THE COLLEGE OF ARTS AND SCIENCES

Dean
Joan Wick- Pelletier

Associate Dean, Academics
Jeanette Altarriba

Associate Dean, Research
Lawrence Schell

Assistant Dean, Facilities Management
Elizabeth Gaffney

Assistant Dean, Administrative Services
Dona Parker

Assistant Dean, Budget and Personnel
Steven Galime

Assistant Dean, Academic Program
Gregory Stevens

Director, CAS Computing Services
Brian Macherone

The College of Arts and Sciences comprises the students and faculty of 25 departments offering majors and minors, as well as those working in a variety of cooperative interdisciplinary programs. These include the arts, computational sciences, humanistic studies, physical sciences, and social sciences. Study in the Arts and Sciences provides students with a liberal education, including knowledge and skills applicable to further study and to occupations in a great variety of fields.

The presence of research faculty and graduate students in the programs of the College affords undergraduate students the opportunity to study with scholars and researchers working at the cutting edge of their disciplines. Qualified advanced undergraduates, in accordance with University policy, may enroll in appropriate graduate courses.

Fields of study leading to majors in the College are actuarial and mathematical sciences, Africana studies, anthropology, art, Asian studies, atmospheric science, biology, chemistry, Chinese studies, computer science, computer science and applied mathematics, economics, English, French, geography, geology, Greek and Roman civilization, history, Italian, Judaic studies, Latin American studies, linguistics, mathematics, music, philosophy, physics, psychology, Puerto Rican studies, rhetoric and communication, Russian, Russian and East European studies, sociology, Spanish, theatre, urban studies and planning, and women's studies.

In addition, the college is responsible for interdisciplinary majors with concentrations in art history, biochemistry and molecular biology, earth and atmospheric science, East Asian studies, human biology, Japanese studies, medieval and Renaissance studies, and religious studies; and for minor programs in cognitive science, film studies, journalism, Hebrew, Japanese studies, and Portuguese.

For purposes of degree requirements for the B.A. and B.S. degrees, the following undergraduate courses offered by the college are defined as liberal arts and sciences: all courses except A Csi 198, A Eaj 423, A Eco 495, A Heb 450, A Mat 204, A Mus 315, A Rus 395, A Thr 315.

Courses in this section are preceded by the prefix letter *A*.

Foreign Language Study Placement Policies

Foreign language placement is based on a student's current level of competence, as determined by placement procedures developed by the University's foreign language departments. Regulations covering foreign language placement and credit may be obtained from departmental offices offering the language in question.

The department, through a departmental representative, will assess the active skills in that language and will make a final placement decision for each student no later than the second class meeting of the course being recommended. A student may not earn graduation credit for a course in a language sequence if it is a prerequisite to a course for which graduation credit has already been earned.

Students earning advanced placement credits from high school will be expected to register for the next course in the language sequence. Those earning credit in University in the High School course work must consult with the appropriate department chair for placement in the next course in that language's sequence.

Courses in Arts and Sciences

A Cas 101 Understanding Language (3)
Non-technical introduction to the nature and role of human language in everyday life. Topics include factors which give rise to regional and social varieties, ways in which language is exploited (for example, in advertising and government,) and linguistic aspects of such fields as education, literature and computer science. Enrollment limited to freshmen and sophomores. May not be offered in 2003-2004.

A Cas 109 Intermediate Science Research (2)
Students learn research methodology in the natural and social sciences by accessing scientific databases, by using on-line bibliographic search techniques, consulting doctoral-level research scholars, developing hypotheses and performing experiments to test them, and by writing research papers and making presentations at scientific symposia. It is expected that the students will have done many of these activities in the prerequisite high school course, and in this course emphasis in placed upon the formulation of hypotheses and initiation of experiments in consultation with mentors. Prerequisite(s): completion of one year of an approved course in science research at the high-school level; permission of instructor; may not be taken by students enrolled in college. Offered summer session only.

A Cas 110 Intermediate Methods of Research (4)
Students learn research methodology in the natural and social sciences by accessing scientific databases by using on-line bibliographic search techniques, consulting doctoral-level research scholars, developing hypotheses and performing experiments to test them, and writing research papers and making presentations at scientific symposia. It is expected that the students will have done many of these activities in the prerequisite high school course, and in this course emphasis is placed upon performing experiments in consultation with mentors. Students are expected to spend at least three hours per week outside of class. Prerequisite(s): Completion of one year of an approved course in science research at the high-school level; permission of instructor; may not be taken by students enrolled in college; available for year-long course of study only.

A Cas 111 Beginning Fundamentals of Research (2)
Students learn research methodology in the natural and social sciences. Students access scientific databases by using on-line bibliographic search techniques, consult doctoral level research scholars, develop hypotheses and perform experiments to test them, and write research papers and make presentations at scientific symposia. This course emphasizes the first group of these activities, up to the actual performance of experiments, but some students may go further. Students are expected to spend at least three hours working on class work per week outside of class. May be repeated once for credit.

A Cas 125 A Diversity of Voices in Literature and the Arts: Creating Ourselves and Our Cultures (3)
Examines the emergence of American literary and other creative endeavors from the diverse experiences and heritages of the American peoples. The course focuses on creative works that explore and create representations of the self in relation to individual and group identity, and on the ways that cultural values and ideologies influence creative expression. [DP]

A Cas 131 Diversity and Equity in America (3)
What are the sources, extent, and consequences of diversity in American society? Using various approaches in the social and behavioral sciences, this course compares the American beliefs about equality with evidence of unequal treatment of groups labeled on the basis of race, ethnicity, gender, and religion. The course also considers how group conformity, stereotyping, and prejudice affect individuals in their everyday lives. [DP]

A Cas 103 Perspectives on Globalization (3)
An introduction to multidisciplinary perspectives on globalization processes including, among other topics, the economic configuration of the world economy, the changing nature of the state, the transformation of home and households in transnationalism, biological constraints and environmental problems, and the impact of and responses to globalization throughout the world. The course presents the perspectives of the social sciences, humanities and natural sciences, and encourages discussion and critical thinking. This is a team-taught course. [GC]

A Cas 141 Concepts of Race and Culture in the Modern World (3)
This course considers the complex dynamics of global human diversity from the vantage point of the various social sciences. It explores the use of race, nationality, ethnicity, culture, and gender as focal concepts in the critical analysis of human behavior and interaction in the modern world. Cross-cultural and cross-national aspects of these issues are of central concern to the course. [DP if taken *before* Fall 2004; GC]

A Cas 150 Cultural Diversity and the Human Condition (3)
Interdisciplinary study of selected cultures or societies focusing on six themes: family and social structure; religion and cultural values and traditions; art and nature; continuity; change and their global implications; work and play; health, ecology, science/technology. Each semester two or more cultures, including at least one non-Western culture, will be compared and contrasted with each other and with contemporary U.S. experiences. Examples will include Brazil, China, France, India, Mexico, Peru, Russia and West Africa. May be repeated once for credit when content differs. May be taken only by freshmen and sophomores. [DP, if taken *before* Fall 2004; GC]

. [WI]

A Cas 198 Special Topics in the Humanities (1–4)
Special group studies which provide students and faculty with the opportunity to explore significant themes, issues and problems from a broadly humanistic and interdisciplinary perspective. May be repeated for credit provided the subject matter is not repeated.

A Cas 202L Understanding the Arts (3)
Interdisciplinary course designed to foster an awareness and understanding of the significance of great works of Western art, music and literature. Students will study how to perceive and analyze works of art drawn from various periods. Categories include: architecture, sculpture, painting, music, drama, poetry and fiction.

A Cas 209 Advanced Science Research (2)
Continuation of work undertaken in A Cas 109 or equivalent with emphasis placed upon the completion of experiments in consultation with mentors. Students will consult with their teachers as necessary, but will not meet in a formal classroom period. Prerequisite(s): Satisfactory completion of A Cas 109 or completion of two years of an approved science research course at the high school level; permission of instructor; may not be taken by students enrolled in college; offered summer session only.

A Cas 210 Advanced Methods of Research (2)
Continuation of work undertaken in A Cas 110 or equivalent with emphasis placed upon the communication of results. Students are expected to spend at least three hours per week outside of class. Prerequisite(s): Satisfactory completion of A Cas 110 or completion of two years of an approved science research course at the high school level; permission of instructor; may not be taken by students enrolled in college; students must be enrolled throughout an entire academic year to obtain credit.

A Cas 211 Intermediate Fundamentals of Research (2)
Students learn research methodology in the natural and social sciences. Students access scientific databases by using on-line bibliographic search techniques, consult doctoral level research scholars, develop hypotheses and perform experiments to test them, and write research papers and make presentations at scientific symposia. In this course emphasis is placed upon performing experiments and the communication of results. Students are expected to spend at least three hours per week working on class work outside of class. May be repeated once for credit. Prerequisite(s): completion of A Cas 111.

A Cas 220L Literatures of the World I (3)
Major works in English translation from literatures of ancient Mediterranean (Judaic, Graeco-Roman), China, Italy, France, Germany, Spain, and francophone world. The first-semester course feeds into the second-semester course, but either semester may be taken alone. The course is team taught by faculty from the respective literature departments. May not be offered during 2003-2004.

A Cas 221L Literatures of the World II (3)
Major works in English translation from more recent literatures of Hebrew, China, Italy, France, Germany, Spain, and francophone worlds. The first semester course feeds into the second semester course, but either semester may be taken alone. The course is team taught by faculty from the respective literature departments. May not be offered during 2003-2004.

A Cas 240 Images and Issues of Diversity in the Visual Arts (3)
This course will look at the visual arts produced in selected subcultures and will consider the ways in which such social identities as race, class, gender and age are represented. The course focuses on the relationship of artists and their work to cultural and critical history, on social conditions under which these artists create, and the effect of these conditions on the themes, content, forms and shape of the reality in their art. [DP]

A Cas 360E Passion and Choice (3)
Through film drama, fiction and philosophy, this team-taught course will focus generally on the inner and outer dynamics of the individual as he/she interacts with the world and culture, and will take up such issues as the authority of reason versus the authority of the passions; personal responsibility versus allegiance to society; wealth as redemption and corruption; finding one's personal myth; and gender identity and the quest for happiness. May not be offered during 2003-2004.[WI]

A Cas 390 New York State Theatre Institute Internship (1–15)
A full- or part-time program involving academic study through classes, individualized instruction and written projects, and supervised applied experiences structured around the Institute's theatrical productions and its residencies in New York State schools. These internships emphasize interdisciplinary learning about the arts in society, in the education of children, and the arts' aesthetic, technical, and business aspects. **Internships are open only to qualified juniors and seniors who have an overall grade point average of 2.50 or higher.** Open to qualified majors in diverse fields or undeclared majors through a competitive selection process. Applications should be made to the Arts and Sciences faculty coordinator by November 1 or April 1 for the following terms. Prerequisite(s): permission of instructor. *S/U* graded.

A Cas 497 & 497Z Special Topics in the Humanities (1–4)
Special group studies which provide students and faculty with the opportunity to explore, on an advanced level, significant themes, issues, and problems from a broadly humanistic and interdisciplinary perspective. A Cas 497Z is the writing intensive version of 497; A Cas 497 and/or 497Z may be repeated for credit provided the topic differs. Prerequisite(s): junior or senior class standing or permission of instructor. [WI]

DEPARTMENT OF AFRICANA STUDIES

Faculty
Professors
Allen Ballard, Ph.D. (Collins Fellow)
Harvard University
Iris Berger, Ph.D.
University of Wisconsin
Leonard A. Slade, Jr., Ph.D., L.H.D.
University of Illinois
Jogindar S. Uppal, Ph.D.
University of Minnesota
Associate Professors
Helen R. Desfosses, Ph.D. (Collins Fellow)
Boston University
George A. Levesque, Ph.D.
State University of New York
at Binghamton
Kwadwo A. Sarfoh, Ph.D.
University of Cincinnati
Marcia E. Sutherland, Ph.D.
Howard University
Adjunct Associate Professor
Kirk Smith, M.A.
Shenandoah University
Assistant Professors
Sharon Parkinson, Ph.D.
Purdue University
Oscar Williams, Ph.D.
The Ohio State University
Adjuncts (estimated): 6
Graduate Assistants (estimated): 10

The objective of the department is to provide a multi- and interdisciplinary education in African/African-American studies and related fields. Students are expected to possess the knowledge and skills necessary to understand the social, political, economic, psychological, and historical consequences of institutional arrangements as they affect the life experiences of African/African-American people.

The department offers full programs leading to the B.A. and M.A. degrees. Students may specialize in African studies and African-American studies. Sub-areas in African studies are the history, economics, politics, and culture of the following regions: Eastern Africa, Central Africa, West Africa, and Southern Africa. Sub-areas in African-American studies include: African-American history and culture, urban economic development, central city politics and institutions, African-American literature and criticism, and urban planning. Though the major concentrations are Africa and the United States, students may design programs that will enhance their knowledge of other Black cultures; e.g., the Caribbean and Haitian.

Students are prepared for careers in teaching, counseling, state and local social welfare programs, urban planning, administrative program direction, and international relations.

Special Programs and Opportunities

Undergraduate students in the department are provided an opportunity to apply theory through community projects, both within formal courses and other such special programs that may be designed by the department. Students participating in the latter may work directly with New York legislators or legislative committees. For further information contact the Department. Students are also provided an ongoing colloquium series featuring locally and nationally known African and African-American scholars. The senior seminar enables students and faculty to explore common research interests.

Degree Requirements for the Major in African/Afro-American Studies

General Program B.A: A minimum of 36 credits (at least 12 credits of which must be at the 300 level or above) including A Aas 142, 219 or 219Z, 286 or 287, and 490. The additional department courses, as advised, must include 6 credits at the 200 level and 6 credits at the 300 level or above.

Courses

A Aas 110 (= A Thr 110) The Black Theatre in America (3)
Study of the historic background of Black involvement in the American theatre and of the role and functioning of the Black theatre in Contemporary American society. Only one of A Aas 110 and A Thr 110 may be taken for credit.

A Aas 142L African/African-American Literature (3)
Survey of Black authors from diverse cultures and an analysis of their relationship to Black thought. [DP HU]

A Aas 150 Life in the Third World (3)
Introduction to cultural variation and fragmentation among third-world developing communities. Some lectures and discussions are led by third-world graduate students. Whenever possible, distinguished visitors from third-world countries are also involved in the course.

A Aas 209 (= A Mus 209) Black American Music (3)
An introduction to Black American Music. Study will include music from West Africa as well as musical/social influences throughout American history. Musical styles will include spirituals, gospel, blues, jazz and classical.

A Aas 213 History of Civil Rights Movement (3)
This course is designed to introduce the student to the historical development and maturation of the movement for civil rights in the United States. It will examine the development of resistance movements and the philosophies of those involved within the movements during the antebellum, Post Civil war and contemporary times. [DP US*]

A Aas 219 Introduction to African/African-American History (3)
Survey of the cultural and historical background of African-American from their African heritage to their present role in American society. A Aas 219Z is the writing intensive version of A Aas 219; only one may be taken for credit.

A Aas 219Z Introduction to African/African-American History (3)
A Aas 219Z is the writing intensive version of A Aas 219; only one may be taken for credit. [WI]

A Aas 220 Black and White in America (3)
In America Blacks and Whites have been organically connected by the space of national geography and centuries of time. With current events an ever-present concern, this course explores the cultural significance and the social meaning of the long and ever-changing relations between black and white Americans and its import for the national welfare. [DP US*]

A Aas 220Z (formerly T Aas 220Z) Black and White in America (4)
A Aas 220Z is the Writing Intensive version of A Aas 220. Only one may be taken for graduation credit. [WI]

A Aas 221 The Economic Structure of the Black Community (3)
Analysis of old and contemporary models of Black entrepreneurship and formal economic organization and its effect in the community.

A Aas 224 Cities as People (3)
Survey of the human aspects of the urban environment, historically and in practical terms today, with an emphasis upon the central city's opportunity for field research in urban life.

A Aas 240 (= A Lcs 240 and A Wss 240) Classism, Racism and Sexism: Issues (3)
Analysis of the connections between and among classism, racism and sexism, their mutually reinforcing nature, and the tensions arising from their interrelations. Emphasizes the ideological and personal aspects of these phenomena as well as the institutional guises in American society. Only one of A Aas 240, A Lcs 240, & A Wss 240 may be taken for credit. [DP]

A Aas 267 (= A Arh 267) African-American Art of the Twentieth & Twenty-First Centuries (3)
Study of paintings and drawings by African American artists in the 20th and 21st centuries and of the cultural context within which the art was produced. A wide range of artistic styles and media is explored. Consideration is also given to the impact of European, African, and Asian visual arts on the work of African American artists.

A Aas 269 (= A Lcs 269 and A Ant 269) The Caribbean: Peoples, History, and Cultures (3)
Peoples, history and cultures of the 20th century Caribbean. Special emphasis will be placed on responses to colonialism and nationalism. Same as A Lcs 269 and A Ant 269. Only one of A Aas 269, A Lcs 269, & A Ant 269 may be taken for credit. [BE]

A Aas 270 (= A Gog 270) Geography of Africa (3)
Geographic analysis of the continent of Africa. The diversity of the African continent is stressed by examining its physical environment; resources; social, cultural, economic and political systems. Emphasizes the demographic as well as spatial planning aspects of geography. Only one of A Aas 270 & A Gog 270 may be taken for credit.

A Aas 275 (= A Arh 275) African Art (3)
Study of art produced on the west coast and central region of sub-Saharan Africa. Includes a wide range of artistic styles, with particular attention given to artifact designs and to their functional or ceremonial use in particular societies. Also explores the impact of African art on European and American Modernism.

A Aas 286 (= A His 286) African Civilizations (3)
Africa from prehistoric times to 1800 with emphasis on sub-Saharan Africa, the development of indigenous states and their response to Western and Eastern contacts. Only one of A Aas 286 & A His 286 may be taken for credit. [BE]

A Aas 287 (= A His 287) Africa in the Modern World (3)
Africa since 1800: exploration. the end of the slave trade, the development of interior states, European partition, the colonial period, and the rise of independent Africa. Only one of A Aas 287 & A His 287 may be taken for credit. [BE]

A Aas 311 History of Slavery in the Western Hemisphere (3)
The institution of slavery and its effects in the Western Hemisphere, its origins, bases of continuance, and contemporary residuals. Prerequisite(s): A His 100 or 100Z, and 101 or 101Z.

A Aas 320 Black Nationalism: Political Perspective in Africa (3)
Examination of selected freedom movements in Black Africa with a focus upon one-party politics and the continuing tensions between socialism and democracy. Prerequisite(s): A Aas 219 or 219Z.

A Aas 322 Developing African Nations (3)
Systems analysis of the contemporary social, political, cultural, and economic institutions crucial to the economic maturation of developing African nations. Prerequisite(s): A Aas 219 or 219Z; A Aas 286 and 287 recommended.

A Aas 325 Introduction to Research Methods (3)
An introduction to paradigms, theories and models on research and the Black community. Emphasis will be placed on methodological concerns of validity, reliability, instrument development, data collection, data analysis and reporting of research outcomes. The ethics of research on people of African descent will be discussed.

A Aas 331 The African/African-American Family (3)
In-depth study of the African/African-American family as an institution, the dynamics of intra-family relations and the effects of social institutions on Black family life. Prerequisite(s): A Soc 115M.

A Aas 333 The Black Community: Continuity & Change (3)
Overview of the socio-historic factors which impact upon the current conditions of the African-American community. Prerequisite(s): A Aas 219 or 219Z or permission of instructor.

A Aas 340 The Black Essay (3)
Essays written by Black American writers in the 19th and 20th centuries. Prerequisite(s): A Aas 142.

A Aas 341 African/African-American Religion (3)
Analysis of the relationship of the religion of Black people to Black culture. Prerequisite(s): A Aas 219 or 219Z.

A Aas 342 (= A Ant 342) Sub-Saharan Africa: Peoples and Cultures (3)
Culture areas of Africa south of the Sahara. Historical and geographic background studies of selected societies. Culture change and contact during the colonial and postcolonial periods. Only one of A Aas 342 & A Ant 342 may be taken for credit. Prerequisite(s): A Aas 286.

A Aas 345 The Black Novel: Black Perspectives (3)
Systematic study of the novel written by Black Americans from the Harlem Renaissance to the present. The novels studied express the cultural, political, and socio-historical consciousness of the writers to demonstrate their awareness of the struggle of Black people. Prerequisite(s): A Aas 142.

A Aas 355Z Introduction to African and African-American Poetry (3)
Intensive study of poetry drawn from the black experience. Emphasis on aesthetic forms, meanings, tone, diction, imagery, symbol, sentences, rhythm, rhyme, allusion, etc. Common characteristics of black poetry will also be discussed. [WI]

A Aas 370 The Psychology of the Black Experience (3)
In-depth examination of the extant psychological literature on blacks. Analyzes varying themes, theories, perspectives, and research that relate to the psychology of blacks. Focuses on the contemporary work of black behavioral scientists involved in the quest for scholarly self-determination and for redefinition of the psychological fabric of the black experience. Selected topics are identity, personality, motivation, achievement, and mental health. Prerequisite(s): junior or senior class standing.

A Aas 375 Black Popular Culture (3)
The course explores the historical and contemporary constructions of "blackness" within the popular realms of film, television, and popular music and the relationship of those constructs to the realities of African-American life and culture.

A Aas 386 (= A His 386) Race and Conflict in South Africa (3)
Study of the historical origins and development of racial conflict in South Africa with a concentration on economic, political, social and religious change in the 20th century. Topics will include changing state structures and ideologies, the impact of industrialization, transformations of rural and urban life, African religious movements, political and religious connections with Black Americans, gender relations, and changing forms of popular resistance against white domination. Only one of A Aas 386 & A His 386 may be taken for credit. Prerequisite(s): 3 credits of A His or A Aas course work, or junior or senior class standing.

A Aas 393 Topics in African History (1-4)
Specific topics to be examined will be announced during advance registration. May be repeated for credit. Prerequisite(s): junior or senior class standing or 3 credits in history.

A Aas 393Z Topics in African History (3-4)
Specific topics to be examined will be announced during advance registration. May be repeated for credit. Prerequisite(s): junior or senior class standing or 3 credits in history. [WI]

A Aas 400 The Law and African-America (3)
The central city as a center of dominance, inner city legal problems as an aspect of social control. Students examine selected central city agencies related to law enforcement. Alternate possibilities for reform and improvement are explored. Term project required.

A Aas 416 (= A Wss 416) Contemporary Black Women and Their Fiction (3)
Evaluation of the style, technique, content, and nature of the discourse in which contemporary Black women writers are engaged. Readings include at least one work by Toni Cade Bambara, Gloria Naylor, Toni Morrison, Paule Marshall, Gayle Jones, and Alice Walker. Only one of A Aas 416 & A Wss 416 may be taken for credit. Prerequisite(s): senior class standing, at least one literature course, and permission of instructor.

A Aas 430 Black Social and Political Thought in the Americas (3)
Seminar on the social and political ideas and strategies of selected African/African-Americans from the late 18th century to the present. Prerequisite(s): junior or senior class standing.

A Aas 432 The African-American Woman: Contemporary Issues (3)
Socio-historic look at the American women of the African diaspora with particular attention to: (1) Black Liberation; (2) feminist movements; (3) sex role socialization; and (4) issues of sexism and racism. Prerequisite(s): A Aas 219 or 219Z, or permission of instructor.

A Aas 435 Blacks and the American Political Process (3)
An examination of the American political process as it impacts upon the Black community in the United States. Prerequisite(s): junior or senior class standing.

A Aas 440 (= A His 440 and A Wss 440) Black Women in United States History (3)
This seminar will examine the history of black women in the United States from the slave era through the post World War II reform movements. It will focus upon the range of demands black women faced during the Gilded and Progressive eras—their participation in the suffrage movement, black struggles for liberation, cultural expressions, labor force, etc. Only one of A Aas 440, A Wss 440 and A His 440 may be taken for credit.

A Aas 490 Senior Seminar for African/African-American Studies Majors (3)
An extensive examination of critical issues involving the experiences of Africans and African Americans in historical, cultural, and social contexts. A central theme will be selected for each semester's work. Students will synthesize and apply knowledge acquired in the major and will discuss their experiences. Attention will also be given to the interrelationships of the values and ideas indigenous to African/African-American Studies, with a discussion of these with a senior faculty member. Students will review basic research methodology and will evaluate their experiences in a 20-page research paper. Prerequisite(s): major in the department and completion of 18 credit hours in the major. [OD]

A Aas 498 Topics in African Studies (3)
Specific topics to be examined are announced during advance registration. May be repeated for credit. Prerequisite(s): junior or senior class standing.

A Aas 499 Topics in African-American Studies (3)
Specific topics to be examined are announced during advance registration. May be repeated for credit. Prerequisite(s): junior or senior class standing.

DEPARTMENT OF ANTHROPOLOGY

Faculty

Distinguished Research Professor Emeritus
William N. Fenton, Ph.D.
Yale University
Distinguished Teaching Professor Emeritus
Gary H. Gossen, Ph.D.
Harvard University
Professor Emeritae/i
Robert M. Carmach, Ph.D.
University of California, Los Angeles
Peter T. Furst, Ph.D.
University of California, Los Angeles
Gary A. Wright, Ph.D.
University of Michigan
Associate Professor Emeritae/i
George J. Klima, Ph.D.
University of California, Berkeley
Dwight T. Wallace, Ph.D.
University of California, Berkeley
Distinguished Service Professor
Ernest A. Scatton, Ph.D.
Harvard University
Lawrence M. Schell, Ph.D.
University of Pennsylvania
Professors
James P. Collins, Ph.D.
University of California, Berkeley
Timothy B. Gage, Ph.D.
Pennsylvania State University
Robert W. Jarvenpa, Ph.D.
University of Minnesota
John S. Justeson, Ph.D.
Stanford University
Michael E. Smith, Ph.D.
University of Illinois, Urbana
Richard G. Wilkinson, Ph.D.
University of Michigan
Associate Professors
Lee S. Bickmore, Ph.D.
University of California, Los Angeles
George Aaron Broadwell, Ph.D.
University of California, Los Angeles
Louise Burkhart, Ph.D.
Yale University
Liliana Goldin, Ph.D.
University at Albany
Gail H. Landsman, Ph.D.
Catholic University of America
Marilyn Masson, Ph.D.
University of Texas, Austin
James W. Wessman, Ph.D.
University of Connecticut
Assistant Professors
Tom D. Brutsaert, Ph.D.
Cornell University
Sean M. Rafferty, Ph.D.
Binghamton University
Associate Curator of Anthropology
Hetty Jo Brumbach, Ph.D.
University at Albany
Adjunct Faculty
Edward Fitzgerald, Ph.D.
Yale University
John P. Hart, Ph.D.
Northwestern University
Karen Hartgen, M.A.
University at Albany
Robert Kuhn, Ph.D.
University at Albany
Elizabeth Marshall, Ph.D.
University of North Carolina, Charlotte
Carolyn Lee Olsen, Ph.D.
University of Michigan
Carol Raemsch, Ph.D.
University at Albany
Brenda P. Rosenbaum
University at Albany
Alice D. Stark, Ph.D.
Yale University
Adjuncts (estimated): 9
Teaching Assistants (estimated): 18

Anthropology is the study of humankind, of ancient and modern people and their ways of living. From its first establishment as a professional discipline, anthropology has been defined in terms of its holistic, cross-cultural, and evolutionary approaches. By systematically analyzing differences and similarities among human groups over time and space, anthropologists achieve the fullest possible understanding of human nature, human diversity, and the forces that govern change in cultural and biological characteristics.

The Anthropology Department provides undergraduates with a wide variety of courses, field and laboratory experiences, and guided research in each of the four major subfields of the discipline: archaeology, biological (physical) anthropology, ethnology (cultural anthropology), and linguistics.

The department offers two majors: a B.A. in anthropology and a Faculty-Initiated Interdisciplinary Major with a concentration in human biology (in conjunction with the department of Biological Sciences).

Students are offered special opportunities for the study of past and present cultures in Mesoamerica, North America, and elsewhere through the research programs of the anthropology faculty.

The major prepares students for graduate studies in anthropology (the department has M.A. and cognate M.A. programs, and a doctoral program), as well as laying a broad scientific and liberal foundation for entering the professions, arts, or other occupations in the modern world.

Many new career opportunities are developing in addition to traditional anthropological careers in college teaching, museum curation, and public archaeology. For example, the diverse ethnic composition of American society is making cross-cultural awareness a matter of increasing importance for careers in business, law, journalism, medicine, public policy, and primary and secondary education.

The B.A. degree in anthropology also offers excellent preparation for careers in international business, public health, politics, and diplomacy. Moreover, many local, state federal, and international agencies are seeking personnel who have sensitivity to cultural diversity.

Anthropology also provides a holistic perspective of and systematic training in the impact of human activity and values on the environment. The study of cross-cultural factors affecting the delivery of health care can be important to a career in health services.

Finally, a degree in biological anthropology is a good foundation for graduate work in genetic epidemiology and other specialties within the field of public health.

Special Programs or Opportunities

Programs in archaeological, bio-anthropological, and ethnological fieldwork are available, with the Northeast and Mesoamerica being the most frequent locations. The archaeology program provides intensive training and/or research opportunities through research programs in Mexico, Belize, and New York State. Laboratory research experience, both in formal courses and as independent projects, is available in archaeology and biological anthropology.

Degree Requirements for the Major in Anthropology

General Program B.A.: A minimum of 36 credits in anthropology including A Ant 110N, 104, 108M or 108G, and 106M or 220M. Of the 24 additional credits in anthropology, no more than 6 may be at the 100 level and at least 12 must be at the 300 level or above.

Honors Program

Outstanding anthropology students are encouraged to consider the department's honors program, which is designed to give them the opportunity to work closely with members of the faculty on research and writing projects. Declared majors in anthropology are eligible to apply, provided that they have completed 12 or more credits in the department with a grade point average in the major of at least 3.50. They must also have an overall grade point average of at least 3.25. To participate in the program, students should contact their adviser during their junior year or at the beginning of their senior year. Students should plan their course work in consultation with their faculty adviser.

Students in the honors program must fulfill the requirements for the major plus the following requirements:

1. Among the 36 credits of course work in anthropology required for the major, students in the honors program must complete at least one course at the 300 or 400 level in each of three different subdisciplines (archaeology, cultural anthropology, biological anthropology, linguistics), for a total of 12 credits:

   Biological Anthropology: 310, 311,312, 313, 319, 414, 416, 418.

   Linguistics: 321, 322, 325, 421, 422, 423, 424, 425, 434.

   Archaeology: 330, 331, 332, 333, 334, 335, 338, 339, 430, 431, 433, 435, 438.

   Ethnology: 340, 341, 343, 351, 355, 360, 361, 363, 364, 365, 372, 381, 390, 450, 480.

2. Students must write an honors thesis based upon original research under the direction of an anthropology faculty member. Any anthropology faculty member knowledgeable in your topic may supervise a thesis project. A written proposal for the intended project must be formally approved by that faculty member and the departmental Undergraduate Affairs Committee during the semester prior to the semester in which the thesis is completed. Students will enroll in A Ant 482A and 482B, "Senior Honors Thesis Seminar," during the fall and spring of their senior year. The six credits from these courses can be counted toward the 36 credits required for the Anthropology major.

3. Research skill. Students will complete 6 credits of coursework in a research skill appropriate for anthropological research. Examples include, but are not limited to, foreign languages, statistics or other quantitative courses, and anthropological methods courses. The research skill courses must be approved by the Undergraduate Affairs Committee.

To graduate with "honors in anthropology," students must achieve an overall grade point average of 3.25 and a minimum grade point average of 3.50 in the major, in addition to the above requirements.

Degree Requirements for the Faculty-Initiated Interdisciplinary Major with a Concentration in Human Biology are listed in the Human Biology Program section of this bulletin.

Courses

A Ant 100 Culture, Society, and Biology (3)
Introduction to the issue of human diversity, the course poses the question of what it means to be human. Through study of biological anthropology, archaeology, linguistics, and ethnology, students will explore the range of diversity within our shared humanity, and seek explanations that might account for it. The former A Ant 100M does not meet the Human Diversity requirement. Only one of A Ant 100, 100M or 100P may be taken for credit. [DP if taken *before* Fall 2004.]

A Ant 104 Archaeology (3)
Introduction to the methods used by archaeologists to study ancient sites and artifacts. Topics include archaeological fieldwork, laboratory analysis, dating, interpretation of artifacts, and the reconstruction of past cultural patterns. Examples include studies of ancient and recent societies. Two lectures, one laboratory period per week.

A Ant 106M Linguistic Anthropology (3)
The study of language and its relationship to human culture, history and biology. Topics include the nature of symbolic systems; the structure of language; the relations of language to cognitive, cultural and societal diversity; how languages change; and how past languages and cultures can be reconstructed from linguistic evidence. The course covers Western and non-Western cases from contemporary and historical periods.

A Ant 108G Cultural Anthropology (3)
A Ant 108G is the writing intensive version of A Ant 108M; only one may be taken for credit. [GC SS WI]

A Ant 108M Cultural Anthropology (3)
Survey of the theory, methods, and goals of cultural anthropology, emphasizing the nature of culture and the varied forms in which it is expressed among the peoples of the world. Two lectures, one discussion period per week. A Ant 108G is the writing intensive version of A Ant 108M; only one may be taken for credit. [GC SS]

A Ant 110N Introduction to Human Evolution (3)
Introduction to human evolution. This course spans the human fossil record from "Lucy" to Cro-Magnon. Topics include our primate past and the evolution of upright walking. The steady increase in our ancestors' brain size is explored along with the cultural correlates of biological evolution such as stone tools, language origins and cave art. [NS]

A Ant 111N Introduction to the Primates (3)
Survey of the basic morphology and behavior of nonhuman primates. Prosimian and anthropoid primates are studied in terms of their comparative morphology and behavior, with reference to these same features among humans. [NS]

A Ant 119N The City and Human Health (3)
Survey of the history of health and disease from the earliest humans before the development of settlements to contemporary populations living in industrialized cities. Emphasizes the role of culture and behavior in disease. [NS]

A Ant 131M (= A Cla 131M) Ancient Peoples of the World (3)
Ancient cultures from around the world will be presented and analyzed from the available archaeological data. The gradual development of civilization in both the Old and New Worlds will be the focus of the course. Only one of A Ant 131M & A Cla 131M may be taken for credit. [SS]

A Ant 140 Anthropological Survey of World Cultures (3)
In-depth survey of selected ancient, historical, and modern world cultures. Major themes include production of goods and services, authority systems, legal processes, and religious and ritual life. A Ant 140Z is the writing intensive version of A Ant 140; only one may be taken for credit.

A Ant 140Z Anthropological Survey of World Cultures (3)
A Ant 140Z is the writing intensive version of A Ant 140; only one may be taken for credit. Offered every semester. [WI]

A Ant 145 (= A His 145 and A Lcs 145) Continuity and Change in Latin America (3)
Introduction to the historical development of Latin America's diverse cultural heritage and to its contemporary institutions and civilization. Broadly interdisciplinary perspective reflecting diverse approaches and fields. Only one of A Ant 145, A His 145, & A Lcs 145 may be taken for credit.

A Ant 146 (= A Lcs 150) Puerto Rico: People, History, and Culture (3)
Survey of Puerto Rican culture on the island from the prehispanic era to the 20th century. Special emphasis will be placed on the change of sovereignty in 1898, the national question, class and culture, and migration. A Ant 146Z and A Lcs 150Z are writing intensive versions of A Ant 146 and A Lcs 150; only one of the four courses may be taken for credit.

A Ant 146Z (= A Lcs 150Z) Puerto Rico: People, History, and Culture (3)
A Ant 146Z and A Lcs 150Z are writing intensive versions of A Ant 146 and A Lcs 150; only one of the four courses may be taken for credit. [WI]

A Ant 160G Symbol and Human Nature (3)
A Ant 160G is the writing intensive version of A Ant 160M; only one may be taken for credit. [WI]

A Ant 160M Symbol and Human Nature (3)
Introduction to ideas in the social sciences and humanities pertaining to the central place of symbolic behavior in human evolution, human nature, and contemporary human communities. Comparative perspective, including both Western and non-Western materials. Opportunity for fieldwork in the local community. A Ant 160G is the writing intensive version of A Ant 160M; only one may be taken for credit. [SS]

A Ant 172 Community and Self (3)
What is the "self"? Individual and social diversity are considered cross-culturally, in conjunction with personal identity, class, nationality, and ethnicity. Implications for the students' own lives are discussed, as well as questions of freedom and authority in America. [DP]

A Ant 175L (= A Rel 175L) Anthropology and Folklore (3)
Introduction to the study of folklore as an aspect of culture, symbolically expressing people's identity, beliefs and values. The focus is on oral text traditions—myths, folktales, and legends. Topics in folk custom and ritual, folk music and folk art are also included. Includes folklore from Western and non-Western cultures. Only one of A Ant 175L and A Rel 175L may be taken for credit. [HU]

A Ant 189Z Writing in Anthropology (Lower Division) (1)
Students who are concurrently registered in any 100- or 200-level anthropology course, may with permission of the instructor of that course, enroll in A Ant 189Z and fulfill a writing intensive version of that other course. The writing intensive version will involve: 1) a body of written work beyond that normally required by the companion course, 2) opportunities for students to receive assistance in progress, and 3) an opportunity for students to revise some pieces. [WI]

A Ant 197 Special Topics in Anthropology (1–4)
Study of a selected topic in anthropology. May be repeated for credit when topic differs. Consult class schedule for specific topic.

