a certified course in Child Abuse

Recognition and Reporting. Further information regarding the Project Save fingerprinting initiative is available at **www.highered.nysed.gov/tcert**.

Further informational documents associated with the New York State Coaching requirements may be at **www.emsc.nysed.gov/ciai**.

The New York State Public High School Athletic Associations Handbook (2004-2006) can be found at **www.nysphsaa.org**.

To apply for a coaching certificate from Hartwick College, you must complete the above requirements. The certificate may be obtained through the Hartwick College Department of Physical Education.

Physics

Physics, the most fundamental of the sciences, deals with the laws describing the behavior of matter and energy. From the study of physics, students acquire not only knowledge of the subject itself, but valuable training in analytical thinking and a quantitative approach to problem solving which will be useful in both their professional and personal lives. At the same time, an understanding of the language and analytical methods of science, and of the fundamental principles of physics, offers preparation for life in a future heavily influenced by science and technology. A major or minor in physics can be combined with study in other disciplines to produce particularly strong future employment credentials.

Course requirements for the major in physics provide students with a broad and flexible background in the discipline, and enable them to develop analytical skills necessary to pursue a career in physics or a related field. Students are introduced to the major sub-disciplines within classical and modern physics: optics, relativity, mechanics, electricity and magnetism, thermodynamics, atomic and nuclear physics, quantum mechanics, and electronics. In addition, majors must take courses in general chemistry, calculus, and differential equations.

Beyond the minimum requirements, students can tailor their academic programs to meet their interests and needs. Students considering graduate study in physics, for example, are encouraged to take additional courses in physics and mathematics. In addition to advanced courses in an area of interest, majors can pursue a particular area through directed study with a faculty member. A senior project also is required for the major. Some recent senior projects include measuring the phase transitions in a ferroelectric solid, the drag force on a smooth sphere, and computer-generated holograms.

Those students interested in engineering can earn a B.A. degree in physics from Hartwick and an engineering degree from Clarkson University or Columbia University through the College's "dual degree" program. Arrangements with other institutions are possible as well. Under this program, a student spends three years at Hartwick and two at an engineering school, graduating with a bachelor's degree from each school. In addition, a student may complete four years at Hartwick, earning a bachelor's degree in physics, and then spend two years at the engineering school and earn a master's of science degree in engineering. Students interested in either option should begin their study of physics and mathematics early in their college career in order to fulfill requirements without difficulty.

Freshmen who may be considering a major in physics should take Light & Relativity (PHYS 160) and Single Variable Calculus (MATH 121) in their first term at Hartwick. However, a full physics major may be completed starting as late as the beginning of the sophomore year, providing a student has taken Single Variable Calculus as a freshman.

Faculty

Lawrence Nienart, Chair; Robert Gann; Parker Troisicht

Courses

121 Astronomy (4 credits), (3 one-hour lectures, 1 two-hour lab weekly) A survey of modern astronomy. Topics include gravitation, properties of light, optical instruments, spectra, the solar system, stars, nebulae, clusters, galaxies, pulsars, quasars, black holes and the creation of the universe. The laboratory includes study of astronomical measurements, with both daytime and

nighttime observing sessions. Credit can be awarded for only one of the following courses: PHYS 121, PHYS 163. (LAB)

127 Space and Time (3 credits), (3 one-hour lectures weekly) An introduction to our understanding of the universe from the findings of Galileo and Newton to modern theories of the origin of the universe and unification physics. The role of space and time in Einstein's theory of relativity, the uncertainty principle and quantum mechanics, black holes, quarks, anti-matter and entropy will be among the topics discussed.

129 Physics of Everyday Objects (3 credits), (3 one-hour lectures weekly) The “how-and-why” of the working of everyday objects from household appliances and television to the way electricity reaches our homes and how telephone calls are made. The inner workings of cars, ships, airplanes and spacecraft will also be studied. Prerequisite: open only to students with no previous college physics credit.

140 Principles of Physics I (4 credits), (3 one-hour lectures, 1 two-hour lab weekly) An introduction to the basic principles of physics. The first term is devoted to the study of mechanics, the properties of matter, and heat and thermodynamics. Applications of physics to the life sciences are included. Laboratory work is an important component of the course. This course (plus PHYS 141) fulfills the physics requirement for biology, geology, and medical technology majors. Prerequisite: competence in high school algebra. (LAB)

141 Principles of Physics II (4 credits), (3 one-hour lectures, 1 two-hour lab weekly) A continuation of PHYS 140. This course includes the study of wave phenomena, electricity and magnetism, optics and modern physics. Applications of physics to the life sciences are included. Laboratory work is an important component of the course. This course (plus PHYS 140) fulfills the physics requirement for biology, geology, and medical technology majors. Prerequisite: a grade of C- or better in PHYS 140. (LAB)

150 Topics in Physics (3 credits) Individual courses designed for non-science majors. The topics covered change from term to term. Possible topics include energy, modern physics and introductory electronics. Some topics courses include a laboratory component.

160 Light and Relativity (4 credits), (3 one-hour lectures, 1 three-hour lab weekly) An introduction to optics and Einstein's theory of relativity. Topics include geometric and wave optics, the special theory of relativity, and relativistic mechanics. Laboratory work includes a study of optical instruments, wave motion and computer simulation. The course is designed as a first course for entering freshmen who are considering the possibility of studying physics in some depth during their college career. It also may be profitably taken by upperclass students with an interest in the area. Competence in high school algebra is required. (LAB)

163 General Astronomy (3 credits), (3 one-hour lectures weekly) An introduction to astronomy and astrophysics primarily for students whose major is in the Division of Physical and Life Sciences. Topics include methods of astronomy, stellar evolution, galactic structures and cosmology. Some observing sessions will be required. Competence in high school algebra is required. Credit can be awarded for only one of the following courses: PHYS 121, PHYS 163.

201 General Physics I (4 credits), (3 one-hour lectures, 1 three-hour lab weekly) Topics in the first term include the description of motion, forces, work and energy, momentum, rotational motion, oscillatory motion and gravitation. Laboratory work is an important component of the course. Calculus is used. This course and PHYS 202 fulfill the physics requirements for biology, biochemistry, chemistry, geology, mathematics (PHYS 201 only) and medical technology majors. Prerequisite: MATH 121 must be taken previous to or concurrent with PHYS 201. (LAB)

202 General Physics II (4 credits), (3 one-hour lectures, 1 three-hour lab weekly) A continuation of PHYS 201. In this course, electricity, magnetism, light and electromagnetic radiation are covered. Laboratory work is an important component of the course. Calculus is used. This course and PHYS 201 fulfill the physics requirements for biology, biochemistry, chemistry, geology, and medical technology majors. Prerequisite: a grade of C- or better in PHYS 201. MATH 235 must be taken previous to or concurrent with PHYS 202. (LAB)

265 Electronics (4 credits), (3 one-hour lectures, 1 three-hour lab weekly) An introduction to modern electronics. Topics include circuits, amplifiers, signal processing, practical instrumentation and logic circuits. Both discrete components and integrated circuits are discussed and used in laboratory experiments illustrating digital and analog applications. Prerequisite: MATH 121 and PHYS 140 or 201. Offered alternate years. (LAB)

305 Atomic and Nuclear Physics (4 credits), (3 one-hour lectures, 1 three-hour lab weekly) Introductory modern physics and quantum theory. Some of the topics studied are Compton scattering, the hydrogen atom, an introduction to Schrodinger quantum mechanics, nuclear structure, and elementary particles. Laboratory work includes measurement of atomic and nuclear particles, the Franck-Hertz experiment, spectroscopy, and computer simulation of an accelerator. Prerequisites: PHYS 201, 202. Offered alternate years. (LAB)

314 Thermodynamics and Statistical Physics (4 credits), (3 one-hour lectures, 1 three-hour lab weekly) A study of relationships between thermodynamic variables and the statistical interpretation of these relationships. Topics studied include definition of temperature; the first and second laws of thermodynamics; entropy; properties of ideal gases and real substances; and statistical descriptions of systems of particles, including quantum statistics. Laboratory experiments emphasize the methods of measuring various thermodynamic variables. Prerequisites: PHYS 201, 202. Offered alternate years. (LAB)

318 Optics (4 credits), (3 one-hour lectures, 1 three-hour lab weekly) A study of geometrical and physical optics. Topics studied in class and emphasized in laboratory experiments include refraction, lenses and lens systems, interference, Fresnel and Fraunhofer diffraction, polarization, and quantum optics. Prerequisites: PHYS 201, 202. Offered alternate years. (LAB)

361, 362 Classical Mechanics (3 credits), (3 one-hour lectures weekly) A study of the kinematics and dynamics of bodies in motion. The first term is a study of Newtonian mechanics. Topics include the harmonic oscillator, central forces and gravitation. The second term includes Lagrangian dynamics, small oscillations, and the inertia tensor. Prerequisites: PHYS 201 and MATH 311. Offered alternate years.

401, 402 Electricity and Magnetism (3 credits), (3 one-hour lectures weekly) A detailed study of the principles of electricity and magnetism. During the first term topics include electrostatics, dielectrics, electric currents, magnetic fields, and electromagnetic induction. Topics covered during the second term include the magnetic properties of matter, plasmas, Maxwell's equations, and electrodynamics. Prerequisites: PHYS 201, 202, and MATH 311. Offered alternate years.

410 Quantum Mechanics (3 credits), (3 one-hour lectures weekly) Basic postulates of quantum mechanics and their physical meaning. Topics include potential wells and barriers, the harmonic oscillator, the hydrogen atom, electron spin and perturbation theory. Prerequisites: PHYS 201, 202, 305 and MATH 311. Offered alternate years.

490 Senior Project (3 credits) Experimental or theoretical research project. Students work on a project of their choice under supervision of a faculty member. The results of the work are presented to the department in both written and oral form.

Physics

Requirements for the major: Minimum of 16* courses in physics, chemistry and mathematics, distributed as follows:

Ten courses in physics:

160 Light and Relativity

201, 202 General Physics I, II

265 Electronics

305 Atomic and Nuclear Physics

314 Thermodynamics and Statistical Physics or 318 Optics

361 Classical Mechanics I
401 Electricity and Magnetism I
410 Quantum Mechanics
490 Senior Project

Four courses in mathematics:

- 121 Single Variable Calculus
- 235 Advanced Single Variable Calculus
- 233 Multivariable Calculus
- 311 Differential Equations (MATH)

Two courses in chemistry:

- 107, 108 General Chemistry I, II (CHEM) or
- 109 Accelerated General Chemistry (CHEM)

Recommended for freshmen interested in using the observatory:

- 163 General Astronomy

Students considering graduate work in physics also should take:

- 362 Advanced Classical Mechanics
- 402 Electricity and Magnetism II

In addition, the following advanced mathematics courses are suggested:

- 220 Linear Algebra (MATH)
- 341 Complex Variables (MATH)
- 411 Partial Differential Equations (MATH)

Requirements for the minor: Minimum of five courses numbered 160 and above, including:

- 201, 202 General Physics I, II
- 305 Atomic and Nuclear Physics

For those interested in a minor in Environmental Science and Policy, see page 86.

**Number of courses required for the major is reduced by one if Accelerated General Chemistry is taken instead of General Chemistry I, II.*

Grades for all courses taken in physics are used to calculate the average in the major for Departmental Distinction.

Political Science

The study of political science acquaints students with the principal concerns of the discipline and allows them to develop a critical outlook on the political universe around them. The political science faculty is committed to graduating well-rounded individuals mindful of their connectedness in this interdependent world. Our curriculum is designed to help students meet the moral and intellectual challenges of citizenship.

Courses in U.S. Government examine important aspects of the U.S. political system including governmental institutions as well as the political behavior of individuals and groups. International Relations involves the study of factors governing relations among state and non-state actors in global politics. Comparative Politics provides an analytical framework for studying states and regions in their rich diversity—economic, cultural, ethnic, and political. Courses in Political Theory examine the evolution of political ideas and concepts.

The department participates in several interdisciplinary programs including: the Latin American-Caribbean Studies minor, the Women's and Gender Studies minor, the Environmental Science and Policy Program, and the Pre-Law program.

From time to time, the department directs off-campus programs. Programs have included study in Sri Lanka, Britain, China, and New Hampshire (for the Presidential primary). The department is offering an off campus program to Greece for J Term 2011. Additionally, the department provides a wide array of internship opportunities to help students deepen their understanding of political institutions and processes through experiential learning.

Many Hartwick Political Science graduates go on for advanced studies and earn graduate degrees in Political Science or allied fields. Some find employment working for government officials and agencies at the local, state, national and international level, and others employ their degree as advocates/organizers for various causes, as history or government teachers, journalists, and research analysts, among many other interesting careers. A substantial number of Political Science majors go on to law school.

Faculty

Laurel Elder, Chair; Amy Forster Rothbart; Mary Vanderlaan; Matthew Voorhees

Courses

A. Unites States Politics

101 U.S. Government and Politics (3 credits) An examination of American national government and politics. Required of political science majors and minors and recommended for anyone wishing to take upper-level courses in the department.

210 State and Local Government (3 credits) An examination of the structure, functions and problems of contemporary state and local government in the U.S. federal system. Prerequisite: POSC 101 or 107.

220 Congress and the Presidency (3 credits) An examination of the legislative process and the role of presidential leadership in the making of the nation's public policy, with particular attention given to the constitutional and political dimensions to the contest of power between the two branches. Prerequisite: POSC 101 or 107.

230 Courts and Judicial Process (3 credits) Examines the role and structure of the judiciary, the judicial process, and how judicial decisions affect, and are affected by, society. The primary focus is the Supreme Court but the course also covers other federal courts and the state courts. Topics

include: the courts and the constitution, models of judicial decision-making, judicial selection, the judicial process, the courts and public opinion, and the courts and democracy. Prerequisite: POSC 101 or 107.