A Ant 211 (formerly A Ant 411) Human Population Biology (3)
Biological variation in human populations, with emphasis on genetics, adaptability, demography and related aspects of population dynamics. Two lectures and one lab per week. Prerequisite(s): A Ant 110N or A Bio 110N or F.

A Ant 220M (= A Lin 220M and A Eng 217M) Introduction to Linguistics (3)
Introduction to the study of language, including examination of the characteristics and structural principles of natural language. After exploring the basic characteristics of sound, word formation and sentence structure, these principles are applied to such topics as: language variation, language change, psycholinguistics, pragmatics, and animal communication. Only one of A Ant 220M, A Lin 220M, & A Eng 217M may be taken for credit. [SS]

A Ant 233 (= A Lcs 233) Aztecs, Incas and Mayas (3)
Introductory survey of the archaeology and ethnohistory of the three best-known indigenous civilizations of the New World. Each is presented in terms of prehistoric background and evolution, social organization, politics and economics, religion and art. Consideration is given to the Spanish conquest of these three groups and to their modern legacies. Only one of A Ant 233 & A Lcs 233 may be taken for credit. [BE]

A Ant 236 American Indian Archaeology (3)
Introductory survey of the prehistory of North America and Mesoamerica. Emphasis on the prehistoric developments in the Eastern Woodlands, Plains, Southwest, Mexico, and the Arctic. An introduction to current theoretical issues as applied in these culture areas. [BE]

A Ant 240M The North American Indian (3)
The nature and distribution of North American Indian cultures from the pre-Columbian period to the present. Prerequisite(s): A Ant 100, or A Ant 108G, or 108M. [BE SS]

A Ant 243 (= A Jst 243) Peoples and Cultures of the Middle East (3)
The main features of the "Middle Eastern culture continent." A comparison of selected societies in Southwest Asia and North Africa. The impact of modernization on preindustrial cities and peasantries in the area. A Ant 243Z is the writing intensive version of A Ant 243 and A Jst 243; only one of these courses may be taken for credit. [BE]

A Ant 243Z (= A Jst 243) Peoples and Cultures of the Middle East (3)
The main features of the "Middle Eastern culture continent." A comparison of selected societies in Southwest Asia and North Africa. The impact of modernization on preindustrial cities and peasantries in the area. A Ant 243Z is the writing intensive version of A Ant 243 and A Jst 243; only one of these courses may be taken for credit. [BE WI]

A Ant 268L (= A Lcs 268L) Ethnology of Pre-Columbian Art (3)
Survey of the art and architecture of the pre-Columbian Mesoamerican civilizations, from the origins of the Olmec civilization (c. 1500 B.C.) through the native art produced under Spanish colonial rule in the 16th century. The objects are viewed in relation to their cultural and historical context. Issues of collection and exhibition are also discussed. Only one of A Ant 268L & A Lcs 268L may be taken for credit. [AR HU]

A Ant 269 (= A Aas 269 and A Lcs 269) The Caribbean: Peoples, History and Cultures (3)
Peoples, history and cultures of the 20th century Caribbean. Special emphasis will be placed on responses to colonialism and nationalism. Only one of A Ant 269, A Aas 269, & A Lcs 269 may be taken for credit. [BE]

A Ant 310 Human Paleontology (3)
Examination of the human fossil record and of the major theories dealing with fossil record. Prerequisite(s): A Ant 102 or A Geo 230 or A Geo 230Z or permission of the instructor.

A Ant 311 (formerly A Ant 413) Functional Anatomy of the Human Skeleton (4)
Laboratory course in skeletal and dental identification and analysis, with emphasis on the interaction of the muscular and skeletal systems. A Ant 311Z is the writing intensive version of A Ant 311; only one may be taken for credit. Prerequisite(s): A Ant 110N or A Bio 325.

A Ant 311Z (formerly A Ant 413Z) Functional Anatomy of the Human Skeleton (4)
A Ant 311Z is the writing intensive version of A Ant 311; only one may be taken for credit. Prerequisite(s): junior or senior class standing. [WI]

A Ant 312 (= A Bio 318; formerly A Ant 412/A Bio419) Human Population Genetics (3)
Population genetics theory is the foundation of evolutionary biology and contributes heavily to modern ideas in ecology, systematics, and agriculture. This course is an introduction to that theory with special emphasis on evolution. Only one of A Ant 312 and A Bio 318 may be taken for credit. Prerequisite(s): A Ant 211 or A Bio 205 or 212.

A Ant 319 Physical Growth and Development (3)
Analysis of the pattern of human growth during the prenatal and postnatal periods and their variation around the world. The course focuses on the influence of social factors, nutrition, alcohol and cigarette use, race/ethnicity, pollution, and features of the physical environment which modify growth patterns. Prerequisite(s): A Ant 100, or A Ant 102, or A Bio 110N/F and 111N, or A Bio 102N or A Bio 103Z or 103.

A Ant 321 (= A Lin 321) Introduction to Syntax (3)
The human ability to produce and understand an infinite number of different sentences is one of the most remarkable capabilities we have. The study of the structure of sentences is called *syntax*, and this course is an introduction to syntactic theory. The particular approach we will be pursuing is called *generative grammar,* the approach to syntax pioneered by linguists such as Noam Chomsky. Chomsky argues that all humans are born with an unconscious knowledge of Universal Grammar, the basis on which the grammars of all languages are built. Through a detailed examination of English sentence structure, we will investigate the connections between English syntax and Universal Grammar. Only one of A Lin 321 & A Ant 321 may be taken for credit. Prerequisite(s): A Ant 220M or permission of instructor.

A Ant 322 (= A Lin 322) Introduction to Phonology (3)
Introduction to the description and analysis of human speech sounds and their organization. Introduction to articulatory phonetics and the International Phonetic Alphabet followed by examination and generative phonological analysis of data from English and a wide range of other languages. Only one of A Ant 322 & A Lin 322 may be taken for credit. Prerequisite(s): A Ant 220M or permission of instructor.

A Ant 325 (= A Lin 325) Sociolinguistics (3)
Introduction to the study of language as a social phenomenon. Includes basic sociolinguistic concepts, interactional sociolinguistics, social dialects, Black English, diglossia, bilingualism, and bilingual education. Only one of A Ant 325 & A Lin 325 may be taken for credit. Prerequisite(s): A Ant 220M or permission of instructor.

A Ant 330 Topics in Archaeology (3)
Survey of a topic in archaeology or regional prehistory for upper division students. May be repeated for credit when topic differs. Consult class schedule for specific topic. Prerequisite(s): A Ant 104.

A Ant 331 Early Civilization of the Old World (3)
The development of early complex societies in the Old World, including the origins of agriculture, urbanism, states, and empires. Examines the nature of the archaeological evidence for these developments and its interpretation, employing case studies drawn from the Near East, the Indian Subcontinent, and China. Prerequisite(s): junior or senior class standing.

A Ant 332 Ethnoarchaeology (3)
Ethnoarchaeology combines the archaeologist's interest in material culture with the cultural anthropologist's interest in ongoing behavior. Included are the archaeology of living populations, action archaeology, experimental and replication studies, formation processes, and ethnographic analogy, among other subjects. Prerequisite(s): A Ant 104 or permission of instructor.

A Ant 333 Iroquois Archaeology and Ethnohistory (3)
An intensive survey of the archaeology, history, and ethnology of the Iroquois. Coverage begins with the first appearance of the Iroquois in the region and continues to modern reservation life. A Ant 333Z is the writing intensive version of A Ant 333; only one may be taken for credit. Prerequisite(s): A Ant 104.

A Ant 333Z Iroquois Archaeology and Ethnohistory (3)
A Ant 333Z is the writing intensive version of A Ant 333; only one may be taken for credit. Prerequisite(s): A Ant 104. [WI]

A Ant 334 The Earliest Cities (3)
Comparative treatment of the earliest urban settlements around the world. Case studies include Mesopotamia, Egypt, Sub-Saharan Africa, China, Southeast Asia, Mesoamerica, and the Andes. Cities are compared in terms of planning, political roles, religious features, economic patterns, and their rise and fall. Also covers archaeological methods for the study of early cities. Prerequisite(s): A Ant 104

A Ant 335 Introduction to Archaeological Field Techniques (3)
Introduction to data gathering techniques used by archaeologists in the field. Taught prior to A Ant 338 as basic training for students concentrating in archaeology. Prerequisite(s): A Ant 104 or permission of instructor.

A Ant 338 Archaeological Field Research (6)
Directed archaeological excavation of selected sites, including experience in site location, mapping, excavation, preservation, analysis, classification, and interpretation. A Ant 338Z is the writing intensive version of A Ant 338; only one may be taken for credit. Prerequisite(s): A Ant 335 or permission of instructor.

A Ant 338Z Archaeological Field Research (6)
A Ant 338Z is the writing intensive version of A Ant 338; only one may be taken for credit. Prerequisite(s): A Ant 335 or permission of instructor. [WI]

A Ant 339 Archaeological Lab Techniques (3)
Survey and practical application of laboratory techniques using materials from the University collections. Emphasis on physical and chemical analysis, classification, and specialized analysis. A Ant 339Z is the writing intensive version of A Ant 339; only one may be taken for credit. Prerequisite(s): A Ant 104.

A Ant 339Z Archaeological Lab Techniques (3)
A Ant 339Z is the writing intensive version of A Ant 339; only one may be taken for credit. Prerequisite(s): A Ant 104. [WI]

A Ant 340 Topics in Ethnology (3)
Survey of the cultures of one of the major regions of the world. May be repeated for credit when topic differs. Consult class schedule for specific topic. Prerequisite(s): A Ant 108G or 108M.

A Ant 341M (= A Lcs 341M) Ethnology of Mesoamerica (3)
Survey of the cultures and history of the native peoples of Mexico and Central America. Beginning with the documents created by and about native peoples around the time of the Spanish invasion, the course follows the experiences of these societies through the colonial period and up to the present. A Ant 341G & A Lcs 341G are writing intensive versions of A Ant 341M & A Lcs 341M; only one of the four courses may be taken for credit. Prerequisite(s): A Ant 100 or 108M or 108G. [BE SS]

A Ant 341G (= A Lcs 341G) Ethnology of Mesoamerica (3)
A Ant 341G & A Lcs 341G are writing intensive versions of A Ant 341M & A Lcs 341M; only one of the four courses may be taken for credit. Prerequisite(s): A Ant 100 or 108M or 108G. [BE SS WI]

A Ant 343 Native American Literature (3)
Survey of the literature of the native peoples of North America and Mesoamerica, from early colonial times to the present. Readings include oral narratives, songs, autobiography, and contemporary poetry and fiction. Discussion focuses on the use of texts for cultural analysis, Native American literary aesthetics, and the survival of native literary traditions. A Ant 343Z is the writing intensive version of A Ant 343; only one may be taken for credit. Prerequisite(s): junior or senior class standing.

A Ant 343Z Native American Literature (3)
A Ant 343Z is the writing intensive version of A Ant 343; only one may be taken for credit. Prerequisite(s): junior or senior class standing. [WI]

A Ant 351 Ethnicity in North America (3)
Analysis of ethnicity, assimilation and pluralism with regard to one or more North American ethnic group(s). Social, political, economic and symbolic adaptations. Consideration of relative merits of integration and separation in modern society. This course is cross-listed with A Jst 351 & 351Z when Jewish ethnicity and assimilation are a major focus of those courses. When cross-listed, A Jst 351Z & A Ant 351Z are writing intensive versions of A Jst 351 & A Ant 351; only one of the four courses may be taken for credit. A Ant 351Z is the writing intensive version of A Ant 351; only one may be taken for credit. Prerequisite(s): junior or senior class standing and permission of instructor. [DP US*]

A Ant 351Z Ethnicity in North America (3)
This course is cross-listed with A Jst 351 & 351Z when Jewish ethnicity and assimilation are a major focus of those courses. When cross-listed, A Jst 351Z & A Ant 351Z are writing intensive versions of A Jst 351 & A Ant 351; only one of the four courses may be taken for credit. A Ant 351Z is the writing intensive version of A Ant 351; only one may be taken for credit. Prerequisite(s): junior or senior class standing and permission of instructor. [DP US* WI]

A Ant 355 Environment, Economy and Culture (3)
Cross-cultural survey of the systematic relations between environment, behavior and culture. Analysis of production and exchange systems at hunting and gathering, agricultural, and industrial stages of social evolution. Environmental and economic disruption, perception and management in cultural perspective. A Ant 355Z is the writing intensive version of A Ant 355; only one may be taken for credit. Prerequisite(s): A Ant 108M or 108G or 102 or 104 or permission of instructor.

A Ant 355Z Environment, Economy and Culture (3)
A Ant 355Z is the writing intensive version of A Ant 355; only one may be taken for credit. Prerequisite(s): A Ant 108M or 108G or 102 or 104 or permission of instructor. [WI]

A Ant 360 Social Anthropology (3)
Comparative study of social systems, tribal, traditional, and modern societies. Deals with economic, kinship, political, and other aspects of social structure. Social systems in functionalist, evolutionary, and dialectic perspectives. Combines in one course kinship, political, economic, and stratificational anthropology. Prerequisite(s): A Ant 108M or 108G. A Ant 360Z is the writing intensive version of A Ant 360; only one may be taken for credit.

A Ant 360Z Social Anthropology (3)
A Ant 360Z is the writing intensive version of A Ant 360; only one may be taken for credit. [WI]

A Ant 361 Anthropology and Public Policy (3)
The practical application of anthropological theory and research to policy areas such as economic development, environment, welfare, and mass media. The ethics of applied anthropology. A Ant 361Z is the writing intensive version of A Ant 361; only one may be taken for credit. Prerequisite(s): 3 credits in anthropology or political science or sociology.

A Ant 361Z Anthropology and Public Policy (3)
A Ant 361Z is the writing intensive version of A Ant 361; only one may be taken for credit. Prerequisite(s): 3 credits in anthropology or political science or sociology. [WI]

A Ant 363 (= A Rel 363) Ethnology of Religion (3)
Topical and theoretical survey of anthropological approaches to understanding human religious expression. Topics include myth, ritual, world view, shamanism, gender, and religious change. Emphasizes the religions of non-literate, non-Western peoples but also includes examples from major world religions and contemporary Western societies. Prerequisite(s): A Ant 100 or 108M, or A Phi 214.

A Ant 364 Anthropology of Health and Health Care (3)
Introduction to medical anthropology. Cross-cultural examination of different views of health, disease, healing and curing, their effect on medical care and maintenance of health of individuals and communities. Analyses of interface of modern medicine with traditional systems and dilemmas caused by the application of recent medical advances in our own culture. Prerequisite(s): 3 credits in anthropology or biology.

A Ant 365 (= A Wss 365) The Anthropology of New Reproductive Technologies (3)
A cross-cultural perspective on how new reproductive technologies (including invitro-fertilization, surrogacy, ultrasound, prenatal screening for disability, sex selection, fetal surgery, and neonatal intensive care) are transforming the experience of procreation and challenging cultural notions of kinship, personhood, and what it means to be human. Prerequisite(s): 3 credits in anthropology, philosophy, or women studies.

A Ant 372 Urban Anthropology (3)
Introduction to urban anthropology. Emphasis on rural-urban migrations, adjustment and assimilation of urban migrants, urban kinship and family structure, poverty culture, rural-urban typologies, and the application of anthropological methods to the study of urban societies. A Ant 372Z is the writing intensive version of A Ant 372; only one may be taken for credit. Prerequisite(s): one course in anthropology, sociology, political science or geography.

A Ant 372Z Urban Anthropology (3)
A Ant 372Z is the writing intensive version of A Ant 372; only one may be taken for credit. Prerequisite(s): one course in anthropology, sociology, political science or geography. [WI]

A Ant 381 (= A Wss 381) Anthropology of Gender (3)
Cross-cultural analysis of gender roles. Focuses on non-Western societies, using data from other societies to better understand the gender system of our own culture. Issues include status of women and men, the meaning of "femaleness" and "maleness", and women and health care systems. A Ant 381Z and A Wss 381Z are writing intensive versions of A Ant 381 and A Wss 381; only one of the four courses may be taken for credit. Prerequisite(s): one course in anthropology or sociology.

A Ant 381Z (= A Wss 381Z) Anthropology of Gender (4)
A Ant 381Z and A Wss 381Z are writing intensive versions of A Ant 381 and A Wss 381; only one of the four courses may be taken for credit. Prerequisite(s): one course in anthropology or sociology. [WI]

A Ant 389Z Writing in Anthropology (Upper Division) (1)
Students who are concurrently registered in any 300- or 400-level anthropology course, may with permission of the instructor of that course, enroll in A Ant 389Z and fulfill a writing intensive version of that other course. The writing intensive version will involve: 1) a body of written work beyond that normally required by the companion course, 2) opportunities for students to receive assistance in progress, and 3) an opportunity for students to revise some pieces. [WI]

A Ant 390 Ethnological Theory (3)
Historical survey of theoretical approaches to the study of culture, with emphasis on contemporary trends. Recommended for majors planning graduate work. Content may vary with instructor. Prerequisite(s): A Ant 108M or A Ant 108G.

A Ant 414 (formerly A Ant 313) Demographic Anthropology (3)
Demographic theory as it applies to anthropological populations, with emphases on birth, death and growth rates, population size and dispersion, mating, and migration. Aspects of historical and paleodemography accompany analyses of living populations. A Ant 414Z is the writing intensive version of A Ant 414; only one may be taken for credit. Prerequisite(s): A Ant 110N and 211.

A Ant 415 Nutritional Anthropology (3)
This course provides an introduction to the biological, ecological, and social factors influencing diet and nutrition. Basic nutritional physiology and biochemistry are presented in the first part of the course. Later topics include paleonutrition as well as nutritional issues of contemporary human population groups. The core focus is on the concept of energy balance. Time is spent in the metabolic laboratory learning how to measure metabolic energy expenditure and assess nutritional status in humans. Students participate in the collection and analysis of individual and class data on nutritional intake and energy expenditure, with an emphasis on basic techniques of data presentations, analysis, and interpretation. Prerequisite(s): A Ant 211

A Ant 414Z (formerly A Ant 313Z) Demographic Anthropology (3)
A Ant 414Z is the writing intensive version of A Ant 414; only one may be taken for credit. Prerequisite(s): A Ant 110N and 211. [WI]

A Ant 416 (=A Bio 416; formerly A Ant 315) Topics in Human Biology (3)
Selected topics in biological anthropology. May be repeated for credit when topic differs. Consult class schedule for specific topic. Only one of A Ant 416 and A Bio 416 may be taken for credit. Prerequisite(s): A Ant 110N and 211.

A Ant 418 Biomedical Anthropology (3)
Anthropological study of health and disease patterns in human populations with emphasis on human-made influences on the health of contemporary societies. The effects of societal and cultural factors on disease patterns, and the assessment of health status through epidemiological and anthropological methods are explored. A Ant 418Z is the writing intensive version of A Ant 418; only one may be taken for credit. Prerequisites: A Ant 102 or 119N.

A Ant 418Z Biomedical Anthropology (3)
A Ant 418Z is the writing intensive version of A Ant 418; only one may be taken for credit. Prerequisite(s): A Ant 102 or 119N. [WI]

A Ant 421Z (formerly 421; = Lin 421Z) Advanced Syntax (3)
This course continues the investigation of the relationship between the grammars of particular languages and Universal Grammar. We will examine the syntax of several languages from around the world asking ourselves the following questions: a.) How do the principles that organize the grammars of other languages around the world compare to English? b.) What grammatical properties are true for all languages? We will discuss the answers to these questions in the light of generative grammar. Only one of A Lin 421Z and A Ant 421Z may be taken for credit. The former A Lin 421 & A Ant 421 do not yield writing intensive credit, Prerequisite(s): A Lin 321 with grade of *C* or higher. [WI]

A Ant 422 (= A Lin 422) Advanced Phonology (3)
Advanced studies in generative phonological theory, with a focus on the analysis of prosodic phenomena such as stress, tone, and accent. Discussion of recent theoretical trends in phonology. Only one of A Ant 422 & A Lin 422 may be taken for credit. Prerequisite(s): A Ant 322 with grade of *C* or higher.

A Ant 423 Linguistic Structures (3)
Investigation of the structure of a selected language, language family, or language area. Prerequisite(s): a prior course in linguistics or consent of instructor. [OD]

A Ant 424 Language and Culture (3)
Study of the nature of the interrelationships that exist between linguistic behavior and other aspects of culture. Prerequisite(s): A Lin 220 or A Ant 221M or permission of instructor.

A Ant 425 (= A Lin 425) Comparative and Historical Linguistics (3)
Language development and change. Language classification, linguistic reconstruction. Prerequisite(s): A Ant 220M or A Lin 220M or consent of instructor.

A Ant 430 Archaeological Theory (3)
Advanced theory and method in archaeology, emphasizing topics such as quantitative applications, spatial analysis, cultural processes, systems analysis, the application of dating techniques, and the reconstruction of extinct cultures. Prerequisite(s): A Ant 104.

A Ant 431 Seminar in Social Archaeology (3)
Seminar on selected topics in the archaeological study of past social organization. Topics will vary. Examples include settlement patterns, household organization, economic processes, urbanism, and world systems. Topics will be approached in terms of methods, theories, and comparative analysis. May be repeated for credit.

A Ant 433 Mesoamerican Archaeology (3)
Archaeological study of the ancient peoples and cultures of Mesoamerica from the earliest inhabitants to the Spanish conquest. Coverage is chronological and evolutionary, with application of anthropological models of cultural change. Emphasis on the major transformation such as the origin of agriculture, the rise of cities, and the expansion of states and empires. Prerequisite(s): A Ant 104 or equivalent or permission of instructor.

A Ant 434 Seminar in Mesoamerican Writing Systems (3)
Seminar on selected Mesoamerican writing systems. Focus varies, but Classic Mayan writing is usually emphasized. Topics include the structure and evolution of the scripts; relations between writing and other communication systems; and anthropological research using hieroglyphic evidence. May be repeated for credit. Prerequisite(s): course work in Mesoamerican archaeology, ethnology, or linguistics is recommended.

A Ant 435 Archaeological Surveys (3)
Survey of the archaeology of a selected region of the world. Topics vary according to the regional specialty of the professor in charge. May be repeated for credit when topic differs. Prerequisite(s): A Ant 104.

A Ant 438 Museum Research and Curation (3)
The course emphasizes collections management and research with existing collections, including database management, basic museum methods for anthropologists, and approaches to problems of using data collected by other researchers. Students design and complete projects using existing collections. Prerequisite(s): A Ant 104.

A Ant 450 Medical Anthropology (3)
Advanced medical anthropology. In-depth examination of selected issues and conflicting values pertaining to health care. Presentations, frequently by outside speakers actively working in their fields, on alternative medical belief systems as well as moral and ethic dilemmas caused by developments in modern medicine. Emphasizes practical applications for health care providers. A Ant 450Z is the writing intensive version of A Ant 450; only one may be taken for credit. Prerequisite(s): junior or senior class standing and permission of instructor.

A Ant 450Z Medical Anthropology (3)
A Ant 450Z is the writing intensive version of A Ant 450; only one may be taken for credit. Prerequisite(s): junior or senior class standing and permission of instructor. [WI]

A Ant 480 Introduction to Ethnographic Field Research (3)
Ethnographic fieldwork experience for qualified undergraduates. Study of fieldwork methodology and principles together with actual fieldwork on selected topics under faculty supervision. Prerequisite(s): junior or senior class standing and permission of instructor.

A Ant 481 (= A Lcs 491) Research Projects (3–6)
Introduction to basic research skills required to answer questions on human behavior, with special emphasis on cross-cultural communication and learning and dynamics of cross-cultural interaction. Specific research projects familiarize students with the basic research methods including data collection, processing, and analysis. Only one of A Ant 481 &A Lcs 491 may be taken for credit. Prerequisite(s): junior or senior class standing and permission of instructor.

A Ant 482A & B Senior Honor Thesis Seminar (3)

Students in the honors program should enroll in both A Ant 482A & B for a total of 6 credits during the fall and spring of their senior year. Students will write an honors thesis under the supervision of a member of the Anthropology Department, present periodic progress reports, and deliver an oral summary of the completed thesis. Prerequisite(s): admission to the Anthropology Department honors program.

A Ant 490 (= A Cla 490) Internship in Archaeological Conservation and Documentation (3–9)
Supervised placement in an agency engaged in conservation and documentation of archaeological artifacts, such as the New York State Museum or State Conservation Laboratory. Provides practical experience and cannot be counted among the 9 elective credits above the 300 level required for Mediterranean archaeology majors. Anthropology majors may use up to 3 credits toward major elective credit. May be taken by majors in Greek and Roman civilization and anthropology only. **Internships are open only to qualified juniors and seniors who have an overall grade point average of 2.50 or higher.** *S/U* graded. Prerequisite(s): permission of instructor.

A Ant 497 Topics in Anthropology (3)
Advanced course on selected topic in anthropology. May focus on geographic or theoretical area. May be repeated for credit when topic differs. Prerequisite(s): junior or senior class standing and permission of instructor.

A Ant 498A & B Independent Study in Anthropology (1–6), (1–6)
Independent reading or research on selected topics under the direction of a faculty member. May be repeated for credit. Prerequisite(s): junior or senior class standing.

A Ant 499 Senior Seminar in Anthropology (3)
Seminar on selected topics in anthropology, Open to seniors with permission of instructor. Recommended for majors planning graduate work. May be repeated for credit.

DEPARTMENT OF ART

Faculty
Professors Emeritae/i
Dennis Byng, M.S.
University of Wisconsin
Richard Callner, M.F.A.
Columbia University
Robert Cartmell, M.F.A.
University of Iowa
Edward P. Cowley, M.A.
Columbia University
Mojmir S. Frinta, Ph.D.
University of Michigan
Arthur G. Lennig, Ph.D.
University of Wisconsin
Thom O'Connor, M.F.A.
Cranbrook Academy
William H. Wilson, M.F.A.
Cranbrook Academy
Professors
Roberta M. Bernstein, Ph.D. (Collins Fellow)
Columbia University
Phyllis J. Galembo, M.F.A.
University of Wisconsin
Edward A. Mayer, M.F.A.
University of Wisconsin
Associate Professors
David Carbone, M.F.A.
Brooklyn College, CUNY
JoAnne Carson, M.F.A.
University of Chicago
Sarah R. Cohen, Ph.D.
Yale University
Rachel Dressler, Ph.D.
Columbia University
Mark A. Greenwold, M.F.A.
Indiana University
Marja Vallila, M.F.A.
Cornell University
Assistant Professors
Daniel Goodwin, M.F.A.
Hunter College
Sculpture Technician
Roger Bisbing, M.F.A.
Syracuse University
Adjuncts (estimated): 6
Teaching Assistants (estimated): 18

Art History Faculty in Mediterranean Archaeology and Art
Distinguished Service Professor
Paul W. Wallace, Ph.D.
Indiana University
Professor
John C. Overbeck, Ph.D.
University of Cincinnati
Associate Professor
Michael R. Werner, Ph.D.
Stanford University
Visiting Associate Professor:
Stuart Swiny, Ph.D.
University of London

The Department of Art offers a 36 credit major in art, a departmental art major of 60 credits, and a 36 credit Faculty-initiated interdisciplinary major in art history. In addition students can minor in art or art history; the department also directs the interdisciplinary minor in Film Studies. The foundation of the studio art majors is a core curriculum in drawing, two- and three-dimensional design, and art history; areas of concentration are painting and drawing, sculpture, printmaking, and photography. The interdisciplinary major in art history offers a range of courses drawn from offerings in art history with the art department, and from other departments and programs in the College of Arts and Sciences, including classics, history, and East Asian studies. The University Art Museum offers a wide variety of exhibitions that enhance and extend the art department's offerings.

Careers

In addition to the traditional careers in fine art, commercial art, art history and criticism, students who immerse themselves in our art curriculum emerge with an understanding of visual literacy at a time when our culture as a whole is becoming increasingly dependent upon visual communication. Career paths include various positions in art museums and galleries, art conservation, art therapy, furniture design, industrial design, interior design, stage and costume design, graphic design, film production, TV production, medical and anthropological illustration, and animation.

Degree Requirements for the Major in Art

General Program B.A.: 36 credits, including at least 12 credits at the 300 level or above, to be distributed as follows: 18 credits are core requirements: A Art 105, 110, 115, 205 and A Arh 170L and 171L; 18 credits are from electives with an Art prefix; 3 of these credits may be from any course that applies to the art history major (see below).

Degree Requirements for the Departmental Major in Art

General Program B.A.: 60 credits including a 27-credit core requirement consisting of A Art 105, 110, 115, 205, 220, 230, 240 or 242, 244 and 305; 12 credits in art history consisting of A Arh170L and 17lL and 6 credits from courses that apply to the art history major (see below); 6 credits in studio art electives; and a 15-credit concentration in either painting and drawing, sculpture, printmaking, or photography.

Admission to Departmental Major in Art
The 60-credit art major is aimed at encouraging students who demonstrate both an unusual degree of accomplishment and potential. In the second semester of their sophomore year, or thereafter, students should submit from 12 to 20 works of art, in a portfolio or sheet of slides, to the Art Department for review. The portfolio should reflect a student's intended area of focus: painting and drawing, sculpture, printmaking or photography. The portfolio review is intended to give students an opportunity to demonstrate a maturing level of visual culture and the emergence of an artistic voice. Ultimately, an exemplary portfolio will display a high level of visual literacy and technical ability at the service of individual expression. This orientation will lead a student to further study at art school or at graduate school. Portfolios should be submitted to the art department secretary during the seventh week of the semester.

If a student is accepted as a 60-credit art major, the student should seek advisement from the undergraduate adviser and the faculty member they work with most to determine a set of personal goals within their remaining course of study.

Honors Program in the Departmental Major in Art

The Honors Program is designed for the exceptionally talented and committed student of art. Successful completion of the program is excellent preparation for graduate work in the Fine Arts. Studio space for Honors Students is limited. Successful completion of the program earns an Honors Certificate in Art and a nomination for graduating with "Honors in Art" from the University.

Students may present a portfolio for admission to the Honors Program to the Undergraduate Director in the second semester of their junior year or the first semester of their senior year. In order to be eligible for admission to the Honors Program, a student must be accepted as a 60-credit major and have completed at least 12 credits of studio course work. An applicant should have an overall grade point average of 3.25 or higher and a 3.5 or higher in all courses applicable toward the major. Applicants must submit a portfolio of 10 works in their area of concentration. The portfolio must demonstrate visual literacy, technical mastery, creative potential, and the drive and maturity to work independently in order to cultivate a distinctive personal direction. The Honors Committee may waive the entry requirements where appropriate. Decisions of the Honors Committee are final and are not subject to review or appeal.

Students in the Honors Program are required to complete a minimum of 60 credits, meeting all the requirements of the major. In addition, students must complete an Honors Project for 6-12 credits of studio course work and complete A Art 496, the Mentor Tutorial. The Honors Project mentor will be a member of the faculty who regularly works with the student in the student's area of concentration. Critiques will be conducted during regular course offerings. An overall grade point average of 3.25 or higher and an average of 3.5 or higher in all courses applicable toward the major must be maintained in each semester of the program. Students dismissed from the program cannot be readmitted unless the grades on which dismissal is based were in error and are officially changed.

Degree Requirements for the Faculty-Initiated Interdisciplinary Major with a Concentration in Art History

The purpose of the interdisciplinary major in Art History is to introduce students to the principles and methods of art history, and to encourage their intellectual exploration of art and architecture in historical culture. The faculty and curriculum for the Art History major are drawn from the Art Department and from the Classics Department. Advisement and internship supervision are conducted in the Art Department.

General Program B.A.: A minimum of 36 credits: Within the requirements for the major, a student must take a minimum of 6 credits in courses with an A Cla prefix.

Required core courses (9 credits): A Arh 170L, A Arh 17IL; 3 credits from: A Arh 450, 480, 499.

Lower Division Electives 9 credits from: A Arh 260, 261; 262; 265, 266, 267; 273, 274, 275; 280L, 281, 298; A Ant 268L; A Cas 240; A Cla 207E/L, 208E/L, 209L; A His 263E, 264E; A Rel 200L.

Upper Division Electives 18 credits, of which no more than 6 credits can be from A Cla courses, from: A Arh 331, 332 or 332Z, 341, 342 or 342Z, 350 or 350Z, 351 or 351Z, 352 or 352Z, 361,362, 363, 364 365 or 365Z, 366 or 366Z, 432, 442, 450 or 450Z, 460, 466, 467 or 467Z, 468 or 468Z, 475 or 475Z, 480, 490, 491; 497, 498; A Cla 301, 302, 303 or 303Z, 307, 310, 311, 401, 402, 403, 405, 406, 407, 490, 497; A His 302Z; 303Z; 364Z; A Thr 380L.

Honors Program in Art History

Honors students in Art History will take a structured sequence of coursework focusing upon the main areas of study offered in the Art History curriculum. They must take at least one three-credit course each in the following areas of Western Art History: Ancient (A Cla 207, A Cla 208, A Cla 209, A Cla 301, A Cla 302, A Cla 303, A Cla 307, A Cla 310, A Cla 311, A Cla 401, A Cla 402, A Cla 403, A Cla 405, A Cla 406, A Cla 407); Medieval (A Arh 331, A Arh 332, A Arh 442); Early Modern (Renaissance, Baroque, and Eighteenth Century: A Arh 342, 350, A Arh 351, A Arh 352, A Arh 450); Modern and Contemporary (A Arh 365, A Arh 366, A Arh 468); Film and Photography (A Arh 260, A Arh 261, A Arh 265, A Arh 266, A Arh 361, A Arh 362, A Arh 363, A Arh 364. In addition, they must take at least one three-credit course in non-Western Art History (A Arh 267, A Arh 274, A Arh 275, A Arh 280, A Ant 268, A Arh 281, A Arh 480).

Honors students in Art History are required to take a research seminar, in which they will perform special work devoted to Honors: A Arh 499 "Research Seminar: Special Topics," A Arh 450 "Art and Society in Early Modern France," A Arh 480 "Yűan and Sung Painting," or equivalent seminars as they are developed. The special Honors work in the seminar will entail at least *two* of the following features: use primary sources; conduct research in languages other than English; build on an annotated bibliography to develop an historiographic analysis; or conduct research on a primary object in a museum or archaeological setting, using archival documentation when appropriate.

Honors students in Art History will also be required to take six credits of intensive work culminating in a major project or series of projects. This will comprise two additional Research Seminars with Honors level work or one additional Research Seminar with Honors level work plus three credits of Independent Study or, in exceptional cases, six credits of independent study. The Independent Study credit will generally be developed from research the student began in a Research Seminar and will include Honors level research (as defined above). An Internship (A Arh 490 or 491 or A Cla 490) with a particularly strong and focused research component may count as three credits toward this requirement.

When needed, Art History faculty may create a special "honors track" in regular (non-seminar) upper-level courses for a student who wishes to pursue advance research in that area but does not have the opportunity to take a seminar in the area.

Advisement and Evaluation of Honors Students

Selection: The students should have declared as an Art History major and should have completed at least 12 credits in the Art History program. Their overall grade point average must be at least 3.25, with a grade point average of at least 3.5 in the Art History major.

Project Evaluation: Honors students are entitled to an evaluation at the beginning of their last semester if the project has been in progress for at least one semester, and must receive a formal evaluation at the end of the third quarter of their senior year through an Evaluation Committee (composed of two members of the Art History faculty in the Art department and at least one member of the Mediterranean Archaeology faculty). The faculty member responsible for grading the student's Honors papers will explain the strength of the student's work and recommend acceptance or denial. The committee is also responsible for waiving program requirements where warranted and for certifying the candidate has finished all outstanding "Incomplete" grades by the end of the third quarter of the senior year.

Advisement: The student's faculty adviser will also serve as the Honors adviser and is responsible for supervising the student's selection of coursework toward the Honors. If the primary focus of the student's research is in the Ancient area, the student will be advised by a member of the Mediterranean Archaeology faculty.