232 Mock Trial (2 credits) Students learn how a trial works. Topics include the fundamentals of case preparation, courtroom procedure, witness questioning, and rules of evidence. Especially appropriate for students in Hartwick's pre-law program and those preparing to participate in inter-collegiate mock trial competitions. Typically offered fall term. Prerequisite: Any 100-level POSC course.

240 Women, Men, and Politics (3 credits) Explores the different treatment and political behavior of men and women within the American political system. Examines policies that discriminated against women as well as policies that have attempted to promote equality between the sexes. Other topics include the gender gap in terms of political views, voting behavior, running for office, and legislative behavior. Prerequisite POSC 101 or 107 or any Women's and Gender Studies course.

243 Religion and Politics in America (3 credits) Explores the influence of religion in American politics from the late 18th century through the present. Topics include the views of the founders on religion, the First Amendment and its interpretation, voting patterns of key religious groups, religiously motivated political activism, and the religious views of political elites.

260 Public Opinion and Voting (3 credits) Examines the political ideology, attitudes, and behavior of Americans. Topics include the origins of political attitudes, the influence of public opinion on political elites and policy, voter turnout levels, and voting behavior in congressional and presidential elections. Prerequisite: POSC 101 or 107.

270 Constitutional Law I: Sources of Governmental Power (3 credits) An exploration of Supreme Court decisions that have established the boundaries of legitimate government action in the United States. Special attention is given to decisions that have drawn lines between state and federal power and have expanded or limited the capacity of various levels of government to address important social and political problems, including poverty, racial conflict, and environmental degradation. Political Science Prerequisite: POSC 101 or 107 or 280. Typically offered alternate years.

280 Constitutional Law II: Rights and Equality (3 credits) An exploration of Supreme Court decisions that have established the range of individual rights and the meaning of legal equality in the United States. Topics may include freedom of speech and press, religious freedom, privacy rights, rights of the accused, gay and lesbian rights, racial equality, and gender equality. Prerequisite: POSC 101 or 107 or 270. Offered alternate years.

290 Environmental Politics and Policy (3 credits) An introduction to the issues and concepts of environmental policy, to policy analysis and the role of the analyst, to the process of policy making in the U.S., and to current U.S. environmental policy and its implementation. Attention is given to environmental politics in the national and international arenas. Prerequisite: POSC 101 or 107 or permission of instructor.

310 Parties and Elections (4 credits) An investigation of the role of political parties elections in U.S. politics, with heavy reliance upon the empirical research of electoral behavior and of the effects of parties upon the electoral and governmental process. Prerequisite: POSC 101 or 107. (EL)

320 Public Administration (3 credits) An examination of the principles of public administration: organization and management in the public sector with special emphasis upon personnel, budgeting, taxation, public policy making and administrative accountability. Prerequisite: POSC 101 or 107.

330 Politics of Race and Ethnicity (3 credits) Examines the political experiences of African Americans, Hispanics, and other racial/ethnic groups in the United States. Explores the formal and informal barriers to equality that these racial and ethnic groups have faced, as well as the

strategies they have employed to bring about political change. Prerequisite: 101 or 107. This course is additionally appropriate for students with an interest in ethnic studies. (ILS)

340 Media and Politics (3 credits) A look at the free media as an essential aspect of a representative democracy. This course explores the American news media in depth, critically examines its contents and politics, and discusses its impact on the attitudes of citizens, election outcomes, the behavior of politicians, and the policies that do and do not get enacted.

Prerequisite: Any 100-level POSC course. (ILS)

360 Interpreting the Constitution (3 credits) An investigation of controversies over how the United States Constitution should be read and understood. Readings include theoretical works on Constitutional interpretation along with Supreme Court opinions. Prerequisite: POSC 270 or 280. (ILS)

370 U.S. Public Policy (3 credits) A study of the concepts and methods of public policy analysis, with emphasis on formulating policy problems, developing solutions, and use of analysis in the policy-making process. The cause, consequences, and performance of national public policies and programs are investigated. Prerequisite: POSC 101 or 107.

B. International Relations

105 International Relations (3 credits) An introduction to politics among and across nation-state, non-state and transnational actors. Competing theories on concepts such as power, security, nationalism, nation building, and the emerging international system are examined. Other issues examined include: the uneven global economy, globalization, patterns of cooperation and conflict, conflict resolution, international organization and law, human rights, and political transitions. Some country case studies are used to provide comparative analyses of issues across political settings.

205 U.S. Foreign Policy (3 credits) A study of U.S. foreign policy, the politics of how that policy is formulated and implemented, and the consequences of that policy for other states. Themes and trajectories in U.S. policy history such as isolationism, international activism, intervention, hegemonic presumption, strategic alliances, arms control, and unilateralism, among others, are reviewed with focus upon the sources, goals, and assumptions of U.S. policy. Approaches to U.S. national security (broadly defined) are examined as students assess the values underpinning the projection, use, and preservation of U.S. power in the post-Cold War world. Prerequisite: POSC 101 or 105 or 108, or permission of instructor.

215 International Organizations (3 credits) This course is designed to provide students with a deeper understanding of leading organizations and processes that enable order, stability, and cooperation in the international system. It examines critical approaches to the study of international organizations and the impact these organizations exert on various issues and areas of the contemporary world. It also evaluates the United Nations and the European Union and analyzes the unique functions both perform and the novel challenges both are confronted within an increasingly more complex and interdependent world. Typically, students also will study the work of a nongovernmental organization, so as to understand how such NGOs develop and the philosophical and political challenges they face. Typically offered alternate years. Prerequisite: POSC 105 or 108.

245 The Model UN (1 credit) This course prepared first-time participants for the Harvard Model UN role play, which takes place in February (in Boston) every year. The course meets during the second half of Fall Term, with the final grade being issued after the student's participation in the three-day February role play. The course is tied to participation in the model UN. Students are taken through the process of resolution writing, inter-state negotiation, committee work, and are generally prepared to represent the assigned country or countries. Prerequisite: permission of instructor.

305 Comparative Foreign Policy (3 credits) An examination of foreign policies and policy decision making of major world or regional actors, including an examination of the historical

dynamics influencing policy making, the system-level (global) sources facilitating states' strategic opportunities and constraints, and the domestic factors shaping foreign policies in these countries. From a comparative standpoint, the course evaluates foreign policy decision making with regard to each country's regional imperatives and standing in the world, their foreign policy formulation vis-a-vis each other, and their relations with the world's most dominant power, the United States. Examples of states likely to be included: China, Russia, India, Brazil, Egypt, Germany, Israel, South Africa. PR: POSC 205, or permission of instructor. Typically offered alternate years. (ILS)

315 Rising Powers: (3 credits) An examination of significant changes in the diffusion of power across states and the resulting emergence of "second powers" in global affairs such as Brazil, China, Russia, India, Turkey and others. We will study the expanding influence and presence of 5 or 6 rising powers, the factors contributing to ongoing global power shifts and the effects of recent power shifts on state behavior and international relations. Study will also focus upon a growing list of global challenges that will require wide collaboration among current and rising powers if they are to be addressed successfully. Prerequisite 105 or 108 and 1 course in international/comparative politics at the 200 level or permission. (ILS)

325 Global Environmental Governance (3 credits) An exploration of how environmental challenges are addressed across state borders. It considers how national institutions, stakeholders and political cultures interact with international actors, norms and institutions to shape both national level and global outcomes. The course looks at power and legitimacy in international environmental governance, and explores the way environmentally crucial states participate in global environmental initiatives. It focuses on the management of several specific environmental issues, which may include efforts to address climate change, protect biodiversity, and manage hazardous wastes. Prerequisite: POSC 105 or 108 and one course in international/comparative politics at the 200 level, or any course in the Environmental Science and Policy minor, or permission. (ILS)

335 International Law (3 credits) An introduction to the role of public international law, including an evaluation of both historical and contemporary perspectives on the operation of international law, the nature and sources of international law, the rights and obligations of states (including why states and non-state actors comply with and violate international law), and issues dealing with sovereignty, international treaties, territoriality, and international adjudications. It also will examine how international law applies to the use of force and human rights and also seek to understand the role international law plays in U.S. foreign policy. Prerequisite: POSC 105 or 108 or permission of instructor. (ILS)

345 Seminar: Global Issues, Global Crises (3 credits) This course examines crisis-level issues in global affairs and analyzes private (nongovernmental) and public responses to them at both the national and international levels. Study of crisis-precipitating factors will be followed by more intense focus on state and non-state actors involved in addressing crises and shaping policy responses. How actors and groups interact, cooperate, or compete, and pursue their own interests as they respond to crises will be explored. Prerequisites: POSC 105 or 108 and a 200-level Comparative Politics or International Politics course, or permission of instructor. (ILS)

C. Comparative Politics

108 Intro to Comparative Politics (3 credits) An exploration of how history, culture, institutions, economics and interests shape politics in other lands. The course focuses on the political systems and policy processes of at least five different countries from various regions of the globe. In addition to introducing the variety of political systems currently in existence, each country study will allow for a look at various sub-fields of study within comparative politics—for example, state formation, contentious politics, nationalism, democratization, political institutions, and political culture.

208 Russian Politics (3 credits) An evaluation of the history, politics, and economics of Russia and its “near abroad” (the countries of the former Soviet Union). The course will examine the post-Communist transitions that have been taking place in the political, economic and social realms and the different form they have taken in different states. Particular attention will be given to questions of democratization and authoritarian consolidation, integration into regional and international organizations, and changes in the political economy. Prerequisite: POSC 105 or 108 or permission.

218 Central Asian Politics (3 credits) A study of the politics of the states of Central Asia, with particular focus on the post-Soviet “stans” - Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan - as well as on Afghanistan. Because the region has historically been a crossroads and a source of competition among powerful states, the course will examine the way this has influenced the region over time and the role played by powers such as Russia, China, the European Union and the United States today. Particular attention will be paid to questions of national identity, political transition, economic change, the role of Islam, and relations among Central Asian states. Prerequisite: POSC 105 or 108 or permission of instructor.

228 EU Politics (3 credits) A study of the development of the European Union (EU) and the issues it faces as it enlarges and increases the scope of its common policies. The course will consider important EU institutions, the way different European states relate to the EU, and how EU foreign policy is made and carried out. It will also explore concerns that have been raised about the EU including about its bureaucratization and possible “democratic deficit.” Prerequisite: POSC 105 or 108 or permission.

248 Middle East Politics (3 credits) An examination of factors shaping political systems in the Middle East and North Africa, with special focus on global contexts, resource politics, economic change, women’s status, and political transitions. While studying the politics of individual states and sub-regions within the MENA states, students will explore the rich cultural history of the region, and examine the impact on politics of ethnic and racial diversity, regional income gaps, religious diversity, and radical Islam. POSC 105 or 108 is recommended. Typically offered alternate years.

268 Latin American-Caribbean Politics (3 credits) A survey of post- World War II politics in Latin America and the Caribbean, with special attention to the changing political and economic policies and prospects of these states. The effects of history, culture and international contacts on local institutions are examined, as is the dynamism of grassroots movements for change in the region. Prerequisite: POSC 105 or 108 would be helpful, or any LACS course.

278 East Asian Politics (3 credits) An examination of the politics of China, Japan, Korea, Taiwan, and several other states in the region. Students will evaluate these states’ politics and economies from the 20th century, particularly in the post-WWII period. The focus will be on transitions to market economies, the transition to and consolidation of democracy, the impact of civil society, and major challenges facing these states in the 21st century. Prerequisite: POSC 105 or 108 or permission.

288 African Politics (3 credits) An examination of the governments, politics and policies of African states. Topics to be covered include: colonial legacies; current political and economic models across African states; political transitions toward more open government; ethnic politics and conflict; environmental stress; and other challenges and opportunities confronting African countries as they develop their systems of governance. Africa’s position in global politics and economy will also be examined. African literature and music, group projects, student reports and discussion of current African events will all be employed in learning. PR: POSC 105 or 108 *or permission of instructor*. Typically offered alternate years.

308 Seminar in Comparative Politics (3 credits) An examination of the leading topics informing the field of comparative politics, including the utility and efficacy of civil society, democratic transitions and consolidations, authoritarianism, globalization and its impact on developing countries, the challenges stemming from ethnicity and nationalism, and the north-

south divide. The seminar includes a significant writing component and requires students to read each other's research and present their research before their peers in the classroom. Prerequisite: 105 or 108 and one regional politics course at the 200-level, *or* permission of instructor. (ILS)

328 Women, Politics, and Development (3 credits) An examination of the experiences of and central role played by women in political and economic development in poor countries. Study considers the impact of international institutions and actors and of local development programs and micro-lending on women's economic and political opportunities. Among the topics studied are women's roles in formal and informal economies, in the household, and in local and national politics; competing views of feminism; and critiques of mainstream development theory. Case studies are drawn from Latin America, Africa, the Middle East and Asia. Prerequisite: POSC 105 or 108 or permission of instructor.

D. Political Theory

107 Freedom, Equality, and Power (3 credits) An introduction to political thought. Students explore influential ideas about politics through careful study of important works from earlier eras as well as our own.

227 Justice and Virtue: Classical Political Ideas (3 credits) Students investigate the ideas that shaped and emerged out of pre-modern political life, including arguments about the nature of justice and of political virtue. Authors may include Plato, Aristotle, Cicero, Seneca, Augustine, Aquinas, Machiavelli, and others. Prerequisite: POSC 101 or 107 or any Philosophy course.

247 Rights and Revolution: Modern Political Ideas (3 credits) Students investigate key political ideas of modernity, including arguments over the legitimacy of revolution and over the nature and scope of individual rights. Authors may include Hobbes, Locke, Rousseau, Wollstonecraft, Marx, Nietzsche, Dewey, Arendt, Fanon, Gandhi, and others. Prerequisite: POSC 101 or 107 or any Philosophy course.

317 American Political Thought (3 credits) Students investigate significant themes in political thought in the American colonies and the United States. The course focuses on ideas about central conflicts in American political life—including conflicts over race, ethnicity, gender, and the role of government. Readings include both formal theoretical works and works intended to directly shape public opinion. Prerequisite: POSC 101 or POSC 107. (ILS)

327 Politics Through Literature (3 credits) An examination of a number of contemporary writers of various nationalities who explore concepts of traditional interest to students of politics, e.g., imperialism, colonialism, neocolonialism, revolution, the revolutionary mentality, terrorism, modernization, bureaucracy, war and visions of future world orders.

337 Politics, Law, and Gender (3 credits) Students explore the relationship between gender and legal and political theory and institutions. Readings may include historical and contemporary works of political and legal theory, as well as state and federal court opinions. Prerequisite: POSC 101 or 107 or any Women's and Gender Studies course.

347 Politics, Culture, and the Arts (3 credits) Students investigate the relationship between politics and art. In addition to readings, course materials include works of visual art, film, music, literature, and theatre. Prerequisite: Any 100-level POSC course, or any ART or MUSI course. (ILS)

357 Democratic Theory (3 credits) What is democracy? How much citizen participation does democracy demand? How does a diverse citizenry affect the pursuit of democracy? Does democracy demand free markets? Or does it demand a carefully regulated economy. Through theoretical and empirical works, students examine democratic theory and practice. Prerequisite: POSC 101 or 107. (ILS)

377 Seminar in Philosophy of Law (same as PHIL 377) (3 credits) Philosophical questions about such topics as the nature of law, the function of legal systems, the meaning of legal terms, legal reasoning, justice, law and morality, theory of punishment. Permission: POSC 101 or 107 or relevant Philosophy Course (ILS)

E. General

150, 250, 350 Topics in Political Science (3 credits) Special topics are considered in depth. Prerequisite depends on the topic.

F. Internship

395 Internship (3 credits) Internships in government and in the non-profit or private sector with significant government involvement. Developed by interested students in consultation with a department faculty advisor and a field supervisor representing the organization that offers the internship. A maximum of six credits accepted toward a major and three credits toward a minor. Prerequisite: at least one POSC on campus course, the consent of a member of the Political Science faculty to serve as academic advisor, and the approval of the Department Chair and Internship Coordinator.

G. Methods and Senior Thesis

209 Political Science Research Methods (3 credits) This course, required of all Political Science majors, focuses on how to conduct research in political science and how to interpret and critically assess the research of others. Reviews the scientific method and focuses on the stages of the research process including: how to develop a good research question, how to find and effectively utilize existing research, how to generate plausible hypotheses and measure the variables in hypotheses, when and how to employ different research designs and data collection techniques, and how to statistically analyze data to determine what the data are saying about the political world. Prerequisites: 101 or 107, and 105 or 108. Offered once or twice each year.

489 Thesis Methods (1 credit) This course must be taken the same term as POSC 490, and focuses on how to design and carry out the senior thesis research project. Thesis students meet with the Political Science faculty to discuss issues such as the literature review, hypothesis development, research design, data collection, and argument development. Students are assigned to report on aspects of their thesis research throughout the semester. Prerequisite: POSC 209 and registration for POSC 490 the same semester. (Note: Neither POSC 489 nor POSC 490 are offered during January Term.)

490 Senior Thesis (3 credits) Each senior major is required to write, in consultation with a faculty member within the department, a research paper that demonstrates the ability to investigate and analyze a problem in depth and to defend it before fellow students and the political science faculty in a public forum. Prerequisite: POSC 209 and registration for POSC 489 the same semester.

Political Science

Requirements for the major: Minimum of 34 credits (12 courses) in Political Science, distributed as follows:

- 101 U.S. Government and Politics; or 107 Freedom, Equality, and Power
- 105 International Relations; or 108 Intro to Comparative Politics
- 209 Political Science Research Methods
- 489 Senior Thesis Methods (must be taken the same semester as 490)
- 490 Senior Thesis
- Seven additional courses in the discipline, including at least three at the 300 level.

The department encourages all majors to acquire a broad exposure to the discipline by sampling courses in all four of the principal areas of study. A model program would include at least one course above the 100 level from each of the following areas:

- (A) U.S. Politics
- (B) International Relations
- (C) Comparative Politics
- (D) Political Theory

This model is required for departmental distinction.

To graduate with distinction in Political Science students must:

- Have a Political Science major GPA of 3.5 or higher
- Have an overall GPA of 3.0 or higher
- Have taken at least one class beyond the 100-level in each of the four sub-fields of Political Science
- Receive an A- or higher in POSC 490: Senior Thesis.

Normally, the department will accept no more than three transferred Political Science courses (up to the equivalent of 9 Hartwick credits) toward the Hartwick College Political Science major.

Requirements for the minor: Minimum of six courses (18 credits) in Political Science, distributed as follows:

- 101 U.S. Government and Politics; or 107 Freedom, Equality, and Power
- 105 International Relations; or 108 Intro to Comparative Politics
- At least one classroom course at the 300 level
- Three additional courses in the discipline

Pre-Med and Pre-Allied Health Programs

Hartwick College has a Pre-Health Advisory Committee whose members serve as advisors and evaluators for students interested in pursuing a career in the health sciences as a physician, dentist, veterinarian, optometrist, podiatrist, physician assistant, chiropractor, or physical or occupational therapist. Members of this committee assist students with their application to health professional schools by advising and providing workshops on study strategies, standardized test preparation, interview skills, ethical issues, financial aid sources, internship opportunities and careers in medicine. A Pre-Med and Pre-Allied Health Resource Room is also available to students for researching medical fields and schools.

The health sciences need individuals with broad educational backgrounds who will bring a variety of talents and interests to the profession. Therefore, it is important to have a broad liberal arts and sciences education with a strong foundation in the sciences. Although no specific undergraduate major is required to enter the health sciences, the strongest preparation for pre-health students is to follow the pre-med or pre-allied health curriculum with a major in biology, chemistry or biochemistry. The sciences must be studied in the pre-med and pre-allied health curriculum in order to gain a thorough understanding of scientific concepts and vocabulary, to confirm the interest in and the capacity for further study in science, to prepare for the various admission examinations, and to enable medical schools to estimate the student's potential in the practice of medicine. The minimum basic required courses for pre-medicine and pre-allied health programs are:

- Biology in Practice (BIOL 101)
- Concepts of Biology: Information (BIOL 203)
- Concepts of Biology: Energy (BIOL 202)
- General Chemistry (CHEM 107, 108 or CHEM 109)
- Organic Chemistry (CHEM 201, 202)
- Physics (PHYS 201, 202 or PHYS 140, 141)
- English literature course and composition course

Although many of the requirements for entrance into professional programs are the same for each medical field, carefully note that some fields, as well as some schools, have additional or other requirements (e.g. allied health fields require Anatomy and Physiology). Interested students should contact Dr. Linda A. Swift (Pre-Med) or Dr. Allen Crooker (Pre-Allied Health).

Psychology

Hartwick's rigorous psychology program emphasizes the scientific method and empirical approach in its study of human behavior and mental processes. Experimental psychologists are committed to the idea that through objective empirical observations, progress can be made in understanding, predicting, and modifying behavior. Students who major in psychology acquire knowledge of major theoretical frameworks and hone research skills in observation, experimental design, data analysis, and scientific report writing.

A major in psychology provides an appropriate background for a variety of professions in which an understanding of the principles of human behavior is important. Graduate study in medicine, law, human factors, neuroscience, or social work, as well as in psychology, might all follow an undergraduate major in psychology. The undergraduate program in psychology, like pre-medical and pre-law programs, does not provide the specialized training needed to be a professional psychologist, which requires a graduate degree as an indication of competence.

Faculty

Lisa A. Onorato, Chair; Katharine Blackwell; KinHo Chan; Jeffrey A. Goldman; Lynn A. Elmore Strano; Justin Wellman

Courses

Introductory Courses

110, 111 Psychological Science I, II (3 credits) An introduction to the science of behavior and mental processes. The major psychological systems, theories, methods, and disciplines will be covered. PSYC 110 is offered every fall and covers topics such as neuroscience, learning, and developmental psychology. PSYC 111 is offered every spring and covers topics such as social psychology, perception, cognitive psychology, and clinical/counseling psychology. Neither course has a prerequisite.

Courses in Psychological Research Skills

290 Psychological Research Methods (3 credits) Quantitative and qualitative research methods of psychology, observation and collection of data, experimental design, APA journal style writing. Prerequisite: at least a B- in either PSYC 110 or 111.

291 Experimental Statistics (3 credits) Statistics, reduction, display and analysis of data, interpretation and reporting of results. Prerequisites: PSYC 110, 111, and at least a C+ in PSYC 290. (QFR)

Core Courses

301 Developmental Psychology (3 credits) Topics include the genetic foundation of development, the development of brain and body, cognitive development (e.g., perception, thinking, reasoning, language, etc.) and social development (e.g., attachment, aggression, sex and gender). Prerequisites: PSYC 110, 111, and at least a C+ in PSYC 290.

302 Clinical Psychology: Abnormal (3 credits) Mental and emotional disorders: causes, treatments. Topics such as organic brain syndrome, schizophrenia, the affective disorders and the anxiety-based disorders are discussed. Treatments such as drug therapy, behavior modification, psychoanalysis, and humanist existential approaches also are covered. Prerequisites: PSYC 110, 111, and at least a C+ in PSYC 290.

303 Social Psychology (3 credits) The social influences upon an individual's attitudes and behavior are considered. Prerequisites: PSYC 110, 111, and at least a C+ in PSYC 290.

304 Cognitive Psychology (3 credits) The acquisition, storage, retrieval and use of knowledge. Topics include perception, attention, pattern recognition, imagery, memory, problem solving, knowledge, reasoning, and decision making. Prerequisites: PSYC 110, 111, and at least a C+ in PSYC 290.

305 Biopsychology (3 credits) In-depth analysis of how neurobiological factors influence the way we act, think, and feel. What are the biological bases of learning, cognition, sleep, sexual behavior, energy regulation, sensations, movements, and emotions? Prerequisites: PSYC 110, 111, and at least a C+ in PSYC 290.

306 Clinical Psychology: Personality (3 credits) Major theories of personality including psychoanalytic, humanistic, behavioral, cognitive, and trait are discussed in depth. In addition, research on the relationship between personality and human social behavior is covered. Prerequisites: PSYC 110, 111, and at least a C+ in PSYC 290.

307 Child Development (3 credits) This course investigates the cognitive and social development of children from infancy to middle childhood (birth to 8 years). The first half of the course will consider infant and toddler development with the goal of understanding the origins of knowledge, such as whether children are born with certain innate knowledge and how nature and nurture interact in development. The second half of the course will consider the qualitative shifts in thinking and interacting with others that occur during the preschool and early elementary school years, such as changes in how we remember events from our lives and how we understand what other people think. Prerequisites: PSYC 110, 111, and at least a C+ in PSYC 290.

Research Courses

350 Research in TBA (4 credits) Research in special topics (to be announced). Only 350 courses with the title “Research in ___” can be used to fulfill the Research Course requirement. Prerequisites will vary, but all sections require at least a C+ in PSYC 290 and 291.

361 Research in Developmental Psychology (4 credits) In this class we will study developmental psychology of children, teens, and adults by way of qualitative research methods. Such methodologies try to explain behavior without quantitative methods by using, for example, case histories, naturalistic observations, stories or citations, and Q0sorts. Students will learn and apply these in a research context. Prerequisites: at least a C+ in PSYC 290, 291, and 301. (EL)

362 Research in Clinical Psychology (4 credits) Principles and procedures of psychological testing. The following tests will be covered in depth: MMPI-2, Rorschach, TAT, CPI, Myers-Briggs, intelligence tests, and neuropsychological assessment. Prerequisites: at least a C+ in PSYC 290, 291, and 302 or 306. (EL)

363 Research in Social Psychology (4 credits) Experimental research in social psychology will be conducted. Prerequisites: at least a C+ in PSYC 290, 291, and 303. (EL)

364 Research in Cognitive Psychology (4 credits) Experimental research in cognition will be conducted. Students will learn to program original experiments on psychology-experiment software and learn advanced SPSS statistical analyses. Prerequisites: at least a C+ in PSYC 290, 291, and 304. (EL)

366 Research in Learning (4 credits) This course will begin with a survey of basic principles of learning, addressing issues such as the conditions necessary for learning to occur. We will then examine a few theories of learning in detail and design and conduct animal experiments to test predictions derived from some of these theories. Prerequisites: at least a C+ in PSYC 290 and 291. (EL)

367 Research in Child Development (4 credits) Experimental research involving the observation of children will be conducted. Prerequisites: At least a C+ in PSYC 290, 291, and 307. (EL)

Capstone Experience

488 Senior Capstone (4 credits) This course is offered fall and spring semesters. Students seek an internship/work placement the semester *prior* to enrolling in the course. Sample placements include local hospitals, Hospice, Job Corps, Springbrook, on-campus work placements, local schools, collaborative faculty research, etc. During the Capstone semester, students spend several hours per week on site at their work placement and several hours in a regularly scheduled class for discussions relating theory to practice. At the end of the semester, students will be expected to demonstrate integrative learning in both written and oral reports describing how the Capstone experience has contributed to personal growth, recognition of differences and diversity among people, interpersonal relationships, ethics, job skills, and perhaps most important, discussing the underlying principles and theories of psychology that form the basis for the experience. Prerequisites: at least a C+ in PSYC 290 and 291.

490 Senior Thesis (4 credits) Individual study, whereby students, under the close supervision of a thesis advisor, conduct experimental research to test original hypotheses. Prerequisite: departmental approval.