Courses in Art

A Art 105 (formerly A Art 105A) Beginning Drawing (3)
Drawing encompasses all the visual disciplines; it will be taught as a way of thinking and planning for other fields of creative endeavor. Drawing is a way of seeing, thinking, and feeling through making marks. Students will be exposed to objective drawing techniques with an emphasis on two-dimensional design.

A Art 110 (formerly A Art 110A) Two-Dimensional Design (3)
The principles of two-dimensional design and composition intended primarily as a preparatory course for all other courses concerned with the two-dimensional approach.

A Art 115 (formerly A Art 110B) Three-Dimensional Design (3)
A problem-solving introduction to the principles and elements of three-dimensional design. Demonstrations and implementations of equipment, methods and materials encourage students to develop their interpretive and technical facility, while solving problems that deal with form, space, structure, scale and volume.

A Art 205 (formerly A Art 105B) Life Drawing (3)
A studio course for students with one semester of drawing experience. This course offers extended opportunities to draw the human figure. Emphasis will be placed on the underlying conceptual structures of perceptual relationships. Students will be asked to master the description of bodily forms deployed in a coherent pictorial space. Prerequisite(s): A Art 105.

A Art 220 Beginning Sculpture (3)
Modeling in clay from the figure. Projects include building armatures, modeling portrait heads, doing full figure studies and making a waste mold. Prerequisite(s): A Art 115 or permission of instructor.

A Art 230 (formerly A Art 230A) Beginning Painting (3)
An introduction to the language of painting through studio practice. Students will work toward mastering the skills of color mixing as they apply to painting from life. This course stresses the discipline of perceiving the optical effects of light and color in nature and translating them into a pictorial space. Prerequisite(s): A Art 205 or permission of instructor.

A Art 240 (formerly A Art 240A) Beginning Etching (3)
Studio course using processes of graphic reproduction with concentration on etching, both linear and tonal. Prerequisite(s): A Art 105 or permission of instructor.

A Art 242 (formerly A Art 242A) Beginning Lithography (3)
Introduction to the materials and the process of lithography. Emphasis is on plate printing. Prerequisite(s): A Art 105 or permission of instructor.

A Art 244 (formerly A Art 244A) Beginning Photography (3)
Photography as fine art; covers basic black and white processing techniques and darkroom skills. Principles of photographic composition and introduction of important work by photographers. Prerequisite(s): one studio art class and permission of instructor.

A Art 250 Introduction to Digital Imaging (3)
An introduction to the technical and theoretical issues of the computer in the visual arts. The convergence of photography and digital media is explored through hands-on projects and readings designed to increase students' aesthetic and technical vocabulary. Topics covered include basic scanning and manipulation of photographic imagery through raster-based graphics programs, and fine art digital printmaking, as well as an introduction to web graphics. Prerequisite(s): A Art 244 or one studio art course and permission of instructor.

A Art 298 Topics in Art (3)
Introductory study of a special topic in fine arts not otherwise covered in the curriculum. May be repeated for credit when the topic varies.

A Art 300 Art and Psychology (3)
This course explores the influence of 20th Century psychological thought on the contemporary creative process. We will investigate the works of art and explore creative processes that are directly related to the mapping of the modern psyche. Readings will include writings by both artists and psychologists, including texts by Freud, Lacan, Jung, Breton, Miro, etc. Students will be expected to make class presentations and produce visual projects. Prerequisite(s): A Arh 170L, 171L and A Art 205. May not be offered in 2003-2004

A Art 305 (formerly A Art 305A) Intermediate Drawing (3)
A studio course for students with two semesters of drawing experience. This course offers extended opportunities to draw from life combined with an awareness of various pictorial traditions and procedures. The development of a personal direction is strongly encouraged through challenging projects. May be repeated once for credit. Prerequisite(s): A Art 205. [OD]

A Art 310 (formerly A Art 310A) Studio Experiments in Visual Thinking (3)
An idea-oriented course designed to help students solve visual and artistic problems through invention and interpretation. Emphasis will be placed on imagination and experimentation with alternative and traditional materials, and students will work toward developing an expanded, personal, visual vocabulary. May be repeated once for credit. May not be offered in 2003-2004.

A Art 320 (formerly A Art 321) Intermediate Sculpture (3)
An exploration of traditional and nontraditional materials, processes and concepts of sculpture with an emphasis on fabrication, assemblage and installation ideas and actualization of finished sculptural pieces. Prerequisite(s): A Art 115.

A Art 321 Sculpture Fabrication Techniques (3)
A sequence of workshops and demonstrations exploring fabrication, additive processes and assembly techniques used in sculpture. Instruction is given on the materials and techniques used to cut, form and join aluminum, steel, wood and plastics. The student will become conversant with oxy-acetylene and electric welding (stick, MIG and TIG) equipment; woodworking tools, mechanical fasteners and industrial materials. Prerequisite(s): A Art 115 3-Dimensional Design or permission of the instructor.

A Art 322 Sculpture Casting Techniques (3)
A sequence of workshops exploring techniques of learning to make molds in plaster, flexible rubber and classic investment, used in casting ceramic, wax, plaster, concrete, plastic resins, aluminum, bronze and other materials involved in generating sculpture. Prerequisite(s): A Art 115 3-Dimensional Design or permission of the instructor.

A Art 330 (formerly A Art 230B) Intermediate Painting (3)
A studio course for students with one semester of oil painting experience. This course offers extended opportunities to paint from life combined with an awareness of various pictorial traditions and procedures. The development of a personal direction is strongly encouraged through challenging projects. Prerequisite(s): A Art 205 and A Art 230.

A Art 331 (formerly A Art 330A) Painting in Water-Based Media (3)
A studio course for students with two semesters of drawing experience. An introduction to the language of painting through the use of a variety of water-based media (ink, gouache, watercolor, egg tempera). Students will be asked to master several media-related procedures and develop coherent pictorial constructions. Prerequisite(s): A Art 205.

A Art 335 Color Theory and Pictorial Tradition (3)
In this combined studio/lecture course, students will examine a range of color theories and their application to specific works of art. Emphasis will be on the expressive role of color in various pictorial traditions. Students will be given an extensive vocabulary of color concepts and related studio exercises. Prerequisite(s): A Art 110. May not be offered in 2003-2004.

A Art 340 Intermediate Etching (3)
Studio course with concentration on color etching collagraphs and other advanced techniques. Prerequisite(s): A Art 240.

A Art 342 Intermediate Lithography (3)
Emphasis on combining ideas with the medium of lithography both on plates and stones. Prerequisite(s): A Art 242.

A Art 344 (formerly A Art 244B) Intermediate Photography (3)
Advanced darkroom skills and introduction to non-silver techniques and analysis of important work by representative studio and photographic artists. Prerequisite(s): A Art 244.

A Art 345 (formerly A Art 345A) The Monotype (3)
Studio experience in most processes in the making of monotypes. Emphasis is on water-based, nontoxic materials. Prerequisite(s): A Art 105 or permission of instructor.

A Art 346 Introductory Film Production (3)
Seeing and thinking in cinematic terms, with an introduction to the process and equipment with which the filmmaker works. Cameras, lenses, film emulsions and editing procedures are studied in the making of short silent films. Prerequisite(s): A Arh 260, or A Com 238 and permission of instructor. May not be offered in 2003-2004.

A Art 347 (formerly A Art 246) Non-silver Photography (3)
Exploration of the various methods of applying light-sensitive emulsions to materials (cloth, paper) and printing from them rather than from the traditional silver-based photographic paper. This method enables the student to work in a more painterly printmaking manner. Prerequisite(s): A Art 344.

A Art 348 Color Photography (3)
Utilization of transparency and negative materials in color photography with emphasis on color printing. Prerequisite(s): A Art 344 and permission of instructor. A Art 110 recommended.

A Art 350 Intermediate Digital Imaging (3)
An intensive exploration into the uses of the computer in the fine arts. This course builds on concepts introduced in A Art 250. Emphasis is placed on correlating technical concerns with theoretical, conceptual, and aesthetic content. Students are expected to develop a portfolio through challenging projects. Prerequisite(s) A Art 250 and permission of the instructor.

A Art 390 Topics in Printmaking (3)
Special projects in print processes ranging from relief printing to color viscosity etching. May be repeated for credit when topic varies (up to 12 credits). Prerequisite(s): A Art 240 or 242.

A Art 405 Advanced Drawing (3)
A studio course for students with two or three semesters of drawing experience. Individual attention is combined with technical and formal criticism in the development of a personal visual idiom. In this course, stress will be placed on how the history of drawing helps to reveal a student's potential. May be repeated once for credit. Prerequisite(s): A Art 305.

A Art 420 (formerly A Art 420A) Advanced Sculpture (3)
A focus on contemporary concerns and attitudes in three-dimensional work and media requiring an application of concepts and experience learned and acquired in prerequisite courses and through research, which results in finished sculptures. May be repeated once for credit. Prerequisite(s): A Art 320 and A Art 321 or permission of instructor.

A Art 421 (formerly A Art 421A) Topics in Sculpture (3)
Further exploration of sculptural concepts with a focus on individual problems, covering a wide range of media, methods and techniques. An emphasis is on the development, interpretation, realization and presentation of one's ideas. May be repeated for credit when topic varies (up to 12 credits). Prerequisite(s): A Art 320 and A Art 321 or permission of instructor.

A Art 430 (formerly A Art 430A) Advanced Painting (3)
A studio course for students with two or three semesters of oil painting experience. Individual attention is combined with technical and formal criticism in the development of a personal visual idiom. In this course, stress will be placed on how the history of painting helps to reveal a student's potential. May be repeated once for credit. Prerequisite(s): A Art 330.

A Art 434 Topics in Drawing (3)
A studio course for students with at least two semesters of drawing experience. In depth study of selected topics in drawing not otherwise covered in the curriculum. Students will be guided through several pictorial models and procedures, seeking both mastery and a pictorial persona. May be repeated for credit when topic varies (up to 12 credits). Prerequisite(s): A Art 205.

A Art 435 (formerly A Art 435A) Topics in Painting (3)
A studio course for students with two or three semesters of oil painting experience. In-depth study of selected topics in painting not otherwise covered in the curriculum. Students will be guided through a variety of pictorial paradigms, seeking both mastery and a pictorial persona. May be repeated for credit when topic varies (up to 12 credits). Prerequisite(s): A Art 330.

A Art 440 (formerly A Art 440A) Advanced Etching (3)
Studio course with concentration on advanced etching techniques including photo work. May be repeated once for credit. Prerequisite(s): A Art 340.

A Art 442 (formerly A Art 442A) Advanced Lithography (3)
Advanced course in lithography. Emphasis on color and stone process. May be repeated once for credit. Prerequisite(s): A Art 342.

A Art 444 (formerly A Art 444A) Advanced Photography (3)
Emphasis on aesthetics and archival processing for exhibition-quality work. May be repeated once for credit. Prerequisite(s): A Art 344.

A Art 445 Advanced Monotype (3)
Continuation of A Art 345. Emphasis will be on individual approaches to ideas and various print techniques. Prerequisite(s): A Art 345.

A Art 446 (formerly A Art 444B) Topics in Photography (3)
Expansion of camera skills and photographic techniques. Individual interests and abilities play a major role in established course content. May be repeated for credit when topic varies (up to 12 credits). Prerequisite(s): A Art 344.

A Art 447 Advanced Film Production (3)
This course builds on filmmaking skills acquired in Introductory Film Production. Students explore cinematic narrative structures, styles of editing, and setting the *mise en scène*. Students will make a fictional work on film or videotape that focuses on their own life experience. Prerequisite(s): A Art 346. .May not be offered in 2003-2004.

A Art 450 Advanced Digital Imaging (3)
An exploration of some of the more sophisticated concepts, processes, and software involved in digital fine art. Students develop self-directed projects that reflect not only a technical proficiency with the media explored, but a thoughtfully developed conceptual thread. Weekly readings in current digital media theory and criticism provide insight into the work of emerging artists, and a wide range of techniques, media, and software are covered, including: advanced 2-D image manipulation, web graphics, and high-resolution fine art printmaking, as well as introductions to interactive multimedia and digital video. Emphasis is placed on finding the most appropriate solutions for each student's individual project. Prerequisite(s): A Art 250 or permission of instructor.

A Art 490 Internship in Studio Art (3)
Designed for undergraduate students interested in pursuing a career in the arts. Students work with art professionals for one semester. Internships may include the Times Union Photography Department, the Center for Photography at Woodstock, or assisting professional artists. Students complete an academic component consisting of required meetings with the faculty supervisor in the area of focus, and may involve a journal and portfolio. Art majors may use three credits toward course requirements above the 300 level. Internships are open only to qualified juniors and seniors who have an overall grade point average of 2.5 or higher. Consent for the internship must be obtained in the preceding semester by the submission of a plan of intent and a signed contract with a professional organization or individual artist. Prerequisite(s): Junior or senior class standing, 2.5 or higher GPA, and permission of the instructor.

A Art 492 Internship in Art Museum Management and Operation (3–4)
Designed for undergraduate students interested in pursuing a career in Arts Management or the Gallery/Museum administrative field. Projects may include computer database, archival records retrieval and storage, media relations skills, collections management, and exhibition organization and documentation. A final project will be assigned. **Internships are open only to qualified juniors and seniors who have an overall grade point average of 2.50 or higher.** Prerequisite(s): interview by gallery administrative staff and permission of Art Department Chair. *S/U* graded. May not be offered in 2003-2004.

A Art 496 Mentor Tutorial (3)
A tutorial in which readings, discussions, visits to museums and galleries are assigned to build awareness of the relevant traditions supporting an Honors student's development. This tutorial will also include consultation on graduate school applications and instruction on taking slides of works of art. Prerequisite(s): admission into the departmental Honors Program.

A Art 497 Independent Study (1–4)
Studio project in a selected art area. Prerequisite(s): junior or senior class standing and permission of instructor and department chair.

A Art 498 Honors Project I (3-6)
Studio project in a selected area of concentration. Topics and issues vary according to the needs and goals set by the students with their mentors. The goal of this project is to allows students adequate space and opportunity to cultivate a distinctive personal direction and generate a significant body of work to pursue graduate study. Students will attend appropriate MFA critiques. Prerequisite(s) admission into the departmental Honors Program and permission of instructor.

A Art 499 Honors Project II (3-6)
The continuation and completion of a studio project set forth in A Art 498. Upon completion of the project, the student will be required to make an oral defense of the work before the Honors Committee. Successful completion of the program earns an Honors Certificate in Art and a nomination for graduating with "Honors in Art" from the University. Students will attend appropriate MFA critiques. Prerequisite(s): A Art 498.

Courses in Art History

A Arh 170L (formerly A Arh 150L) Survey of Art in the Western World I (3)
Survey of art from prehistoric times through the 14th century focusing on architecture, sculpture and painting of the ancient Near East and Europe. [AR EU]

A Arh 171L (formerly A Arh 151L) Survey of Art in the Western World II (3)
Survey of art from the 14th century to the present focusing on painting, sculpture and architecture of Europe and the Americas. [AR EU]

A Arh 230 The Art of Medieval Knighthood (3)
The art and culture of medieval European knighthood from its beginnings in mounted soldiers of the eleventh century to its role in elaborate tournaments and jousts of the sixteenth. Attention will be given to the social expression of the knightly class through visual and literary means. Objects of study will include architecture, sculpture, manuscript painting and ivory carvings. Literature will include chivalric epics, romances, and manuals of war. Among the topics to be addressed will be arms and armor, castles and manor houses, the arts of courtly love and the visual spectacle of chivalry. [AR]

A Arh 260 (formerly A Art 290) Introduction to Cinema (3)
Survey of the silent and sound classics of the cinema with emphasis on the changing conceptions of cinematographic form and content. Screenings of selected European and American films. [AR]

A Arh 261 Independent Cinema (3)
Introduction to the study of film as an artistic and social practice through an examination of the various genres of independent filmmaking pursued in the United States during the twentieth and twenty-first centuries.

A Arh 262 (= A Fre 238) Great Classics of French Cinema (3)
An introduction with detailed analyses to a dozen of the most well known French classic films as contributions to the art of cinema and as reflections of French society at various historical moments. Taught in English. May not be used to fulfill the requirements of the major in French. Only one of A Arh 262/A Fre 238 and 315 may be taken for credit.

A Arh 265 History of Photography (3)
A survey of photography from its invention in 1839 to recent trends. Emphasizes why it was developed, the major19th century documentary and artistic uses, and the extraordinary range of 20th century explorations. An integrated approach tied to parallel social and artistic events. [AR]

A Arh 266 Photography 1970 to the Present (3)
A thorough survey of recent photography. Emphasizes fine art photography and the use of photography by artists working in other media, including documentary and photojournalistic work, photography books, mixed media and digital work. The materials for study are drawn from slide lectures, local exhibitions, contemporary criticism, library materials, and the media. No prior photography or art history required. [AR]

A Arh 267 (= A Aas 267) African-American Art of the Twentieth & Twenty-First Centuries (3)
Study of paintings and drawings by African American artists in the 20th and 21st centuries and of the cultural context within which the art was produced. A wide range of artistic styles and media is explored. Consideration is also given to the impact of European, African, and Asian visual arts on the work of African-American artists.

A Arh 273 History of Printmaking (3)
History of fine art techniques for reproducing images from the 14th century to the present, including woodcut, engraving, etching, lithography, photography. .May not be offered in 2003-2004.

A Arh 274 Islamic Art and Architecture (3)
This course focuses on the art and architecture of the Islamic peoples in Europe, the Middle East and North Africa from the seventh through the sixteenth century. We will consider the philosophical, political, religious and social context of Islamic visual culture. May not be offered in 2003-2004. [AR]

A Arh 275 (= A Aas 275) African Art (3)
Study of art produced on the west coast and central region of sub-Saharan Africa. Includes a wide range of artistic styles, with particular attention given to artifact designs and to their functional or ceremonial use in particular societies. Also explores the impact of African art on European and American Modernism.

A Arh 280L (= A Eac 280L) Chinese Painting (3)
Introduces students to the major works of traditional Chinese painting and analyzes those works to arrive at an understanding of life in traditional China. The major class activity will be viewing, discussing and analyzing slides of Chinese paintings. Only one of A Arh 280L and A Eac 280L may be taken for credit. [AR]

A Arh 281 (= A Eac 180) Introduction to Chinese Art and Culture (3)
The course combines a rapid survey of Chinese art with selected readings in Chinese literature to present an introduction to the visual and written culture of traditional China. Evidence from archaeology, sculpture, architecture, and painting will be viewed and analyzed to illustrate such topics as the origins and multiethnic character of Chinese civilization, the nature of the Chinese writing system, the growth of religious systems, and the development of the bureaucratic state. No prior knowledge of Chinese or Art History is required.

A Arh 298 Topics in Art History (3)
Introductory study of a special topic in Art History not otherwise covered in the curriculum. May be repeated for credit when the topic varies.

A Arh 303 (= A Cla 303) Early Christian Art and Architecture (3)
An examination of early Christian art and architecture from their beginnings in the third century to the death of Justinian in 565. Architecture, painting, mosaic and the minor arts are examined in their historical setting. A Arh 303Z & A Cla 303Z are the writing intensive versions of A Arh 303 & A Cla 303; only one of the four courses may be taken for credit. Prerequisite(s): A Cla 209, or A Clc 134, or A Arh 170L.

A Arh 303Z (= A Cla 303Z) Early Christian Art and Architecture (3)
A Arh 303Z & A Cla 303Z are the writing intensive versions of A Arh 303 & A Cla 303; only one of the four courses may be taken for credit. Prerequisite(s): A Cla 209, or A Clc 134, or A Arh 170L. [WI]

A Arh 331 (formerly A Arh 361L) Early Medieval And Romanesque Art (3)
An examination of European architecture, painting, sculpture and minor arts from the 6th to the 12th century. Course covers early Germanic and Celtic art, Carolingian and Ottonian periods. French. English, German, Italian Romanesque architecture and sculpture of the Pilgrimage route of Santiago, Monastic manuscript illumination, mural painting, objects in bronze and precious metals. Prerequisite(s): A Arh 170L or permission of instructor.

A Arh 332 (formerly A Arh 362L) Gothic Art and Architecture (3)
Examines Gothic Art of the 13th and 14th Centuries in France and its spread throughout Europe. Includes a study of religious and lay architecture (cathedrals, castles, town halls); cathedral sculpture; stained glass, murals and mosaics; manuscript illumination, painted altarpieces and art of precious metals. Prerequisite(s): A Art 170L or 331 or permission of instructor.

A Arh 332Z (formerly A Arh 362L) Gothic Art and Architecture (3)
A Arh 332Z is the writing intensive version of A Arh 332; only one may be taken for credit. Prerequisite(s): A Arh 170L or permission of instructor. [WI]

A Arh 341 (formerly A Arh 371L) Renaissance Art of the 15th Century (3)
An examination of art and architecture produced in Italy and Northern Europe during the 1400's. Italian art will concentrate on major architects, sculptors and painters, chiefly in Florence and including Umbria, Marches and North Italy. Art in Northern Europe will concentrate on the Netherlands and Germany, and will cover primarily panel painting and graphic art. Prerequisite(s): A Arh 170L or 171L or permission of instructor.

A Arh 342 Art in the Era of Renaissance and Reformation (3)
An examination of art and architecture produced in Italy and Northern Europe during the sixteenth century. Emphasis will be placed upon individual artists such as Leonardo, Michelangelo, Dürer, and Bruegel, as well as on specific artistic themes and their relation to social, religious, and theoretical concerns. Prerequisite(s): A Arh 171L or permission of the instructor

A Arh 342Z Art in the Era of Renaissance and Reformation (3)
A Arh 342Z is the Writing Intensive version of A Arh 342; only one may be taken for credit. Prerequisite(s) A Arh 171L or permission of the instructor. [WI]

A Arh 350 Art in the Courts of Seventeenth-Century Europe (3)
A study of the painting, sculpture and architecture produced in Italy, France and Spain during the 17th Century. Attention will focus on the religious, political and ceremonial demands of the Catholic Church and the royal courts, as well as on the careers of individual artists such as Bernini, Borromini, Caravaggio, Poussin and Velasquez. Prerequisite(s): A Arh 171L or permission of instructor.

A Arh 350Z Art in the Courts of Seventeenth-Century Europe (3)
A Arh 350Z is the writing intensive version of A Arh 350; only one may be taken for credit. Prerequisite(s): A Arh 171L or permission of instructor. [WI]

A Arh 351 Netherlandish Painting in the Age of Rembrandt and Rubens (3)
An examination of the painting and graphic art produced in the Netherlands during the seventeenth century. In addition to studying artistic trends and individual artists such as Rembrandt and Rubens, students will explore the ways in which the art addressed the social needs and concerns of Dutch and Flemish audiences. Prerequisite(s): A Arh 171L or permission of instructor.

A Arh 351Z Netherlandish Painting in the Age of Rembrandt and Rubens (3)
A Arh 351Z is the writing intensive version of A Arh 351; only one may be taken for credit. Prerequisite(s): A Arh 171L or permission of instructor. [WI]

A Arh 352 Art in the Era of Rococo and Enlightenment (3)
A study of painting, sculpture, architecture, garden design, graphic and decorative arts produced in Europe during the eighteenth century. Special emphasis will be placed upon the original context, use and significance of the art, as well as upon the association between artmaking and philosophical pursuits during this era of profound European change. Prerequisite(s): A Arh 171L or permission of instructor.

A Arh 352Z Art in the Era of Rococo and Enlightenment (3)
A Arh 352Z is the writing intensive version of A Arh 352; only one may be taken for credit. Prerequisite(s): A Arh 171L or permission of instructor. [WI[

A Arh 361 European Screen Artists (3)
Study of the European cinema from the silent film era to recent years. Consideration is given both to the careers of prominent artists and to the social and economical context in which they worked. Directors to be examined include, among others, Sergei Eisenstein, Ingmar Bergman, Leni Riefenstahl, and Jean Renoir. Prerequisite(s): A Arh 260.

A Arh 362 Significant Cinema Directors (3)
Examination of the artistry and cultural significance of films by selected directors, such as Charles Chaplin, Stanley Kubrick, Dorothy Arzner, Ingmar Bergman, or Ousmane Sembene. American and/or international in scope. This course may be repeated for credit as the content varies. Prerequisite(s): A Arh 260

A Arh 363 Art of American Silent Films (3)
Examination of the silent film in America, with an emphasis upon Hollywood. Topics to be addressed include: the studio and star systems; significant personalities; the writing of silent film; technological developments; and the various film genres, such as epics, comedies, and melodramas. Prerequisite(s): A Arh 260.

A Arh 365 (formerly A Arh 491) Modern Art I (3)
Survey of the first phase of Modernism, focusing on painting and sculpture in Europe and the USA from circa 1780–1880. Movements covered include Neo-Classicism, Romanticism, Realism, and Impressionism; artists include David, Goya, Manet, Cassatt. A Arh 365Z is the writing intensive version of A Arh 365; only one of the two courses may be taken for credit. Prerequisite(s): A Arh 171L or permission of instructor.

A Arh 365Z (formerly A Arh 491) Modern Art I (3)
A Arh 365Z is the writing intensive version of A Arh 365; only one of the two courses may be taken for credit. Prerequisite(s): A Arh 171L or permission of instructor. [WI]

A Arh 366 (formerly A Arh 492) Modern Art II (3)
Survey of Modern art from circa 1880–1945, focusing on painting and sculpture of Europe and the Americas. Movements covered include Post-impressionism, Cubism, German Expressionism, Dada, Surrealism; artists include Van Gogh, Picasso, Kollwitz, Duchamp, O'Keeffe, Douglas, Kahlo. A Arh 366Z is the writing intensive version of A Arh 366; only one may be taken for credit. Prerequisite(s): A Arh 171L or permission of instructor.

A Arh 366Z (formerly A Arh 492Z) Modern Art II (3)
A Arh 366Z is the writing intensive version of A Arh 366; only one may be taken for credit. Prerequisite(s): A Arh 171L or permission of instructor. [WI]

A Arh 432 (formerly A Arh 462) Gothic Painting (3)
Study of the style and technique of stained glass, manuscript illumination, wall and panel painting in the 13th and 14th centuries, with emphasis on France and Italy. Prerequisite(s): A Arh 170L and junior or senior class standing, or permission of instructor.

A Arh 442 (formerly A Arh 472) Early Painting of the Netherlands (3)
Study of northern Renaissance panel and manuscript painting from Jan van Eyck to Bruegel. Prerequisite(s): A Arh 170L or A Arh 171L or permission of instructor.

A Arh 450 (=A Fre 460) Art and Society in Early Modern France (3)
Seminar examining selected topics in art and architecture produced in France from the sixteenth through eighteenth centuries. Special emphasis upon the cultural significance of art in an era that saw the rise and fall of monarchical power as well as dramatic changes in understandings of social hierarchy, gender, the natural world, and philosophy. Prerequisite(s): Junior or Senior status and at least nine credits of upper-level coursework in Art History or French Studies. [OD]

A Arh 450Z Art and Society in Early Modern France (3)
A Arh 450Z is the . [WI] version of A Arh 450; only one may be taken for credit. Prerequisite(s): Junior or Senior status and at least nine credits of upper-level coursework in Art History or French Studies. [WI]

A Arh 460 (formerly A Art 490) Special Topics in Cinema (3)
In-depth study of selected topics in film not otherwise covered in the curriculum. Can be repeated for credit when the topic varies. Prerequisite(s): A Arh 260.

A Arh 466 Art Criticism of the Modern Period (3)
A study of the major European and American critics of 20th century art up to circa 1970. Student essays in criticism of actual artworks will emphasize understanding of historically significant critical perspectives, as well as the development of personal approaches to criticism. Prerequisite(s): A Arh 171L; permission of instructor; junior or senior status.

A Arh 467 Art Criticism of the Post-Modern Period (3)
Investigation of practice and theory of contemporary art criticism. Readings will concentrate on critics and writers from the 1970's to the present. In writing about works of art, students will practice basic critical skills of description, formal analysis, interpretation, and articulation of personal responses. Prerequisite(s): A Arh 171L; permission of instructor; junior or senior status.

A Arh 467Z Art Criticism of the Post-Modern Period (3)
Investigation of practice and theory of contemporary art criticism. Readings will concentrate on critics and writers from the 1970's to the present. In writing about works of art, students will practice basic critical skills of description, formal analysis, interpretation, and articulation of personal responses. A Arh 467Z is the writing intensive version of A Arh 467; only one can be taken for credit. Prerequisite(s): A Arh 171L; permission of instructor; junior or senior status. [WI]

A Arh 468 (formerly A Arh 490) Art Since 1945 (3)
Survey and critical analysis of art from circa 1945 to the present. The course will cover directions in late Modernism and Post-modernism, including Abstract Expressionism, Pop Art, Minimalism, Feminist Art, Graffiti Art and Political Art. A Arh 468Z is the writing intensive version of A Arh 468; only one can be taken for credit. Prerequisite(s): A Arh 171L or permission of instructor.

A Arh 468Z (formerly A Arh 490Z) Art Since 1945 (3)
A Arh 468Z is the writing intensive version of A Arh 468; only one may be taken for credit. Prerequisite(s): A Arh 171L or permission of instructor. [WI]

A Arh 475 (formerly A Arh 455; = A Wss 475) Women in Art (3)
Survey of women artists from 1550 to the present, including Artemesia Gentileschi, Elizabeth Vigee-Lebrun, Mary Cassatt, Alice Neel. The course also includes a feminist analysis of images of women since the Renaissance. A Arh 475Z & A Wss 475Z are the writing intensive versions of A Arh 475 & A Wss 475Z; only one of the four courses may be taken for credit. Prerequisite(s): A Arh 171L and junior or senior class standing, or permission of instructor.

A Arh 475Z (formerly A Arh 455; = A Wss 475Z) Women in Art (3)
A Arh 475Z & A Wss 475Z are the writing intensive versions of A Arh 475 & A Wss 475Z; only one of the four courses may be taken for credit. Prerequisite(s): A Arh 171L and junior or senior class standing, or permission of instructor. [WI]

A Arh 480 (= A Eac 471) Yüan and Sung Painting (3)
A seminar on Chinese painting during the Sung and Yüan Dynasties (960-1368) with research into selected paintings. The course will combine a detailed survey of painting during this period with examination of selected topics such as the rise of literati painting, Court painting as government art, and painting as political expression during the Sung-Yüan transition. Prerequisite(s): A Eac 180/A Arh 281 or A Eac/A Arh 280L and permission of instructor.

A Arh 490 Internship in Art History (3)
Supervised placement in an institution devoted to the collection, exhibition and/or conservation of works of art, such as the Albany Institute of History and Art or the State Conservation Laboratory. Provides practical experience in working with original works of art and includes research and writing projects. Art History majors may use 3 credits toward course requirements above the 300 level. May be repeated for credit, with permission of supervising instructor. **Internships are open only to qualified juniors and seniors who have an overall grade point average of 2.50 or higher.** Prerequisite(s): A Arh 170L and A Arh 171L. *S/U* graded.

A Arh 491 Internship in Film Studies (3)
Internship in the study of film or in film production. Students are responsible for finding and securing the internship with an organization or individual, subject to approval by the director of the Film Studies minor. May be repeated for credit. Three credits may be applied to upper level coursework in the Film Studies minor or the Art History major. *S/U* graded. Prerequisite(s): **Open only to Juniors or Seniors with a Film Studies minor or with at least six credits of film studies coursework, and an overall grade point average of 2.5 or higher.**

A Arh 497 Independent Study (1–4)
Directed reading and/or research in a selected area. May be repeated with approval of department chair. Prerequisite(s): junior or senior class standing, and permission of instructor and department chair.

A Arh 498 Topics in Art History (3)
In-depth study of selected topics in art history not otherwise covered in the curriculum. Can be repeated for credit when the topic varies. Prerequisite(s): A Arh 170L or A Arh 171L or permission of instructor.

A Arh 499 Research Seminar in Art History: Selected Topics (3)
Seminar focusing upon selected topics in art historical research. Students will study all aspects of research in art history, including the formulation of a topic; establishing the state of research on the topic; preparing an annotated bibliography and scholarly notes; and using library and web-based catalogues, databases, museum archives, image banks, and other research tools. The main focus of the coursework will be an individual research project. The course may be repeated for credit as the topic varies. Prerequisite(s): Junior or senior status-Art History major or minor, or permission of the instructor. [OD]

ASIAN STUDIES PROGRAM

Director
Jogindar Uppal, Ph.D.
Department of Economics

The interdisciplinary major in Asian studies offers students an opportunity to study various facets of Asian societies and cultures (South Asia, Southeast Asia, Southwest Asia/Middle East as well as East Asia). Students primarily interested in China, Japan and Korea are encouraged to major in East Asian Studies. While the East Asian Studies Major has language requirements, language courses are not required of majors in Asian Studies.

Careers

A good background in Asian Studies is invaluable for work in journalism, government service, intercultural activities, business abroad, and academic professions.

Degree Requirements for the Major in Asian Studies

General Program B.A.: A minimum of 36 credits distributed as follows:
Core Curriculum (9 credits) Six credits from A Ant 172; A Cas 150; A Gog 160 or 160G; A His 158 or 158Z, A His 176, A His 177 or 177Z and the completion of a senior essay (3 credits) taken either through a seminar or topics course sponsored by the program, or through an independent research or reading course in a department.

Area Studies (15 credits) A minimum of 3 credits must be completed in two of the following areas and a minimum of 9 credits must be completed in the third area: South Asia, Southeast Asia, Southwest Asia (Middle East). Language study may not be used to satisfy the area studies requirement.

Electives (12 credits) An additional 12 credits must be completed in appropriate course work related to Asian studies from the following listed courses.

South Asian Area Courses

A Ant 351 or 351Z Ethnicity in North America
A Eco 480 or 480Z Economic Development of South Asia
A His 378 History of South Asian Civilization II
A His 384Z Social Science Approaches to History
A His 485 or 485Z Colloquium in Comparative and Cross-Cultural History
A Phi 340 Topics in Philosophy (depending on topic)
A Phi 342 Indian Philosophies
R Pos 358 Politics of India and Pakistan

South East Asian Area Courses

A Eco 330 or 330Z Economics of Development
A Eco 364 or 364Z Comparative Economic Systems
A His 312 History of American Foreign Policy II
A His 384 or 384Z History of Japan

Southwest Asian (Middle East) Area Courses

A Ant 243 Peoples and Cultures of the Middle East
A Clc 133 History of Ancient Greece
A His 381 or 381Zand 382 or 382Z History of the Middle East I & II
A His 383 or 383Z The Arab-Israeli Conflict in Historical Perspective
A Jst 243 Peoples and Cultures of the Middle East
A Jst 341Z Issues in Biblical Civilization
A Jst 342Z Issues in Hellenistic-Rabbinic Judaism
R Pos 359 Israeli Politics

Other Courses

East Asia

A Eac 170L China: Its Culture and Heritage
A Eac 210L Survey of Chinese Classical Literature in Translation I
A Eac 211L Survey of Chinese Classical Literature in Translation II
A Eac 212L Modern Chinese Literature in Translation
A Eac 290 Ideology and Reality in Contemporary China
A Eac 389 Topics in Chinese Literature, History and Culture
A Eco 362/A Eas 362 The Political Economy of Japan & Korea
A Eco 363 Economic Development of Modern China
A Gog 160M or 160G China: People and Places in the of Land One Billion
A Gog 470Z China after Deng Xiaoping
A His 387 or 387Z Islam in the Middle East: Religion and Culture I
A His 388 or 388Z Islam in the Middle East: Religion and Culture II
A His 379 or 379Z History of China I
A His 380 or 380Z History of China II
A His 385 History of Japan
A His 485 Colloquium in Comparative and Cross-Cultural History
A Jst 351 or 351Z Jewish American Ethnic Groups
A Phi 344 Chinese Philosophies
A Phi 346 Japanese Religions and Philosophies
A Pln 570 Urbanization in China
R Pos 373 Government and Politics in the People's Republic of China
R Pos 376 The Foreign Policy of the People's Republic of China

Additional Non-Area Courses

A Ant 172 Community and Self
A Ant 331 Early Civilization of the Old World
A Ant 351 or 351Z Ethnicity in North America
A Eco 330 or 330Z Economics of Development
A Eco 364 or 364Z Comparative Economic Systems
A Phi 214 World Religions
A Phi 340 Topics in Philosophy (depending upon topic)
A Phy 201L & 201E Physics and Buddhism
A Rel 100L Introduction to the Study of Religion
A Soc 282M Race and Ethnicity
R Crj 414Z Order and Disorder in Society
R Pos 353 Developing Political Systems
R Pos 461Z Comparative Ethnicity

Additional Course Opportunities

Independent study and topical courses offered in various departments may be considered for the major when the topics are appropriate; e.g., courses in economics or sociology. Other courses may be approved for the major when their content is predominantly Asian. Appropriate Asian studies courses at neighboring institutions also may be applied to the major.

Opportunities for Study Abroad

Several opportunities to study abroad are available through various exchange programs. The exchange programs in China and Japan are administered through the East Asian Studies Department. However, the exchange program through Singapore is available to majors in Asian Studies. Students interested primarily in South East Asia are encouraged to apply for the Singapore Program. Also, there is a Consortium of Colleges in New York State that arranges studies in India for a semester's credit.

DEPARTMENT OF BIOLOGICAL SCIENCES

Faculty

Distinguished Teaching Professors
- Stephen C. Brown, Ph.D.
  University of Michigan
- Helmut V. B. Hirsch, Ph.D.
  Stanford University
- John S. Mackiewicz, Ph.D.
  Cornell University

Professors
- Richard P. Cunningham, Ph.D.
  Johns Hopkins University
- Helen T. Ghiradella, Ph.D.
  University of California, Santa Barbara
- Colin S. Izzard, Ph.D.
  Cambridge University (England)
- Jon W. Jacklet, Ph.D.
  University of Oregon
- Paulette McCormick, Ph.D.
  University at Albany
- Albert J. T. Millis, Ph.D.
  University of Pennsylvania
- John T. Schmidt, Ph.D.
  University of Michigan
- David A. Shub, Ph.D.
  Massachusetts Institute of Technology
- Daniel L. Wulff, Ph.D. (Collins Fellow)
  California Institute of Technology
- Richard S. Zitomer, Ph.D.
  University of Pennsylvania

Associate Professors
- Dmitry A. Belostotsky, Ph.D.
  Ukraine Academy of Sciences
- Thomas B. Caraco, Ph.D.
  Syracuse University
- Gary S. Kleppel, Ph.D.
  Fordham University
- Gregory Lnenicka, Ph.D.
  University of Virginia, Charlottesville
- Robert Osuna, Ph.D.
  University of Michigan
- George Robinson, Ph.D.
  University of California, Davis
- Caro-Beth Stewart, Ph.D.
  University of California, Berkeley
- Ben G. Szaro, Ph.D.
  John Hopkins University
- Sho-Ya Wang, Ph.D.
  State University of New York at Stony Brook

Assistant Professors
- Ravindra Gupta
  University of Bombay, Ph.D.
- Ing-Nang Wang, Ph.D.
  SUNY at Stony Brook

Affiliated Faculty
- Jeffrey L. Travis, Ph.D.
  Dartmouth College
- Suzannah Bliss Tieman, Ph.D.
  Stanford University

Adjuncts (estimated): 41

Teaching Assistants (estimated): 26

The objective of the department is to provide the undergraduate student with a broad background in the biological sciences and adequate supporting strength in the physical sciences. Accordingly, most of the B.S. programs listed here are structured around a combined major/minor sequence.

The department also offers programs leading to the M.S. and the Ph.D. in which the graduate student is able to obtain an in-depth professional education in one of several more restricted areas of biological sciences.

Careers

The B.A., which specifies the major only and requires a separate minor sequence outside science and mathematics, is designed with the aims of the liberal or fine arts students in mind and as such is not intended for the professional biologist or teacher. The B.S. programs provide a strong background for further study either in graduate school or medicine and prepare the student for secondary school teaching and a variety of careers in biology at the technical level. Graduates with a B.S. degree often find technical-level positions with pharmaceutical companies or as research assistants in grant-related positions. Those who go on to graduate or professional school have a wide array of career opportunities in research, health fields, and business.

Degree Requirements for the Major in Biology

General Program B.A.: Major sequence consisting of a minimum of 36 credits. Required courses are: A Bio 110F or 110N, 111N, 212; A Chm 120N, 121N, 122A, 122B; and 16 additional credits of biology major electives including two courses which are partially or exclusively laboratory courses. A Bio 399, 399Z, 499, and 499Z may contribute up to a total of 4 credits of non-laboratory major elective credit. Courses that do not yield credit toward the major are indicated in the individual bulletin descriptions. Major electives must be selected so that a total of 12 credits at the 300 level or above is included in the major. The minor sequence will consist of a minimum of 18 credits. The student may not have a minor in: atmospheric science, biology, chemistry, computer science, electronics, geology, mathematics, physics, or statistics.

Bachelor of Arts in Biology Requirements

A Bio 110F& 111N	8
A Bio 212	4
Chemistry	8
Subtotal	20
Additional credits in biology	16
Total	36
Plus nonscience/math minor	18–24

General Program B.S.: Combined major and minor sequence consisting of a minimum of 66 credits.

Required courses: A Bio 110F or 110N, 111N, 212, 365, 402; A Phy 105N, 106, 108N, 109; 6 credits in mathematics exclusive of A Mat 100, 101, 102N, 103, 105, 110; and A Chm 120N, 121N, 122A, 122B, 216A, 216B, 217A, 217B.

18 additional credits in biology are also required, and must include at least 3 laboratory courses. *At least one course* must be selected from *each* of the following areas:

- Molecular-Cell Biology: A Bio 214, 217, 312, 314, 366, 412
- Development-Function: A Bio 303, 317, 335, 341, 406, 410, 420, 422, 441, 460
- Ecology-Behavior-Diversity: A Bio 306, 308, 316, 319, 319Z, 320, 321, 325, 326, 409, 432, 436, 442, 443, 444, 445, 450, 455, and 468.

Credits in A Bio 399, 399Z, 499, and 499Z may be used to fulfill the requirement for 1 laboratory course if the student completes at least 4 credits over at least 2 semesters. A Bio 399, 399Z, 499, and 499Z may contribute a total of 4 credits towards the major. Courses that do not yield credit toward the major are so indicated in the individual bulletin descriptions.

Courses in the combined major/minor sequence must include at least six credits at the 300-level and at least 6 credits at the 400-level or above. Graduate courses are open to qualified seniors with appropriate departmental and instructor consent.

Bachelor of Science Requirements

A Bio 110F& 111N	8
A Bio 212	4
A Bio 365	3
A Bio 402	3
Biology major electives	18
A Bio ___ (Molecular-Cell)	
A Bio ___ (Function-Development)	
A Bio ___ (Ecology-Behavior-Diversity)	
Chemistry	16
Mathematics	6
Physics	8
Total	66

Degree Requirements for the Faculty-Initiated Interdisciplinary Major with a Concentration in Human Biology are listed in the Human Biology Program section of this bulletin.

Degree Requirements for the Faculty-Initiated Interdisciplinary Major with a Concentration in Biochemistry and Molecular Biology

The Biochemistry and Molecular Biology program is a Faculty-Initiated Interdisciplinary major (Biology and Chemistry) designed for students interested in these rapidly developing fields of science. Students with training in these fields can pursue careers as researchers in academic or industrial settings or they can pursue further study in graduate or professional schools. Students must complete 40 graduation credits before application to the program, generally in the spring of the sophomore year.

Admission: Students must obtain the approval of the Program Director before officially declaring this Faculty-Initiated Interdisciplinary Program as a major.
General Program B.S. Combined major and minor sequence consisting of a minimum of 65 credits.

Required Courses: A Bio 110F or 110N, 111N, 212, 312, 313, 365, 366, 367; A Chm 120N, 121N, 122A, 122B, 216A, 216B, 217A, 217B, 340A 441A, 340B or 441B; A Phy 140, 150; A Mat 111 or 112 or 118, 113 or 119; and an additional laboratory course in Biology or Chemistry at or above the 300 level. Credits in A Bio 399, 399Z, 499, 499Z or A Chm 425, 426 maybe used to fulfill this laboratory requirement if the student completes at least 4 credits over 2 semesters.

Bachelor of Science Requirements:

A Bio 110F (or 110N) & 111N	8
A Bio 212	4
A Bio 312 & 313	5
A Bio 365, 366 & 367	8
A Chm 120N, 121N 122A, & 122B	8
A Chm 216A, 216B, 217A, & 217B	8
A Chm 441A (or 340A) & 441B (or 340B)	6
A Phy 140 & 150	7
A Mat 111, 112, or 118 & 113 or 119	8
Additional laboratory and elective credits	3
Total	65

Honors Program

The honors program in biology is designed for outstanding students in the programs leading to the B.S. degree. Students may apply for admission to the honors program by submitting a letter of request to the departmental honors committee no later than April 15 of the freshman or sophomore year (for admission for the fall) or November 15 of the sophomore year (for admission in the spring). Junior transfers may apply at the time of their admission to the University. Students found acceptable by the committee must find a research adviser to supervise the independent study leading to an HONORS THESIS.

The requirements for admission include: (1) the candidate must declare the major and have completed (or have in progress at time of application) 12 credits of course work required for the biology major, including A Bio 110F or 110N, and 111N; (2) an overall grade point average of 3.50; (3) a grade point average of 3.50 in courses required for the major; and (4) a written recommendation from an adviser, professor or teaching assistant if possible. Primary emphasis will be placed on indications of academic ability and maturity sufficient for applicants to complete with distinction a program involving independent research.

Students in the program are required to complete a minimum of 65 or 66 credits as specified for the respective program for the B.S. in biology and must include: (1) at least 6 credits of independent study (A Bio 399, 499); the independent study, or honors research project, which will result in an HONORS THESIS; (2) at least 3 credits of course work at the 500 level or higher (not including A Bio 515) in the student's area of interest; and (3) oral presentation of research at a public seminar.

Students in the program must maintain both a minimum grade point average of 3.50 overall and in biology courses taken to satisfy major requirements during the junior and senior years. The progress of participants in the honors program will be reviewed at the end of the sophomore and junior years by the student's adviser and the departmental honors committee. Students not meeting academic and independent research standards may be precluded from continuing in the program during their senior year. These students may, of course, continue as majors.

After completion of the requirements above, the departmental honors committee will make its recommendation to the faculty to grant the degree "with honors in biology" based upon (1) overall academic record, (2) performance and accomplishments of the independent study project(s), (3) the quality of the Oral Presentation (4) the evaluations of departmental faculty members who have supervised these activities.

Combined B.S./M.S. Program

The combined B.S./M.S. program in biology provides an opportunity for students of recognized academic ability and educational maturity to fulfill integrated requirements of undergraduate and master's degree programs from the beginning of the junior year. A carefully designed program can permit a student to earn the B.S. and M.S. degrees within nine semesters.

The combined program requires a minimum of 138 credits, of which at least 30 must be graduate credits. In qualifying for the B.S., students must meet all University and college requirements, including the requirements of the undergraduate major described previously, the minimum 60-credit liberal arts and sciences requirement, general education requirements, and residency requirements. In qualifying for the M.S., students must meet all University and college requirements as outlined in the Graduate Bulletin, including completion of a minimum of 30 graduate credits and any other conditions such as a research seminar, thesis, comprehensive examination, professional experience, and residency requirements. Up to 12 graduate credits may be applied simultaneously to both the B.S. and M.S. programs.

While satisfying B.S. and M.S. requirements, students must complete a coherent sequence of courses in one of the two core areas: ecology, evolution, and behavior (EEB); or, molecular, cellular, developmental, and neural biology (MCDN). This sequence of courses begins with a 400-level course and includes a minimum of three graduate

courses up to a total of at least 9 credits. In addition, the sequence should include two semesters involving a discussion of the current literature in the field of biology selected by the student (one of the following: A Bio 650 or A Bio 633).

Students are considered as undergraduates until completion of all B.S. requirements. Upon meeting B.S. requirements, students are automatically considered as graduate students. Although the Graduate Record Examinations are not required for this program, students are encouraged to take the examinations in their senior year with the expectation that they will continue graduate studies.

Students may be admitted to the program at the beginning of the junior year or after the completion of 56 credits. Normally an application should be made at the completion of the sophomore year. Those students who are accepted into the program in their Junior year must complete at least three (3) semesters of research in the Bio 399-499 sequence. Seniors are not normally admitted into this program. However, students may be accepted if they have completed at least one semester of Bio 399 (for admittance at the beginning of first semester senior year) or one semester each of Bio 399 and 499 (for admittance at the beginning of second semester senior year). A minimum grade point average of 3.20 is required and the application should be supported by a minimum of three letters of recommendation from faculty. The application should be submitted to the department chair.

Joint Seven-Year Biology/ Optometry Program

This combined program sponsored by the State College of Optometry, State University of New York, and the University at Albany, provides students an opportunity to earn a Bachelor of Science (B.S.) degree in biology and a Doctor of Optometry (D.O.) in seven years. Participating students will matriculate at the University at Albany for three years and begin their Optometry studies in year four of the program. Students will be awarded the B.S. degree after completion of their requirements at the end of the fourth year.

At the end of the seventh year and completion of all program requirements, students will be awarded the D.O. degree.

Students interested in making application to this program shall submit the necessary materials to the Pre-Health adviser in the University's Advisement Services Center by the stated deadline in the middle of the spring semester of the freshman or sophomore year (transfer students are ineligible). Selection will be based on written application materials, academic progress, and a personal interview.

A minimum of a 3.2 grade point average on a scale of 4.0 in undergraduate courses completed at the time of application is required.

Students will complete three years (90 credits) of study at the University at Albany with a major in biology for a B.S. degree. Students attend SUNY-Optometry (New York, NY) for the fourth year of study (and pay SUNY-Optometry tuition), beginning the first year of the professional program. With the completion of the fourth year of study, the University at Albany will accept as transfer credits twenty-four credits of biology and six credits of physics electives, for a total of 30 credits. Students in this program should take the Optometry Admission Test (OAT) in October or February of the third year at the University at Albany.

A minimum of 90 credits must be taken at the University at Albany. Summer course work completed the first and second year or between the second and third year at the University at Albany is acceptable for this program.

The following courses are required: A Bio 110F, 111N, 212, 16 credits of biology electives* (of which twelve credits must be the 300 or 400 level); A Chm 120N, 122a, 121N, 122b, 216a, 217a, 216b, 217b; A Mat 112, 108; A Phy 105N, 106, 108N, 109; and A Psy 101M. In addition to the General Education Program requirements, students are required to enroll in ten credits of electives.

*The biology electives MUST be 300-400 level courses in biology that are designated as courses that count towards the biology major. The following courses will not be used as biology electives: A Bio 303, 325, 341, 342, 365, 406, 410, and 411.

Courses

A Bio 100 Contemporary Biology (3)
Topics in selected areas of the Biological Sciences. May be repeated for credit when topic varies. **Does not yield credit toward the major in biology**.

A Bio 102N General Biological Sciences (3)
Introduction to the major concepts in biology and a survey of the common structures of organisms, including humans, and their functions at the molecular, cellular, organismal and population levels. Emphasis placed on principles of ecology, inheritance, evolution and physiology relevant to human society. May not be taken for credit by students who have credit in A Bio 110N or A Bio 110F or A Bio 111N or other equivalent introductory courses. **Does not yield credit toward the major in biology**. [NS]

A Bio 110F General Biology I (4)
A Bio 110F is the writing intensive version of A Bio 110N; only one may be taken for credit. Offered fall semester only. [NS WI]

A Bio 110N General Biology I (4)
First course in a two semester sequence which offers a comprehensive survey of the structures and functions common to all living systems at the molecular, cellular, organismal, and population levels. This course emphasizes evolutionary principles, ecology, and behavior. Three class periods and one laboratory per week. A Bio 110F is the writing intensive version of A Bio 110N; only one may be taken for credit. Offered fall semester only. .May not be offered in 2003-2004. [NS]

A Bio 111N General Biology II (4)
Second course in a two-semester sequence which offers a comprehensive survey of the structures and functions common to all living systems at the molecular. cellular, organismal, and population levels. This course emphasizes structure and function at the cellular level as a basis for understanding function at the organismal level. Offered spring semester only. Three class periods and one laboratory per week. Prerequisite(s): A Bio 110F or 110N. [NS WI]

A Bio 117N Nutrition (3)
The biological roles of energy, protein, vitamins, and minerals; digestion, absorption, and storage of nutrients, the chemical nature of foods and food processing; assessment of nutritional status; interactions of nutrients and disease; food supplementation and community nutrition. **Does not yield credit toward the major in biology**. [NS]

A Bio 199 Contemporary Issues in Biological Sciences (1–3)
Issues from the current literature in selected areas of biological sciences. Particular areas of study to be announced each semester. Intended for students interested in exploring in depth themes covered in large lecture classes. *S/U* or *A-E* graded. May be repeated for credit when topic varies. May not be offered in 2003-2004.

A Bio 205 Human Genetics (3)
Survey of human genetics emphasizing the principles and mechanisms of inheritance and including the analysis of the genetic material of humans; the behavior of genes in individuals families, and populations; and the implications for human behavior and evolution, medicine, and society. Prerequisite(s): A Bio 110F and 111N or permission of instructor. **Does not yield credit toward the major in biology.**

A Bio 209N The Human Organism (3)
An introduction to the biology of the human organism from the perspective of its anatomy and physiology, emphasizing applications to modern life and human society. **Does not yield credit toward the major in biology**. [NS]

A Bio 212 Introductory Genetics (4)
Genetics from the classical Mendelian Laws of inheritance to molecular genetics. Topics will include: DNA structure and replication; Mendelian genetics and recombination; population, fungal, somatic cell, and bacterial genetics; gene organization; the genetic code; mechanisms of gene expression and regulation; and applications of genetic technology. Three class periods and one discussion section. Prerequisite(s): A Bio 111N. [OD]

A Bio 214 Genetics II (3)
A continuation of A Bio 212. Topics to be covered will include viruses; genetics of organelles (mitochondria and chloroplasts); genetic diseases; mutagenesis and repair of DNA; RNA splicing; gene regulation; transposition and other gene arrangements; developmental genetics; and genetic engineering. Prerequisite(s): A Bio 212. May not be offered in 2003-2004.

A Bio 217 Cell Biology (3)
An introduction to modern cell biology. This course will present the basic organization of eukaryotic cells while stressing their elaborate structural-functional integration. The cell's fundamental properties conserved through evolution will be stressed. May not be taken for credit by students who have credit in A Bio 301 or A Bio 304. Prerequisite(s): A Bio 212.

A Bio 230N People and Resources in Ecological Perspective (3)
Introduction to environmental science from the perspective of ecosystem dynamics: succession, matter cycling, productivity, resource allocation and biodiversity. Concepts and connections to major problems of pollution, global warming, resource exploitation and human overpopulation in a historical and contemporary context. **Does not yield credit toward the major in biology**. May not be offered in 2003-2004. [NS]

A Bio 241N The Biology of Sex (3)
This course, designed for nonmajors, examines sex from a biological perspective in species from bacteria to humans. Topics covered include sexual and asexual reproduction, sexual selection, mate choice, sex determination, sexual dimorphisms, mating strategies, courtship, genetic and environmental determinants of sexual behavior, and genetic and neural bases of sexual orientation. This course focuses on biological rather than social or cultural constructions of sex and reproduction. Prerequisite(s): high school biology. **Does not yield credit toward the major in biology**. [NS]

A Bio 299 Introduction to Methods for Research ((2)
This course helps to prepare students for supervised undergraduate research in A Bio 399 and A Bio 499. It will provide basic, current laboratory training applicable to various areas of modern biology. Laboratory exercises are drawn from the general areas of molecular, neural, cellular and developmental, and behavioral biology. Emphasis is placed on learning fundamental laboratory techniques, interpreting and presenting data, and designing simple experiments. One laboratory per week and additional flexible time as required. Prerequisite(s): A Bio 212 and permission of instructor.

A Bio 302Z Cell Biology Laboratory (2)
Introduction to modern techniques in cell biology, including advanced optical microscopy, DNA extraction and analysis, protein electrophoresis and western blotting, cell homogenization and fractionation, and cell culture. These techniques are used to investigate cell motility, membrane structure and permeability, mitochondrial respiration, DNA replication, the cell cycle, and cell adhesion. One laboratory period per week; additional time as required. Prerequisite or corequisite: A Bio 217 or 301; A Bio 365. [WI]

A Bio 303 (formerly A Bio 403) Developmental Biology (3)
The development of form and function in animals with emphasis on molecular analyses of organismal and cellular events underlying fertilization, early development, morphogenesis and growth. Prerequisite(s): A Bio 212.

A Bio 305 Developmental Biology Laboratory (2)
This laboratory course examines the mechanisms of animal and plant development at the molecular and cellular level by modern and classical techniques. Topics include gametogenesis, fertilization, early and later development, cell division and morphogenesis. One laboratory period per week; additional time as required. Prerequisite or corequisite(s): A Bio 303.

A Bio 306 Marine Biology (3)
Exploration of life in the sea; biological processes in marine environments; structure and function of marine biological communities; productivity and food webs; diversity, evolution and adaptations of marine organisms; and role of the oceans in global cycles. Covers planktonic, soft-bottom, coral reef, intertidal, deep-sea communities and environments; and the effects of human activity on life in the sea. Prerequisite(s): A Bio 110F and A Bio 111N; A Chm 120N and A Chm 122A.

A Bio 308 Parasitic Diseases and Human Welfare (3)
Ecological, medical, and social interrelationships of selected parasitic diseases of people and domestic animals in temperate, semi-tropical, and tropical climates; role of wild animals as reservoirs or vectors of parasitic diseases in humans. Prerequisite(s): 10 credits of biology or permission of instructor.

A Bio 311N (= A Gog 310N and U Uni 310N) World Food Crisis (3)
Interdisciplinary approach to understanding world food problems through analyses of social, political, economic, nutritional, agricultural, and environmental aspects of world hunger. Faculty from several departments in the sciences, humanities, and social and behavioral sciences present views from various disciplines. **Does not yield credit toward the major in biology.** Only one of A Bio 311N & U Uni 310N may be taken for credit. Prerequisite(s): junior or senior class standing, or permission of instructor. May not be offered in 2003-2004.

A Bio 312 Molecular Biology (3)
Mechanisms of gene expression and regulation will be studied, using examples from bacteria and eukaryotes. Discussion will include experimental approaches to gene cloning and sequencing, analysis of DNA-protein interactions, and structure and function of RNA. Prerequisite(s): A Bio 212; prerequisite or corequisite: A Bio 365 or A Chm 342.

A Bio 313 Laboratory in Molecular Biology (2)
Experiments in the modern techniques of recombinant molecular biology will be performed. These may include restriction mapping of plasmids, gene cloning, DNA blotting, DNA sequence analysis, plasmid constructions, and gene expression studies. One laboratory per week, plus additional flexible time as required. Prerequisite: A Bio 212. Prerequisite or corequisite(s): A Bio 312.

A Bio 314 Microbiology (3)
Introduction to the morphology, physiology, structure, genetics, and metabolism of microorganisms, including the roles played by microorganisms in medical, environmental, agricultural, and biotechnological sciences. Prerequisite(s): A Bio 212, or both A Bio 111N and A Bio 205; and A Chm 342 or A Bio 365.

A Bio 315 Microbiology Laboratory (2)
Laboratory studies that deal with the culture and study of microorganisms, the dynamics of microbial growth, and the physiological basis of bacterial identification. One laboratory per week; additional flexible time as required. Prerequisite(s) or corequisite:

A Bio 314A Bio 316 Biogeography (3)
Origin and differentiation of floras and faunas; biotic regions of the world, principles of distribution; migration, adaptation, evolution, and extinction. Three class periods each week. Prerequisite(s): A Bio 111N, or A Bio 102N

A Bio 317 Comparative Animal Physiology (3)
The physiological mechanisms employed by animals in meeting the stresses imposed by different environments. Considers strategies of adaptive radiation including toleration, avoidance, and regulation from an evolutionary perspective. Prerequisite(s): A Bio 111N and junior status

A Bio 318 (= A Ant 312; former A Bio 419/A Ant 412) Human Population Genetics (3)
Population genetics theory is the foundation of evolutionary biology and contributes heavily to modern ideas in ecology, systematics, and agriculture. This course is an introduction to that theory with special emphasis on evolution. Only one of A Ant 312 and A Bio 318 may be taken for credit. Prerequisite(s): A Ant 211 or A Bio 205 or 212. .May not be offered in 2003-2004.

A Bio 319Z Field Biology (3)
Introduction to those aspects of biology which are based on field study; local flora and fauna from an ecological viewpoint; selected field and laboratory techniques and related literature. Students are required to complete an independent field investigation. Two class periods, one laboratory period each week. Prerequisite(s): A Bio 111N, or A Bio 102N. Not open to freshmen. [WI]

A Bio 320 Ecology (3)
Introduction to the study of organisms, populations, and communities in relation to their environments. Stresses an integrated approach at all levels of biological organization. Topics include: the niche concept, species diversity, nutrient cycling, energy flow, population dynamics and control, biological rhythms, and other physiological mechanisms influenced by the environment. Three class periods each week. Prerequisite(s): A Bio 111N.

A Bio 321 The Insects (3)
A multilevel examination of the biology of insects, with particular emphasis on those aspects of design, physiology and behavior that make them so distinctive and successful. Prerequisite(s): A Bio 111N or equivalent. May not be offered in 2003-2004.

A Bio 325 Comparative Anatomy of Chordates (4)
Comparative study of embryonic development, functional morphology, adaptive radiation, and evolution of chordates. Three class periods, one laboratory period each week. Prerequisite(s): 12 credits of biology or permission of instructor. Not open to freshmen.

A Bio 326 Environmental Microbiology Lab (2)
Microorganisms are an essential part of many environments. This course explores the role of microbes in natural and human-impacted systems; topics include nutrient cycling, waste degradation, bioremediation, waterborne disease, and pollution control. Some informal lectures and current events discussions are incorporated into laboratory exercises. Prerequisite(s): A Bio 314 or equivalent. May not be offered in 2003-2004.

A Bio 335 Immunology (3)
The structure and function of the antibody molecule and of reactions between antigen and antibody. Also covers cellular interactions in the immune response as well as both the beneficial and harmful consequences of the response. Prerequisite(s): A Bio 212; prerequisite(s) or corequisite(s): A Chm 342 or A Bio 365.

A Bio 336Z (formerly A Bio 336) Laboratory in Immunology (2)
Modern laboratory techniques will be performed to study the cellular and humoral components of the immune system; immune cells and cell markers, immunoglobulin purification and characterization, antibody and antigen identification assays including immunodiffusion and immunoelectrophoresis, and enzyme-based immunoassays (ELISA). One laboratory per week, plus additional flexible time as required. The former A Bio 336 does not meet the writing intensive requirement. Only one of A Bio 336 and 336Z may be taken for credit. Prerequisite(s) or corequisite(s): A Bio 335. [WI]

A Bio 341 Neurobiology (3)
The structure and function of the nervous system examined at the cellular level. Topics include: organization of nervous systems; morphology and physiology of nerve cells; synaptic transmission; sensory processing; cellular circuitry underlying "simple" behaviors; cellular basis of learning; and the development of neuronal connections. Prerequisite(s): A Bio 111N; prerequisite(s) or corequisite(s): A Phy 108N.

A Bio 342 Neurobiology Laboratory (2)
Experimental analyses of the morphology and electrophysiology of nerve cells. Experiments include the visualization of individual nerve cells through selective staining, stimulation and recording of electrical potentials in nerve cells; and an examination of synaptic transmission. Experiments will be performed on invertebrate nervous systems. One laboratory period each week. Prerequisite(s) or corequisite(s): A Bio 341.

A Bio 365 Biological Chemistry (3)
The chemistry and biochemical interrelationship of carbohydrates, lipids, proteins, and nucleic acids; enzyme catalysis and introduction to metabolism. Prerequisite(s): A Chm 216A and 217A.

A Bio 366 Biological Chemistry II (3)
Control and regulation of metabolic pathways, expression and transmission of genetic information, and a variety of selected current topics. Prerequisite(s): A Bio 365.

A Bio 367 Biochemistry Laboratory (2)
This laboratory course is designed to provide basic training in various procedures used in present day biochemical research. These will include methods for protein purification, enzyme kinetics, peptide sequencing, and fractionation of intracellular components. In addition, biochemical processes such as glucose metabolism and photosynthesis will be studied. One laboratory period each week. Prerequisite(s) or corequisite(s): A Bio 365 or equivalent and permission of instructor.

A Bio 389Z Writing in Biology (1)
Students who are concurrently registered in, or have previously taken, any 300- or 400-level biology course which yields credit toward the major, may with permission of the instructor of that course, enroll in A Bio 389Z and fulfill a writing intensive version of that other course. One additional meeting per week in which writing techniques and experiences are stressed is required. Written work that will be used for credit in A Bio 389Z must be in addition to any writings required for the companion course. Prerequisite(s) or corequisite(s): a companion biology course at the 300 or 400 level. *S/U* graded. [WI]

A Bio 399 Supervised Research for Juniors (1–3)
Individual, independent research on selected topics in biology. Critical analysis of selected research papers. Junior majors in the department of biological sciences apply for this course through the prospective research advisor. Students taking two or more semesters of A Bio 399, 399Z, 499, or 499Z will prepare a poster or make an oral presentation at the Departmental Research Symposium. A copy of the final written report of each semester's work, preferably typewritten in journal format, is kept on permanent file in the department. May be taken either semester. A maximum of 6 credits may be earned in A Bio 399 and 399Z.

A Bio 399Z Supervised Research for Juniors (2–3)
Writing intensive version of A Bio 399 open to junior majors in biology who have completed a minimum of one previous semester in A Bio 399 for at least two credits. Students taking two or more semesters of A Bio 399, 399Z, 499, or 499Z will prepare a poster or make an oral presentation at the Departmental Research Symposium. Requires permission of research advisor. A maximum of 6 credits may be earned in A Bio 399 and 399Z. Prerequisite(s): A Bio 399. [WI]

A Bio 402 Evolution (3)
The patterns and processes of biological change with time from the origins of life, through major evolutionary innovations, to the development of human culture. Fundamental concepts in biology will be stressed, including information, mutation, selection, random drift, and adaptation. Prerequisite(s): A Bio 212.

A Bio 406 Vertebrate Histology (4)
Microanatomy and function of animal cells, tissues and major vertebrate organs, excluding the brain. Practical work with bright-field microscopy and preparation of formalin-fixed, paraffin-embedded, sectioned and stained tissues. Three class periods, one laboratory period each week. Extra time may be needed to complete individual projects. Prerequisite(s): A Bio 212; A Bio 325 and/or A Bio 410 recommended but not required.

A Bio 409 Introduction to Biological Materials (3)
Investigation of the structure, function, and materials properties of non-living biological products (e.g., insect and plant cuticles, mineralized shell, bone, etc.). Particular attention to developmental control on the cellular and other levels. Prerequisite(s): One of the following courses: A Bio 321, 324, 325, or 422, or equivalent. May not be offered in 2003-2004

A Bio 410 Human Physiology (3)
The functions of organ systems and their contributions to the functions of the human body as a whole. Topics to include: nervous, cardiovascular, respiratory, gastrointestinal systems and energy metabolism and temperature regulation. Two 1 1/2-hour lecture periods each week. Prerequisite(s): A Bio 111N and A Chm 121N.

A Bio 411Z Human Physiology Laboratory (2)
Experimental investigations in systemic physiology with emphasis on membrane transport, nerve excitability, muscle contraction, sensory mechanisms, cardiac activity, and special problems. Three hour laboratory and one hour discussion per week. Emphasis will be placed on writing of scientific laboratory reports. The former A Bio 411 does not yield writing intensive credit. Corequisite(s): A Bio 410. [WI]

A Bio 412 Biological Movement (3)
Biological movements at the level of molecules, organelles, cells, and tissues examined in terms of their contractile and/or other basis. Emphasizes the role of molecular assembly, reorganization and interaction in producing movement, and intrinsic and extrinsic control of movement. Three class periods each week. Prerequisite(s): a course in biochemistry. May not be offered in 2003-2004.

A Bio 416 (=A Ant 416; former A Ant 315) Topics in Human Biology (3)
Selected topics in biological anthropology. May be repeated for credit when topic differs. Consult class schedule for specific topic. Only one of A Bio 416 and A Ant 416 may be taken for credit. Prerequisite(s): A Ant 110N and 211. May not be offered in 2003-2004

A Bio 420 Plant and Animal Morphogenesis (3)
Cellular basis and control of morphogenesis during development of the embryo in animals and plants, and in vegetative and reproductive growth from plant meristems. Topics examined in terms of cell division, motility and adhesion, cellular rearrangements, matrices produced by cells, hormonal factors, and gene expression. Prerequisite(s): A Bio 212. May not be offered in 2003-2004

A Bio 422 (formerly A Bio 304) Biological Architecture (3)
An analysis of the basic physical and architectural principles underlying the design of biological organisms. Topics to be covered include architecture and materials of skeletons, biological design for swimming and flight, structural colors, patterns of branching and fractal growth. Three lectures per week. Prerequisite(s): A Bio 110F or 110N, 6 credits of upper level biology or permission of instructor.

A Bio 432 Animal Behavior (3)
The organization, causation, development, and evolution of behavior in vertebrates and invertebrates. Emphasizes a synthesis of information from both field and laboratory. Topics include stimuli and responsiveness, motivation, conflict behavior, social behavior with emphasis on ecological aspects, orientation and navigation, rhythmicity, learning, and the neural organization responsible for behavior. Three class periods each week. Prerequisite(s): 15 credits in biology. May not be offered in 2003-2004.

A Bio 436 Sensory Worlds (3)
A physical, physiological and evolutionary perspective on how vertebrates and invertebrates acquire and interpret information about the surrounding world and its inhabitants. Prerequisite(s): A Bio 111N and at least one of the following: A Bio 422, A Bio 460, A Phy 105, A Psy 214, A Psy 382 or consent of instructor. May not be offered in 2003-2004.

A Bio 441 Molecular Neurobiology (3)
The molecular biology of learning, memory, neural development and neurological disease. The course will relate the structure and function of receptors, second messangers, cytoskeletal proteins, transcription factors and gene structure to their roles in the nervous system. Prerequisite(s): A Bio 312 or 341 or 301. May not be offered in 2003-2004

A Bio 442 Restoration Ecology (3)
Restoration ecology seeks to enhance natural recovery of damaged ecosystems. Through lectures and readings, we review the science and practice of ecological restoration, with emphasis on application of ecological principles. Prerequisite(s): 15 credits in Biology, including a course in organismal biology or ecology. May not be offered in 2003-2004.

A Bio 443 Restoration Ecology Laboratory (1)
Demonstrations and laboratory exercises will explore tools for the design, implementation, and assessment of restoration projects in a variety of habitats. As the principal assignment, student teams will prepare a design plan for a restoration project. Prerequisite(s): concurrent enrollment A Bio 442. May not be offered in 2003-2004.

A Bio 444 The Biology of Birds (3)
A broad survey of the biology of birds. Topics will include the origin and evolution of birds, the taxonomy and diversity of living birds, biogeography, anatomy and physiology with an emphasis on comparisons with other vertebrates and adaptations for flight, communication, behavior, ecology, and the importance of birds as conservation indicators. Prerequisite(s): 15 credits in biology. May not be offered in 2003-2004.

A Bio 445 Experimental Ecology (3)
Ecological concepts are demonstrated with experimental manipulations and comparative assessment techniques. Local wetlands are studied; the focus is on the effects of invasive species. Ecological assessment skills are developed in the field and laboratory. Lectures couple fundamental and applied topics, balancing understanding of ecological principles with realistic environmental problem solving. Students contribute to a report that becomes part of the record for a municipal wetland. Two lectures and one laboratory period each week. Prerequisite(s): A Bio 320 or equivalent, junior or senior standing or permission of instructor.

A Bio 450 Biodiversity (3)
Lectures, readings, discussions, and students' presentations examine theoretical and empirical studies of the extent and distribution of faunal and floral diversity; of patterns of relative abundance of species in major ecosystems; and of the significance of diversity loss. Approaches to preserve, restore, and manage ecosystem structure and function will be examined. Prerequisite(s): Ecology or Field Biology. May not be offered in 2003-2004

A Bio 455 Plant Ecology (3)
Current research and theoretical background in the field of plant ecology will be explored. Topics will include population and community dynamics, evolution of life history traits, physiological responses to environmental stresses, plant-animal interactions, and the role of vegetation in ecosystem processes. Prerequisite(s): A Bio 319, 391Z, or A Bio 320 or permission of instructor. May not be offered in 2003-2004

A Bio 456 Plant Ecology Laboratory (1)
Field and laboratory studies will explore experimental and analytical technique used in plant ecology. Topics include population dynamics, community patterns, plant-animal interactions, and vegetation mapping. Pre-requisite or co-requisite(s): A Bio 455.