Psychology

Requirements for the major: 39 credits in Psychology, distributed as follows. *At least a B- is required in 110 or 111 and at least a C+ is required in 290 and 291 in order to progress in the major. PSYC 290 may be taken only one time for psychology credit. PSYC 110 or 111, 290, 291, and all courses numbered 360 and higher must be taken within the department. Either PSYC 302 or PSYC 306 (but not both) may be used to satisfy the core course requirement. Either PSYC 301 or PSYC 307 (but not both) may be used to satisfy the core course requirement. Either PSYC 361 or PSYC 362 (but not both) may be used to satisfy the research course requirement.*

110, 111 Psychological Science I, II

290 Psychological Research Methods

291 Experimental Statistics

Four Core Courses, selected from:

- 301 Developmental Psychology or 307 Child Development
- 302 or 306 Clinical Psychology: Personality or Abnormal
- 303 Social Psychology
- 304 Cognitive Psychology
- 305 Biopsychology

Two Research Courses, selected from:

- 361 Research in Developmental Psychology or 362 Research in Clinical Psychology
- 363 Research in Social Psychology
- 364 Research in Cognitive Psychology
- 366 Research in Learning
- 367 Research in Child Development
- 350 Research in TBA

488 Senior Capstone or 490 Senior Thesis

Three additional credits in Psychology

Requirements for the minor: A department-approved program of 22 credits in Psychology, distributed as follows:

110, 111 Psychological Science I, II

290 Psychological Research Methods

291 Experimental Statistics

One Core Course

One Research Course

Three additional credits in Psychology

Grades for all courses taken in Psychology are used to calculate the average in the major, as well as the average for Departmental Distinction.

Departmental Distinction requires at least a 3.50 Psychology GPA, 3.25 cumulative GPA, and A- in either PSYC 488 or PSYC 490.

Religious Studies

The world's great religions are centered on the quest to find meaning and purpose in human life and existence. Religious beliefs and practices in various ways address not only what it means to be human, but also concepts such as good and evil, right and wrong. These beliefs and practices, in turn, help to shape the character of individual societies and cultures. Therefore, knowledge of religion and its various manifestations is indispensable to a study of the diverse social and cultural phenomena we encounter in the world around us.

Hartwick's curriculum covers three areas. One focuses on the **monotheistic traditions**. Various courses in biblical studies take a historical approach examining the Bible in terms of its ancient historical and cultural contexts. Other courses in this area focus on Judaism, Christianity and Islam, providing students with an understanding of the impact that these Middle Eastern traditions have had upon the Western cultural heritage.

The second area covers the **religious traditions of the Asian world**, particularly Buddhism and Hinduism. There are also opportunities for studying other isolated non-Western religions (Sikhism, Zoroastrianism, Confucianism, Taoism, Shinto, Jainism). The primary aim is to provide students with fundamental conceptual frameworks for understanding the major non-Western cultures of the world in which these various religious traditions have been influential.

The third area deals with recent and **contemporary religious expression in the West** and includes courses on religion in the United States, new religious movements, and the relationship between religion and modern culture, including literature, science, medicine, entertainment, technology, politics, and social change. These courses use historical, literary, philosophical, and social scientific approaches to explore the challenges faced by religious traditions during the modern era, as well as their dynamism and adaptability.

Special study opportunities available through the department include off-campus programs in India, the Middle East, Washington DC, and New York City, usually offered periodically during January Terms in alternate years. Furthermore, because Oneonta is uniquely situated within a few hours drive of various important Buddhist, Christian, Jewish, Muslim, and Hindu monasteries and centers, efforts are made to incorporate field trip experiences into regular course offerings. Courses also visit sacred sites, museums, and memorials in major urban centers such as Washington, DC and New York City.

Each student who wishes to major in Religious Studies must develop a program of study in the discipline in consultation with a faculty advisor. Majors also are encouraged to complement their study with courses in a variety of other disciplines which will enable them to understand more fully the interconnections among religion, history, literature, philosophy, the social sciences, art, and the sciences. Many students majoring in other departments choose to continue their interest in religion and religious phenomena by pursuing a minor in Religious Studies. Guidelines for both major and minor are described below.

Students with a special interest in combining the study of Philosophy with Religious Studies can pursue one of three degree options: 1) an 18-course double major; 2) a ten-course major (with senior thesis) in one program and a six course minor in the other; or 3) a 14-course major in Philosophy and Religious Studies, with one senior thesis bridging both disciplines. Students should meet with members of the Department of Philosophy and Religious Studies to design the degree program that best suits their interests.

The departmental program offers the breadth and depth of study to prepare students to better understand the world, its diverse people and cultures, the challenges of the future, and the resources of the religious imagination that may help inspire us to engage the world and the future more responsibly. In the past, religious studies graduates have been drawn to careers in a diverse range of professions, including law, journalism, medicine, teaching, counseling, public relations, community organization, not-for-profit agencies, and even government service. Some have gone on to religious vocations, from Christian ministers to Buddhist monks. Others have chosen to continue the academic study of religion at the graduate level.

Faculty

C.W. (Sandy) Huntington, Chair; Lisle Dalton; Gary Herion

Courses

Surveys

101 Understanding Religion (3 credits) An introduction to the structure, forms and functions of religion, with special attention given to the diverse approaches (anthropological, sociological, psychological, historical and philosophical) used to study religious phenomena. (Sometimes offered as FYS.)

103 Religious Diversity in America (3 credits) A survey of major and minor religious traditions found in the United States, covering the colonial era to present.

105 The Bible Goes to Hollywood (3 credits) A comparison of well-known OT and NT stories with film depictions of those stories, critically analyzing plot, character, theme, and other aspects of storytelling. (Usually offered periodically during J Term as an FYS.)

106 World Religions (3 credits) An introduction to the study of comparative religion, focusing on how such basic concepts as myth, ritual, gods and systems of purity are handled in the great religious traditions of the world.

107 Religion and Popular Culture (3 credits) An exploration of the religious dimensions of American popular culture with emphasis on film, television, and sports. (Generally offered during J Term.)

110 Introduction to the Bible (3 credits) A survey of the collections of texts comprising the Bible, with the aim of identifying the key themes and concepts developed in these diverse writings.

115 Religious Cults (3 credits) An examination of alternative religions including treatment of historical and contemporary groups. Topics include formation and development of “new religions,” social and psychological motives for joining, leadership, relations with the mainstream, legal issues, and violence.

146 Sacred Space in America (4 credits) An exploration of the concept of sacred space, including an introduction to theories and methods used to study sacred spaces, religious architecture, monuments and memorials, and spiritual beliefs related to American landscapes. Includes various field trips to sacred sites. (Usually offered during J Term.) (EL)

150-450 Topics in Religion (3-4 credits) From time to time, the department offers new courses that examine selected topics in Religious Studies. The subjects of these courses vary, and have included philosophical theology, religious literature, the psychology of religion, social movements, religious architecture, and religious views of the natural world. The content and level of these courses will be announced in advance and all will include “TIR” (topics in religion) in the title.

Topical Courses

- 201 Ancient Egypt (0.5 credit)** A six-week mini-course on the history, geography, beliefs, and institutions of ancient Egypt, offered only in the Fall Term as a prerequisite for RELS 360.
- 206 The Ancient Near East (3 credits)** An examination of the history, literature, and religions of the ancient civilizations of Mesopotamia, Egypt, Asia Minor, and Syria-Palestine, up to the arrival of the Greeks in the 4th century BCE.
- 210 Hebrew Scriptures/Old Testament (3 credits)** An historical examination of the formation of the Hebrew Scriptures in ancient Israel, focusing on the major themes of the historical, prophetic, and other writings in the Old Testament.
- 211 The New Testament (3 credits)** An historical examination of the development of the early Christian tradition reflected in the four Gospels and in the other New Testament writings. Attention will be given to the cultural world in which the New Testament was written.
- 221 Hinduism (3 credits)** An exploration of the world of Hinduism, a religion originating in India that includes not only a multitude of gods and goddesses and powerful techniques of meditation, but also some of the world's most subtle philosophies.
- 222 Buddhism (3 credits)** An exploration of a religion that grew from the experience of a prince who lived in India 600 years before Jesus, examining how his influential teachings spread throughout South and Southeast Asia.
- 223 Religions of the Far East (3 credits)** A close look at the Buddhism of Tibet, China and Japan, and at the other indigenous religious traditions of the Far East, including Taoism, Confucianism and Shinto. Recommended prerequisite: RELS 222.
- 225 Native American Religions (3 credits)** An introduction to the spiritual traditions of North America's indigenous populations, from the earliest times up through the present, focusing on "the sacred" as experienced in the day-to-day life of these people.
- 235 Judaism (3 credits)** An examination of the historical development of the Jewish cultural heritage from antiquity up to the modern day, focusing on the diverse forms in which it has been expressed, and the role that religion has played in its development.
- 237 Christianity (3 credits)** An examination of the Christian tradition from its beginnings as a Jewish movement through its establishment as a world religion. Attention will be given to the religious, literary, liturgical, and theological trends that have defined Christianity across the centuries.
- 239 Islam (3 credits)** An introduction to the life and career of Muhammad, the Quran, the history of Islamic civilization, Islamic mysticism, the struggles between traditional Islam and modernization, and the resurgence of Islamic fundamentalism, focusing on issues of unity and diversity within the faith.
- 241 Religion and Science (3 credits)** An examination of the key ideas, events, individuals and movements that have shaped the interaction of religion and science from the Scientific Revolution to the present. Emphasis on the varied models of interaction between science and religion, as well as current ethical, educational, and political debates.
- 243 Religion and Politics in America (3 credits)** Explores the influence of religion in American politics from the late 18th century through the present. Topics include the views of the founders on religion, the First Amendment and its interpretation, voting patterns of key religious groups, religiously motivated political activism, and the religious views of political elites.
- 245 Studying Religion: Vodou/Voodoo (3 credits)** An introduction to basic theories and methods used by scholars to study religious phenomena. Emphasis on both classic theories from anthropology, sociology, and psychology, as well as more recent scholarship that focuses on race, class, gender, and popular culture. Includes case studies of vodou in Haiti and voodoo in the United States.

Special Studies and Seminars

307 Religion and Literature (4 credits) "Who am I?" We take this question as the starting point for religious enquiry into the nature of human identity. What if I'm not really a fixed, unchanging

thing, but rather nothing more than a fictional construct, an imaginary character in an unfinished narrative? Through a close reading of several short stories and novellas, we will see how a strong sense of self is both essential to our well being and, simultaneously, the single largest obstacle to religious experience. (ILS)

311 Hebrew Storytelling (3 credits) A literary- and historical-critical examination of the well-known (and not-so-well-known) stories of the Hebrew Bible/Old Testament that recount the history of Israel up to 586 BC. Recommended: RELS 110 or 210.

312 The Prophets of Israel (3 credits) A historical-critical approach to the prophetic books of the Hebrew Scriptures/Old Testament, focusing upon the socio-political aspects of prophecy and its place and role in the Israelite religious tradition. Recommended: RELS 110 or 210.

313 Jesus in Myth, Tradition and History (3 credits) A historical-critical approach to the various Gospel texts, focusing upon the synoptic tradition and the quest to recover the reality of the historical person (Jesus) behind those texts. Recommended: RELS 110 or 211. (ILS)

326 Religion, Magic and Myth (3 credits) (same as ANTH 326) The relation of religious belief and practice to patterns of culture and society; mythology, magic, sorcery, witchcraft, sacrifice, supernatural beings, shamanism, divination, and totemism in traditional and modern societies with focus on non-Western traditions; religion and culture change. Prerequisite: ANTH 105.

332 Philosophy of Religion (3 credits) What is religion? Is there a God? What is the value of religious experience? Is it possible to be religious without being superstitious? Answers to these and related questions will be examined in the analytical manner appropriate to philosophy.

341 Religion and Medicine (3 credits) An interdisciplinary survey of the relationship between religion and medicine. Topics include shamanic healing, belief in healing miracles, the development of modern scientific medicine, religious counseling in medical contexts, and the general influence of faith and religious practice on health. (Usually taught as CIS - INTR 310)

345 Religion and Technology (3 credits) An exploration of the dynamic relationship between technology and religion in modern societies. Topics include the use of the world wide Web by religious groups, robotics, science fiction films, and technological utopianism. (Usually taught as CIS - INTR 310)

347 Religion and Nature (4 credits) An upper-level seminar that explores the relationships between human beings, their religious traditions, and the Earth's living systems.

360 The Religious Culture of Ancient Egypt (4 credits) An off-campus course offered in Egypt during J Term, exposing students to a more advanced understanding of the religious culture of ancient Egypt by focusing on its expression in its ancient monumental art, artifact, and architecture. Prerequisites: RELS 201 or 206 and permission of the instructor.

363 Philosophy of Consciousness in India (4 credits) In this course we will closely examine some of the major Indian theories associated, in particular, with the Yoga tradition of Patanjali. The Indian view of consciousness will be carefully compared and contrasted with theories of consciousness in Anglo-American analytic philosophy and contemporary neuroscience, with particular attention to the assumptions governing current Western ideas about consciousness. In conjunction with our reading and discussion, students will spend some time each day actually practicing Hatha Yoga and seated meditation under the guidance of qualified teachers.

490 Senior Project (3 credits) Required of all majors. Students either complete a Capstone Seminar on current issues in the field of Religious Studies, or complete a Senior Thesis advised by one of the Religious Studies faculty.

Religious Studies

Requirements for a Major in Religious Studies

Courses: A departmentally approved program of nine 3 or 4 credit courses in Religious Studies, plus a senior project (RELS 490) for a minimum of 30 credits.

Recommended Sequence. Students are strongly encouraged to take at least two of the survey courses (100 level) with two different instructors early in their college careers, certainly by the end of the sophomore year.

Distribution: Students must complete two courses in each of the following core subject areas:

A. Monotheistic traditions: RELS 101, 105, 110, 235, 237, 239, 311, 312, 313

B. Asian traditions: RELS 106, 221, 222, 223, 225, 307

C. Contemporary Western religions: RELS 103, 107, 215, 241, 245, 341, 345

- With permission of the department, Topics in Religion courses may be used to satisfy distributional requirements.
- Students may petition to have one course from another department counted toward the Religious Studies major. Students wishing to explore this possibility should consult with the Religious Studies faculty. Possible courses may include ANTH 335 Third World Studies, ENGL 221 Classical Mythology, HIST 306 Reformation, POSC 248 Middle Eastern Politics, PHIL 360 Freedom and Determinism.