A Bio 460 Neural Basis of Behavior (3)
The neural basis of innate and learned behaviors in vertebrates and invertebrates will be examined. Emphasis will be placed on sensory processing, reflexive behavior, fixed action patterns, rhythmic behavior and simple learned behavior amenable to analysis at the neuronal level including analysis of membrane electrical activity, chemical synaptic activity and neuromodulation. Prerequisite(s): A Bio 341 or equivalent or permission of instructor.

A Bio 468 Behavioral Ecology (3)
Recent theoretical models of the evolution of behavior by natural selection applied to animals, especially to social insects, birds, and mammals. Includes sociobiology and optimal foraging. Three class periods each week. Prerequisite(s): A Bio 320 (A Bio 402 and 432 recommended). May not be offered in 2003-2004.

A Bio 497 Topics in Biology (1–3)
Issues from the current literature in selected areas of biology. Particular areas of study to be announced each semester. Yields credit toward the major in biological sciences. May be repeated for credit. Prerequisite(s): junior or senior class standing, and permission of instructor. May not be offered in 2003-2004.

A Bio 498 Topics in Biology, with Laboratory (1–3)
Issues in selected areas of biology. Particular areas of study to be announced each semester. Yields laboratory credit toward the major in biological sciences. May be repeated for credit. Prerequisite(s): junior or senior class standing, and permission of instructor. May not be offered in 2003-2004.

A Bio 499 Supervised Research for Seniors (1–4)
Individual, independent research on selected topics in biology. Critical analysis of selected research papers. Senior majors in the department of biological sciences apply for this course through the prospective research advisor. A copy of the final written report of each semester's work, preferably typewritten in journal format, is kept on permanent file in the department. May be taken either semester. Students taking two or more semesters of A Bio 399, 399Z, 499, or 499Z will prepare a poster or make an oral presentation at the Departmental Research Symposium. A maximum of 8 credits may be earned in A Bio 499 and 499Z.

A Bio 499Z Supervised Research for Seniors (2–4)
Writing intensive version of A Bio 499 open to senior majors in biology who have completed a minimum of one previous semester in A Bio 399 or 499 for at least two credits. Requires permission of research advisor. Students taking two or more semesters of A Bio 399, 399Z, 499, or 499Z will prepare a poster or make an oral presentation at the Departmental Research Symposium. A maximum of 8 credits may be earned in A Bio 499 and 499Z. Prerequisite(s): A Bio 399 or 499. [WI]

DEPARTMENT OF CHEMISTRY

Faculty

Distinguished Professor Emeritus
Harry L. Frisch, Ph.D.
Polytechnic Institute of Brooklyn

Distinguished Professor
Eric Block, Ph.D.
Harvard University

Distinguished Teaching Professor of Earth and Atmospheric Sciences and Chemistry
John W. Delano, Ph.D.
State University of New York at Stony Brook

Professors Emeritae/i
Shelton Bank, Ph.D.
Purdue University
Robert E. Frost, Ph.D.
Harvard University
Henry Kuivila, Ph.D.
Harvard University
Eugene Mclaren, Ph.D. (Collins Fellow)
Washington University
Yash P. Myer, Ph.D.
University of Oregon
Ramaswamy H. Sarma, Ph.D.
Brown University

Professors
Frank M. Hauser, Ph.D.
University of North Carolina
Bernard J. Laurenzi, Ph.D.
University of Pennsylvania
Charles P. Scholes, Ph.D.
Yale University
Lawrence C. Snyder, Ph.D.
Carnegie Institute of Technology
John T. Welch, Ph.D.
Case Western Reserve University
Andrew J. Yencha, Ph.D.
University of California, Los Angeles

Professor of Education and Chemistry
Audrey Champagne, Ph.D.
University of Pittsburgh

Associate Professors Emeritae/i
Arthur O. Long, Ph.D.
University of Wisconsin

Associate Professors
Lawrence H. Daly, Ph.D.
Rensselaer Polytechnic Institute
Paul J. Toscano, Ph.D.
Johns Hopkins University

Assistant Professors
Evgeny Dikarev, Ph.D.
Moscow State University
Igor Lednev, Ph.D.
Moscow Institute of Physics & Technology
Rabi A. Musah, Ph.D.
University of Arkansas
Li Niu, Ph.D.
University of Wisconsin
Marina Petrukhina, Ph.D.
Moscow State University

Adjuncts (estimated): 4
Teaching Assistants (estimated): 25

The objective of the department is to provide students with a broad, fundamental knowledge of modern theoretical and experimental chemistry enabling graduates to embark immediately on professional careers in chemistry or to continue study at an advanced level toward higher degrees.

The general program in chemistry is approved by the Committee on Professional Training of the American Chemical Society. For students interested in engineering, 3–2 programs with Rensselaer Polytechnic Institute and Clarkson University are available.

Careers

Careers graduates have pursued include: industrial production chemist, industrial control chemist, analytical chemist (industrial and governmental laboratories), research assistant, technical sales and service representative, secondary school teacher, science writing and editing, forensics, chemical business, patent law, information science, toxicology, and even investment counseling and public relations.

Special Programs

For students interested in engineering, there are available 3-2 programs with Rensselaer Polytechnic Institute, Clarkson University, SUNY at New Paltz, and SUNY at Binghamton. Students in these programs spend their first three years at this campus and the last two years at the other. The tuition is at the University at Albany rate for the first three years only. Upon successful completion of the programs, students are awarded a B.S. in Chemistry from the University at Albany, and B.S. in Chemical Engineering from the other institution.

A typical program, in the three years here, includes all courses required for the B.S., Chemistry emphasis, degree except for A Chm 341B, 420A, and the 6 credits of advanced chemistry. Equivalent work at the engineering school is accepted for these last 12 credits. In addition, students take more mathematics, physics, and computer science, to prepare for the engineering school. This includes A Mat 220 and 311, A Phy 321C and 462, A Csi 101 and 204.

Degree Requirements for the Major in Chemistry

General Program B.A.: Combined major and minor sequence consisting of a minimum of 51 credits: A Chm 120N, 121N, 122A, 122B, 216A, 216B, 217A, 217B, 225, 320, 321, 420a, 430, and 6 credits in advanced chemistry including at least 3 credits in courses other than A Chm 424, 425, or 426; A Mat 111 or 112 or 118 and 113 or 119; A Phy 105N, 106, 108N, and 109.

Note: A Phy 140N and 150N will substitute for A Phy 105 and 108 sequence.

General Program B.S.: Within this program, a student has a choice of four tracks: Chemistry Emphasis (66 credits); Chemistry/Polymers Emphasis (67 credits); Chemistry/Materials Emphasis (67 credits); and Chemistry/Forensic Chemistry Emphasis (69 credits). The specific requirements for individual tracks are outlined below.

Chemistry Emphasis: B.S.: (combined major and minor sequence) 66 credits: A Chm 120N, 121N, 122A, 122B, 216A, 216B, 217A, 217B, 225, 317, 340A, 340B, 341Z, 341B, 420A, 440A or 342, and 3 credits in advanced chemistry in courses other than A Chm 424, 425, or 426; A Mat 111 or 112 or 118, 113 or 119, and 214; A Phy 140N, 145, 150N, 155, 240.

Chemistry/Forensic Chemistry Emphasis: B.S.: (combined major and minor sequence) (69 credits): A Chm 120N, 121N, 122A, 122B, 216A, 216B, 217A, 217B, 225, 340A, 340B, 341Z, 417, 420A, 430, 440A (or 342), 450A, 450B and A Mat 111 or 112 or 118, 113 or 119, and 214 and 108; A Phy 140N, 145, 150N, 155.

Chemistry/Polymers Emphasis: B.S.: (combined major and minor sequence) (67 credits): A Chm 120N, 121N, 122A, 122B, 216A, 216B, 217A, 217B, 225, 340A, 340B, 341Z, 408, 420A, and 496; A Mat 111 or 112 or 118, 113 or 119, and 214; A Phy 140N, 145, 150N, 155 240, and 462; X RPI 300 (RPI 72-464, Polymer Science Laboratory—student cross-registers at Rensselaer Polytechnic Institute for the course).

Chemistry/Materials Emphasis: B.S. (combined major and minor sequence) (67 credits): A Chm 120N, 121N, 122A, 122B, 216A, 216B, 217A, 217B, 225, 340A, 340B, 341Z, 408, 420A, and 495; A Mat 111 or 112 or 118,113 or 119 and 214; A Phy 140N, 145, 150N, 155, 240, 462 and 464; X RPI 300 (RPI 72-464 Polymer Science laboratory) may be substituted for A Phy 464.

Honors Program

The honors program in chemistry is designed for outstanding students enrolled in the general program leading to the B.S. degree, chemistry emphasis. Students may apply for admission to the honors program by submitting a letter of request to the department chair no later than April 15 of the sophomore year (for admissions in the Fall) or November 15 of the junior year (for admission in the Spring). Junior transfers may apply at the time of their admission to the University. Primary emphasis will be placed on indications of academic ability and maturity sufficient for applicants to pursue with distinction a program involving independent research.

The minimum requirements for admission include: (1) Completion of A Chm 120N, 121N, 122A, 122B, 216A, 216B, 217A, 217B, 225 or their equivalents; (2) An overall grade point average of 3.50; (3) A grade point average of 3.60 in chemistry courses required for the major; and (4) Written recommendations from at least three faculty members, one of whom, preferably should be from outside the Department of Chemistry.

Students in the program must maintain both a minimum grade point average of 3.50 overall and of 3.60 in chemistry courses taken to satisfy major requirements during the junior and senior years. The progress of participants in the honors program will be reviewed at the end of junior year by the student's adviser and the Departmental Undergraduate Committee. Students not meeting academic and independent research standards at that time may be precluded from continuing in the program during their senior year. These students may, of course, continue as majors.

Students in the program are required to complete a minimum of 72 credits as follows: in addition to the 19 credits listed above and mathematics and physics requirements listed for the general B.S. program with chemistry emphasis, A Chm 340A, 340B, 341Z, 341B, 420A, and six credits of advanced chemistry, *not including research courses* (64 credits total); A Chm 424 (1 credit), 3 credits of A Chm 426 (Undergraduate Research), and 4 credits of A Chm 426T (Honors Undergraduate Research). The independent study must include an honors research project, culminating with a written honors thesis and departmental seminar by the end of the student's last semester.

After completion of the requirements above, the records of the candidates will be reviewed by the Departmental Undergraduate Committee. After consideration of overall academic record, performance and accomplishments in the independent study project, the quality of the Honors Seminar and Thesis, and the evaluations of departmental faculty members who have supervised these activities, a recommendation for or against a degree "with honors in chemistry" will be made by the committee to the departmental faulty. The final recommendation will be made by the departmental faculty and transmitted to the departmental chair.

Combined B.S./M.S. Program

The combined B.S./M.S. program in chemistry provides an opportunity for students of recognized academic ability and educational maturity to fulfill integrated requirements of undergraduate and master's degree programs from the beginning of the junior year. A carefully designed program can permit a student to earn the B.S. and M.S. degrees within nine semesters.

The combined program requires a minimum of 138 credits, of which at least 30 must be graduate credits. In qualifying for the B.S., students must meet all University and college requirements, including the requirements of the undergraduate major described previously, the minimum 60-credit liberal arts and sciences requirement, general education requirements, and residency requirements. In qualifying for the M.S., students must meet all University and college requirements as outlined in the Graduate Bulletin, including completion of a minimum of 30 graduate credits and any other conditions such as a research seminar, thesis, comprehensive examination, professional experience, and residency requirements. Up to 12 graduate credits may be applied simultaneously to both the B.S. and M.S. programs.

The undergraduate requirement of 420A may be satisfied by A Chm 520A. Likewise, the requirement of 6 credits in advanced chemistry may be satisfied by two 500-level graduate courses.

Students are considered as undergraduates until completion of 120 graduation credits and satisfactory completion of all B.S. requirements. Upon meeting B.S. requirements, students are automatically considered as graduate students.

Students may apply for admission to the combined degree program in chemistry after the successful completion of 56 credits, but no later than the accumulation of 100 credits, and after the satisfactory completion of A Chm 340A. A cumulative grade point average of 3.2 or higher and three supportive letters of recommendation from faculty are required for consideration.

Courses

A Chm 100N Chemical ABCs: Atoms, Bonds, and Citizen Consumers (3)
Introduction to chemistry emphasizing its applications to problems in modern society, consumer goods, and life-related topics. Lecture and demonstration only. Does not yield credit toward the major or minor in chemistry.[NS]

A Chm 120N General Chemistry I (3)
Atomic theory, quantitative relationships in chemical change, electronic structure of atoms and chemical periodicity, chemical bonding, and states of matter. [NS]

A Chm 121N General Chemistry II (3)
Elementary principles of chemical equilibrium, thermodynamics, and kinetics; electrochemistry; descriptive chemistry of the elements and their compounds. Prerequisite(s): A Chm 120N. [NS]

A Chm 122A and B General Chemistry Laboratory (1, 1)
Introduction to laboratory techniques, experiments demonstrating chemical principles and properties of elements and compounds. Prerequisite(s) for A Chm 122B: A Chm 122A; corequisite(s) or prerequisite(s) for A Chm 122A: A Chm 120N; for A Chm 122B: A Chm 121N.

A Chm 216A and B Organic Chemistry (3, 3)
Structure, synthesis, and reactions of the principal classes of organic compounds stressing the underlying principles of reaction mechanisms, stereochemistry, and spectroscopic techniques. Prerequisite(s) for A Chm 216A: A Chm 121N and A Chm 122B; for A Chm 216B: A Chm 216A.

A Chm 217A and B Organic Chemistry Laboratory (1, 1)
Laboratory techniques in organic chemistry, including extraction, crystallization, distillation, and chromatography, exemplified by the application of these techniques to the synthesis and qualitative analysis of organic compounds. Applications of infrared and NMR spectroscopy. Prerequisite(s) for A Chm 217B: A Chm 217A; corequisite(s) or prerequisite(s) for A Chm 217A: A Chm 215 or 216A; for A Chm 217B: A Chm 216B.

A Chm 225 Quantitative Analysis (3)
Theory of quantitative analysis based on modern chemical principles. Practical application to typical gravimetric, volumetric, and colorimetric analysis. Two class periods, one laboratory period each week. Prerequisite(s): A Chm 121N and A Chm 122B.

A Chm 307 (= Atm 307) Introduction to Atmospheric Chemistry (3)
Chemical principles and concepts leading to understanding the composition and change in the chemical/atmospheric environment; sources and sinks of chemical constituents; chemistry of the troposphere and stratosphere; measurement and theory; greenhouse gases; global pollution and ozone depletion. A Atm 307Z is the writing intensive version of A Atm 307 and A Chm 307; only one may be taken for credit. Does not yield credit toward the major in chemistry. Prerequisite(s): A Mat 113 or 119; A Phy150; and A Chm 121N.

A Chm 320 Introduction to Physical Chemistry (3)
Behavior of gases chemical thermodynamics (including solution equilibria, phase equilibria and electrochemistry), dynamics of chemical reactions (reactions, mechanisms, theory) and fundamentals of quantum chemistry with focus on chemical bonding, molecular structure and spectroscopy. Prerequisite(s): A Chm 121N; corequisite(s) or prerequisite(s): A Mat 113 or 119 and A Phy 108N. Does not yield credit toward the B.S. major in chemistry.

A Chm 321 Introduction to Experimental Physical Chemistry (1)
Experimental illustration of physical principles and introduction to instrumentation. Techniques of physical measurements, treatment of experimental data and generalization of results to illustrate the fundamental principles. Corequisite(s) or prerequisite(s): A Chm 320. Does not yield credit toward the B.S. major in chemistry.

A Chm 340A and B Physical Chemistry (3,3)
Mathematical description of physiochemical systems and their interpretation in terms of thermodynamics, kinetic theory, reaction rates and statistical mechanics. Atomic and molecular structure from the viewpoint of quantum theory with special emphasis on bonding and spectra. Prerequisite(s) for A Chm 340A: A Phy150N, A Mat 214, and A Chm 216B; for A Chm 340B: A Chm 340A or consent of instructor.

A Chm 341Z and B Physical Chemistry Laboratory (3, 3)
The experimental understanding of the basic principles of physical chemistry and development of familiarity with instrumentation. Includes thermodynamics; chemical kinetics; hydrodynamic, electrochemical, and optical properties; and searching of the chemical literature, computer processing of experimental data, and writing laboratory reports. One lecture and two laboratory periods each week. Prerequisite(s) for A Chm 341Z: A Chm 225; for A Chm 341B: Chm 341Z. Corequisite(s) or prerequisite(s) for Chm 341Z: Chm 340A; for Chm 341B: Chm 340B. [WI]

A Chm 342 Biological Chemistry (3)
The chemistry and biochemical interrelationship of carbohydrates, lipids, and nucleic acids; enzyme catalysis and introduction to metabolism. Prerequisite(s): A Chm 215or 216B. .May not be offered in 2003-2004.

A Chm 343 Introduction to Biochemistry Laboratory (1)
Experiments illustrating the fundamentals of biochemistry as discussed in A Chm 342. Prerequisite(s): A Chm 217A; corequisite(s) or prerequisite(s): A Chm 342. .May not be offered in 2003-2004.

A Chm 411A Computer Applications in Chemistry (3)
An introduction to microcomputing in chemistry. An introduction to the principles of microcomputers; programming using BASIC/TURBOBASIC, instrumental interfacing and the use of commercially available microcomputer programs related to chemistry. Prerequisite(s) or corequisite(s): A Chm 320 or 340A or permission or instructor.

A Chm 411B Computer Applications in Chemistry (3)
Introduction to work station operating systems with emphasis on UNIX. An overview of computational chemistry and molecular modeling methods. Applications to database searching, drug design and structure-activity relations. Prerequisite(s) or corequisite(s): A Chm 320 or 340A or permission of instructor.

A Chm 417 Advanced Synthesis Laboratory (2)
Experimental investigation of advanced syntheses of organic and inorganic compounds including their separation and analysis. The development of skills and understanding for the application of complex procedures and methods common in current practice. Prerequisite(s): A Chm 217B.

A Chm 420A and B Inorganic Chemistry (3, 3)
Bonding and reactivity in inorganic systems including ionic solids, metals, covalent molecules, and coordination complexes; acid-base chemistry; descriptive chemistry of the elements and their compounds. A Chm 420B includes main group chemistry, transition metal complexes, organometallic chemistry, catalysis and bioinorganic chemistry. Prerequisite(s) for A Chm 420A: A Chm 320 or 340B; for A Chm 420B: A Chm 420A.

A Chm 424 Retrieval and Presentation of Chemical Information (1)
Instruction and practice in modern methods of searching the chemical literature. Students are required to develop their skills in preparing written presentations and speeches. Prerequisite(s): junior or senior class standing. *S/U* graded.

A Chm 425 Introduction to Undergraduate Research in Chemistry (2)
Original experimental and theoretical research problems A printed or typewritten final report is required. Laboratory and conference hours to be arranged. May not be repeated for credit. Not more than 3 credits of A Chm 425 and/or A Chm 426 may be applied toward the advanced course requirement of the chemistry major. Prerequisite(s): junior or senior class standing, and permission of instructor. Corequisite(s) or prerequisite: A Chm 424. *S/U* graded.

A Chm 426 Undergraduate Research in Chemistry (3)
Original experimental and theoretical research problems. A printed or typewritten final report is required. May be repeated for credit, but not more than 3 credits of A Chm 425 and/or A Chm 426 may be applied toward the advanced course requirement of the chemistry major. Laboratory and conference hours to be arranged. Prerequisite(s): junior or senior class standing, and permission of instructor; corequisite(s) or prerequisite(s): A Chm 424. *S/U* graded.

A Chm 426T Honors Undergraduate Research in Chemistry (4)
Original experimental and theoretical research problems in chemistry with the results reported in a written Honors Thesis, as well as a public Department Seminar.

A Chm 430 Instrumental Analysis (3)
Theoretical principles and chemical applications of selected methods of instrumental analysis. Main emphasis is on electroanalytical methods including polarography, conductance, potentiometry, and coulometric methods, and on trace methods of analysis such as spectrograph emission, flame emission, atomic absorption, and fluorometric analysis. Two class periods, one laboratory period each week. Prerequisite(s): A Chm 225; prerequisite(s) or corequisite(s): A Chm 320 or 340B or permission of the instructor.

A Chm 436 Advanced Organic Chemistry (3)
Organic chemistry at an advanced level, including introduction of theoretical background and application in synthesis. Prerequisite(s) or corequisite(s): A Chm 320 or 340B.

A Chm 440A and B Comprehensive Biochemistry (3, 3)
Chemical characteristics of living matter, amino acids, polypeptides and proteins, supramolecular assembly and membrane structure; enzyme mechanisms and kinetics; bioenergetics and the chemistry of metabolism; electron transport and other transports across membranes; biosynthesis, storage, and expression of genetic information. Prerequisite(s): A Chm 216B or permission of instructor

A Chm 441A and B Physical Chemistry for Biochemical Sciences (3, 3)
Foundations of the physical principles and their application to biochemical systems. Topics include: thermodynamics, general kinetics, enzyme kinetics, transport phenomena, quantum chemistry, spectroscopy, and macromolecular conformation. Does not yield credit toward the major in chemistry. Prerequisite(s) for A Chm 441A: A Chm 121N, A Phy150N, and A Mat 113 or 119 (A Chm 216A or B, and A Chm 342 or A Bio 365 recommended); for A Chm 441B: A Chm 441A.

A Chm 450A Forensic Chemistry I (3)
This introductory course combines a series of seminars, lectures, and laboratories which focus on current topics and analytical methods utilized in today's modern forensic laboratories. Seminars in *Forensic Chemistry* will include topics such as: Introduction to Criminalistics, Ethical Dilemmas, and Computer-Assisted Data Analysis. Lecture and laboratory courses will include: Microscopy, Drug Chemistry, Questioned Documents, Toxicology, Latent Prints, Trace- and Firearms/Tool-marks. Various analytical methods currently being used in modern forensic laboratories will be performed utilizing chromatography (TLC, GC, CG/MSD, etc.) and liquid/liquid extractions. One lecture and two laboratory periods each week. Prerequisite(s): A Chm 225, A Chm 430, and senior class standing or consent of the instructor.

A Chm 450B Forensic Chemistry II (3)
Continuation of A Chm 450A. This course combines a series of advanced seminars, lectures and laboratories in *Forensic Chemistry*. Topics such as: public speaking on technical and non-technical subjects, as well as courtroom testimony, will be covered. Lecture and laboratory topics will include: DNA, Quantitative Methodologies in Drug Chemistry and Toxicology, as well as Advanced Statistical Methods such as: chi-square tests, multiple regression and correlation, nonparametric statistics and analytical variances. Prerequisite(s): A Chm 450A, and senior class standing or consent of the instructor.

A Chm 455 Forensic Chemistry Internship (3)
Students will have the opportunity to acquire practical "hands-on" experience in forensic chemistry by participating as an intern in the work of an agency, institution, or corporation other than the University. The student's work will be supervised and evaluated by a designated individual at the internship site. This supervisor will provide an evaluation of the student's work to the University at Albany faculty member who is the instructor of record for final assessment and grading.

Students majoring in chemistry with a *forensic chemistry* emphasis may apply to the Department of Chemistry for permission to enroll in this course. Admission to the Forensic Chemistry Internship course will be dependent upon the acceptability of the candidate to the Department of Chemistry and the host institution or agency. Among the criteria used by these agencies will be completion of A Chm 450A and a possible background check of the applicant. Enrollment in the course is limited in number in order to provide substantial individual hands-on training, and therefore is determined on a competitive basis. Application to the program must be made six months in advance of the beginning of the proposed internship. S/U graded.

A Chm 495 Materials Independent Study (3)
Individually selected topic of independent study in materials science-(chemistry) culminating in a comprehensive written report. The material covered is to be beyond that offered in any other formal undergraduate course. Prerequisite(s): junior or senior class standing, and permission of instructor. *S/U* graded.

A Chm 497 Independent Study (3)
Individual, independent study of selected topics above or beyond those offered in formal undergraduate courses. May be repeated for credit. Prerequisite(s): junior or senior class standing, and permission of instructor. *S/U* graded.

DEPARTMENT OF CLASSICS

Faculty
Distinguished Service Professor
Paul W. Wallace, Ph.D.
Indiana University
Professors Emeritae/i
Hans A. Pohlsander, Ph.D.
University of Michigan
Professors
John C. Overbeck, Ph.D.
University of Cincinnati
Associate Professors
Sylvia Barnard, Ph.D.
Yale University
Michael R. Werner, Ph.D.
Stanford University
Visiting Associate Professor
Stuart Swiny, Ph.D.
University of London
Adjuncts :
Richard Gascoyne, M.A.
Columbia University
Adjunct Associate Professor
Gregory I Stevens, Ph.D.
University of Michigan

The Department of Classics offers courses in Mediterranean archaeology and art, Greek and Roman civilization, and the classical Latin and Greek languages. A major in Greek and Roman civilization (in English) is available through the general program with two concentrations: *Mediterranean Archaeology and Art* or *Classical Literature and Culture*. The department also offers a minor in Greek and Roman Civilization.

Careers

The major concentrations in the department would be suitable preparation for teaching and for master's-level studies in classics or for professional programs in law, library science, theology, business administration or public administration. The department itself offers a master's degree with concentrations in Latin and classical archaeology. In the case of classical archaeology, several graduate programs would follow from this concentration, including conservation and preservation, museology, and Old World or classical archaeology.

Special Programs or Opportunities

There is a combined bachelor's/master's program which makes it possible to earn both degrees in a total of only five years.

The department assists students who seek placement in summer or academic-year programs in Greece or Italy (of which many are available) or who wish to participate in an archaeological excavation in Europe or the Mediterranean.

All students in the Classical Art and Archaeology concentration are strongly urged to include archaeological fieldwork in their course of studies. Such a program is offered regularly during the summer session by both the Departments of Classics and Anthropology.

Internships in archaeological documentation and conservation are also available at state agencies in the Albany area.

Students who expect to enter a graduate program in classical archaeology are urged to pursue the study of Latin or ancient Greek.

Degree Requirements for the Major in Greek and Roman Civilization

General Program B.A.: A minimum of 36 credits at least 18 of which must be at the 300 level or above, to be distributed as follows:

1. 9 credits from the following core courses:

A Clc 110L Classical Roots: Great Ideas of Greece and Rome
A Clc 133 History of Ancient Greece
A Clc 134 History of Ancient Rome

2. 6 credits from the following breadth courses:

A Cas 220L Literatures of the World
A Cla 131M Ancient Peoples of the World
A Clc 105E/L Myths of the Greek World
A Clc 125 Latin and Greek Elements in English
A Clc 220Z Roman Poets & Playwrights
A Clc 223E/L Masterpieces of Greek Tragedy and Comedy
A Clc 225 Greek Literature in Translation
A Clc 321 Fifth Century Athens
A Clc 322 Alexander and the Hellenistic Age
A Clc 330 Rome: From Republic to Empire
A Clc 331 The Age of Trajan and Hadrian
A Clc 402 Greek and Roman Religion
A Clc 403 Roman Civilization and Christianity
A Clc 497 Independent Study (2-4 crs)
A Clc 498 Topics in Classical Studies (1-4 crs)
A Ant 131M Ancient Peoples of the World
A Ant 243 Peoples and Cultures of the Middle East
A Ant 331 Ancient Civilizations of the Old World
A Eng 222E/L Masterpieces of Literature
A Eng 295E/L Classics of Western Literature I: Ancient Epic to Modern Drama
A Eng 296E/L Classics of Western Literature II: Homer, Vergil, Dante, Cervantes and Joyce
A His 130 History of European Civilization I
A His 263E Art, Music and History: A Multimedia Approach I
A Jst 243 Peoples and Cultures of the Middle East
A Phi 110L Introduction to Philosophical Problems
A Phi 114L Morals and Society
A Phi 116L World Views
A Phi 212L Introduction to Ethical Theory
A Phi 310 Ancient Philosophy
A Phi 311 History of Medieval Philosophy
A Rel 100E/L Introduction to the Study of Religion

3. 18 credits from one of the concentrations:

MEDITERRANEAN ARCHAEOLOGY AND ART CONCENTRATION:

A Cla 207E/L Egyptian Archaeology
A Cla 208E/L Greek Archaeology
A Cla 209L Roman Archaeology
A Cla 240 Archaeology and Ancient Israel I: Archaeology and the Bible (2 crs)
A Cla 241 Archaeology and Ancient Israel II: Greco-Roman Period (2 crs)
A Cla 290 Archaeological Graphic Documentation I
A Cla 291 Archaeological Graphic Documentation II
A Cla 301 Aegean Prehistory
A Cla 302 Villanovans, Etruscans, and Early Rome
A Cla 303/Z Early Christian Art and Architecture
A Cla 307 The Pyramid Age
A Cla 310 Art and Archaeology of Cyprus I
A Cla 311 Art and Archaeology of Cyprus II
A Cla 329 Archaeological Field Research (2-4 crs)
A Cla 401 Greek Sculpture
A Cla 402 Roman Sculpture
A Cla 403 Greek Painting
A Cla 405 Greek Architecture
A Cla 406 Roman Architecture and Town Planning
A Cla 407 The Egyptian Empire
A Cla 490 Internship in Archaeological Conservation and Documentation (3-15 crs)

A Cla 492 Internship in Archaeological Field Methodology (3 crs only)
A Cla 497 Independent Study (2-4 crs)
A Ant 104 Archaeology
A Ant 330 Topics in Archaeology
A Ant 332 Ethnoarchaeology
A Ant 335 Introduction to Archaeological Field Techniques
A Ant 338 Archaeological Field Research (6 crs)
A Ant 339 Archaeological Lab Techniques
A Ant 413 Functional Anatomy of the Human Skeleton
A Ant 430 Archaeological Theory
A Ant 431 Seminar in Social Archaeology
A Ant 435 Archaeological Surveys
A Ant 438 Museum Research and Curation
A Ant 490 Internship in Archaeological Conservation and Documentation (3-15 crs)
A Ant 504 Proseminar in Archaeology
A Ant 539 Topics in Archaeology
A Arh 170L Survey of Art in the Western World I
A Arh 303 Early Christian Art and Architecture
A Bio 208N Marine Biology
A Bio 322 Plant Morphology
A Bio 324 Invertebrate Zoology
A Bio 325 Comparative Anatomy of Chordates
A Bio 415Z Vertebrate Biology
A Bio 428 Mass Extinctions: Catastrophes in Ancient Environments
A Csi 422 Introduction to Computer Graphics
A Geo 210 Mineralogy
A Geo 222 Igneous and Metamorphic Geology
A Geo 230 Introduction to Field Methods and Stratigraphy
A Gog 120 World Cities
A Gog 220M Introductory Urban Geography
A Gog 290 Introduction to Cartography
A Gog 390 Intermediate Cartography
A Gog 396 Introductory Statistical Methods for Geography
A Gog 414 Computer Mapping
A Jst 240 Archaeology and Ancient Israel I: Archaeology and the Bible (2 crs)
A Jst 241 Archaeology and Ancient Israel II: Greco-Roman Period (2 crs)
A Phy 462 Physics of Materials
A Phy 519 Experimental Techniques in Physics
A Pln 220M Introductory Urban Planning

CLASSICAL LITERATURE AND CULTURE CONCENTRATION:

(Students are strongly encouraged to take approved courses in languages of the Mediterranean.)

A Clg 101L Elementary Greek I
A Clg 102L Elementary Greek II
A Clg 103L Introduction to New Testament Greek I
A Clg 104L Introduction to New Testament Greek II
A Clg 497 Independent Study (2-4 crs)
A Cll 101L Elementary Latin I
A Cll 102L Elementary Latin II
A Cll 201L Introduction to Latin Literature I
A Cll 202L Introduction to Latin Literature II
A Cll 410A Latin Prose Authors
A Cll 410B Latin Poetry
A Cll 497 Independent Study (2-4 crs)
A Clc 300 The Greeks and Their Neighbors
A Clc 301 Rome and the Mediterranean World
A Clc 310/Z Women in Antiquity
A Clc 311 Law in Antiquity
A Com 355 Introduction to Rhetorical Theory
A Eng 421 Literature of the Middle Ages
A Eng 522 The History of Rhetoric
A His 235 Early and Medieval Christianity
A His 336 History of the Early Middle Ages
A His 337 History of the High Middle Ages
A His 338 The Italian Renaissance
A His 339 Renaissance and Reformation in 16th C. Europe
A His 463 The Byzantine Empire
A Ita 315 Italian Civilization from the Etruscans to Galileo
A Jst 252 Jews, Hellenism, and Early Christianity
A Jst 342Z Issues in Hellenistic-Rabbinic Judaism
A Phi 523 Ancient Ethical Theory
A Phi 550 Plato
A Phi 552 Aristotle
A Phi 553 Medieval Philosophy
A Rel 103L Introduction to New Testament Greek I
A Rel 104L Introduction to New Testament Greek II
A Thr 221L Development of Theatre and Drama I
A Wss 311/Z Women in Antiquity

4. 3 credits from the senior seminar
A Clc 499

Honors Program in Greek and Roman Civilization

The Honors Program in the Department of Classics consists of a structured sequence of at least 12 credits of course work designed to insure that the honors student receives a rigorous and thorough mastery of the discipline. These courses may be drawn from the department's regular offerings in "Mediterranean Archaeology and Art" or "Classical Literature and Culture," depending on the student's concentration in the major.

In addition, the student must complete a specifically designed three-credit junior- or senior-level independent study/research project under the close supervision of a member of the faculty.

Finally, the student must complete at least 6 credits (but no more than 12) of intensive work culminating in a major project (or series of projects). This "intensive work" may take place in an independent study, a group tutorial, a workshop, archaeological field experience, special work in a seminar, and/or undergraduate research.

The student must have written approval for the project from the honors adviser in the department at the outset of the project. The project will be formally evaluated at the end of the third quarter of the student's senior year and submitted in final form by the end of the fourth quarter.

To be eligible for admission to the honors program, the student must have declared the Greek and Roman Civilization major and selected either of the two concentrations. The student must also have completed at least 12 credits of course work within the major. In the "Classical Literature and Culture" concentration, this would normally include two courses in Latin or Greek. In addition, the student must have an overall GPA of at least 3.25, and 3.50 in the major, both of which must be maintained in order to graduate with honors.

Combined B.A/M.A. Program

The combined B.A./M.A. program in Greek, Greek and Roman Civilization, Classical Archaeology, or Latin provides an opportunity for students of recognized academic ability and educational maturity to fulfill integrated requirements of the undergraduate and master's degree programs from the beginning of their junior year. A carefully designed program can permit a student to earn the B.A. and M.A. degrees within nine semesters.

The combined program requires a minimum of 138 credits, of which at least 30 must be graduate credits. In qualifying for the B.A., students must meet all University and college requirements, including the requirements for the B.A. program described above, the minor requirement, the minimum 90-credit liberal arts and sciences requirements, general education requirements, and residency requirements. In qualifying for the M.A., students must meet all University and college requirements as outlined in the Graduate Bulletin, including completion of a minimum of 30 graduate credits and any other conditions such as a research seminar, thesis, comprehensive examination, or other professional experience where required, and residency requirements. Up to 12 graduate credits may be applied simultaneously to both the B.A. and M.A. programs.

Students will be considered as undergraduates until completion of 120 graduation credits and satisfactory completion of all B.A. requirements. Upon meeting B.A. requirements, students will automatically be considered as graduate students. Students may apply for admission to the combined degree program at the beginning of their junior year or after the successful completion of 56 credits, but no later than the accumulation of 100 credits. A cumulative grade point average of 3.20 or higher and three supportive letters of recommendation from faculty are required for consideration.

Courses in Classical Archaeology/Mediterranean Archaeology and Art

No knowledge of Greek or Latin is required for these courses.

A Cla 131M (= A Ant 131M) Ancient Peoples of the World (3)
Ancient cultures from around the world will be presented and analyzed from the available archaeological data. The gradual development of civilization in both the Old and New Worlds will be the focus of the course. Only one of A Cla 131M & A Ant 131M may be taken for credit.

A Cla 207L Egyptian Archaeology (3)
A survey of the remains of ancient Egypt from the earliest times to the Roman Empire. The pyramids, temples, tombs, mummies and works of art will be examined in an attempt to understand the unique character of ancient Egypt. Selections from Egyptian religious and historical texts will be read in translation. A Cla 207E is the writing intensive version of 207L; only one may be taken for credit. [AR HU]

A Cla 207E Egyptian Archaeology (3)
A Cla 207E is the writing intensive version of 207L; only one may be taken for credit. [AR HU WI]

A Cla 208L Greek Archaeology (3)
Survey of the prehistoric and historical cultures of ancient Greece, as revealed by archaeology, from the Neolithic to the Hellenistic era, with emphasis on the evolution of pottery style, painting, sculpture and architecture. [AR HU]

A Cla 208E Greek Archaeology (3)
A Cla 208E is the writing intensive version of 208L; only one may be taken for credit. [AR HU WI]

A Cla 209L Roman Archaeology (3)
Survey of the monuments of ancient Rome and her empire in a cultural and evolutionary context, including major works of sculpture, wall painting and architecture. Roman towns and principles of town planning also studied. Translated selections from Roman literary and historical sources. [AR HU]

A Cla 240 (= A Jst 240) Archaeology and Ancient Israel I: Archaeology and the Bible (2)
Important discoveries related to biblical history and literature. Examination of sites, artifacts, texts and scripts from the Bronze Age to the Babylonian exile. Only one of A Jst 240 & A Cla 240 may be taken for credit.