Course levels. Majors must complete at least five courses at the 200 level or above.

Senior Project. All majors must complete RELS 490 during their senior year.

Requirements for a Minor in Religious Studies

Courses: A departmentally approved program of six 3 or 4 credit courses in Religious Studies, for a minimum of 18 credits.

Distribution. Each minor must take at least one course in each of the three core subject areas listed above.

Philosophy and Religious Studies

Requirements for a Combined Major in Philosophy and Religious Studies

Courses: A departmentally approved program of 14 3- or 4-credit courses, including a senior project that bridges both disciplines, for a minimum of 42 credits. Students should meet with members of the Departments of Philosophy and Religious Studies to design the degree program that best suits their interests.

Sociology

Sociologists investigate human relationships and interaction at interpersonal, organizational, institutional, societal, and global levels.

Sociology provides insight into social relationships among individuals, couples, families, organizations, political institutions, social movements, and globally. It examines social structuring based on race, ethnicity, nationality, sex, religion, age, and class. The study of sociology as part of a liberal education helps students develop a critical understanding of the workings of societal forces.

The department presents a wide range of theoretical perspectives. Research areas include health, demography, social and political history and movements, youth, criminology and criminal justice, rural poverty, social welfare, public policy, third world studies, human rights, domestic violence, indigenous rights, and globalization.

In addition to a rich theoretical mix, the department encompasses a broad range of pedagogical approaches. Faculty utilize videos, participant observation exercises, role playing, ethnography, film analysis, basic and advanced statistical analysis, journal writing, community-based advocacy and service learning, field trips, faculty-student collaborative research, and guest speakers as well as traditional lectures in their teaching.

While most department courses consider issues of race, class and gender, the department also offers specific courses examining issues of race, class, gender, and cultural identity in the U.S. Many of our courses fulfill the requirements for the American Ethnic Studies Program. Race and Ethnicity and Multiculturalism are entry level courses for this minor. We also have a departmental affiliation with the Women's and Gender Studies Program and LACS.

Special study opportunities available through the department include off-campus programs in India; Chiapas, Mexico and Ireland. Other opportunities include social advocacy work with agencies and organizations, internships in related careers in the local community and in other locations throughout the country, and community-based service-learning projects. Majors may also participate in the College-affiliated GLCA Philadelphia Urban Semester. The Hardy Chair Lecture Program grants students the special opportunity to interact with nationally and internationally recognized scholars and practitioners.

The Sociology major is composed of nine required courses, and five electives. Elective may be organized to construct a focused area of study (eg. social work/community advocacy, social and political rights and movements). In addition, the department offers a minor in Criminal Justice that may be taken along side sociology or another major. The department recommends the following course sequence for the most successful completion of the major:

- 1st year: Introduction to Sociology
- 2nd year: Classical Theory, Contemporary Theory
- 3rd year: Qualitative; and Quantitative analysis or Quantitative Analysis in Criminal Justice
- 4th year: Senior Capstone Seminar/ Senior Thesis (optional)
- 5 electives

Please note: If you are in the 3-year or Education Program, you will need to take both Classical Theory and Qualitative Methods in fall and Contemporary Theory and Quantitative Methods in the spring of your sophomore year.

Please note: If you wish to combine a sociology major and criminal justice minor, you must complete all requirements for both including 8 total electives (5 sociology and 3 from CJ minor list). The only course that may count for both the sociology major and CJ minor is SOC 384 – Quantitative Methods in Criminal Justice.

A major in Sociology prepares students for graduate study in the discipline, as well as in a variety of other fields including law, counseling, teaching, social work, public health, education and criminal justice. The understanding of how people interact and behave in groups provides an excellent background for a wide range of careers in such fields as law enforcement, business, education, and government service. In addition, majors have used their background in sociology to pursue careers in communications, community relations, human resources management, and community organizing and advocacy.

Faculty

Lori M. Collins-Hall, Chair; Katherine O'Donnell; Reid M. Golden; Cecelia Walsh-Russo; Sarah Whiteford

Adjunct Faculty

Justine Woolner-Wise, CSW; Denise Newvine

Courses

105 Introduction to Sociology (3 credits) What is sociology? How do sociologists go about their work? Sociology as a distinctive perspective on human behavior. The links between personal experience and wider social forces are explored while covering the main fields of the discipline.

111 Controversial Social Issues (3 credits) This course provides students with an opportunity to be exposed to the controversial social issues of our time. Throughout the term we will examine several controversial issues, such as terrorism, human trafficking, war, health care, and other major areas of social concern. In doing so, we will read the arguments of leading social scientists and then debate the basic assumptions and values of each position.

150 Topics in Sociology (3 credits) Special topics of current interest will be considered in depth, examples include experiences of children, introductions to social psychology. **155 Children's Lives** (4 credits) Course analyzes public policy regarding children at local, national, and global levels. It is a goal of this course to raise consciousness about the state of the world's children and to empower us to work effectively, cooperatively, and justly with one another and with children and organizations in our communities. Topics include structural violence, impact of war on children; intersection of race, class, gender impact on children; social construction of gender; child labor; poverty in the U.S. and Global South; children's human rights; social justice and public policy. Substantial community-based service learning is required. (EL)

205 Deviance and Social Control (3 credits) This course will introduce you to the central sociological concepts of deviance, self control, power, identity construction, and identity management. We will use the topic of deviance to explore how groups of people have the power to shape the social definitions of other people's actions and behaviors. We also will examine the consequence, identity formation, and meaning in everyday life for those who are defined as "deviant." Although the primary theoretical orientation of the class is social constructionist, we will examine the other important theoretical contributions of the broader field to the study and understanding of why people deviate or are identified as deviant. Prerequisite: SOCI 105 or 155 or permission of instructor. (ILS)

211 Teens and Families (4 credits) Course examines the diversity of families, trends in family change, youth and communities, race, class gender intersection impact on youth; adolescent identity; public policy and youth. Substantial community-based service learning with teens is required. Prerequisite: SOCI 105 or FYS SOCI 155. (EL)

225 Human Rights (3 credits) The class is designed to examine human rights theories and practices. Course content will focus on the dramatic post cold-war transformation of human rights as a focus of social struggle. In addition to studying human rights historically, we will examine the contradictions between contemporary human rights standards the U.S. demands of other countries and evaluate its own practices at home and abroad. Prerequisite: SOCI 105 or 155.

238 Irish Culture and Society I (3 credits) This course is a dialectic between modern Irish society and Irish history, each examined from the sociological perspective. *Early Irish History* – This first part sets the context for the course by looking at how history has uniquely shaped modern Irish society. During this section we will explore Ireland up through and including the reformation and Cromwellian invasion. *Sociology in Ireland* - Next we introduce the discipline of sociology and start to examine Irish society from a sociological perspective. We will spend a significant amount of time examining the specific development of Irish culture. *Modern Irish Society* – In order to understand modern Irish society we need to look at social institutions and social indices. *Irish Culture* - The values and beliefs of the Irish are reflected in their culture. For this section we need to return to some history to examine such issues as the Diaspora, the famine, and the revolutionary movements. *Modern Irish society* – It is here where we look more closely at the puzzle of Northern Ireland as well as the impact of the so-called Celtic Tiger on the Republic. It is also here where we need to examine the modern dimensions of race, class and gender in Ireland.

240 Women and Social Change (4 credits) This course investigates how societies structure gender and how race, class, and gender intersect. It analyzes gender from interpersonal, interactional, institutional, historical, and cross-cultural points of view. The goal of the course is to formulate a theoretical and practical understanding of gender and gender inequality as it exists today and to develop strategies to create more egalitarian systems. Community organizing/ group work component. Specific topics include: feminist theory, women of color, political struggles, reproductive justice, economic justice, body politics. Substantial community-based work is required Prerequisite: SOCI 105 or 155. (EL)

250 Topics in Sociology (3 or 4 credits) See description for SOC 150. Examples of recent 250 topics courses include, criminal justice, social construction of the drug war, and Irish culture and society. More than one topic may be taken for credit. Prerequisite: SOCI 105 or as specified.

251 Race and Ethnicity (3 credits) This course examines racial and ethnic relations in American society. What structural factors allowed for the relative success of some groups while denying the success of others? What roles have racism, prejudice and discrimination played in the American experience? Current issues in U.S. race/ethnic relations also are explored. Prerequisite: SOCI 105 or 155.

260 Food and Social Justice (4 credits) Course investigates food in ecological, community, ideological, social, economic, philosophical, and political terms. Our attention will focus on the right to food as a human right; global and national control of food production and trade, and emerging alternative food movements including the Fair Trade Movement, Community-Supported Agriculture-Local Foods Movement, Green Belt Movement (Kenya), and Seed Savers-Navdayna (India). Our work takes us into the Oneonta community and across the county to understand local food security issues. Videos and readings are comparative and allow us to travel to India, Kenya, and Chiapas, Mexico. Substantial community-based service learning in local food pantries is required. Prerequisite: SOCI 105 or SOCI 155.

265 Global Feminisms (4 credits) Course reviews global womanist initiatives and movements in Africa, Latin America, India, and the U.S. rooted in the drive for social justice. Key movement philosophies, strategies, and tactics are reviewed. A goal is to glean strategic insights and apply them to our organizing work. Substantial community- based service learning is required. Prerequisite: SOCI 105 or SOCI 155

285 Introduction to Criminal Justice (3 credits) This course is designed to introduce students to

the American criminal justice system and the role of the police, the courts, and correctional facilities within that system. It focuses on the history and the primary duties of our justice system in America while briefly introducing conceptions of justice as well as definitions of, measurement of, and causes of crime. Within the detailed discussions of the police, the courts, and corrections particular attention is paid to current debates within each of these criminal justice agencies.

Prerequisite:

301 Criminology (3 credits) This course examines criminal behavior and the measures intended to control it. Major emphasis is placed upon social factors that contribute to such behavior, and criminal justice system efforts to combat criminal behavior. Attention is also given to current trends in criminal behavior and criminal justice policy, and the evaluation of these from the perspective of different sociological theories. Prerequisite: SOCI 105 and SOCI 285. (ILS)

310 Classical Social Theory (3 credits) This is a course intended to introduce students to the works of early western social theorists. Classical social theory provides the foundation for current sociological thinking and is fundamental to the understanding of ongoing discussions within the discipline. This course will primarily emphasize the works of the Founding Three: Karl Marx, Max Weber, and Emile Durkheim. We will also explore other nineteenth and twentieth century theorists including Charlotte Perkins Gilman, W.E.B. DuBois, George Herbert Mead and others, as the semester allows. In tackling the (primarily) 19th and early 20th century writings, we will analyze the theoretical concepts of these sociological thinkers in relation to current social problems and dilemmas. Our ongoing conversation of these various theorists will include continual application of their theories to “real life” examples found in our 21st century world. Prerequisite: SOCI 105.

311 Juvenile Delinquency (3 credits) This course offers an introductory survey of the study of juvenile delinquency and the Juvenile Justice system in the U.S. Crucial to this examination is a framework based upon the understanding of two central issues: the social definition of adolescent years in American society, and how the justice system treats behavior which society views as unacceptable or deviant. To this end, this course focuses on: the social status of juveniles of different status positions and the often conflicting expectations and opportunities for those adolescents in contemporary American society, the operation of the juvenile justice system in the formal and informal decision making and processing of that form of juvenile behavior broadly defined as “delinquency,” current dimensions and trends, differing major theoretical perspectives which have been developed to explain juvenile delinquency, and the range of options society has available to help prevent, treat, and/or punish “delinquent” behavior. Prerequisite: SOCI 105 or SOCI 285.

321 Introduction to Social Work (4 credits) Social welfare public policy is undergoing the most significant change since the New Deal. These changes are based upon competing ideas about the nature of individual and community responsibility. This course explores these ideas to uncover their underlying assumptions, value properties and social impacts on the lives of individuals, groups and communities. To aid in this understanding, this course examines major social concerns including poverty, violence, alcohol and other drug use, mental illness, crime, healthcare issues and discrimination. Throughout this course we examine the roles of social workers in addressing these social “problems.” In addition, this course offers an introduction to case management, group work, community organization and social work administration. A field placement requirement is built into the course. Prerequisite: SOCI 105 and permission of instructor. (EL)

322 Population and Ecology (3 credits) A study of the social, cultural and environmental forces that affect population trends: the size, growth, composition, distribution, fertility, mortality and migration of human populations. Current historical and cross-cultural problems in population, food, health and environment will be explored. In particular the impact of post-colonialism is examined in a cultural context. Prerequisite: SOCI 105.

325 Policing and Corrections (3credits) This course is designed to provide students with an in depth look at policing in America and current correctional systems. The first half of the course focuses on the origins of policing and the current role of police in today's criminal justice system. The process of becoming a police officer and the daily functions of the police are discussed while paying particular attention to potential problems within policing. The second half of the course focuses on current correctional systems in America, the problems faced within these systems, and alternatives to imprisonment. Prerequisite: SOCI 285.

331 Sociology of the Media (3 credits) The course explores the historical origins that gave rise to differences between "high," "mass," and "popular" culture. The course investigates sociologically significant topics such as the production of mass media and popular culture and the interpretation of culture. The effects of media and popular culture on contemporary understandings of race, class, and gender as well as contentious politics, including social movements and electoral campaigns are also studied. Prerequisite: SOCI 105 or SOCI 155.

338 Irish Culture and Society II (4 credits) The Republic of Ireland is a land of many contrasts resulting from both its isolation from the European continent and a millennium of colonial rule. Recently it has gone through hurried social change resulting from rapid economic growth in a phenomenon called the Celtic Tiger and subsequently the world-wide recession. This course will explore Irish cultural and social institutions and how they have been shaped by Ireland's unique history. Prerequisite: SOCI 238.