A Cla 241 (= A Jst 241) Archaeology and Ancient Israel II: Greco-Roman Period (2)
Important discoveries related to postbiblical Jewish life and history. Examination of relevant papyri, the Dead Sea Scrolls, coins, Masada, Jerusalem, burial caves, synagogue art and other topics. Only one of A Jst 241 & A Cla 241 may be taken for credit.

A Cla 290 Archaeological Graphic Documentation I (3)
This course teaches how to graphically record a typical range of archaeological artifacts, including stone tools, pottery, metal objects and clay figurines from the University's collection of New and Old World artifacts. Emphasis will be placed on the professional standards of artifact illustration for publication in research projects. Prerequisite(s): permission of instructor.

A Cla 291 Archaeological Graphic Documentation II (3)
This is a continuation of A Cla 290. This course builds upon the skills developed in A Cla 290 and provides the experience for critical interpretation of the artifacts being documented. Prerequisite(s): A Cla 290.

A Cla 301 Aegean Prehistory (3)
Archaeology of the Aegean area from Paleolithic times to the end of the Bronze Age, with emphasis on Minoan Crete and Mycenaean Greece. Prerequisite(s): A Cla 208L or A Cla 208E. May not be offered in 2003-2004.

A Cla 302 Villanovans, Etruscans, and Early Rome (3)
Archaeology of the Etruscans and of early Rome in the context of the Iron Age cultures of the Italian peninsula. Prerequisite(s): A Cla 209, or A Clc 134, or junior or senior class standing. May not be offered in 2003-2004.

A Cla 303 (= A Arh 303) Early Christian Art and Architecture (3)
An examination of early Christian art and architecture from their beginnings in the 3rd century to the death of Justinian in 565. Architecture, painting, mosaic and the minor arts are examined in their historical setting. A Arh 303Z & A Cla 303Z are the writing intensive versions of A Arh 303 & A Cla 303; only one of the four courses may be taken for credit. Prerequisite(s): A Cla 209, or A Clc 134, or A Arh 170L.

A Cla 303Z (= A Arh 303Z) Early Christian Art and Architecture (3)
A Arh 303Z & A Cla 303Z are the writing intensive versions of A Arh 303 & A Cla 303; only one of the four courses may be taken for credit. Prerequisite(s): A Cla 209, or A Clc 134, or A Arh 170L. [WI]

A Cla 307 The Pyramid Age (3)
Archaeology of Egypt during the Old Kingdom and the 1st Intermediate Period, from later predynastic times to the end of the 10th dynasty (ca. 3100–2040 B.C.). Detailed study of pyramids and tombs, together with art and literature of the period. Prerequisite(s): A Cla 207L, 207E or permission of instructor.

A Cla 310 Art and Archaeology of Cyprus I (3)
An examination of the art, architecture and changing environmental setting of successive cultures on the east Mediterranean island of Cyprus from the first human occupation to the Roman period. The island's role as the main contact point between Near Eastern and Western Mediterranean civilizations will be emphasized.

A Cla 311 Art and Archaeology of Cyprus II (3)
An examination of the archaeology, art, architecture and history of the island of Cyprus from the Roman Period to its recently won independence. The wealth of mosaics, Byzantine church painting and Gothic ecclesiastical and military architecture emphasize the significance of the Christian enclave in the Moslem east under Latin, Venetian, Ottoman and British colonial rule.

A Cla 329 (formerly A Cla 338) Archaeological Field Research (2–6)
Supervised participation in the excavation of approved Old World prehistoric, classical or medieval sites. Prerequisite(s): junior or senior class standing and permission of the department chair.

A Cla 401 (formerly A Cla 402) Greek Sculpture (3)
Study of selected sculptural monuments from the Archaic, Classical and Hellenistic eras, considered in relation to their historical, intellectual and religious context. Prerequisite(s): A Cla 208L or A Cla 208E.

A Cla 402 (formerly A Cla 412) Roman Sculpture (3)
Selected monuments representing the historical development of Roman sculpture in its social and religious context from the early Republic to the time of the emperor Constantine. Prerequisite(s): A Cla 208L or A Cla 208E or A Cla 209 or A Arh 170L.

A Cla 403 (formerly A Cla 432) Greek Painting (3)
A survey of ancient Greek painting from the beginnings about 1000 B.C. through the Hellenistic age; primarily painted vases, but also including the limited evidence that exists for wall painting and other forms. Prerequisite(s): A Cla 208L or A Cla 208E.

A Cla 405 (formerly A Cla 460) Greek Architecture (3)
The development of Greek monumental architecture from the earliest temples through the Hellenistic Age. Prerequisite(s): A Cla 208L or A Cla 208E.

A Cla 406 (formerly A Cla 461) Roman Architecture and Town Planning (3)
The development of Roman public and private architecture, with emphasis on its urban setting and function, and the evolution of Roman towns in Italy and the Empire from the early Republic to the time of the emperor Constantine. Prerequisite(s): A Cla 208L or A Cla 208E or A Cla 209 or A Arh 170L.

A Cla 407 The Egyptian Empire (3)
Concentrates on the Middle and New Kingdoms (circa 2133–1085), when Egypt ruled the east. Includes the art, literature, architecture, political and military activity that created the beginnings of western civilization in the Mediterranean. Prerequisite(s): A Cla 207L, 207E or permission of instructor.

A Cla 490 (= A Ant 490) Internship in Archaeological Conservation and Documentation (3–15)
Supervised placement in an agency engaged in conservation and documentation of archaeological artifacts, such as the New York State Museum or State Conservation Laboratory. Provides practical experience and cannot be counted among the 9 elective credits above the 300-level required for Mediterranean archaeology majors. Anthropology majors may use up to 3 credits toward major elective credit. May be taken by majors in Greek and Roman civilization and anthropology only. **Internships are open only to qualified juniors and seniors who have an overall grade point average of 2.50 or higher. *S/U* graded. Prerequisite(s): permission of instructor.**

A Cla 492 Internship in Archaeological Field Methodology (3-9)
Supervised placement in cultural resource management firms engaged in archaeological field research. This course provides practical experience in the methods and goals of archaeological field investigation in the context of specific archaeological projects managed by professional archaeologists. The experience will include field testing and recording and preparation of field records for reports. Only 3 credits can be used for the Mediterranean Archaeology and Art concentration. May be taken by majors in Greek and Roman Civilization with a concentration in Mediterranean Archaeology and Art and by majors in Anthropology and Art History. **Internships are open only to qualified juniors and seniors who have an overall grade point average of 2.50 or higher.** *S/U* graded.

A Cla 497 Independent Study (2–4)
Seniors may offer 2 to 4 credits of independent study in place of regular course work in classical archaeology. Projects must be approved by the department chair. May be repeated once.

Courses in Greek and Roman Civilization

No knowledge of a classical language is required for these courses.

A Clc 105L Myths of the Greek World (3)
Survey of the origin and development of the major myths of ancient Greece. [HU]

A Clc 105E Myths of the Greek World (3)
Survey of the origin and development of the major myths of ancient Greece. A Clc 105E is the writing intensive version of 105L; only one may be taken for credit. [HU WI]

A Clc 110L Classical Roots: Great Ideas of Greece and Rome (3)
Greek and Roman literature in translation. Considers such topics as human dignity and values, power and pride, the hero, intelligence impaired by appetite, and justice of the gods in such authors as Homer, Aeschylus, Sophocles, Plato, Aristotle, Vergil and selected historians. Prerequisite(s): freshman or sophomore class standing. [EU HU]

A Clc 125 Latin and Greek Elements in English (3)
Systematic study of those elements of the Latin and Greek languages that have contributed to the formation of English vocabulary, both general and scientific. Designed for students with no knowledge of a classical language. May not be offered in 2003-2004.

A Clc 133 History of Ancient Greece (3)
An examination of the antecedents of Greek culture in the ancient Near East and the Aegean, followed by the rise of Greece, the development of Athenian democracy, the decline of Greece leading to Macedonian domination, the conquests of Alexander the Great, and the cosmopolitan Hellenistic world. [EU]

A Clc 134 History of Ancient Rome (3)
Alexander the Great and the Hellenistic Age, the rise of Rome, the Republic and the Empire. [EU]

A Clc 220Z Roman Poets and Playwrights (3)
Study of various types of Roman poetry, including lyric, epic and dramatic, with consideration of their role in the development of the Western literary tradition. [WI]

A Clc 223E Masterpieces of Greek Tragedy and Comedy (3)
A Clc 223E is the writing intensive version of A Clc 223L; only one may be taken for credit. .May not be offered in 2003-2004. [HU WI]

A Clc 223L Masterpieces of Greek Tragedy and Comedy (3)
Selected plays of Aeschylus, Sophocles, Euripides, Aristophanes and Menander. A Clc 223E is the writing intensive version of A Clc 223L; only one may be taken for credit. .May not be offered in 2003-2004. [HU]

A Clc 225 Greek Literature in Translation (3)
Reading (in English) and analysis of ancient Greek literary masterpieces from Homer through the Hellenistic era.

A Clc 300 The Greeks and Their Neighbors (3)
The relations of the Greeks with the Near East and with Rome. Readings in English from the works of five Greek historians: Herodotus, Thucydides, Xenophon, Arrian and Polybius. Prerequisite(s): junior or senior class standing.

A Clc 301 Rome and the Mediterranean World (3)
The Romans' view of their origin and destiny in the Mediterranean world. Readings in English from the works of five Roman historians: Livy, Sallust, Caesar, Tacitus and Ammianus. Prerequisite(s): A Clc 134 or A Cla 209. [EU]

A Clc 310 (= A Wss 311) Women in Antiquity (3)
Study of the literary, historical and archaeological evidence concerning the lives and roles of women in Greek and Roman society. A Clc 310Z & A Wss 311Z are writing intensive versions of A Clc 310 & A Wss 311; only one of the four courses may be taken for credit. Prerequisite(s): junior or senior class standing. [EU]

A Clc 310Z (= A Wss 311Z) Women in Antiquity (3)
A Clc 310Z & A Wss 311Z are writing intensive versions of Clc 310 & Wss 311; only one of the four courses may be taken for credit. Prerequisite(s): junior or senior class standing. [EU WI]

A Clc 311 Law in Antiquity (3)
Survey of ancient law from Sumerian times until the end of the Roman Empire, with emphasis on Greek and Roman legal practice; studied in relation to social, economic, religious and political life. Comparisons between ancient and modern concepts of justice. Prerequisite(s): junior or senior class standing, or 3 credits in Classics.

A Clc 321 Fifth-Century Athens (3)
An area study of 5th-century Athens using all available resources of history, art and archaeology, geography, and literature. Prerequisite(s): A Clc 133 or A Cla 208L.

A Clc 322 Alexander and the Hellenistic Age (3)
An area study of Alexander the Great and the Hellenistic Age to the Battle of Actium (31 B.C.), using all available resources of history, art and archaeology, geography and literature. Prerequisite(s): A Clc 133 or A Cla 208L or A Cla 208E.

A Clc 330 Rome: From Republic to Empire (3)
An area study of the history, art and archaeology, geography, and literature of Rome in the transition from republic to empire using all available resources. Prerequisite(s): A Clc 134 or A Cla 209L.

A Clc 331 The Age of Trajan and Hadrian (3)
An area study of the history art and archaeology, geography, and literature of the age of Trajan and Hadrian using all available resources. Prerequisite(s): A Clc 134 or A Cla 209.

A Clc 402 (= A Rel 402) Greek and Roman Religion (3)
Survey of Greek and Roman religions at large followed by a detailed examination of the so-called mystery religions. Interdisciplinary in nature, it employs not only religious but also philosophical, especially ethical, literary, historical and archaeological materials. Only one of A Clc 402 & A Rel 402 may be taken for credit. Prerequisite(s): junior or senior class standing and some background in either classical or religious studies. .May not be offered in 2003-2004.

A Clc 403 (= A Rel 403) Roman Civilization and Christianity (3)
Roman civilization in the late Empire. The relation between pagan and Christian culture based on a study of literary and archaeological sources. Prerequisite(s): A Clc 134 or A His 235Z. Only one of A Clc 403 & A Rel 403 may be taken for credit. .May not be offered in 2003-2004.

A Clc 497 Independent Study (2–4)
Seniors may offer 2 to 4 credits of independent study in place of regular course work in Greek and Roman civilization. Projects must be approved by the department chair. May be repeated once.

A Clc 498 Topics in Classical Studies (1–4)
Selected topics in classical studies. May be repeated for credit with a change of topic. Prerequisite(s): junior or senior class standing, or permission of instructor.

A Clc 499 Senior Seminar in Classical Studies (3)
Seminar on selected topics in classical studies. Preparation of a paper under the direction of a faculty member. Open to seniors with permission of director.

Courses in Ancient Greek

A Clg 101L Elementary Greek I (4)
Introduction to Attic Greek Prose. .May not be offered in 2003-2004.

A Clg 102L Elementary Greek II (4)
Introduction to Attic Greek Prose. Prerequisite(s): A Clg 101L or permission of instructor. .May not be offered in 2003-2004. [FL]

A Clg 103L (= A Rel 103L) Introduction to New Testament Greek I (4)
Introduction to the fundamentals of the grammar and vocabulary of the New Testament. Readings in the gospel of John and the Book of Acts. No previous knowledge of Greek required. Only one of A Clg 103L & A Rel 103L may be taken for credit.

A Clg 104L (= A Rel 104L) Introduction to New Testament Greek II (4)
Continuation of A Clg 103L. Only one of A Clg 104L & A Rel 104L may be taken for credit. Prerequisite(s): A Clg 103L or permission of instructor.

A Clg 497 Independent Study (2–4)
Seniors may offer 2 to 4 credits of independent study in place of regular course work in Greek. Projects must be approved by the department chair. May be repeated once.

Courses in Latin

A Cll 101L Elementary Latin I (4)
Grammar, composition, conversation, and reading of Latin.

A Cll 102L Elementary Latin II (4)
Continuation of A Cll 101L; grammar, composition, conversation, and reading of Latin. Prerequisite(s): A Cll 101L or permission of instructor. [FL]

A Cll 201L Introduction to Latin Literature I (3)
Selected readings from prose authors, especially Cicero, and from Latin poetry. Prerequisite(s): A Cll 102L or permission of instructor for students with two years of high school Latin.

A Cll 202L Introduction to Latin Literature II (3)
Continuation of A Cll 201L; selected readings from prose authors, especially Cicero, and from Latin poetry. Prerequisite(s): A Cll 201L or permission of instructor.

A Cll 410A Latin Prose Authors (3)
Detailed study and criticism of one or more Latin prose authors (historians, orators, novelists, etc.) May be repeated with change in author(s). Prerequisite(s): A Cll 202L or equivalent.

A Cll 410B Latin Poetry (3)
Detailed study and criticism of one or more Latin epic, lyric or dramatic poets. May be repeated with change or author(s). Prerequisite(s): A Cll 202L or equivalent.

A Cll 497 Independent Study (2–4)
Seniors may offer 2 to 4 credits of independent study in place of regular course work in Latin. Projects must be approved by the department chair. May be repeated once.

DEPARTMENT OF COMMUNICATION

Faculty
Professor Emeritae/i
Donald P. Cushman, Ph.D.
University of Wisconsin
Kathleen E. Kendall, Ph.D.
Indiana University
Professors
Alan Chartock, Ph.D.
New York University
Teresa M. Harrison, Ph.D.
Bowling Green State University
Robert E. Sanders, Ph.D.
University of Iowa
Timothy D. Stephen, Ph.D.
Bowling Green State University
Associate Professors Emeritae/i
Richard Wilkie, Ph.D.
University of Michigan
Associate Professors
François Cooren, Ph.D.
University of Montreal
Anita Pomerantz, Ph.D.
University of California, Irvine
Assistant Professors
Annis G. Golden, Ph.D.
Rensselaer Polytechnic Institute
Cherie Strachan, Ph.D.
University at Albany
Jennifer Stromer-Galley, Ph.D.
University of Pennsylvania
Lecturer
Michael W. Barberich, M.A.
University of Maine
Adjuncts (estimated): 6
Teaching Assistants (estimated): 12

The department specializes in studies of communication in each of three particular social contexts: first, communication on an individual level, involving interpersonal or intercultural relations; second, communication at the societal level involving large scale audiences, especially in regard to political action and democratic processes; and third, communication in organizations-whether business, governmental, or grass roots organizations--that affects either the organization's internal processes or external relations. All three of these areas have been significantly affected by new communication technologies, the study of which we incorporate into department course work.

The undergraduate program in Communication has two primary goals. One is to educate students, and expose them to significant writings, about communication processes and media and the critical role they play in the conduct of social life and its quality among individuals, in organizations, and in the larger society.

Our second goal grows out of the first; to help students become able to analyze and improve communication practices in particular settings and instances. This involves developing a basis for judging whether or not specific communication processes are meeting the needs of the people involved. It also involves learning about ways to measure the effectiveness of specific communication practices, and gaining experience analyzing and designing solutions to communication problems.

Studies in the major are organized so that students enrolled in 100- and 200-level courses are exposed to foundational ideas and research findings in the field of Communication, as well as provided with research methods and analytic tools. Students are also required to become more practiced as communicators, either through a public speaking or debate course. Course work at the advanced (300 and 400) level is intended to provide students with in-depth knowledge of current research and theory about interpersonal/intercultural communication,

organizational communication or public communication.

Careers in Communication

The program in Communication is intended to help students become knowledgeable about communication processes and their influences on the interpersonal, intercultural, organizational and political aspects of our societies. By focusing on development of analytical and critical skills, the program helps students become able to analyze and effectively participate in, and improve communication practices in diverse settings and instances. Having completed their degree in communication, the students will have a basis for judging whether or not specific communication processes are meeting the needs of the people involved. They will also be able to evaluate the effectiveness of specific communication practices, devise ways of improving them, and provide solutions to communication problems. These competencies have recognized value in the workplace as well as in one's personal life.

Graduates of the Communication program have pursued careers in sales, media relations, marketing, training, commercial production, film, editing, media planning, publishing, journalism, financial advisement, budget analysis, legislative assistance, radio programming, advertising, television production, and internal communication in not-for-profit, governmental, and business organizations. Some have college teaching or advisement positions. Others have gone on to law school, or to work on their master's degree or doctoral degrees in Communication and related fields.

Special Programs and Opportunities

The department provides research opportunities for graduate and undergraduate students, a rigorous honors program, and an exceptional internship program. The department also provides a combined B.A./M.A. Program in Communication. We encourage all students to become active members of the local student club of the National Communication Association. We invite outstanding communication majors to be inducted into Lambda Pi Eta, the local chapter of the national honor society for communication.

Internship Program

The *Communication Internship Practicum,* which requires enrollment in both Com 392 for 9 cr. (these credits are general electives and do not apply toward the major or minor) and Com 393z for 6 cr., is a full-time internship offered in fall and spring for juniors and seniors who have an overall grade point average of 2.50 or higher. It includes a weekly seminar meeting, and places students in communication related professional settings including, but not limited to, radio, television, public relations, the state legislature, and corporate communication. If you are accepted in this internship, you are not allowed to take any other course work during the semester. Acceptance into the program is competitive.

The part-time *Internship in Communication* (COM 390, for 1-3 lower-level credits) is for undergraduate majors and minors who wish to develop on-site experience in one of the communication professions. This part-time internship may be taken in fall, spring, or summer terms. There is no seminar component in this course, and the minimum number of hours at the host agency is proportionately less than the fulltime Internship Practicum.

Admission

Admission to the program in Communication is restricted. All students wishing to declare the major must complete an application and be formally admitted by the department. Applications can be made each semester. The deadline for submitting applications is the first day of the add-drop period in the fall and spring semesters. Notification of admission or denial generally will be made within three business days by a posted list outside the department office, and afterwards by mail.

Any matriculated student can apply for admission who has completed the following two courses with grades of C- or higher or S in each (See the section below for the policy on admission of transfer students to the major):

(a) A Com 100, and (b) either a course in statistics (A Mat 108, B Msi 220, A Soc 221, R Crj 281, or A Psy 210), or a course in formal logic (A Phi 210 or equivalent). Students who apply and are not accepted can reapply in subsequent semesters.

Note: A Com 100 course required for admission to the major must be taken on the Albany campus if the student does not already have credit for it prior to matriculation.

An applicant will be guaranteed admission to the major whose grades in the two entry courses average to B or higher (in A Com 100, and either a statistics or logic course). Grades of S are counted as the equivalent of C for the purposes of this computation.

Applicants whose grades in the two entry courses average between B and C- will be admitted to the major on a space-available basis. Applications in this group are rank ordered each semester on the basis of a Composite Grade Point Average. This Composite Grade Point Average is computed by adding together the student's overall grade point average and the average of the grades in the two entry courses (A Com 100 and a statistics or logic course). Applicants in this group are accepted in descending rank order until all the spaces for new majors that semester are filled. However, no two applicants with the same Composite Grade Point Average will be treated differently: if one is accepted with that average, all others will be accepted with that average even if the total number accepted exceeds the available spaces that semester.

Transfer students who have completed at least 3 credits in Communication courses, and a total of at least 6 credits in courses that count towards the major in Communication, will be admitted to the major automatically if their GPA in all transfer courses that count towards the major is 2.0 or higher. All other transfer students seeking admission to the major will have to meet the admissions requirements for matriculated students after they begin coursework on the Albany campus.

Transfer students admitted to the major who do not have credit for A Com 100 or an approved statistics or logic course upon matriculation are still required to complete those courses with grades of C- or better. Transfer students whose grades in those two courses fall below that minimum are subject to being withdrawn from the major, pending an appeal and departmental review, but will automatically be readmitted if and when they meet the requirement.

Advisement

Majors in the Communication Department are encouraged to seek advisement each semester. Advisement is offered by appointment between the end of the add-drop period and the beginning of the advance registration period. Majors who have been advised during that period are given priority for enrollment for the next semester's Communication classes. For students newly admitted to the major, attendance at an orientation meeting for new majors is required in order to get an advisement appointment.

Advisement is under the direction of the Director of the Undergraduate Program. Advisement each semester is generally conducted by an advising staff composed of graduate assistants. However, undergraduate majors are encouraged to seek out a meeting with a faculty member when they begin their studies in the department to discuss their goals, and devise an overall plan of study supportive of those goals in the Department, in their Minor or Second Major, and in their General Education requirement courses and electives.

Degree Requirements for the Major in Rhetoric and Communication

General Program B.A.: A minimum of 36 credits including: A Com 100; a computing course [all minors but business: A Cas 200 or B Msi 215 or A Csi 101 or A Csi 201 or R Isp 100 or R Isp 301] [business minors: B Msi 215 or A Csi 101 or A Csi 201]; a statistics course (A Mat 108 or B Msi 220 or A Soc 221 or R Crj 281 or A Psy 210) or logic (A Phi 210); A Com 265; one course from either A Com 203 or 212; and 15-18 additional credits in the Department of Communication as advised (of which at least 12 credits must be at the 300-level or above); and 3-6 credits of supporting courses (outside the Department of Communication), as advised.

A Com 265 is restricted to A-E grading after matriculation at Albany.

Course offerings are listed below in grouping according to the following headings:

1. General Foundations,
2. Public Communication,
3. Interpersonal Interaction/Cultural Practices,
4. Organizational Communication,
5. Applied Studies.

Courses in General Foundations offer students an introduction to the practice and social consequences of communication in a variety of settings, and an overview of traditional and contemporary thought on human communication.

Courses in Public Communication create a basic understanding of the process of communication in the political process, and public life more generally. This includes attention to communication and media issues in political participation, legislative processes, social movements, and election campaigns. This also includes attention to the speaker-audience setting typical of argumentation and persuasion in social and political life.

Courses in Interpersonal Interaction/Cultural Practices provide for a basic understanding of the process of communication in face to face interaction. These include attention to language use and strategy in personal relationships, health care, and work relationships of various kinds. Other courses include attention to cultural differences in face to face and group communication practices, and the role of communication in everyday life.

Courses in Organizational Communication address communication processes within and between organizations that affect their internal operations, development, climate, productivity, and social acceptance. These courses include a concern for the effect of new information technologies on organizational communication.

Applied Studies courses provide an opportunity for students who have achieved a grounding in the appropriate theoretical and research literature of the field, to apply this knowledge in independent projects or internships.

Honors Program

The honors program in Communication is designed to provide opportunities for the most talented and motivated students to work closely with each other and with the faculty.

Students may apply for admission at any point during a semester and may reapply if rejected after the close of that semester or thereafter. Decisions of the Honors Committee on admission are final and not subject to review or appeal.

Applications for admission will be approved if the student meets the following criteria:

The applicant is a major in the department, with a 3.50 average in the required courses for admission to the major.

The applicant has completed at least two full-time semesters of college study at Albany, with an overall average of at least 3.50, or the equivalent in the case of transfer students.

Admission to the program will be on a provisional basis for any student with fewer than 12 credits in Communication. Upon completion of 12 credits, admission will be finalized.

Students in the honors program are required to complete a minimum of 36 credits, meeting all requirements of the major, except for a special requirement among courses at the 300 level or

above as follows: instead of 6 credits of electives at the 300 level or above, students in the honors program must complete either an honors project for 6 credits (A Com 499), or a senior honors project for 3 credits (A Com 499) plus 3 credits in a graduate course in

Communication (for undergraduate credit) with approval of the undergraduate director.

Students will be put on program probation by the Honors Committee at the end of any semester in which their cumulative average in the major falls below 3.50 or their term average that semester is below 3.30.

Students will be dismissed from the program if they are placed on program probation in two consecutive semesters, or if they receive a grade below B in A Com 499. Students dismissed from the program cannot be readmitted unless the grades on which dismissal is based were in error and are officially changed.

After completion of the requirements above, the records of candidates will be reviewed by the Departmental Honors Committee, who shall recommend to the department candidates for the degree with honors in Rhetoric and Communication.

Combined B.A./M.A. Program

The combined B.A./M.A. program in Rhetoric and Communication provides an opportunity for students of recognized academic ability and educational maturity to fulfill integrated requirements of undergraduate and master's degree programs from the beginning of the junior year. The program provides an integrated and focused curriculum in Communication that allows the upper-level student exposure to advanced knowledge in theory and substantive areas and opportunities for participation in research. A carefully designed program can permit a student to earn the B.A. and M.A. degrees within nine semesters.

The combined program requires a minimum of 141 credits, of which at least 33 must be graduate credits. In qualifying for the B.A., students must meet all University and college requirements, including the requirements of the undergraduate major described previously, the minor requirement, the minimum 90 credit liberal arts and sciences requirement, general education requirements, and residency requirements. In qualifying for the M.A., students must meet all University and college requirements as outlined in the Graduate Bulletin, including completion of a minimum of 33 graduate credits and any other conditions such as a research seminar or thesis, comprehensive examination, professional experience, and residency requirements. Up to 12 graduate credits may be applied simultaneously to both the B.A. and M.A. programs.

Students are considered as undergraduates until completion of 120 graduation credits and satisfactory completion of all B.A. requirements. Upon meeting B.A. requirements, students are automatically considered as graduate students.

Students who have completed a minimum of 6 credits of course work in Rhetoric and Communication may apply for admission to the combined degree program in Rhetoric and Communication at the beginning of their junior year or after the successful completion of 56 credits, but no later than the accumulation of 100 credits. A cumulative grade point average of 3.20 or higher and three supportive letters of recommendation from faculty are required for consideration.

General Foundations Courses

A Com 100M Human Communication: Language and Social Action (3)
Introduction to human communication in terms of an examination of the communication needs, processes, and results that typically occur in different social settings. [SS]

A Com 265 Introduction to Communication Theory (3)
Approaches to the study of human communication. Consideration of major research findings, methods and conceptualizations in such areas as persuasion, interpersonal communication, group communication, organizational communication, and mass communication. For rhetoric and communication majors completing their major requirements as outlined in this bulletin or subsequent editions, A Com 265 is restricted to A–E grading after matriculation at Albany. Prerequisite(s): A Com 100M. [IL]

A Com 270 Methods of Communication Research (3)
Intermediate-level study of research strategies, design of experiments, and field methods in human communication. For rhetoric and communication majors completing their major requirements as outlined in this bulletin or subsequent editions, A Com 270 is restricted to A-E grading after matriculation at Albany. Prerequisite(s): A Com 100. Statistics course recommended.

Courses in Public Communication

A Com 203 Speech Composition and Presentation (3)
Introduction to the composition and presentation of speeches. Course includes guided practice in topic development, organization, and the oral presentation of various kinds of speeches. [OD]

A Com 212 Argumentation and Debate (3)
Study of and practice in the methods of argument. Special emphasis upon skills needed in oral argumentation. [OD]

A Com 238 Introduction to Mass Communication (3)
Survey of electronic and print media with emphasis on structural analysis, content analysis, and research.

A Com 345 Argumentative Methods (3)
Composition and criticism of argumentative discourse stressing the nature of issue, proposition, evidence, and form. Theory of rhetorical and scientific argument is also included. A Com 345Z is the writing intensive version of A Com 345; only one may be taken for credit.

A Com 345Z Argumentative Methods (3)
A Com 345Z is the writing intensive version of A Com 345; only one may be taken for credit. [WI]

A Com 355 Introduction to Rhetorical Theory (3)
The writings of major theorists, from Aristotle to figures of the 20th century. A Com 355Z is the writing intensive version of A Com 355; only one may be taken for credit. Prerequisite(s): junior or senior class standing, or permission of instructor.

A Com 355Z Introduction to Rhetorical Theory (3)
A Com 355Z is the writing intensive version of 355; only one may be taken for credit. Prerequisite(s): junior or senior class standing, or permission of instructor. [WI]

A Com 370 Theories of Mass Media (3)
The theories, research methods, and empirical research findings related to the effects of mass communication on individuals and society. Prerequisite(s): A Com 238 and A Com 265, or permission of instructor.

A Com 376 Empirical Studies of Persuasion (3)
Empirical approaches to attitude and behavior change brought about by communication. Prerequisite(s): A Com 265 or permission of instructor.

A Com 378 Studies in Public Persuasion (3)
Application of the student's critical skills to the rhetoric of a particular public figure or movement; or to the rhetorical practice of a particular historical period or genre of public persuasion, such as television advertising, propaganda in mass movements, American campaign rhetoric. A Com 378Z is the writing intensive version of A Com 378. May be repeated for a total of 15 credits with changes in topic. Prerequisite(s): junior or senior class standing, or permission of instructor.

A Com 378Z Studies in Public Persuasion (3)
A Com 378Z is the writing intensive version of A Com 378; may be repeated for a total of 15 credits when topic differs. Prerequisite(s): junior or senior class standing, or permission of instructor. [WI]

A Com 380 Political Campaign Communication (3)
This course examines from both a theoretical and a practical standpoint the planning, execution, and evaluation of campaign communication strategies. It focuses mainly on modern presidential campaigns—the organization, the candidate, the audience, and the media. Forms examined include speeches, debates, television commercials, polling, news stories, and interpersonal contact. This course often has a co-requirement of A Com 297 for 1 credit. Prerequisite(s): junior or senior class standing or permission of instructor.

A Com 465 Studies in Communication Theory (3)
Study of a selected topic in communication theory; e.g., nonverbal communication, consistency theory, or mass communication. May be repeated for a total of 15 credits with changes in topic. Prerequisite(s): A Com 265, and junior or senior class standing.

Courses in Interpersonal/ Intercultural Communication

A Com 201 Interpersonal Communication (3)
Introduction to those aspects of communication which typify interpersonal relationships. Included are experientially acquired insights into, and theoretical considerations of, interpersonal communication.

A Com 204 Group Communication (3)
The theory and practice of small group interaction. Examination of both group dynamics and cognitive processes, as they relate to group deliberation.

A Com 304 Conference and Group Leadership (3)
Advanced study of small group deliberation, with special emphasis upon theories of group leadership as they apply in business and professional group communication settings. Prerequisite(s): A Com 204 or permission of instructor. .May not be offered in 2003-2004.

A Com 367 Theories of Interpersonal Communication (3)
The theories, research methods, and representative research findings related to experimental and observational studies of interpersonal communication. Prerequisite(s): A Com 201 and 265, or permission of instructor.

A Com 371 Theories of Intercultural Communication (3)
Communication between people from different cultures and/or subcultures, including racial and ethnic groups. Focus is upon appropriate theories, concepts, research findings, and practice in intercultural settings. Prerequisite(s): A Com 265, or permission of instructor. [GC; DP, if taken *before* Fall 2004.]

A Com 373 Communication Codes (3 or 6)
The patterns of communication behavior in everyday life. Emphasizes both language and nonlanguage behavior, and the various social contexts in which interaction occurs. Topics include social and cultural rules for structuring messages and the basis for interpreting behaviors. Course includes major components in both theory and research on this topic, including a research paper. Course will be scheduled intensively during the semester to reflect the number of credits to be earned. Prerequisite(s): junior or senior class standing. .May not be offered in 2003-2004.

A Com 465 Studies in Communication Theory (3)
Study of a selected topic in communication theory; e.g., nonverbal communication, consistency theory, or mass communication. May be repeated for a total of 9 credits when topic differs. Prerequisite(s): A Com 265, and junior or senior class standing.

Courses in Organizational Communication

A Com 369 Theories of Organizational Communication (3)
Theoretical models and empirical studies of communication within complex organizations. In-depth case study of one or more organizations. Prerequisite(s): A Com 265 or permission of instructor.

A Com 465 Studies in Communication Theory (3)
Study of a selected topic in communication theory; e.g., nonverbal communication, consistency theory, or mass communication. May be repeated for a total of 9 credits with changes in topic. Prerequisite(s): A Com 265, and junior or senior class standing.

Courses in Applied Studies

A Com 297 Research Practicum (1–3)
Supervised participation in established research projects. Course may be repeated for a total of 6 credits, but only a maximum of 3 credits may be applied toward major requirements. Prerequisite(s): permission of instructor. *S/U* graded.

A Com 390 Internship in Communication (1–3)
Supervised participation in rhetorical or communicative practices. May be repeated for a total of 3 credits. This course is meant to provide practical experience and cannot be counted among the 12 additional credits in "A Com" courses at the 300 level required for majors. **Open only to majors and minors in their junior or senior years with cumulative averages of at least 2.50.** Prerequisite(s): A Com 265, and permission of undergraduate director. *S/U* graded.

A Com 392 Internship in Operational and Applied Communication Theory (9)
Supervised field placement in an approved setting. Cumulative average of at least 2.50 required. (Open only to rhetoric and communication majors and minors, except with permission of instructor.) Student attends a weekly seminar (A Com 393) and prepares a major project and weekly reports in conjunction with that seminar. Does not satisfy major or minor requirements. **Internships are open only to qualified juniors and seniors who have an overall grade point average of 2.50 or higher.** Corequisite(s): A Com 393 or 393Z and permission of instructor. *S/U* graded.

A Com 393Z Seminar in Operational and Applied Communication Theory (6)
Advanced applications of rhetoric and communication theory. Participants will complete a major project describing in detail each segment of their work. Each participant will also complete five ten-page analytical papers in addition to a series of weekly seminar papers. (Open only to rhetoric and communication majors and minors, except with permission of instructor.) Yields credit toward rhetoric and communication major or minor. Corequisites: A Com 392 and permission of instructor. [WI]

A Com 397 Independent Study and Research in Communication (1–3)
Directed reading and conferences on selected topics. Course may be repeated for a total of 6 credits. Prerequisite(s): A Com 265, and permission of instructor and department chair.

A Com 499 Senior Honors Project (3–6)
Design and implementation of an investigation of some clearly defined problem in rhetoric and communication, under faculty supervision. Students may repeat this course once, for a maximum of 6 credits, for those projects requiring two consecutive semesters of study. Prerequisite(s): admission to the honors program in communication; enrollment by permission of the director of undergraduate studies.