340 Socio-Political Movements (3 credits) The course will provide an introduction to theory and research on one form of social movement mobilization: national-level movements organized for political change. Our focus will emphasize how political, organizational, and cultural factors shape social movement emergence and development. We will focus on current activism, including case studies of the American civil rights movement, the student movement of the late 1960s, the feminist movement, the abortion movement (pro-life and pro-choice) gay/lesbian mobilization and the recent emergence of transnational activism. Prerequisite: SOCI 105 or SOCI 155.

350 Topics in Sociology (3 or 4 credits) For description see SOCI 150. Recent examples include, domestic violence seminar and social construction of the drug war. Prerequisite: SOCI 105 or other as required.

355 Weaving Transnational Solidarity-Fair Trade, Human Rights & Social Justice Chiapas, MX. (4 credits) Course examines impact of globalization and its contestation in the global North and South. The course draws on the knowledge and expertise of community members, particularly indigenous Maya in Chiapas, Mexico, involved in creating social justice via alternative development, economic solidarity, health programs, education, human rights, and transnational solidarity. The principle Chiapas groups with whom we work include Jolom Mayaetik, Mayan women's weaving cooperative, and K'injal Antzetik, grassroots NGO. Course acquaints students with the cultural traditions of the Mayan people including their language, weaving, and architecture and addresses Spanish colonization. Community-based service learning component. Prerequisite SOCI 155 or SOCI 240 or permission of instructor.

380 Labor and Society (3 credits) This course explores work in the context of sociological, cultural, historical and international forces. Specific topics include: gender-race-class systems and labor, paid/unpaid work, international division of labor, government policy, African-American labor history, work and family issues, cross-cultural labor contexts. Prerequisite: SOCI 105.

381 Sociology of Health and Medicine (3 credits) Explores the social structural conditions of health. Topics covered are: the social distribution of wellness and illness, the cultural determinants of health and healing, alternative models of medicine, the impact of social structure and social policy on health and on the delivery of health services. Prerequisite: SOCI 105. (ILS)

383 Quantitative Analysis (4 credits) This course introduces the central issues and strategies involved in the collection and analysis of quantitative data with an emphasis on survey research,

experimental designs, and statistical analysis using SPSS. The course is concerned with demonstrating the logic and meaning of statistical procedures and the conditions under which they are meaningful. This course is the “quantitative” half of the department’s two-term requirement in sociological analysis. Both halves give central importance to identifying and developing meaningful research questions, recognizing crucial theory-method linkages, developing research plans, evaluating the credibility of research findings and presenting the results of one’s research. Prerequisite: SOCI 105. (QFR, EL)

SOCI (384) Quantitative Analysis in Criminal Justice (4 credits) Similar to SOCI 383 this course is designed to introduce students to the central issues and strategies involved in the collection and analysis of quantitative data but with an emphasis on survey research, experimental designs, and statistical analysis using SPSS as they pertain to the study of criminology and criminal justice. The course is concerned with demonstrating the logic and meaning of statistical procedures and the conditions under which they are meaningful. This course will qualify as the “quantitative” half of the sociology department’s two-term requirement in sociological analysis. Both halves give central importance to identifying and developing meaningful research questions, recognizing crucial theory-method linkages, developing research plans, evaluating the credibility of research findings and presenting the results of one’s research. Prerequisite: SOCI 105 and SOCI 285 or permission of instructor. (QFR, EL)

385 Qualitative Analysis (4 credits) This course introduces methods used in the collection and analysis of qualitative data including participant observation, field notes, interviews, discourse analysis, media analysis, ethnography, and community-based research. The rationale and theoretical underpinnings of qualitative analysis are examined together with the ethical issues associated with the use of qualitative methodologies. This course is the “qualitative” half of the department’s two-term requirement in methods. Both halves give central importance to identifying and developing meaningful research questions, recognizing crucial theory-method linkages, developing research plans, evaluating the credibility of research findings, presenting the results of one’s research, and ethics. Substantial community-based service learning fieldwork is required. Prerequisite: SOCI 105. (EL)

389 Advanced Methods (3 credits) Advanced statistical techniques such as regression, path analysis and factor analysis are employed in analyzing such secondary data as the U.S. Census and the General Social Survey. The focus is on development and testing of sociological models. This course is valuable for students planning on entering graduate programs which include research components. Prerequisites: SOCI 105, SOCI 383 and SOCI 385.

395 Internship (3 credits) See course catalog on internships. Internships in sociology include but are not limited to placements with local community action, social work, criminal justice, law enforcement, human right and youth advocacy programs or organizations. Prerequisite: SOCI 105, 383, or 385. (EL)

396 Supervised Field Placement (3 credits) The student will work in a supervised field placement. This course’s objective is to enhance the student’s knowledge and critical understanding of social services delivery systems and of the people involved with them. Prerequisite: SOCI 321.

397 Contemporary Theory (3 credits) The task of this seminar is to critically examine modern social theory. Social theorists include Parsons, Wallerstein, Goffman, Dorothy Smith, Bourdieu, Foucault, Giroux, Freire. Focus is on analysis, critique, evaluation, synthesis, and application. Prerequisite: SOCI 105, 310, or permission of instructor. (EL)

441 Research Projects (4 credits) Individual and collaborative research in sociology. Prerequisites: SOCI 105 and permission of instructor. SOCI 105 and 383, 384, or 385. (QFR)

485 Senior Seminar (3 credits) Course utilizes studies of exemplary sociological research and individual research to model the integration of theory and methods. Involves applied research

project including ethical issue, literature review, research design and analysis, and written and oral presentation of proposals and/or results. Prerequisites: SOCI 310, 383, 385, 397.

490 Senior Thesis (3 credits) Students are expected to develop a thesis based on preliminary coursework and demonstrate the ability to integrate theory and method in sociology. Thesis work is supervised by a faculty member. Prerequisite: a C or better in SOCI 485.

Sociology

Requirements for the major: With an advisor in the department, design a program with a minimum of 12 approved courses, distributed as follows:

Required courses:

- 105 Introduction to Sociology (first year)
- 310 Classical Theory (sophomore year) (offered only in the fall)
- 383 Quantitative Analysis (junior year) (offered only in the spring)
- 385 Qualitative Analysis (junior year) (offered only in the fall)
- 397 Contemporary Theory (sophomore year) (offered only in the spring)
- 485 Senior Seminar (fall)

Five additional courses in sociology

Grades for all courses taken in sociology are used to calculate the average in the major for Departmental Distinction. Students also are required to earn at least A- in Senior Seminar to be eligible for Departmental Distinction.

Requirements for the sociology minor: With an advisor in the department, design a program with a minimum of seven approved courses, distributed as follows:

Three core courses:

- 105 Introduction to Sociology
- 310 Classical Theory (recommended) OR 397 Contemporary Theory (with Permission of Instructor)
- 383 Quantitative Analysis OR 384 Quantitative Analysis in Criminal Justice OR 385 Qualitative Analysis

Four additional courses in sociology

Requirements for the Criminal Justice Minor:

- 285 Introduction to Criminal Justice
- 301 Criminology
- 384 Quantitative Analysis in Criminal Justice

Three additional electives selected from the following list:

- | | |
|---------------------------------|-------------------------------------|
| 311 Juvenile Delinquency | 350 Social Construction of the Drug |
| 325 Policing and Corrections | War |
| 205 Deviance and Social Control | 270/280 Constitutional Law |
| 251 Race and Ethnicity | 302 Abnormal Psychology |

Spanish

The importance of studying the Spanish language is underscored by the fact that the United States is the fourth largest Spanish-speaking country in the world. Knowledge of the Spanish language and Hispanic cultural diversity is vital for business, both foreign and domestic; healthcare; social services; international relations; politics; government; education; travel, and many other fields. In addition, an understanding of Hispanic cultures, civilizations, and language gained through courses offered by the Department of Modern and Classical Languages is a valuable component of a liberal arts and sciences education designed to prepare students for a future of increasing global interdependence and an increasing Hispanic influence in the U.S.

Spain and Latin America occupy a unique place in the realm of Western culture in their blending of diverse religious, linguistic, and intellectual traditions from the Jewish, Muslim, and Christian influences in Spain with the diversity of Native American cultures in Latin America. Students majoring in Spanish at Hartwick will gain an appreciation of the linguistic and cultural diversity of the 20 countries in the world where Spanish is spoken through an exploration of their literature, film, art, and music.

The Spanish major at Hartwick is designed to develop facility in both oral and written language skills as well as to broaden each student's global perspective through a critical understanding of multiculturalism in Hispanic countries and in the U.S. In addition to the variety of language, culture, and literature courses offered on the Hartwick campus, the Spanish faculty regularly organizes off-campus study programs and strongly recommends that students majoring in Spanish participate in January Term and semester- and year-abroad opportunities.

Students interested in earning teacher certification in Spanish may do so by completing the requirements for the major, taking the psychology and education courses required for certification and student teaching in Spanish. (See Education.)

A minor in Spanish is a valuable complement to any major and may be of particular interest to students whose major fields orient them toward a career in business, healthcare, social services, travel, or education. A student interested in completing a minor in the language is encouraged to consult with a member of the Spanish faculty in order to plan a minor program which relates to the major. Students majoring and minoring in Spanish are encouraged to broaden their understanding in the field by taking related courses in other disciplines and in the Latin American and Caribbean studies program.

Spanish majors recently graduated from Hartwick have gone into teaching; to graduate schools both here and abroad; and have found employment in banks, insurance companies, social service agencies and many other fields in which knowledge of the Spanish language and Hispanic cultures is becoming increasingly advantageous.

Faculty

Esperanza Roncero, Mireille Vandenheuvel

Courses

101 Introduction to Spanish I (3 credits) This is a beginner's course using the communicative method that will emphasize the acquisition of grammatical structures and vocabulary through an active process of participation; it will focus on listening comprehension, correct pronunciation and cultural knowledge. Spanish will be the language of instruction. Students are expected to attend regularly and participate in all class activities. Prerequisite: Course is designed for students who have had no previous experience in Spanish, and students who have had less than two years of Spanish in high school.

102 Introduction to Spanish II (3 credits) A continuation of SPAN 101, which focuses on the active development of listening and reading comprehension, cultural knowledge and speaking and writing skills. Cultural topics may include: Types and Stereotypes, the Human Community, and Views on Death. Spanish will be the language of instruction. Students are expected to attend regularly and participate in all class activities. Prerequisite: SPAN 101; students with two or more years of Spanish in high school with Spanish faculty approval and placement exam. (OCL)

150 Topics in Hispanic Studies (3 credits) Stresses the unique historical, linguistic, cultural, and traditional differences of individual areas of the Hispanic World. Normally this course will be offered during the term preceding the trip abroad and will deal with the area to be visited. Students may repeat the course when the title and content change. (LNC)

201 Intermediate Spanish I (3 credits) This course offers the student an opportunity to reinforce and expand previous learning in grammar, comprehension, oral and written skills, and vocabulary. Unlike previous courses, this course focuses upon giving the student an idiomatic grasp of the language. Oral and written practice and weekly language laboratory exercises. SPAN 201 should be taken the semester immediately following SPAN 102. Prerequisite: SPAN 102, with Spanish faculty approval and placement exam.

202 Intermediate Spanish II (3 credits) This intermediate level course is the gatekeeper which will determine if students will be invited to pursue advanced studies in Spanish. This course will go more in depth in grammatical points in order to help students manipulate them with more precision in written and oral assignments. Students will be exposed to a variety of written, visual and audio texts, and they will relate them to their historical, social and cultural contexts. Oral proficiency is strongly emphasized. A final grade of B+ is required in order to continue toward a major.

203 Review of Spanish Grammar (3 credits) This course will emphasize a review of Spanish grammar, with particular focus on verb tenses, agreement (adjectives, nouns, articles, etc.), pronounce, accents, idioms, and the structure of sentences. The course will also focus on the continued development of vocabulary, grammatical as well as everyday usage. Finally, students will apply their study of grammar and apply it to the analysis of films, short newspaper readings and written compositions. Oral and written proficiency will be strongly emphasized.

205 Communicative Spanish (3 credits) This course emphasizes the analysis of grammar on written works. Students will learn advance grammar and will apply concepts learnt during the semester to written texts in order to analyze them from a grammatical point of view. Thus, they will investigate how grammar determines the way a text creates meaning, conveys images, insinuates hidden messages, and creates emotional and psychological realities.

240 Spanish for Healthcare Personnel (3 credits) A course and materials designed to bridge the communication gap between the large Spanish-speaking population and English-speaking healthcare team that treats them. This course focuses upon developing the oral skills of the Spanish language, as well as vocabulary related to health-related fields. Except when prevented by extraordinary circumstances, this course should be taken in the semester immediately following SPAN 102. Taught in Spanish. Prerequisite: SPAN 102, and students who have had three or more years of Spanish in high school with Spanish department faculty approval and/or placement test.

250, 350, 450 Seminar in Hispanic Studies (3 credits) A seminar in a selected topic of Spanish language, literature, or civilization. Occasionally the course is taught in English.

285/385/485 Spanish Term Abroad (4 credits) A study-abroad program offered by the Spanish section of the language department. (OCL, LNC, EL)

300 Puntos de vista (3 credits) With the use of a variety of written texts and films, this course is designed to help students speak and write Spanish by manipulating more sophisticated grammar and vocabulary when presenting and supporting their opinions on a variety of cultural, social and historical issues.

301 Análisis del discurso escrito (3 credits) The combined use of text and film sets the background to understand specific socio-historical issues in the Hispanic World. As students broaden their vocabulary and learn more advanced grammar concepts, they are expected to teach them to others, and to show

precision in manipulating them in their written and oral work. This course also offers an introduction in analyzing written discourse of literary texts to prepare students for more advanced literary courses.

303 Estudio de la traducción I (3 credits) In this course students will be introduced to many of the mechanics of translating. Translation will be from Spanish to English and it will include short texts. There will be an emphasis on texts or fragments of texts that expose specific problems of how to translate certain expressions from Spanish to English. It will also give a very strong emphasis on how to translate prepositions, the impersonal voice, order of sentences, punctuation and verbal tenses.

317 La guerra civil española: cine y literatura (3 credits) The Spanish Civil War, which took place between 1936 and 1939, had a great impact in the way that Spain developed in the following decades. Today one can find the vestiges and influences from that period in the art, film and literature. These forms of artistic expression reflect the fear, the lack of confidence and a search for an individual and national identity. Through the analysis of film and literature during and about that period in Spanish history, we will study the events that led Spain into a period of seclusion from the rest of Europe. What were the causes of the Spanish Civil War? What political, social, and religious groups participated? Who did they support during the war? What were the consequences of the war? In what ways were men, women, children, and gays/lesbians affected during the war and its aftermath, the Francoist period?

319 La cultura popular (3 credits) Through the analysis of telenovelas, music, and film, we will discuss what these modes of popular culture say about particular society. We will look at how these forms of cultural expressions convey conflicts between classes, gender and ethnic groups, and how these popular cultural productions say about the relationship between a specific society in the Spanish speaking world and the outside world. The texts for this course will be the forms of popular cultures themselves to provide students the opportunity to create with the language.

329 Nacionalismo y sexualidad (3 credits) This course will focus on the study and analysis of gender and sexuality in contemporary Latin American societies, with a particular emphasis on how writers such as Reinaldo Arenas, Rosario Ferré, Jaime Bayly construct/de-construct societal notions of acceptable gender behavior. Through the user of film and literary works we will discuss issues pertaining to the formation of identity and how the development of this form of identification in various Latin American countries is affected based on the relationship between sexuality, a sense of pride in one's origin and societal expectations. Throughout the semester we will examine and discuss topics that focus on issues relating to the relationship between men and women with an overview of the treatment of sexuality from colonialism to the present to understand the current conditions that have constructed gender dichotomies. Another important aspect of the course will look at the effects and influences that contemporary North American society has had in the 'development' of gender and sexual relations and a historical overview of Spanish, African and Arabic influences in the treatment of sexuality and its effect on national identity.

330 Últimas noticias (3 credits) By reading the news in a variety of Spanish newspapers online, students will familiarize themselves on what is happening throughout the Hispanic World, and how that part of the world presents American news. The written and oral work produced during the semester will have to demonstrate precision in manipulating advanced grammar and ease when creating with the language.

331 Escritores españoles contemporáneos (3 credits) In this course, students will examine 20th century literature from Spain, including the novel, drama, poetry, and the essay. Topics studied will include the Spanish Civil War, the Franco period, and current post-Fascist writing. All texts are read for their literary, cultural, and historical values.

332 La E.T.A. (3 credits) In this course we will study the history of the E.T.A. in Spain, the Spanish movement against the 'terrorist' group, E.T.A. and the press, the victims of the E.T.A., among other topics.

333 El cuento latinoamericano (3 credits) A study of a wide variety of contemporary Spanish American authors who have left an important legacy as representatives of different trends, movements and genres, with special emphasis on their historical contexts. A close analysis on structure, discourse, and grammatical elements will serve as the basis for analyzing other forms of literary texts.

335 El cine hispánico (3 credits) In this course, students will analyze several representative films from Spain and Latin America by such directors as Bunuel, Almodovar, Gutierrez Alea, Littin, Bemberg, and Solas. All films will be studied as social, historical, and cultural texts. Taught in Spanish.

400 Teoría para las humanidades (3 credits) The question that we will address in this course is how the psychoanalytic and the artistic process or experience overlap. We will do so by reading a series of articles that bridge the distance between the sciences and the arts, and we will focus especially on the similarities and differences between trauma and the creative process. The objective of this course is to introduce students to the writings of philosophers and scientists of the 20th century whose works have influenced the world of literature and literary criticism. In this course, we will not read literary works, rather, we will read theoretical ones in order to acquire the tools that may enable us to start understanding one recurrent theme that runs across most cultures throughout the 20th century—trauma (produced by violent and destructive events such as wars, economic upheavals, social disturbances, sexual abuses, gender inequalities, etc.) and its connection to art (creation, construction and mastery), including the most of all arts, the art of living. Most of the texts for the course will be in Spanish unless a translation into Spanish is not available.

403 Estudio de la traducción II (3 credits) In this course we will translate a wide variety of sophisticated Spanish texts into English. Those texts will belong not only to different countries and cultures, but also to different historical periods. They will include literary texts, poetry, philosophy, history, and economics, among others. Translation will be used as a tool to more deeply understand the original text and to compare the realities created by the original language to those of English. Students will also be exposed to various theoretical texts on translation.

420 España del medievo al siglo XIX (3 credits) In this course we will study the following topics: Muslim Spain, the Reconquest, The Catholic Monarchs, the ‘Discovery’ of America, the Rise and Fall of the Spanish Empire, the Bourbons and the Enlightenment, the Peninsular War and the Constitution of 1812, the 19th Century and the loss of Colonies.

425 Lorca y Hernandez (3 credits) In this course students will read the written work by Federico Garcia Lorca and Miguel Hernandez. They will also learn about the historical situation during both writers’ lives, their biographies, and that of other writers and artists of their time. Students will also use a variety of related materials such as films, audio materials and documentaries.

430 Medios de difusión (3 credits) Language is not neutral and the written media conveys different interpretations of facts. By analyzing the written discourse and the way the same news is printed in different newspapers, students will learn to become aware of the different tones, tendencies and editorial agendas. Commercial media will be compared to the independent press, as well as Hispanic to American Press. (ILS)

431 La diáspora latina en los EE.UU. (3 credits) An exploration of the role of Chicanos, Puerto Ricans, Cuban Americans, and other Hispanics in the U.S. through an investigation of exemplary literature, cinema, and music. While many of the texts are bilingual or in English, this course will be conducted entirely in Spanish.

435 La version de los vencidos (3 credits) In this course students will read texts written during the Spanish Conquest of the Americas. Those texts have either been written by Native Americans or by Spaniards who transcribed some of the most important and revealing texts or oral accounts of the natives from Central and South America.

437 El caribe hispánico (3 credits) This course will focus on the intersection of race, class, gender, and sexual belief and practice in the processes of colonialism in the Spanish speaking Caribbean. Through the study of contemporary literature we will examine how colonialism used constructions of sexuality to create political, cultural and social dynamics that have pervaded the lives of the colonized and the colonizer, and influenced the sensitivities, beliefs and perspectives of Western cultures and practices in general.

440 El legado español en América Latina (3 credits) How does the past shape the present? How did the cultural and political legacies brought by the Spanish Conquistador shape Latin America? What remains of the deep roots from indigenous cultures and black slavery? Born in blood and fire, consecrated by the

sword and the cross, Latin America, with a common past, presents today a myriad of contrasts and paradoxes. A variety of texts offering different points of view on the conquest, the colonization process and Latin American today will guide students to substantiate their own answers to these questions.

489 Senior Project Seminar (1 credit) This 1-credit course in preparation for the Senior Project will give students the opportunity to begin work on their thesis topic. Through this class, students will prepare their statements of purpose, bibliographies (including annotated bibliographies), outlines, and various drafts of their thesis before signing up for SPAN 490.

490 Senior Project (3 credits) Required of all majors. A thesis or other appropriate work that demonstrates the student's proficiency in Spanish.

Spanish

Requirements for the major: 31 credits, distributed as follows:

Intermediate Level (12 credits)

Spanish 201, 202, 203, 205

9 credits of 300 level coursework

6 credits of 400 level coursework (not including 489 or 490)

Senior Project Seminar

Spanish 489 (1 credit)

Senior Thesis (3 credits)

Spanish 490

Grades for all courses taken in Spanish are used to calculate the average in the major for Departmental Distinction.

Requirements for the minor: 21 credits, distributed as follows:

Intermediate Level (3 credits)

Spanish 201

Preliminary Assessment (3 credits)

Spanish 202

Any Language/Culture course above 202 (15 credits)

Theatre Arts

The Theatre Arts offer an ideal platform for experiencing the liberal arts through learning by doing. At Hartwick College our students are actively engaged in the literature of the theatre by creating performances on the stage for an audience. This is true for all of our students, not just juniors and seniors. From your first semester at Hartwick you will be engaged in theatre-making. Through this process our students learn because they will need to know things about history, poetry, science, art, language, philosophy, sociology, and psychology. These and all the other disciplines in the liberal arts are bound up in the dramatic literature and performance styles of our world.

To study the art of performance and production is to sharpen the skills of observation, communication, and critical thinking. Hartwick's Theatre Arts curriculum, offered by the Department of English and Theatre Arts, is specifically designed to be part of a liberal education and to meet the needs of students planning a career in theatre as well as the needs of those who choose theatre as a way to enrich their lives. The three core courses—Introduction to Theatre, Play Production, and Senior Project—all deal with the process of analyzing a script, designing a production, and rehearsing and presenting a performance. Using a combination of classroom study and practical experience, these courses are intended to develop progressively the director/designer, a person capable of taking a play from an idea to a polished performance. The rest of the curriculum is intended to support and to extend the core and covers acting, set and lighting design, theatre history, and dramatic literature.

A great deal of the learning in Theatre Arts takes place outside the classroom: in the rehearsal hall, in the shops, and in our two performance spaces. A typical year will see three major productions and as many as 15 student-directed, faculty-mentored plays. The Theatre program also offers technical support to the Hartwick dance program and to visiting dance, theatre, and musical events. Developing actors, directors, designers, and technicians find plenty of chances to hone their skills at Hartwick.

New-play development is featured at Hartwick. The close relationship with the writing program in English has led to the production of several original plays written by both students and professionals. The most notable of these were *Ghost Dance*, written for Hartwick by Nobel Laureate Derek Walcott—a Region II winner in the American College Theatre Festival XXII—in 1990, and student Rob Shimko's *Specks*, the co-winner of the National Short Play Award for the Kennedy Center American College Theatre Festival XXX in 1998.

The student drama club, Cardboard Alley Players, and the drama honorary, Alpha Psi Omega, are very active. They promote theatre trips and host visits by theatre professionals as well as mount their own plays and musicals. January Term off-campus classes are offered in New York City and England. These courses provide more opportunities to see professional productions and to meet the people who produce them. And Theatre students are encouraged to pursue the many internship and apprentice opportunities offered by professional theatre companies in our area and around the Northeast.

Recent Theatre Arts graduates have gone—some directly and some with additional training—into positions at the Smithsonian Discovery Theatre, MSNBC TV, the Vineyard Theatre, Adirondack Scenic, Manhattan Children's Theatre, Glimmerglass Opera and more. Others have used their theatre training as part of their preparation for work in film, television, and teaching. Equally important, however, are those students who have graduated from Hartwick with majors other than theatre, who will continue to enrich their lives with an informed love of the performing arts developed by learning and doing on Hartwick's stages.

Faculty

Kenneth Golden, Program Director; Malissa Kano-White; Marc Shaw

Adjunct Faculty

Janet Bresee, Gary Burlew, Elizabeth Treadwell

Courses

100 Theatre Practicum (1-2 credits) Available to students working on faculty-supervised shows as designers, technicians, actors, or stage managers. One credit will be awarded for 40 to 79 hours and two credits for 80 hours or more of work overseen and evaluated by an appropriate faculty member. May be repeated as often as necessary, but not more than five credits of Theatre Practicum will count toward graduation. Prerequisite: Permission of the instructor. (EL)

105 Musical Theatre Production (4 credits) (same as MUSI 105) Study, rehearsal, and performance of a musical theatre piece. Students will be cast in a role or assigned a production responsibility and will be coached and directed by the staff. An emphasis will be placed on the development through practice of skills in singing, acting, dancing and in the designing, lighting and running of a production. Significant time will also be given to looking at literary, thematic and historical aspects of the piece to be produced with the intent of developing a sensitivity to the special qualities of musical theatre. Whether MUSI or THEA, this course may be taken only twice for credit. Prerequisite: Permission of the instructor. (EL)

110 Introduction to Movement and Dance for the Theatre (1 credit) Body training in movement technique using rhythm dynamics, space and gesture. Learning basic dance skills including jazz, tap, ballet, and modern. Foundation for dance classes. (EL)

111 Modern Dance (1 credit) An introduction to modern dance technique and the use of the body as an instrument of expression. (EL)

112 Ballet I (1 credit) Introduction to the fundamentals of classical ballet consisting of basic barre, center work, and movement through space. (EL)

115 Dance Rehearsal and Performance (1 credit) Open to members of Orchesis, the College dance club, the course requires a significant number of hours in rehearsal to be determined by the Orchesis club advisor. May be taken twice, but only one credit will count toward the Physical Education requirement. (EL)

120 Introduction to Theatre Arts (3 credits) An introduction to playwriting, script analysis, production and performance designed for students interested in gaining more from reading and watching plays as well as for those beginning a serious study of theatre. In addition to reading several short plays and discussing the creative steps required to mount them, students will work in small groups writing and producing their own play, will see and critique a number of local productions and may work on a Hartwick production. (EL)

131 Stagecrafts Stagecraft is the study of the techniques that are used to bring a theatrical design from concept development to the stage. Through a series of class projects students will learn design concepts and create some of design elements that could be used on stage. In addition time will also be spent on scene painting techniques, lighting design, sound design, and the tools and equipment that are used for each. Students will also learn how the theatrical world is structured and what roles are played by those that work in it. Class time will also be used to teach safe work habits for scene shops and theatres.