DEPARTMENT OF COMPUTER SCIENCE

Faculty
Distinguished Professor Emeritae/i
Richard E. Stearns, Ph.D.
Princeton University
Professors
Harry B. Hunt III, Ph.D.
Cornell University
Neil V. Murray, Ph.D.
Syracuse University
Paliath Narendran, Ph.D.
Rensselaer Polytechnic Institute
Sekharipuram S. Ravi, Ph.D.
University of Pittsburgh
Daniel J. Rosenkrantz, Ph.D.
Columbia University
Dan E. Willard, Ph.D.
Harvard University
Professor Emeritae/i
Dean N. Arden, Ph.D.
Purdue University
Associate Professors
George Berg, Ph.D.
Northwestern University
Peter A. Bloniarz, Ph.D. (Collins Fellow)
Massachusetts Institute of Technology
Seth D. Chaiken, Ph.D.
Massachusetts Institute of Technology
Mei-Hwa Chen, Ph.D.
Purdue University
Andrew R. Haas, Ph.D.
University of Rochester
Lenore M. Restifo Mullin, Ph.D.
Syracuse University
Tomasz Strzalkowski, Ph.D.
Simon Fraser University
Associate Professor Emeritae/i
Edwin D. Reilly, Ph.D.
Rensselaer Polytechnic Institute
Assistant Professors
Ian N. Davidson, Ph.D.
Monash University, Australia
Robert F. Erbacher, Sc.D.,
University of Massachusetts at Lowell
William A. Maniatty, Ph.D.
Rensselaer Polytechnic Institute
Adjuncts (estimated):3
Teaching Assistants (estimated): 21

Courses offered by the Department of Computer Science provide an introduction to the theory and practice of computing. Familiarity with computer languages and data structures is developed in appropriate courses by the completion of programming assignments related to course material.

Students may elect a short sequence of courses in a particular aspect of computer science, complete a minor for broader competence, or obtain a foundation in both theory and practice by completing either a major in computer science or in computer science and applied mathematics.

Among the majors that combine well with either elective course work or a minor in computer science are mathematics, any science major, economics, geography, linguistics, rhetoric and communication, psychology, and sociology. A major in business administration (such as the management science concentrations) would also be appropriate, but students should be aware that they will also have to satisfy the School of Business admission requirements.

A familiarity with computers and their applications may also be obtained through noncredit "Short Courses" offered by the Computing Center and through computer courses offered by the Departments of Atmospheric Science, Biological Sciences, Chemistry, Physics, and Teacher Education, the School of Business, and the College of Arts and Sciences.

Students with a strong interest in the languages and programming techniques commonly used in business may wish to elect the sequence A Csi 101N, 203, 205, and 410.

The computer science majors combine advanced topics in computer practice with introductory material on the mathematical foundations of computer science including abstract models of computers and languages and the fundamental limits of computing.

Students with a primary interest in the applications of computing may combine the major in computer science with a major or minor in other disciplines. Since the range of applications of computing continues to increase, such combinations may be attractive to prospective employers.

The B.A. in computer science requires that the student elect at least one minor from the list of approved minors described in a previous section of this bulletin. Students considering a minor in either mathematics or physics are advised instead to consider one of the B.S. programs described below.

The interdisciplinary combined major and minor program in computer science and applied mathematics or the B.S. program in computer science is recommended for those students who intend to pursue graduate programs in computer science or who wish to qualify for positions involving research or advanced development in computer systems design. The interdisciplinary program combines a strong sequence in computer science with those courses in mathematics particularly relevant to advanced work in computer science.

The B.S. in computer science encompasses a two-course sequence in physics and a second two-course sequence in either more advanced physics or in a second science elected by the student.

Degree Requirements for the Majors in Computer Science

General Program B.A.:

A minimum of 41 credits including A Csi 201N, 310, 210, 333, 311, 402, 404; two additional A Csi courses numbered in the range 400–450 or 500–550; A Mat 111 or 112 or 118, 113 or 119, and 367; plus completion of an approved minor whose courses may not overlap with any of the courses used to complete the major.

General Program B.S. (combined major and minor sequence):

A minimum of 74 credits as follows: A Csi 201N 310, 210, 333, 311, 300Z, 401, 402, 403, 404, 409, plus two courses from A Phy 353, A Phy 454, or any A Csi course numbered 300–450 or 500–550 for a total of 42 credits; A Mat 111 or 112 or 118, 113 or 119, 220, 367, plus three credits from any A Mat course at the 300 level or above; A Phy 140N, 145, 150N, and 155; A Phy 240 and 250, or A Phy 240 and 315, or a two-course sequence in a second science as approved by the department..

Program in Computer Science and Applied Mathematics

The interdisciplinary combined major and minor program in computer science and applied mathematics is an integrated program providing a strong background in the theory and practice of computer science combined with those courses in mathematics which are most likely to be needed for advanced work in computer science, either in graduate study or industrial research and development.

The program provides excellent preparation for the advanced Graduate Record Examination in computer science and will provide an attractive background for admission to high quality graduate programs in computer science. The mathematics portion of the program, with the appropriate selection of one or two electives, can provide a good mathematical background for work in operations research which is an important area of computer application in business, or for numerical computation in a variety of areas related to the scientific and engineering use of computers.

Degree Requirements for the Major in Computer Science and Applied Mathematics

General Program B.S. (combined major and minor sequence): A minimum of 66 credits as follows: A Mat 111 or 112 or 118, 113 or 119, 214, 220, 367; A Csi 201N, 210, 310, 311, 333, 401, 402, 403, 404, 409; 15 additional credits, as advised, from the following list of courses, including at least 9 credits in mathematics: any course with an A Mat prefix numbered 300 or above, any course with an A Csi prefix numbered 300–450 or 500–550, A Csi 499, A Phy 353, A Phy 454, A Phi 432.

Honors Program

The honors program is recommended for students planning graduate study. To be eligible for admission, the student must declare one of the three Computer Science majors and must have completed the following courses: A Csi 201N, 210, 310, 333; A Mat 112 and 113. The student must have a GPA of at least 3.5 in the above courses and an overall GPA of at least 3.25. To complete the honors program, the student must complete 12 credits of course work (to be determined by the department in consultation with each student) designed to ensure a rigorous mastery of the discipline, together with an Honors seminar (A Csi 487/487Z), and an Honors project of at least 6 credits, (A Csi 488Z). Consult the department for further information.

Combined B.S./M.A. and B.S./M.S. Programs

Two combined bachelor's/master's degree programs are available with the undergraduate major in computer science and applied mathematics. The combined B.S./M.A. program combines the undergraduate program in computer science and applied mathematics with the graduate program in mathematics. The combined B.S./M.S. program combines the undergraduate program in computer science and applied mathematics with the graduate program in computer science.

Both programs provide an opportunity for students of recognized academic ability and educational maturity to fulfill integrated requirements of undergraduate and master's degree programs from the beginning of the junior year. A carefully designed program can permit a student to earn the B.S. and M.S. or the B.S. and M.A. degrees within nine or ten semesters.

The combined programs require a minimum of 140 credits, of which at least 32 must be graduate credits. In qualifying for the B.S., students must meet all University and college requirements, including the requirements of the undergraduate major described previously, the minimum 60-credit liberal arts and sciences requirement, general education requirements, and residency requirements.

In qualifying for the M.S. or M.A., students must meet all University and college requirements as outlined in the Graduate Bulletin, including completion of a minimum of 32 graduate credits, and any other conditions such as a research seminar, thesis, comprehensive examination, or other professional experience and residency requirements. Up to 12 graduate credits may be applied simultaneously to both the B.S. and M.S. or the B.S. and M.A. programs.

Students are considered as undergraduates until completion of 120 graduation credits and satisfactory completion of all B.S. requirements. Upon meeting B.S. requirements, students are automatically considered as graduate students.

Students may apply for admission to either combined degree program at the beginning of their junior year or after the successful completion of 56 credits, but no later than the accumulation of 100 credits. A cumulative grade point average of 3.20 or higher and three supportive letters of recommendation from faculty are required for consideration, but admission of a student who meets the minimum requirements is not automatic.

Courses

A Csi 100 Computing and Disability (3)
The relation between people with disabilities and computers. Lectures, tutorials, and laboratory will deal with topics such as how computers may be used by persons with disabilities, assistive devices, software, and applications such as word processing, database inquiries, spreadsheets, and telecommunications. For students with disabilities and for professionals who teach and assist people with disabilities.

A Csi 101N Elements of Computing (3)
Introduction to the principles and practice of computer programming through the use of the general purpose high level programming language VISUAL BASIC. Concepts introduced include algorithms, arrays, files, structured programming, and top-down design. Course also includes a brief introduction to computer technology and computer architecture from both a historical and modern perspective. Only one of A Csi 101N and B Msi 215 may be taken for credit.

A Csi 102 Microcomputer Software (3)
Theory and practice of general purpose microcomputer software systems such as spreadsheet and relational database packages. Query languages for database access. Word processing with emphasis on spelling and grammar checking. Normally offered spring semester only.

A Csi 103 Topics in Computer Literacy (3)
Each offering of this course will address one or more topics that are germane to the use of computers in every day life. The main emphasis of this course will be on the use of available software packages.

A Csi 120N Computational Principles and Issues (3)
Principles and issues arising in a variety of computational situations. Discussion of topics from computation theory, artificial intelligence, and systems design. From computation theory, an emphasis on impediments to computation, such as undecidability and NP-hardness. From artificial intelligence, an emphasis on knowledge representation. From systems, an emphasis on computer design and on synchronization problems. May not be offered in 2003-2004.

A Csi 198 (formerly A Csi 298) Consulting Service (1–3)
Classroom instruction on the practical aspects of computing on the campus personal, network and mainframe computer environment, including word processing, data communications, networking and using various operating systems. Training is followed by continuing consulting work experience in the public user rooms. Work schedules are determined on an individual basis during the first two weeks of class. May be repeated for credit. Total credits for A Csi 198, A Csi 490, A Csi 497 and the former A Csi 298 and A Csi 498 may not exceed nine. Prerequisite(s): permission of instructor. *S/U* graded. [IL]

A Csi 201N Introduction to Computer Science (4)
Computer algorithms and their representation. The principle of information hiding and its relation to program block structure. File structure and access methods. The efficient use of computational resources. Program development and style.

A Csi 203 Data Processing Principles (3)
Introduction to systems analysis and structured programming techniques using COBOL (Common Business Oriented Language). Basic COBOL, table handling, sorting, file structures and maintenance, storage media, and basic functions of a multi-programming operating system. May not be taken for credit by students with credit for A Csi 206 or A Csi 306. Prerequisite(s): A Csi 101N or 201N or B Msi 215. Normally offered spring semester only.

A Csi 204 Scientific Computing (3)
Programming in the scientific languages Fortran 77 and APL. The effect of internal storage representation on precision and accuracy. Symbolic computation using Macsyma. Elementary numerical methods and the graphical presentation of scientific data. Software libraries of interest to scientists. Prerequisite(s): A Csi 101N or A Csi 201N or B Msi 215, and A Mat 113 or 119. Normally offered spring semester only.

A Csi 205 Object Oriented Programming for Data Processing Applications (3)
Introduction to object oriented programming, abstraction and system analysis techniques using the C++ and Java programming languages. Basic syntax and semantics, classes, objects, arrays and pointers. Modular software design using header or class files and separate compilations and linking. Use of standard class and function libraries and packages. Introduction to memory management and performance issues. Prerequisite(s): B Msi 215 or A Csi 101N or 201N.

A Csi 210 Discrete Structures (4)
Proofs by induction; mathematical reasoning, propositions, predicates and quantifiers; sets; relations, graphs, and trees; functions; counting, permutations and combinations. Prerequisite(s) or corequisite: A Csi 201N. Normally offered fall semester only.

A Csi 221 (= A Mat 221) Introduction to Discrete Mathematics (3)
Topics chosen from sets, relations, induction, binomial theorem, permutations and combinations, counting, and related topics in discrete mathematics. Only one of A Mat 221 & A Csi 221 may be taken for credit. Prerequisite(s) or corequisite: A Mat 113 or 119.

A Csi 300Z Social, Security, and Privacy Implications of Computing (3)
The ethical and moral implications of using computers to affect the lives of individual and collective members of human society. Material drawn from a variety of topics, including security and privacy in computers, networks, security measures, and human users, data banks vs. rights to privacy, intellectual property, open vs. closed software, software piracy, unauthorized access, and other computer crimes. Prerequisite(s): A Csi 201N. [WI]

A Csi 310 Data Structures (3)
Commonly used abstract data structures and their implementation. The use of pointers and recursive programming. Stacks, queues, lists and trees, and their application to such problems as sorting and searching. Analysis of algorithms for using these structures. Prerequisite(s): A Csi 201N. Normally offered spring semester only.

A Csi 311 Principles of Programming Languages (3)
Fundamental concepts and general principles underlying programming languages and their use as illustrated by Prolog and Lisp. Analysis and implementation of run-time environment including scope rules, binding, and parameter passing mechanism. Introduction to interpreters and compilers. Prerequisite(s): Grade of C or better required in A Csi 210 and 310. Majors who declare prior to September 1, 2002 will have the grade restriction waived. Normally offered spring semester only.

A Csi 333 Programming at the Hardware Software Interface (4)
Instruction set architecture of contemporary computers; boolean logic, memory, registers, instructions and interrupts. Assembly language programming; assembler passes, symbols, macros, function linkage and separate compilations. C language programming; syntax, control, types, abstractions, pointers and strings. dynamic memory, standard and user written libraries. ANSI and C++ standards. Instruction set simulation. Prerequisite(s): Grade of C or better required in A Csi 310. Majors who declare prior to September 1, 2002 will have the grade restriction waived. Normally offered fall semester only.

A Csi 400 Operating Systems (3)
Historical overview; operating system services; mass storage file organization; memory management in multiprogrammed systems; virtual memory; resource allocation; concurrent processes; deadlock detection and prevention; security; the design of contemporary operating systems such as UNIX. Prerequisite(s): A Csi 333.

A Csi 401 Numerical Methods for Digital Computers (3)
Study of practical methods for the numerical solution of a variety of problems on a digital computer. Topics covered will include roots of equations, numerical interpolation, numerical integration and differentiation; the evaluation of mathematical functions, least squares curve fitting; the solution of simultaneous linear equations, matrix inversion and linear programming. Prerequisite(s): A Mat 220 and A Csi 310. Normally offered fall semester only.

A Csi 402 Systems Programming (3)
Programming aspects of operating systems. Topics covered include implementation of storage management, resource allocation, multi-processing, scheduling, synchronization, inter-process communication, and terminal I/O. Emphasis on projects to enhance subject understanding, problem solving, and programming skills. Prerequisite(s): Grade of *C* or better required in A Csi 333. Majors who declare prior to September 1, 2001 will have this new restriction waived. Normally offered spring semester only.

A Csi 403 Algorithms and Data Structures (3)
Description of common data structures such as lists, push-down stores, queues, trees, and graphs. Definition of algorithm efficiency and efficient algorithms for integer and polynomial arithmetic, sorting, set manipulation, shortest paths, pattern matching, and Fourier transforms. Prerequisite(s): A Csi 210 and 310. Normally offered spring semester only.

A Csi 404 Computer Organization (3)
An introduction to the logical organization of the hardware components of computing systems. Topics include logic design from a functional point of view, data representation and processing, description of major components such as the central processing unit and memory, and control and communication within the components and in the system. Prerequisite(s): A Csi 333 and 210. Normally offered spring semester only.

A Csi 407 User Interfaces (3)
The C programming language. Event-driven systems. Aspects of the UNIX operating system that support simulation of multi-tasking in a single processor environment. Window-oriented user interfaces. Pop-up/pull-down menus. Human factors in software engineering. Prerequisite(s): A Csi 333. .May not be offered in 2003-2004.

A Csi 409 Automata and Formal Languages (3)
Introduction to the theory of computation. Models of computation including Turing machines and push-down automata will be examined along with their formal language counterparts such as context-free languages. Additional topics include unsolvability, computational complexity, and applications to computer science. Prerequisite(s): A Csi 210. Normally offered fall semester only.

A Csi 410 Database Management Systems (3)
Introduction to database management systems (DBMS) with emphasis on the relational model. Physical and logical database design, rollback and recovery techniques, access methods and query language concepts. The design and use of microcomputer-based relational systems and spreadsheets. The hierarchical and network DBMS models. Prerequisite(s): A Csi 310. Normally offered fall semester only.

A Csi 416 Computer Communication Networks (3)
Introduction to computer communication networks. Equal emphasis on all layers of the ISO reference model and the TCP/IP protocol suite. Topics include physical networks, sliding window protocols, remote procedure call, routing, naming and addressing, security, authentication, performance, and applications. Prerequisite(s): A Csi 402 and A Mat 367.

A Csi 417 Compiler Construction (3)
Compilation vs. interpretation; lexical analysis based on finite automata; parsing; syntax-directed translation; symbol tables; run-time storage allocation; error detection and recovery; code generation and optimization. Prerequisite(s): A Csi 333 and 409.

A Csi 418 Software Engineering (3)
Software engineering principles, the role of abstraction in programming, abstract data types, modularization and module interfaces, specifications, and teamwork. Project work in contemporary concurrent and object-oriented languages. Prerequisite(s): A Csi 333. Normally offered fall semester only.

A Csi 421 Discrete Mathematics with Applications (3)
A deeper coverage of the content of A Csi 210. Proofs by induction, recursive definitions, and combinatorial analysis. Introduction to recurrence equations, graph theory, and abstract algebra. Applications to proofs of correctness and analysis of combinatorial and algebraic algorithms. Prerequisite(s): A Csi 210. Normally offered fall semester only. .May not be offered in 2003-2004.

A Csi 422 (formerly A Csi 302) Introduction to Computer Graphics (3)
Mathematics, data structures, algorithms, system architecture and programming projects for implementing two and three dimensional computer graphics software. Rastorization, matrices, linear and projective transformations; clipping, removal of hidden lines and surfaces. Devices, event driven user interaction, and an introduction to window systems and visual programming tools. Prerequisite(s): A Mat 113 and either A Csi 333 or permission of instructor. A Mat 220 (Linear Algebra) is desirable but not required.

A Csi 424 Information Security (3)
This course covers the broad spectrum of technical issues surrounding computer security and intrusion detection. Topics considered include: viruses, worms, host- and network-based vulnerabilities and countermeasures, database security, intrusion detection, and privacy and legal issues. Facilities for securing hosts and limiting vulnerability are also discussed. Unlike in a systems administration class, detailed operational issues are not discussed. Prerequisite(s): A Csi 402 or A Csi 400.

A Csi 426 Cryptography (3)
The making of ciphers to encode information is the subject of cryptography. This course covers the field from its origins in early historic times through its most up-to-date implementations and uses in digital computers. Various ciphers will be shown and their security assessed. This latter is known as cryptanalysis – the attempt to break a cipher in order to read the underlying message. The course will emphasize how cryptography and cryptanalysis are intimately related, and how the arms race between the two has motivated progress throughout their history. Prerequisite(s): A Csi 333 and co-registration in A Csi 403.

A Csi 430 Introduction to Mathematical Logic (3)
Topics include logical validity, logical consequence, computerized theorem proving, compactness, soundness, consistency, completeness and incompleteness in the context of propositional logic, first order logic, Frege-Hilbert deduction and computerized Semantic Tableaux deduction. This course will survey Goedel's Completeness and Incompleteness Theorems along with decidability, undecidabaility, and a classification of theoretically computable and uncomputable problems. Prerequisite(s) A Csi 210 plus permission of instructor.

A Csi 435 Introduction to Artificial Intelligence (3)
An introduction to the broad spectrum of approaches and techniques of Artificial Intelligence. Emphasis on how to represent knowledge in a computer and how to process that knowledge to produce intelligent behavior. Topics include expert systems, heuristic search, natural language processing and logic-based approaches. Programming assignments using artificial intelligence languages. Prerequisite(s): A Csi 311.

A Csi 440 High Performance Scientific Computing I (3)
Introduction to distributed, shared memory, and non-uniform memory advanced architectures, advanced networks, advanced parallel and distributed languages supporting scientific computing. Basic linear algebra algorithms and their relation to decomposition, memory, access patterns, and scalability. High-level prototyping languages, experimental methods, performance analysis and polyalgorithm design. Prerequisite(s): A Csi 310, A Csi 401, A Mat 220 and knowledge of numerical methods and Fortran; or permission of instructor.

A Csi 441 High Performance Scientific Computing II (3)
Numerical methods for ODE's, PDE's and transforms (FFT) suitable for advanced parallel and distributed computing. Explicit versus implicit message generation and processing in distributed computing environments. Advanced experimental methods. High Performance Fortran, F90 and MPI. Prerequisite(s): A Csi 440.

A Csi 445 Topics in Computer Science (3)
The contents of this course will vary from semester to semester. Each offering will cover an advanced senior-level topic in Computer Science. Prerequisite(s): A Csi 333 (or A Csi 205 & 310) or permission of instructor. May be repeated for credit when content varies./

A Csi 487 Honors Seminar (3)
Each student is required to carry out independent study under the supervision of a faculty member and present a departmental colloquium on the chosen topic. Students may also be required to complete a theoretical or an experimental project, write reports or make short presentations. Only one of A Csi 487 and A Csi 487Z may be taken for credit. Prerequisite(s): Admission to the honors program.

A Csi 487Z Honors Seminar (3)
Each student is required to carry out independent study under the supervision of a faculty member and present a departmental colloquium on the chosen topic. Students may also be required to complete a theoretical or an experimental project, write reports or make short presentations. Only one of A Csi 487 and A Csi 487Z may be taken for credit. Prerequisite(s): Admission to the honors program. [WI]

A Csi 488Z Honors Project (3-12)
Students are required to pursue research supervised by a faculty member and submit final reports describing their research. Outcomes of this research may include software/hardware artifacts, data collected through experiments, bibliographies or research papers. Each student is evaluated by a faculty committee during the second semester of their senior year. Honors students must complete at least 6 credits of this course. Prerequisite(s): Admission to the honors program. [WI]

A Csi 490 Internships in Computer Science (1–3)
Arrangements with external agencies or companies requiring programming or design assignments involving computer systems in a practical environment. Interns are selected by the department and are required to submit a significant report upon completion of the internship. Total credits for A Csi 198, A Csi 490, and A Csi 497 and the former 298 and 498 may not exceed nine. **Internships are open only to qualified juniors and seniors who have an overall grade point average of 2.50 or higher.** Prerequisite(s): A Csi 203 or 310, and permission of department. *S/U* graded. For majors only.

A Csi 497 Independent Study in Computer Science (1–3)
Independent study in computer science under the guidance of faculty computer users. Students should expect to spend approximately three hours per week per credit solving real computer-related problems and submit a significant paper or report upon completion. May be repeated for credit. Total credits for A Csi 198, A Csi 490, and A Csi 497 and the former 298 and 498 may not exceed nine. Prerequisite(s): A Csi 203 or 310, and permission of department. *S/U* graded.

A Csi 499 Senior Project in Computer Science (3)
Introduction to software engineering. Students will participate in the design and production of a large, modular program typical of those encountered in business and industry. Prerequisite(s): A Csi 333 or 311, and permission of instructor.

DEPARTMENT OF EARTH AND ATMOSPHERIC SCIENCES

The Department of Earth and Atmospheric Sciences offers students four distinct undergraduate degrees within two programs: [1] a Bachelor of Science degree (B.S.) in Geological Sciences is offered within the Geological Sciences Program; [2] a Bachelor of Science (B.S.) in Atmospheric Science is offered within the Atmospheric Science Program; [3] a Bachelor of Science (B.S.) in Environmental Science; and [4] a Bachelor of Arts degree (B.A.) in Earth and Atmospheric Sciences. Both the B.A. in Earth and Atmospheric Sciences and the B.S. in Environmental Science are offered within the overall department, spanning both programs. All four degrees are recognized as particularly challenging and attract students of high caliber who are interested in studying the fundamental processes operating on-and-within the Earth and its atmosphere.
(A detailed description of the *Geological Sciences Program* follows below; descriptions of the *Atmospheric Science Program* and the *Broadcast Meterorology* and *Environmental Science Program* follow on pages 108 and 110.)

PROGRAM IN GEOLOGICAL SCIENCES

Faculty

Distinguished Teaching Professors
John W. Delano, Ph.D.
State University of New York at Stony Brook
Professors
William S. F. Kidd, Ph.D.
Cambridge University
Gregory D. Harper, Ph.D.
University of California, Berkeley
Professor Emeritae/i
Winthrop D. Means, Ph.D.
University of California, Berkeley
Akiho Miyashiro, D.O.C.
Tokyo University
Associate Professors
Andrei Lapenis, Ph.D.
State Hydrological Institute, St. Petersburg
(joint appointment in Geography and Planning)
Braddock K. Linsley, Ph.D.
University of New Mexico
Associate Professor Emeritae/i
George W. Putman, Ph.D.
Pennsylvania State University
Visiting Assistant Professors
John G. Arnason, Ph.D.
Stanford University
Adjuncts (estimated): 2
Teaching Assistants (estimated): 8

Careers

Graduates with a B.S. in geology or environmental science have found satisfying employment not only in jobs directly related to these disciplines but also in a wide variety of other activities. Students graduating with a B.S. in geology who pursue advanced degrees in geology, computer science, business administration, or geophysics have a competitive edge in the job market. Professional opportunities in jobs using geological expertise are much wider for graduates with master's degrees, in particular for employment with environmental service/consulting companies, oil and mineral resource companies, and with state or federal agencies having responsibilities involving geological matters (geological surveys, water supply, environmental conservation, transport, etc.). Developing shortages of fossil fuels and raw materials for industry, along with an increasing need for professionals trained to understand complex environmental problems should provide a sustained demand for professional geologists and environmental scientists.

Special Programs or Opportunities

The Geology Program sponsors two weekly seminar series that provide students with a sampling of important topics in current geological research: (1) informal talks given by faculty and graduate students; and (2) formal seminars presented by outside speakers. The Program also sponsors field trips in New York, New England, and the Appalachians.

Degree Requirements for the Major in Geology

General Program B.S.: A minimum of 66 credits for the combined major and minor including: (Required) A Geo 100N or A Geo 100F, 106, 210, 212, 222, 230, 231 (or 231Z), 330, 350, 400, , 470 ; A Mat 111 or 112 or 118, 113 or 119; A Phy 105N, 106, 108N; 109, A Chm 120N, 121, 122A, 122B. Elective Classes (choose at least 9 credits of the following; A Geo 260, 211, 331, 332, 420, 435, 450, 466, 497. Students are encouraged to take the following additional courses: A Geo, 317; A Mat 108, 214, 220, 311; A Csi 101N or 201N; A Atm 100N.

Degree Requirements for the Major in Earth and Atmospheric Sciences

Bachelor of Arts (B.A.): A minimum of 56-60 credits for the combined major and minor including: A Phy 105, 106, 108, 109; A Mat 101, 108, 111; A Chm 120N; A Geo 100N or 100F, 106, 250 or A Gog 101N; A Atm 100N or 102N, 210 or 210Z, 211; two courses from A Gog 304, 385, 431, 496; a total of at least 12 credits from the following, including at least one course from each discipline: A Geo 330, 350, 435, and A Atm 304 or 304Z, 305, 307 or 307Z, 311, 335, 390, 408B.

The B.A. in Earth and Atmospheric Sciences is offered as an interdisciplinary study of significant breadth spanning two classical disciplines. Students electing this major have the potential to realize new opportunities for personal enrichment and career development. However, those students committed to seeking advanced degrees in geology or atmospheric science should pursue the corresponding B.S. degree instead. All students contemplating any of the curricula described here should thoroughly discuss their options with personnel of the Advisement Services Center (ASC) and a department undergraduate adviser before formal declaration of a specific major.

Departmental Honors Program

Students who have achieved a GPA of 3.5 in the major, and an overall GPA of 3.25, may apply to the Department Chairperson not later than the end of their junior year to enter the Department Honors Program. Interested students should enroll in Geo 499, Seminar in Geology, in the spring semester of their junior year. In order to graduate with Honors, accepted students must take A Geo 498, Independent Honors Research (3 credits), and complete it with a grade of *A* or *A-*, as well as maintaining superior academic performance overall and in the major during their senior year. Proposals for research to be done in A Geo 498 must be approved in writing by the supervising faculty member and the Department Chairperson before the end of the spring semester of the student's junior year. The other three required credits for Departmental Honors will consist of a total of three credits of A Geo 499 Seminar in Geology, one in each of the last three semesters of the degree program.

Combined B.S./M.S. Program

The combined B.S./M.S. program in geology provides an opportunity for students of recognized academic ability and educational maturity to fulfill integrated requirements of undergraduate and master's degree programs from the beginning of the junior year. A carefully designed program can permit a student to earn the B.S. and M.S. degrees within ten semesters.

The combined program requires a minimum of 138 credits, of which at least 30 must be graduate credits. In qualifying for the B.S., students must meet all University and college requirements, including the requirements of the undergraduate major described previously, the minimum 60-credit liberal arts and sciences requirement, general educational requirements, and residency requirements. In qualifying for the M.S., students must meet all University and college requirements as outlined in the Graduate Bulletin, including completion of a minimum of 30 graduate credits and any other conditions such as a research seminar, thesis, comprehensive examination, professional experience, and residency requirements. Up to 12 graduate credits may be applied simultaneously to both the B.S. and M.S. programs.

The following graduate courses may be substituted for required undergraduate courses: A Geo 517 for A Geo 470, A Geo 535 for A Geo 435, A Geo 550 for A Geo 450, A Geo 566 for A Geo 466,. A reading knowledge of a foreign language useful in the study of geology (French, German, Russian, Spanish, Portuguese, Chinese) must be demonstrated before completion of the program, or satisfactory proficiency in a research skill such as computer programming may be substituted for the language requirement at the discretion of the department.

Students are considered as undergraduates until completion of 120 graduation credits and satisfactory completion of all B.S. requirements. Upon meeting B.S. requirements, students accepted into the combined B.S./M.S. program are automatically considered as graduate students.

Students may apply for admission to the combined degree program in geology at the beginning of their junior year or after the successful completion of 56 credits, but no later than the accumulation of 100 credits. A cumulative grade point average of 3.20 or higher and three supportive letters of recommendation from faculty are required for consideration.

Courses

A Geo 100N Planet Earth (3)
Introduction to the Geological Sciences, including evidence for the major processes and significant events in the origin, history and present condition of the solid Earth. Major topics include geological time, earthquakes, volcanism, plate tectonics and the origin and movement of continents and oceans, mountain building, evidence for past climate change, including glaciation, formation of the earth-moon system, earth resources and geological constraints and consequences of energy use. Emphasis is placed on understanding why we think we know things about the Earth, to enable the student to understand common features of rocks and minerals and the larger-scale solid Earth, and to provide a lifetime background for making informed judgments on increasing number of public issues requiring geological knowledge. Fall and spring semesters. [NS]

A Geo 100F Planet Earth (3)
A Geo 100F is the writing intensive version of A Geo 100N; only one may be taken for credit. Fall semester only. [NS WI]A Geo 102N Planet Earth and Physical Geology Laboratory (4)
Introduction to the Geological Sciences, including geological time, earthquakes, volcanism, plate tectonics evidence for climate change in the past, glaciation, earth resources, and origin of the Earth-Moon system. The laboratory section introduces geological maps, identification of rock and mineral specimens, and making of geological cross-sections.

A Geo 106 Physical Geology Laboratory (1)
Elementary classification of minerals and rocks, and their identification in hand specimen. Introduction to geological maps and sections, both as sources of geological information and as aids in the solution of practical problems. Guided and self-guided field trips to building stones of downtown Albany. This course is required for majors in Geology and Earth Science. One lab each week. Corequisite(s): A Geo 100N or 100F. Fall and spring semesters.

A Geo 201 (= A Gog 201) Environmental Analysis (3)
Uses laboratory work and local field excursions to give students "hands-on" experience in physical geography and environmental sciences. Focuses on human impacts on the environment and on problems of environmental contamination. Prerequisite or corequisite: A Gog 101N. [NS]

A Geo 210 Earth Materials (3)
Crystal structures and crystal chemistry, with emphasis on the major rock- and soil-forming mineral groups. Selected minerals of commercial importance. Examples of mineral-forming processes, and use of mineral properties as indicators of geological conditions. Three lectures each week. Prerequisite(s): A Geo 100N or 100F, 106; or permission of instructor. Fall semester only.

A Geo 211 Optical Mineralogy Laboratory (1)
Introduction to the petrographic microscope. Optical properties of minerals and their use for mineral identification. One lab each week. Corequisite(s): A Geo 210 or permission of instructor.

A Geo 212 Earth Materials Laboratory (1)
An introduction to the study of minerals. Major topics include the formation, physical properties, structure, symmetry, and classification of minerals with emphasis on rock-forming minerals. In laboratory, students will gain hands-on experience with mineral identification of hand samples and mineral properties. The course also introduces more advanced topics in mineral transformations, crystal chemistry, and crystallography.

A Geo 222 Igneous and Metamorphic Geology (4)
Description, classification, and occurrence of igneous and metamorphic rocks. Introduction to phase diagrams, metamorphic facies, and petrogenetic grids. Laboratory section will involve practical identification of mineralogy and textures in hand specimens and thin sections. Three lectures and one lab per week. Prerequisite(s): A Geo 100N or 100F, 106, 210, 211; or permission of instructor. Spring semester only.

A Geo 230 Stratigraphy, Sedimentology, and the Fossil Record (3)
Stratigraphic principles and correlation, identification and classification of sedimentary rocks, introduction to paleontology and historical geology. Three lectures and one lab each week. Geology BS and Earth Science BS majors must also register concurrently for either A Geo 231 or A Geo 231Z, Field Excursions in Stratigraphy. Prerequisite(s): A Geo 100N or 100F, 106; or permission of instructor. Fall semester only.

A Geo 231 Field Excursions for Stratigraphy (2)
One lab per week and five full-day weekend field trips to be taken by Geology BS and Earth Science BS majors concurrently with A Geo 230 Stratigraphy. Corequisite(s): A Geo 230 or permission of instructor. Offered fall semester only.

A Geo 231Z Field Excursions for Stratigraphy (2)
One lab per week and five full-day weekend field trips to be taken by Geology and Earth Science BS majors concurrently with A Geo 230 Stratigraphy. Extended written and illustrated reports must be submitted based on the observations made on each trip. A Geo 231Z is the writing intensive version of A Geo 231; only one may be taken for credit. Corequisite(s): A Geo 230 or permission of instructor. [WI]. Offered fall semester only.

A Geo 250 Energy and Resources (3)
Examination of energy production using non-renewable (coal, oil, natural gas, uranium) versus renewable resources (hydroelectric, solar, wind, geothermal) relative to present and future environmental and societal impacts. Fields trips to energy producing facilities (e.g., Blenheim-Gilboa Pumped Storage Power Plant). Prerequisites; A Geo 100 or Atm 100; Chm 120N or Phy 105N; Mat 111.

A Geo 260 Earth Surface Processes and Hazards (3)
An aspect of environmental science that includes natural geologic processes potentially harmful to people and human modifications of natural systems that can make them harmful. Includes rivers and flooding, groundwater, severe storms, landslides, soil erosion, acid rain, greenhouse effect, pollution and waste disposal, coastal problems, estuarine and wetland problems, and hazards associated with volcanoes and earthquakes. Prerequisites: A Geo 100N.

A Geo 317 (= A Gog 317) Geomorphology (3)
A systematic introduction to the study of landforms and the processes that shape them. Laboratory work and field trips are part of the course. Prerequisite(s): A Gog 101N; A Geo 100N or 100F; or permission of instructor. Fall semester only. .May not be offered in 2003-2004.

A Geo 330 Structural Geology I (3)
Descriptive structural geology, with emphasis on features seen at outcrop and map scales. Selected examples of rock microstructures and their interpretation. Three lectures each week. Prerequisite(s): A Geo 100N or 100F, 106. Spring semester only.

A Geo 331 Field Excursions for Structural Geology I (1)
Five full-day weekend field trips to be taken by Geology and Earth Science BS majors concurrently with Structural Geology I. Several written and illustrated reports must be submitted based on the observations made. Prerequisite(s): permission of instructor; corequisite: A Geo 330. Offered spring semester only.

A Geo 332 Structural Geology Laboratory (1)
Structures on maps, on images, and in rock specimens; computer-based presentation of data. One lab each week. Corequisite(s): A Geo 330. Spring semester only.

A Geo 350 Environmental Geochemistry (4)

Contemporary topics are used to develop concepts of geochemical processes operating in Earth's environmental system. These topics (a) PCBs in the Upper Hudson River, (b) biogeochemical cycles in the global climate system, and (c) geochemical constraints on long-term disposal of high-level, nuclear wastes. 3 hours per week in classroom setting + 2 hours per week of oral presentations by students. [OD]

A Geo 395Z Writing in the Geological Sciences (1)
May be taken with any Geo course at the 300 or 400 level to fulfill a writing intensive version of that course. Students will have an opportunity for assistance during writing and revision of written material with the help of editorial assignments from the instructor. Corequisite(s): any A Geo 300 or 400 level course. Fall and spring semesters. [WI]

A Geo 400 Field Mapping (4)
Supervised geological mapping. Three weeks of field work (off campus) followed by independent study and laboratory sessions for preparation of report (in Albany). Field work starts in early August; laboratory sessions once a week in first quarter of fall semester. Prerequisite(s): A Geo 230, 330; or permission of instructor.