140 Fundamentals of Acting (3 credits) A practical investigation of the basic theories of acting as a fine art. Emphasis will be on training the actor in the use of physical and mental abilities as effective tools of dramatic expression. (EL)

205 Theatre in New York City (3 credits) Based in part on campus and in part in New York City. This course will allow students to see a wide variety of theatrical productions and to study the history of Broadway and off-Broadway production since 1910. In New York students will see productions, meet professionals and tour theatres. Prerequisite: permission of the instructor. Offered in January. Fee involved. (EL)

212 Ballet II (1 credit) Concentration on classical ballet technique, barre, center work, and movement through space. Prerequisite: Ballet I or permission of the instructor. (EL)

220 Play Production (4 credits) Each student in this course will select, analyze, design, cast, rehearse, promote and present a short one-act play—gaining experiential knowledge of the roles of the producer, director and designer. Class discussion and exercises will focus on such matters as selecting the play, budgeting, advertising, organizing the production team and calendar, developing a production concept, casting, blocking, working with actors, creating a prompt book, making a model of the set, planning costumes, props, makeup, lights and sound, setting cues, and polishing the performance. Prerequisite: THEA 120. (EL)

231 Fundamentals of Theatrical Design (4 credits) An introduction to the processes and methods of designing the visual and aural worlds of staged performance based on thematic elements and creative collaboration. Topics include scenery systems, light, costume, sound design, stage crafts, graphic methods, and production organization. (EL)

237 Reconstructing Shakespeare's Company (4 credits) A simulation of the workings of Shakespeare's theatrical company as it prepares to produce one of his comedies for the Elizabethan public theatre. Students take on roles both as characters in the comedy, to be produced in a workshop performance at the end of the course, and as members of the acting company. Activities include script analysis, discussions of Elizabethan culture and theatrical practice, and improvisations based on research into the period. Laboratory sessions are devoted to rehearsal. Counts in the Theatre major as a course in theatre history. (Cross-listed as ENGL 237)

240 Advanced Acting (4 credits) Advanced acting projects such as study of period styles, physical acting, and ensemble development. Prerequisites: THEA 140 and THEA 110, 111, or 112. (EL)

250 Selected Topics (3 or 4 credits) A course at the advanced level, the content of which is determined according to the special interest of the instructor and students.

260 The Art of Cinema (2 credits) An examination of the visual, aural and narrative language systems used to convey meaning in this most popular of art forms. From the most concrete components of cinematic art (story structure, photographic composition, sound, etc.) to the most abstract, the course will provide a foundation for students' personal "cineliteracy."

303 Theatre in England (4 credits) Based in London and Stratford-upon-Avon, the class will attend up to 12 productions offered by the Royal Shakespeare Company, The Royal National Theatre, West End theatres and Fringe companies. Students will also visit theatres, museums and historic sites and will talk with a number of British theatre professionals. There will also be time for students to explore the London area on their own. Prerequisites: Permission of the instructor and preparatory course. Offered alternate January Terms. Fee involved. (EL)

312 Ballet III (1 credit) A continued concentration in classical ballet technique, barre, and center work, and movement through space. Beginning and advanced pointe work. Prerequisite: THEA 212 or permission of instructor. (EL)

331 Stage Lighting and Advanced Design (4 credits) An intensive study of the role of light as an artistic component of theatrical production as well as related technologies as determined by student interest. Prerequisite: THEA 231. (EL)

350 Topics in Theatre (3 or 4 credits) Advanced study of a topic in theatre production or dramatic literature.

490 Senior Project (4 credits) In consultation with the theatre faculty, each theatre major will in the spring of his or her junior year propose a significant theatre project for completion in the senior year. Normally this will involve directing and designing a play to be included in the department's production season. Major design or research projects will also be considered. Prerequisites: THEA 120, 220, 231, senior standing, and substantial completion of the Theatre Arts major.

Theatre Arts

Requirements for the major: A total of 41 credits, distributed as follows:

Five Theatre Arts courses:

- 120 Introduction to Theatre Arts
- 140 Fundamentals of Acting
- 220 Play Production
- 231 Fundamentals of Theatrical Design
- 490 Senior Project

One of the following courses:

- 240 Advanced Acting
- 331 Stage Lighting and Advanced Design

Four approved dramatic literature or theatre history courses, at least two at the 300 or 400 level, totaling at least 13 credits.

Approved electives totaling at least 3 credits

Two THEA 100 Theatre Practicums or one practicum and one dance or movement course totaling at least 3 credits. (No more than 5 credits of THEA 100 to count toward graduation.)

Requirements for the minor: 20 credits distributed as follows:

120 Introduction to Theatre Arts

140 Fundamentals of Acting

231 Fundamentals of Theatrical Design

One approved dramatic literature or theatre history class worth at least 3 credits

Two of the following courses totaling at least 7 credits:

- 220 Play Production
- 240 Advanced Acting
- 331 Stage Lighting and Advanced Design
- One additional dramatic literature or theatre history class

U.S. Ethnic Studies Minor

This academic minor focuses on the comparative study of race and ethnicity in the United States as it uniquely intersects with the international context. Those groups that have historically borne the brunt of enslavement, social stigmatization and discrimination, and political and economic deprivation in the process of European expansion in the Americas are granted special emphasis. The comparative focus assumes that there are general processes that underlie the formation of the concept of race, ethnic identity, and national identity in a wide range of social contexts. The program aims to challenge students to critically examine dominant assumptions about individual and collective racial and ethnic identities as well as expose students to the contributions of diverse groups of Americans to U.S. society and culture. To that end, the minor provides access to a range of analytical tools with which to examine the histories, experiences and cultures of America's racial and ethnic groups and their relationships to each other and to the dominant culture. Interested students should contact Jeffrey Pegram.

Objectives of the U.S. Ethnic Studies Minor are:

1. To provide students with an understanding of the socially constructed nature of race and ethnicity.
2. To help students understand the debates about the biological basis of human diversity.
3. To expose the histories, cultures and contributions of U.S. racial and ethnic groups in ways that highlight the distinctiveness and commonality of ethnic experience and expression as well as expose the relationship of racial/ethnic discrimination to other forms of discrimination such as class and gender.
4. To help prepare students to promote a more just society and to participate in an increasingly diverse world.
5. To introduce the disciplinary scholarship of ethnic studies.
6. To provide opportunities for students to experience the cultural nuances of alternative racial and ethnic contexts that differ from their own cultural backgrounds.

U.S. Ethnic Studies Minor

Requirements for the minor in U.S. Ethnic Studies: Six courses, two of which are core to all students in the minor. No more than two courses in the student's major field may count toward the minor. The core courses are the Introductory Course and the Capstone Seminar.

Introductory Course (Theory/History) All students, regardless of concentration, are required to take an introductory course on ethnicity which prepares them to look at the materials in their area of concentration with reference to current theory in the study of ethnicity. Students are encouraged to take this course as early as possible and before completing the other requirements of the minor. Students may select as their introductory course one of the following courses:

- 250 Hispanic and African-American Cultures (ANTH)
- 279 American Ethnic History (HIST)
- 150 FYS: Politics of Race and Gender (POSC)
- 250 Race and Ethnicity (SOCl)
- 250 Economics of Race and Gender (ECON)

Capstone Seminar This seminar is designed to explore a set of significant social and ethical issues from several cultural and ethnic perspectives. In the process, students will be encouraged to apply the knowledge and analytical skills they have acquired while pursuing the minor in U.S. Ethnic Studies. This will be carried out through a dialogue with their peers and the faculty seminar leader(s). More specifically, the seminar seeks to:

1. Recognize and examine the complexity of social, political, personal and moral questions involved in addressing U.S. cultural diversity.

2. Develop student's capacity to understand and apply concepts, techniques, and value assessments employed by their peers or the faculty seminar leader(s) to address the issues at hand.

Courses that satisfy the Capstone Seminar requirement will be so identified among the Contemporary Issues Seminars (CIS) in the Interdisciplinary (INTR) section of the annual schedule of courses.

Concentrations Students in the minor, in consultation with an advisor, can choose from three areas of concentration:

African American Concentration Four courses, selected as follows:

At least one course dealing with Africa, selected from the following:

- 237 Peoples and Cultures/South Africa (ANTH)
- 237 Peoples and Cultures/West Africa: Roots of American Culture (ANTH)
- 335 Third World Studies: Africa (ANTH)
- 335 Third World Studies: African Colonialism (ANTH)
- 350 World Music: Music of Africa (MUSI)
- 281 African Politics (POSC)

At least two courses in at least two departments, selected from the following:

- 250 African-American Literature (ENGL)
- 241 African-American History (HIST)
- 250 African-Americans in the North (HIST)
- 250 Civil Rights Movement in the 20th Century (HIST)
- 325 Comparative Slave Systems (HIST)
- 330 Slavery and Abolition in America (HIST)
- 351 Civil Rights Seminar (HIST)

American Indian Concentration

Four courses, selected as follows:

One course, selected from the following:

- 241 Native North American Prehistory (ANTH)
- 275 The Indians in American History I (HIST)

The following course:

- 276 The Indians in American History II (HIST)

Two courses, selected from the following:

- 250 20th Century Native American Fine Art (ART)
- 350 Native American Literature (ENGL)
- 310 CIS: Indians in Contemporary Literature (INTR)
- 150 Native American Religions (RELI)

Comparative Concentration In this concentration students select from a range of courses that deal with race and ethnicity (listed below). These courses are divided into three foci : Theoretical, International and United States. After taking the introductory course in the minor, the student who elects this option must work with the coordinator to create a program of study that, while focused and comparative, examines race and ethnicity both nationally and internationally. In addition to the Introductory Course and the Capstone Seminar, the student will select four courses from the following lists, with at least two courses from the United States focus:

Theory

- 346 Race and Human Variability (ANTH)
- 250 Hispanic and African-American Cultures (ANTH)
- 250 Economics of Race and Gender (ECON)
- 250 Economics of Plantations (ECON)
- 279 American Ethnic History (HIST)
- 325 Comparative Slave Systems (HIST)
- 310 CIS: Human Diversity (INTR)

310 CIS: Philosophy, Race and Gender (INTR)
150 FYS: Politics of Race and Gender (POSC)
230 Poverty and Affluence in American Society (SOCl)
240 Women and Social Change (SOCl)
250 Race and Ethnicity (SOCl)
330 Language and Society (SOCl)

Women's and Gender Studies Minor

Over the past two decades, a distinct body of scholarship on gender has developed in almost every academic field. This scholarship raises basic questions about women, men, and society which transcend disciplines and challenge traditional ways of teaching and conducting research. The feminist framework informing Women's and Gender Studies addresses the following issues with respect to gender:

1. It challenges the androcentric bias in thought, language, and social and intellectual systems.
2. It rethinks the central western dualisms—e.g., mind/body, subject/object, thinking/doing.
3. It involves a critique of all forms of oppression including class, race, sex, sexual-affectual preference, 1st world-3rd world, violence, militarism, ecological destruction, political inequality and hierarchies of power.

Faculty

Connie Anderson, Elizabeth Ayer, Robert Bensen, David Cody, Lisa Darien, Fiona Dejardin, Laurel Elder, Carlena Ficano, Vicki Howard, Katharine Kreisher, Cherilyn Lacy, Laura Malloy, Susan Navarette, Mieko Nishida, Kim Noling, Katherine O'Donnell, Edythe Quinn, Stefanie Rocknak, Esperanza Roncero, Lynn Elmore Strano, Linda Swift, Mireille Vandenheuvel, Mary Vanderlaan, Mark Wolff

Courses

166 Introduction to Women's and Gender Studies (3 credits) (INTR) This course introduces students to feminist scholarship and acquaints them with the intellectual, ethical, social, political, historical and cultural forces constructing gender. The class is interdisciplinary and grounded in feminist pedagogy. (Required)

360 Seminar in Women's and Gender Studies (3 credits) (INTR) This seminar explores a broad range of classical and contemporary feminist theory and contrasts it with existing, normative theoretical paradigms. A feminist framework is used to focus on a specific academic field, i.e., history, literature, labor, science. Emphasis is placed on cultivating self-development through student participation in pedagogical experimentation, project creation and reading choices. Prerequisite: two of the courses listed or permission of the instructor. Directed and independent courses in Women's and Gender Studies may be arranged in consultation with the program's faculty.

Women's and Gender Studies Minor

Requirements for the minor in Women's and Gender Studies: 19 credits:

Required courses:

166 Introduction to Women's and Gender Studies (INTR)

360 Capstone Seminar in Women's and Gender Studies

12 credits selected from the following (there are other courses that may count as long as faculty member wishes to list is as a Women's and Gender Studies course):

155 Children's Lives (SOCI)

204 Women and Art (ART)

208 Gender and Sexuality (SOCI)

211 Family and the Life Course (SOCI)

221 Classical Mythology (ENGL/CLAS)

225 Human Rights (SOCI)

240 Women, Men, and Politics (POSC)

240 Women and Social Change (SOCI)

242 Women in American History (HIST)

250 African-American Women Dramatist (ENGL)

250 The Warrior and the Poet (ENGL)

252 Dark Satanic Mills: European Labor History –1700 (HIST)

252 Women in European History (HIST)

253 Power and Identity (HIST)

255 Women and Fiction (ENGL)

283 Western Medicine since 1500 (HIST)

307 Sex and Gender Roles (ANTH)

310 Philosophy of Race and Gender (INTR)

310 Breastworks: An Interdisciplinary Analysis (INTR)

310 Unruly Women ((INTR)

310 Issues in Contemporary Photography (INTR)

316 Race and Gender ((ECON)

319 Latin American Popular Culture (SPAN)

322 Women, Politics, and Development (POSC)

326 Gender and Power in Latin America (HIST)

333 20th Century Spanish American Writers (SPAN)

340 Social Movements (SOCI)

350 Women and the Law (POSC)

352 Medieval Women and Religion (HIST)

360 Victorian Literature (ENGL)

382 19th Century New England Women Writers (ENGL)

383 Disease and the Social Body (HIST)

433 Topics in Gender Studies (SPAN)

437 Topics in Hispanic Caribbean Literatures and Cultures (SPAN)

450 Oscar Wilde and the Queer Cultures of the '90s (ENGL)