A Geo 420 Instrumental Analysis in Environmental Science (3)
A hands-on introduction to instrumental analysis in earth science. Lecture topics include basic principles of spectroscopy, chromatography, mass spectrometry, sampling methods, and error estimation with specific applications to environmental science and geology. In laboratory, students will gain hands-on experience with ion chromatography, atomic absorption spectrometry, carbon analysis, and other methods. Provides a foundation for research projects in the senior year. Two hours lecture/2 hours laboratory each week. Prerequisite(s): A Mat 108 and A Geo 350 or permission of the instructor. S/U graded

A Geo 435 Geohydrology (3)
Introduction to surface water hydrology and ground water hydrogeology. Topics to be covered include, stream hydrograph analysis, flood plain determination, drainage basin analysis, aquifer characterization, pump test analysis, groundwater chemistry and tracers, contaminant hydrogeology, regulatory policy, and introduction to groundwater modeling. . Prerequisite(s): A Mat 112, A Chm 120N or permission of instructor. Spring semester only.

A Geo 450 Climate Change (4)
Introduction to the field of Paleoclimatology. Focus will be on the use of sediments and other biological and geological archives to reconstruct environmental, climatic, and oceanographic change over a range of time scales. Lecture will also provide an introduction to the fields of climatology, age dating techniques, climatic/ environmental proxies (tracers), micro-paleontology, and time-series analysis. In addition to lectures, the class will involve review of current scientific studies, class presentations by each student, and a review paper on a relevant topic of choice. 3 lectures each week and 2 hours each week of oral presentations by students; Prerequisites: A Chm 120N, A Mat 108, or permission of the instructor. This course satisfies the General Education requirement in Oral Discourse. Fall semester only.

A Geo 455 Special Topics (2-3)
A structured program of reading and seminars leading to an in-depth understanding of a chosen topic in geology. Prerequisite(s) A Geo 210, 230, or 230Z; and permission of instructor. Students may repeat course once for an additional two or three credits. Fall or Spring semester.

A Geo 466 Marine/Estuary Systems (3)
Interdisciplinary study of marine and estuary systems with a focus on marine/estuary sedimentology and biogeochemistry. Additional study of lacustrine systems will be integrated into the class. In addition to lectures, the class will involve review of current scientific studies, a class presentation by each student, and a review paper on a relevant topic of choice. 3 lectures each week. Prerequisites: A Geo 100N, A Chm 120N, A Geo210, or permission of the instructor

A Geo 470 Tectonics (4)
Seismologic basis for plate tectonics, kinematics of plate motions, paleomagnetism. Study of modern mid-ocean ridges, magmatic arcs, transforms, and collisional belts. Three lectures and one lab per week. Prerequisite(s): A Geo 230, 330; or permission of instructor. Fall semester only.

A Geo 497 Independent Study (1-3)
Field or laboratory investigation of a chosen geologic problem, including the writing of a research report to be undertaken during the senior year. Prerequisite(s): permission of instructor. Students may repeat this course once for additional credits. Fall or spring semesters.

A Geo 498 Undergraduate Honors Research (3)
Supervised research for undergraduates admitted to the Department Honors Program. To be taken summer and/or fall semester at beginning of senior year. Written proposal for research must be approved no later than end of spring semester of junior year. Prerequisite(s): Permission of instructor and chair. Fall and spring semesters.

A Geo 499 Seminar in Geology (1)
Oral presentation by students of a research topic: attendance at weekly seminar given by other students in this course, and A Geo 500, and regular attendance at geological science seminars given by outside speakers [approximately once weekly in semester]. Students admitted to the Departmental Honors Program must take this course in the last three semesters of their degree program. Fall and spring semesters.

PROGRAM IN ATMOSPHERIC SCIENCE

Faculty

Professor Emeritae/i
- Duncan C. Blanchard, Ph.D.* — Massachusetts Institute of Technology
- Ulrich Czapski, Ph.D. — Hamburg University
- Jai S. Kim, Ph.D. — University of Saskatchewan
- Volker A. Mohnen, Ph.D. — University of Munich
- Jon T. Scott, Ph.D. — University of Wisconsin

Professors
- Lance F. Bosart, Ph.D. — Massachusetts Institute of Technology
- Kenneth L. Demerjian, Ph.D. — Ohio State University
- Daniel Keyser, Ph.D. — Pennsylvania State University
- Arthur Z. Loesch, Ph.D. — University of Chicago
- John E. Molinari, Ph.D. — Florida State University

Associate Professors
- Vincent P. Idone, Ph.D. (Chairperson) — University at Albany
- Robert G. Keesee, Ph.D. — University of Colorado
- Christopher Thorncroft, Ph.D. — University of Reading

Assistant Professor
- Karen Mohr, Ph.D. — University of Texas, Austin

Associated Faculty
- Julius Chang, Ph.D.* — State University of New York at Stony Brook
- David R. Fitzjarrald, Ph.D.* — University of Virginia
- Lee C. Harrison, Ph.D.* — University of Washington, Seattle
- David Knight, Ph.D. — University of Washington, Seattle
- G. Garland Lala, Ph.D.* — University at Albany
- Michael Landin, M.S. — University at Albany
- Joseph J. Michalsky, Ph.D.* — University of Kentucky
- Qilong Min, Ph.D.* — University of Alaska, Fairbanks
- Richard R. Perez, Ph.D.* — University at Albany
- James J. Schwab, Ph.D.* — Harvard University
- Christopher J. Walcek, Ph.D.* — University of California, Los Angles
- Wei-Chyung Wang, D.E.S.* — Columbia University
- Kevin Tyle, M.S. — University at Albany
- Fangqun Yu, Ph.D.* — University of California, Los Angeles

Visiting Professors
- Michael J. Reeder — Monash University
- Morris Weisman — National Center for Atmospheric Research
- W. James Steenburgh — University of Utah

** Primary appointment with the Atmospheric Sciences Research Center as Research Professors.*

Adjuncts (estimated): 1
Teaching Assistants (estimated): 10

The Department of Earth and Atmospheric Sciences and the Atmospheric Sciences Research Center (ASRC) provide the University with the state's largest program in atmospheric science and meteorology.

The undergraduate program provides a broad background in three fundamental areas of atmospheric science: synoptic (observations and weather forecasting), dynamic (theory and computer modeling), and physical (lightning, acid rain, cloud physics, atmospheric chemistry). Because the department has a highly active research program in these areas, many opportunities exist for undergraduate research projects and part-time jobs.

The first two years of the program provide basic training in mathematics, physics, chemistry, and introductory atmospheric science. All students are encouraged to take one or two 100-level courses for enjoyment and experience (these count as electives but not as courses for the major). In the junior and senior years, requirements in the fundamental areas of atmospheric science are combined with electives, including advanced courses on atmospheric physics, atmospheric dynamics, weather forecasting, tropical meteorology and hurricanes, solar energy, air pollution, climatology, and computer applications. Highly qualified students are eligible to enter an accelerated degree program in their junior year that leads to a combined B.S./M.S. degree

Many opportunities exist for students to become involved in department activities. Each semester, several students take part in an internship program with the on-campus office of the National Weather Service (NWS), gaining experience with weather forecasting and familiarity with the responsibilities of a NWS meteorologist.

In addition, a weather forecasting competition is held in the department each semester while classes are in session. The forecasting, along with concurrent weather discussions led by a faculty member, are open to all undergraduate majors. Undergraduates hired part-time and during the summer through research grants have the chance to work closely with a faculty member while contributing to current meteorological research. The Eastern New York Chapter of the American Meteorological Society (AMS) meets regularly and provides speakers of general interest on a variety of meteorological topics. Through these and other activities, the department offers exciting and varied opportunities to any student curious about the science of the atmosphere around us.

Careers

Graduates obtain employment in weather forecasting, environmental engineering, radio and TV broadcasting, scientific consulting, and other private firms; in university departments and research laboratories; and in federal and state agencies such as the National Weather Service, U.S. Air Force, and State Department of Energy Conservation. About half our graduates choose to go on to graduate school for an advanced degree. (The department offers full financial support and a complete tuition waiver to most students accepted into our graduate program.)

Degree Requirements for the Major in Atmospheric Science

General Program B.S.: A combined major and minor sequence including A Atm 210 (or 210Z), 211, 320, 321, 333, 410, 411; at least 12 additional credits from A Atm 307 (or 307Z) and higher level courses as advised; A Phy 140, 145, 150, 240; A Mat 111 or 112 or 118, 113 or 119, 214, 311; A Chm 120N, 122A. No more than 6 credits from A Atm 490, 497, 498 or 499 may be applied toward the major requirements; further, a maximum of 3 credits from A Atm 490 will apply.

A solid foundation in physics and mathematics is recommended for all students planning to major in atmospheric science. It is recommended that all students considering this major meet with a representative of the department before each of the freshman and sophomore registration sessions.

Departmental Honors Program

Students who have by the end of their fourth semester attained a cumulative grade point average of at least 3.25 and a grade point average of at least 3.5 in courses required of the major in atmospheric science may apply to the department chair for the program leading to a B.S. degree with honors in atmospheric science. Applications must be submitted before the end of the first semester of the student's junior year and must be accompanied by letters of recommendation from at least two faculty members.

To be admitted to the program, a student must have completed three semesters of physics (A Phy 140, 145, 150, 240, three semesters of mathematics (A Mat 111 or 112 or 118, 113 or 119, 214), and must be enrolled in or have completed A Atm 333. These requirements may be altered, upon request, for qualified transfer students. At the end of the junior year, the student's program will be reviewed by the Honors Committee to see if satisfactory progress is being made.

To be eligible for a degree with honors, students must complete a minimum of 74 credits specified as follows: (1) the physics, mathematics, and chemistry requirements of the major; (2) the core sequence in atmospheric science (A Atm 210 or 210Z, 211, 320, 321, 333, 410 and 411) plus any three A Atm courses at the 400 or 500 level; (3) a coherent core of three upper-division courses in any discipline besides atmospheric science; and (4) 6 credits of A Atm 499 taken over at least two semesters culminating in a significant undergraduate thesis and an honors seminar in the student's final semester. Students in the program must maintain both a minimum grade point average of 3.25 overall and 3.5 in atmospheric science courses taken to satisfy major requirements during the junior and senior years.

Upon completion of the requirements, the honors committee will make its recommendation to the faculty to grant the degree with honors in atmospheric science based upon the candidate's (1) academic record, (2) research project report, (3) honors seminar, and (4) faculty recommendations.

Degree Requirements for the Major in Earth and Atmospheric Sciences

Bachelor of Arts (B.A.): A minimum of 56-60 credits for the combined major and minor including: A Phy 105, 106, 108, 109; A Mat 101, 108, 111; A Chm 120N; A Geo 100N or 100F, 106, 250 A Gog 101N; A Atm 100N or 102N, 210 or 210Z, 211; two courses from A Gog 304, 385, 431, 496; a total of at least 12 credits from the following, including at least one course from each discipline: A Geo 330, 350, 435; A Atm 304 or 304Z, 305, 307 or 307Z, 311, 335, 390, 408B.

The B.A. in Earth and Atmospheric Sciences is offered as an interdisciplinary study of significant breadth spanning two classical disciplines. Students electing this major have the potential to realize new opportunities for personal enrichment and career development. However, those students committed to seeking advanced degrees in the geological or atmospheric sciences should pursue the corresponding B.S. degree instead. All students contemplating any of the curricula described here should thoroughly discuss their options with personnel of the Advisement Services Center (ASC) and a department undergraduate adviser before formal declaration of a specific major.

Combined B.S./M.S. Program

The combined B.S./M.S. program in atmospheric science provides an opportunity for students of recognized academic ability and educational maturity to fulfill simultaneously undergraduate and graduate course requirements in their senior year, thereby accelerating progress toward the M.S. degree. A carefully designed program can permit a student to complete the B.S. and M.S. degrees one year sooner than is otherwise possible.

The combined program requires a minimum of 138 credits, of which at least 30 must be graduate credits. In qualifying for the B.S., students must meet all University and college requirements, including the requirements of the undergraduate major described previously, the minimum 60-credit liberal arts and sciences requirement, the general education requirements, and residency requirements. In qualifying for the M.S., students must meet all University and college requirements as outlined in the Graduate Bulletin, including completion of a minimum of 30 graduate credits and any other conditions such as a research seminar, thesis, comprehensive examination, professional experience, and residency requirements. Up to 9 graduate credits may be applied simultaneously to both the B.S. and M.S. programs.

In the summer following the senior year, the student will begin work on his or her graduate research. In preparation for this accelerated research program, the student will be required to take two semesters (6 credits) of A Atm 499, Undergraduate Research, during the junior or senior year. These 6 credits may be counted toward the undergraduate elective requirement from either of the following requirements: (1) from any four additional A Atm courses at the 400 or 500 level as advised or (2) from 6 additional credits in mathematics or sciences as advised.

Students are considered as undergraduates until completion of 120 graduation credits and satisfactory completion of all B.S. requirements. Upon meeting B.S. requirements, students are automatically considered as graduate students.

Students may apply for admission to the combined degree program in atmospheric science at the beginning of their junior year or after the successful completion of 56 credits, but not later than the accumulation of 100 credits. A cumulative grade point average of 3.2 or higher and three supportive letters of recommendation from faculty are required for consideration.

Courses

A Atm 100N The Atmosphere (3)
Non-technical survey of the atmosphere; the physical environment of society and its historical development; intentional and unintentional modifications of the environment; cloud types and structure; severe storms; weather forecasting; air pollution; major wind and weather systems. Does not yield credit toward the major in atmospheric science. Two lectures, one-two-hour discussion each week. May not be taken for credit by students with credit for A Atm 210 or 210Z or 320. Fall semester only. [NS]

A Atm 101N The Upper Atmosphere (3)
Elementary survey of the properties and geophysical phenomena of the upper atmosphere; ionosphere, magnetosphere, and interplanetary space, ionospheric and magnetic storms; aurora and airglow; observational techniques including rockets and satellites. Does not yield credit toward the B.S. in atmospheric science. Two lectures, one two-hour discussion each week. May not be offered in 2003-2004. [NS]

A Atm 102N Science and Major Environmental Issues (3)
Study of the role of science in creating, defining, evaluating, and resolving major issues relating to energy production and its use and impact on the physical environments; case studies of such issues as change in climate, air pollution, the fluorocarbon/ozone link, etc. Three lectures each week. Does not yield credit toward the B.S. in atmospheric science. Spring semester only. [NS]

A Atm 107N The Oceans (3)
Introductory survey of the physical, chemical, geological, and biological processes in the marine environment; promise and problems of the oceans as a natural resource. Does not yield credit toward the B.S. in atmospheric science. Three lectures each week. Spring semester only. [NS]

A Atm 199 Contemporary Issues in Atmospheric Science (1)
Issues from the current literature in selected areas of atmospheric science. Particular areas of study to be announced each term. Intended for students interested in exploring in depth themes covered in large lecture courses. Prerequisite(s): permission of instructor. *S/U* graded. .May not be offered in 2003-2004.

A Atm 210 Atmospheric Structure and Circulation (4)
Technical survey of the atmosphere with application of elementary physical and mathematical concepts to the horizontal and vertical structure of the atmosphere; planetary, regional and local circulations; atmospheric radiation; precipitation physics and thermodynamics. Three lectures and one discussion/lab period per week. Prerequisites: A Mat 111 or 112 or 118; A Phy 108 or 150. Fall semester only.

A Atm 210Z Atmospheric Structure and Circulation (4)
A Atm 210Z is writing intensive version of A Atm 210; only one may be taken for credit. Fall semester only. Three lectures and one discussion/lab period per week. [WI]

A Atm 211 Weather Analysis and Forecasting (4)
Physical principles and empirical methods of weather analysis and forecasting, with emphasis on synoptic, regional and local weather systems; introduction to use and interpretation of observed weather data, satellite imagery, temperature and precipitation processes, soundings and stability; use of computer forecast guidance models and products of the National Centers for Environmental Prediction. Prerequisite: A Atm 210 (or Atm 210Z) or permission of instructor. Spring semester only.

A Atm 297 Independent Study I (1-3)
By advisement only and may be repeated once for credit. *S/U* graded. Fall and Spring semesters.

A Atm 300Z Solar Energy (3)
Discussion of solar energy technology, including solar energy measurement and distribution; direct use of the sun's energy; solar architecture; energy from wind, tides, waves, currents, and salinity gradients; biomass and geothermal energy; energy use, conservation, and other major environmental issues. Prerequisite(s): 6 credits in mathematics including one course in calculus; A Phy 108N or 150; junior or senior class standing. .May not be offered in 2003-2004. [WI]

A Atm 304 Air Quality (3)
Designed for undergraduate students not pursuing the B.S. in Atmospheric Science. Topics include air pollution criteria standards and regulations, basic air pollution monitoring (including quality assurance), simple statistical analysis of data, and pollutant transport, transformation and deposition. Prerequisite(s): A Mat 111 or 112 or 118; A Phy 108 or 150.Offered alternate Spring semester. Next offered in Spring 2004.

A Atm 304Z Air Quality (3)
A Atm 304Z is writing intensive version of A Atm 304.; only one may be taken for credit. Offered alternate spring semesters; will next be offered in spring 2004. [WI]

A Atm 305 Global Physical Climatology (3)
The physical basis of climate and climate variability from a coupled atmosphere-ocean perspective. Emphasis will be placed on understanding the causes of regional climate differences and regional climate variability and the role that the global atmosphere and oceans play in the process Prerequisite(s): A Atm 210 (or 210Z). Offered alternate fall semesters; will next be offered in fall 2003.

A Atm 307 (= A Chm 307) Introduction to Atmospheric Chemistry (3)
Chemical principles and concepts leading to understanding the composition and change in the chemical/atmospheric environment; sources and links of chemical constituents; chemistry of the troposphere and stratosphere; measurement and theory of greenhouse gases; global pollution and ozone depletion. Prerequisite(s): A Mat 111 or 112 or 118; A Phy 108 or 150; A Chm 121N. Offered alternate Spring semesters. Will next be offered Spring 2005.

A Atm 307Z (= A Chm 307) Introduction to Atmospheric Chemistry (3)
A Atm 307Z is the writing intensive version of A Atm 307; only one may be taken for credit. Prerequisite(s): A Mat 111 or 112 or 118; A Phy 108 or150N A Chm 120N. . Offered alternate Spring semester. Will next be offered Spring 2005. [WI]

A Atm 311 Severe and Unusual Weather Analysis and Forecasting (4)
Continuation of Atm 211, with emphasis on severe and unusual weather analysis and forecasting, including thunderstorms, tornadoes, downbursts, derechoes, hail, flash floods, hurricanes, winter storms, blizzards, blocking weather patterns, floods and drought; introduction to weather analysis software and weather display systems; commercial meteorology. Prerequisite(s): A Atm 211. Fall semester only.

A Atm 320 Atmospheric Thermodynamics (3)
Equation of state; principles of thermodynamics; water vapor and moist air thermodynamics; changes of phase and latent heat; hydrostatic equilibrium; atmospheric convection; thermodynamic diagrams; atmospheric stability and severe weather events. Prerequisite(s): A Atm 210 (or 210Z); A Mat 214; A Phy 150; co-requisite: ATM 333. Fall semester only.

A Atm 321 Physical Meteorology (4)
Atmospheric physics, including radiation, optics, and visibility; atmospheric electricity; cloud and aerosol physics; acoustics; upper atmospheric processes; radar meteorology. Three lectures and one lab discussion per week. Prerequisite(s): A Atm 320, 333; A Phy 240. Spring semester only. [OD]

A Atm 333 Quantitative Methods in Geophysics (3)
Important topics in atmospheric and geophysical science studied using various analytical and numerical techniques. Description and analysis of specific but disparate geophysical phenomena will expose the student of the commonality of application of certain classical and modern mathematical approaches used to expound the underlying physical principles. Prerequisite(s): A 210 (or 210Z); Mat 214; Phy 150; Mat 311 (recommended as a pre-requisite, acceptable as a co-requisite). Fall semester only.

A Atm 335 Meteorological Remote Sensing (3)
Satellite remote sensing from UV to microwave including the principles of atmospheric radiative transfer, descriptions of important satellite orbits and sensors, the retrieval of atmospheric variables from active and passive systems, and basic principles of interpretation. Prerequisite(s): A Mat 111 or 112 or 118 and A Atm 211. Offered alternate spring semesters; will next be offered in spring 2004.

A Atm 390 Commercial Meteorology (2)
Examination of the impact of weather and climate forecasting on social and economic factors in our society. Emphasis on severe weather prediction, warnings, and disaster preparedness. Guest lectures by private-sector professional meteorologists. Each student will participate as a member of a mock "company" providing weather services to a real client in the community. One lecture each week. Prerequisite(s): A Atm 311. Offered alternate spring semesters; will next be offered in spring 2005.

A Atm 400 Synoptic Meteorology I (3)
Electronic meteorological database description and analysis procedures; use of meteorological software packages and remote sensing technologies in weather analysis and forecasting; operational numerical weather prediction model procedures; application of fundamental thermodynamic and dynamic principles to multiscale weather events; scientific issues in weather forecasting. Two joint lecture-laboratory periods each week. Corequisites: A Atm 311; 410. Fall semester only.

A Atm 401 Synoptic Meteorology II (3)
Application of more advanced thermodynamic and dynamic concepts, laws and remote sensing technologies to multiscale weather analysis and prediction; structure of global scale temperature, wind and precipitation regimes and their causes; use of operational weather prediction models and products for research and weather forecasting; severe weather and heavy precipitation analysis and forecasting. Two joint class/laboratory periods each week. Prerequisite: A Atm 400; corequisite(s): A Atm 411. Spring semester only.

A Atm 408 Hydrometeorology (3)
The physical processes governing the continental hydrologic cycle such as water vapor transport, runoff, evapotranspiration, streamflow, sub-surface recharge; land/atmosphere interaction; spatial/ temporal variability of hydrologic parameters. Prerequisite(s): A Atm 320 and A Mat 311.

A Atm 408B Hydrometeorology (3)
The physical processes governing the continental hydrologic cycle such as water vapor transport, runoff, evapotranspiration, streamflow, sub-surface recharge; land/atmosphere interaction; spatial/ temporal variability of hydrologic parameters. Prerequisite(s): A Atm 211 or A Geo 260; will not yield upper level credit for the atmospheric science B.S. degree.

A Atm 409 Atmospheric Precipitation Processes (3)
Fundamentals of atmospheric precipitation processes; atmospheric moisture budget; convective and stratiform precipitation; application of satellite and radar imagery to precipitation analysis and forecasting; mesoscale convective systems; mesoscale precipitation structure in cyclones; flash flood forecasting; quantitative precipitation forecasting exercise. Prerequisite(s): A Atm 320; A Mat 311. Corequisite: A Atm 410. Offered every other year; will next be offered in fall 2003.

A Atm 410 Dynamic Meteorology I (3)
Forces and force balances in the atmosphere; thermal wind, vorticity and circulation; structure and dynamics of the middle latitudes and tropical cyclones. Prerequisite(s): A Atm 320, 321, 333. Fall semester only.

A Atm 411 Dynamic Meteorology II (3)
Derivation and scaling of the equations of atmospheric motion; major forces in the atmosphere; dynamics of frontal cyclones; mathematics of weather prediction. Prerequisite(s): A Atm 410. Spring semester only.

A Atm 414 Air Pollution (3)
Physical and chemical processes affecting air suspensoids; pollutant dispersion; effects of pollutants on materials, vegetation, and animal life; environmental gas cycles; applications to instruments and industrial removal processes. Corequisite(s): A Atm 410 or permission of instructor. Fall semester only.

A Atm 421 Tropical Meteorology (3)
Tropical cyclone dynamics and thermodynamics; tropical cyclone formation; monsoons; tropical waves; El Niño. Prerequisite(s): A Atm 410 or equivalent. Spring semester only. May not be offered in 2003-2004.

A Atm 422 Meteorological Instrumentation and Measurement (2)
Principles of meteorological measurement; error and propagation of error; measurement of temperature, pressure, windfield, water vapor and solar radiation; basic photogrammetry; survey of measurement systems: Doppler radar, lidar, profilers and ASOS. One lecture and one demonstration/laboratory session per week. Prerequisite(s): A Atm 321; A Phy 240. May not be offered in 2003-2004.

A Atm 424 Fundamentals of Atmospheric Electricity (3)
An introduction to the basic electrical processes operating in the atmosphere; fair weather electricity and the global circuit; electrical properties of clouds and thunderstorms; thunderstorm electrification; the lightning flash; observation and measurement techniques. Prerequisite(s): A Atm 321; A Mat 214; A Phy 240. Spring semester only. May not be offered in 2003-2004.

A Atm 430 Solar Radiation and Applications (3)
Definition of solar and terrestrial radiation components; basic celestial geometry; introduction to the measurement of solar radiation; principles of solar radiation transfer through the Earth's atmosphere; study of the interrelationship between solar radiation components; applied solar radiation examples. Prerequisite(s): A Mat 113 or 119; A Phy 150. May not be offered in 2003-2004

A Atm 433 Software-based Computational Geophysics (3)
Computation of solutions of geophysical problems using contemporary symbolic and numerical mathematical software for PCs. Problems will be drawn from a variety of topics in atmospheric and geological sciences. Emphasis will be placed on the use of appropriate software to obtain, graphically display and physically interpret the solutions. Prerequisite(s): A Atm 333 or permission of instructor. May not be offered in 2003-2004.

A Atm 450 Computer Applications in Atmospheric Science (3)
Computer programming and numerical methods for solving atmospheric science problems; data handling and storage; examination of currently used programs in atmospheric science research; iterative methods; numerical weather prediction. Prerequisite(s): A Atm 333; A Csi 204 or 205 or permission of instructor. May not be offered in 2003-2004.

A Atm 490 Internship in Atmospheric Science (1-3)
Research or operational experience in atmospheric-related activities with local governmental agencies or private industry. No more than 3 credits for A Atm 490 may be applied toward major requirements in atmospheric science. **Internships are open only to qualified juniors and seniors who have an overall grade point average of 2.50 or higher.** Prerequisite(s): junior or senior standing in atmospheric science. *S/U* graded, may be repeated for credit.

A Atm 497 Independent Study II (1-3)
May be repeated once for credit. No more than 6 credits from A Atm 490, 497, 498, and 499 may be applied toward major requirements in atmospheric science. Prerequisite(s): junior senior class standing, and by advisement only. Fall and spring semesters.

A Atm 498 Computer Applications in Meteorological Research (3)
Directed individual study of a particular problem in atmospheric science that requires use of the University Computing Center and/or departmental computers. May be repeated once for credit. No more than 6 credits from A Atm 490, 497, 498, and 499 may be applied toward major requirements in atmospheric science. Prerequisite(s): A Csi 201N or permission of instructor. *S/U* graded.

A Atm 499 Undergraduate Research (3)
Guided research leading to a senior thesis. Oral presentation of results required. May be repeated for credit. No more than 6 credits from A Atm 490, 497, 498, and 499 may be applied toward major requirements in atmospheric science. Prerequisite(s): junior or senior class standing, and permission of department chair. *S/U* graded.

PROGRAM IN BROADCAST METEOROLOGY

Careers

The B.A. in Broadcast Meteorology is offered as an interdisciplinary study of significant breadth combining science and the arts. It is intended for students focused on a career in the media. Students electing this major will have the opportunity to combine their passion for meteorology with full development of their personal communication skills, both written and oral, appropriate to the intended career path. However, those students desiring an advanced, research-oriented degree in Atmospheric Science should pursue the B.S. degree instead. All students contemplating any of the curricula described herein should thoroughly discuss their options with the personnel of the Advisement Services Center (ASC) and an Atmospheric Science undergraduate advisor in the DEAS, before formal declaration of a specific major.

The Bachelor of Arts degree in Broadcast Meteorology is a **restricted major**. For advisement purposes, students should initially declare the Earth and Atmospheric Sciences B.A. as their major; they can subsequently apply for the Broadcast Meteorology B.A. by December 1st of a fall semester, while enrolled in A Atm 210, or by May 1st of a spring semester, while enrolled in A Atm 211. A minimum grade of B- is required in **both** A Atm 211 and A Thr 240 for acceptance into this major.

Degree Requirements for the Major in Broadcast Meteorology

Bachelor of Arts (B.A.): A minimum of 60 credits for the combined major and minor including: A Atm 107N, 210/Z, 211, 305 or A Gog 304, A Atm 311, 335, 390, 408/B, 490, A Com 203, A Gog 290, 496, A Jrl 300/Z, either A Mat 101 and 111 or A Mat 112, A Phy 105N, 108N, A Thr 240, 242.

Non-required but Recommended Courses

A Atm 304, A Csi 101, 201N, A Gog 210, 385, 414, 485, A Jrl 364/Z, A Mat 108, B Mgt 341, B Mkt 310, B Msi 215.

Class Key to the Broadcast Meteorology Major

Broadcast Meteorology B.A. core curriculum:

A Atm 107N; The Oceans (3)
A Atm 210/Z; Atmospheric Structure (4)
A Atm 211; Weather Analysis and Forecasting (4)
A Atm 305; Global Phys. Climatology (3) (or A Gog 304)
A Atm 311; Severe & Unusual Weather Forecasting (4)
A Atm 335; Meteorological Remote Sensing (3)
A Atm 390; Commercial Meteorology (2)
A Atm 408/B; Hydrometeorology (3)
A Atm 490; Internship in Atmospheric Science (2)
A Com 203; Speech Composition and Presentation (3)
A Gog 290; Introduction to Cartography (4)
A Gog 304; Climatology (3) (or A Atm 305)
A Gog 496; Geographic Information Systems (3)
A Jrl 300/Z; Introduction to Journalism (3)
A Mat 101; Algebra and Calculus I (3) plus
A Mat 111; Algebra and Calculus II (4) or
A Mat 112. Calculus I (4)
A Phy 105N; General Physics I (3)
A Phy 108N; General Physics II (3)
A Thr 240, Acting I (3)
A Thr 242; Voice I (3)

Non-required but recommended courses:

A Atm 304; Air Quality (3)
A Csi 101; Elements of Computing (3)
A Csi 201N; Introduction to Computer Science (4)
A Gog 201; Environmental Analysis (3)
A Gog 385; Introduction to Remote Sensing Environ. (4)
A Gog 414; Computer Mapping (3)
A Gog 485; Advanced Remote Sensing of Environ. (3)
A Jrl 364Z; Science Journalism (3)
A Mat 108; Elementary Statistics (3)
A Mgt 341; Behavioral Foundations of Management (3)
A Mkt 310; Marketing Principles (3)
A Msi 215; Computer Applications in Business (3)

PROGRAM IN ENVIRONMENTAL SCIENCE

Careers

Graduates with a B.S. in Environmental Science will be well qualified for a broad range of positions within the highly inter-disciplinary field of environmental science. Consulting firms, industry, federal and state government agencies all require employees with this type of training. The demand for individuals with such a degree is anticipated to remain strong as our society attempts to cope with and address myriad environmental impacts that are occurring on local, regional, national and global scales. Additionally, graduates with this degree are well prepared to consider advanced degrees in the sciences, or other fields such as business administration (M.B.A.) or law (J.D.).

Degree Requirements for the Major in Environmental Science

Bachelor of Science (B.S.): A minimum of 64 credits for the combined major and minor including: A Atm 100N, A Geo 100N, A Geo/Gog 201, 210, 250, 350, A Gog/Pln 330, A Mat 111 or 112, 113, and 108, A Bio 110N/F, A Chm 120N, A Phy 105N, 108N.

Additionally each student must choose one concentration in Earth Science, Atmospheric Science, Biology, or Geography (see below):

Earth Science Concentration (19-21 credits)

A Geo 260; 420: *Electives (any combination of the following):* A Bio 111N, 316, A Geo 330, 435, 450, 466, 497, 498, A Phy 202N.

Atmospheric Science Concentration (19-21 credits)

A Atm 210/Z, A Geo 260; *Electives (any combination of the following);*A Atm 211, 304/Z, 305, 307/Z , 311, 335, 422, 408B: *Additional electives (maximum of two):*A Geo 420, 450, A Bio 316, A Phy 202N.

Biology Concentration (19-21 credits)

A Bio 111N, 320: *Electives (any combination of the following);* A Bio 212, 314, 316, 319/Z, 325, 365, 366, 402, 422, 432, 436, 442/443, 444, 445, 455, 468, A Chm 440 A+B.

Geography Concentration (19-21 credits)

A Geo 260: *Electives(any combination of the following);* A Gog 290, 293, 304, 385, 390, 404, 414, 431, 479, 485, A Gog/Pln 496, A Geo 420, 435.

Class Key to Environmental Science Major

Environmental Science B.S. core curriculum:

A Atm 100N; The Atmosphere (3)
A Geo 100N; Planet Earth (3)
A Geo/Gog 201; Environmental Analysis (3)
A Geo 210; Earth Materials (3)
A Geo 250; Energy and Resources (3)
A Geo 350; Environmental Geochemistry (3)
A Gog 330; Principles of Environ. Manag. (3)
A Mat 111 or 112;Algebra and Calculus II or Calculus I (4)
A Mat 113; Calculus II (4)
A Mat 108; Statistics (3)
A Bio 110N/F; General Biology I (4)
A Chm 120N;General Chemistry I (3)
A Phy 105N+108N; General Physics I and II (6)

Earth Science Concentration (19-20 credits)

Required:
A Geo 260N; Earth Surface Proc. & Hazards (3)
A Geo 420; Instrum. Anal. in Environ. Sci. (3)

Electives (any combination):
A Bio 111N; General Biology II (4)
A Bio 316; Biogeography (3)
A Geo 330; Structural Geology I (3)
A Geo 435; Geohydrology (3)
A Geo 450; Paleoclimatology (4)
A Geo 466; Marine/Estuary Systems (3)
A Geo 497; Independent Study (at USGS or other local organization) (1-3)
A Geo 498; Honors Research (3)
A Phy 202N; Environmental Physics (3)

Atmospheric Science Concentration (19-20 credits)

Required:
A Atm 210/Z; Atmospheric Structure (3)
A Geo 260N; Earth Surface Proc. & Hazards (3)

Electives (any combination):
A Atm 211; Weather Analysis and Forecasting (4)
A Atm 304/Z; Air Quality (3)
A Atm 305;Global Physical Climatology (3)
A Atm 307/Z; Atmospheric Chemistry (3)
A Atm 311; Severe and Unusual Weather and Forecasting (3)
A Atm 335; Meteorological Remote Sensing (3)
A Atm 422; Meteorological. Instrumentation & Measurement (2)
A Atm 408B; Hydrometeorology (3)

Additional electives (maximum of two):
A Geo 420; Instrum. Anal. in Environ. Sci.(3)
A Geo 450; Paleoclimatology (4)
A Gog 304 Climatology (3)
A Bio 316; Biogeography (3)
A Phy 202N; Environmental Physics (3)

Biology Concentration (19-20 credits)

Required:
A Bio 111N; General Biology II (4)
A Bio 320; Ecology (3)

Electives (any combination):
A Bio 212; Introductory Genetics (4)
A Bio 314; General Bacteriology (3)
A Bio 316; Biogeography (3)
A Bio 319/Z; Field Biology (3)
A Bio 325; Comparative Anatomy of Chordates (4)
A Bio 365; Biological Chemistry (3)
A Bio 366; Biological Chemistry II (3)
A Bio 402; Evolution (3)
A Bio 422; Biological Architecture (3)
A Bio 432; Animal Behavior (3)
A Bio 436; Sensory Worlds (3)
A Bio 442/443; Restoration Ecology (3+1)
A Bio 444; Biology of Birds (3)
A Bio 445; Experimental Ecology (3)
A Bio 455; Plant Ecology (4)
A Bio 468; Behavioral Ecology (3)
A Chm 440 A; Comprehensive Biochemistry A (3)
A Chm 440 B; Comprehensive Biochemistry B (3)

Geography Concentration (19-20 Credits)

Required:
A Geo 260N; Earth Surface Proc. & Hazards (3)

Electives(any combination):
A Gog 290; Introduction to Cartography (4)
A Gog 293; Use and Interpretation of Aerial Photographs (3)
A Gog 304; Climatology (3)
A Gog 385; Introduction to Remote Sensing of the Environment (4)
A Gog 390; Intermediate Cartography (3)
A Gog 404; Topics in Physical Geography (1-4)
A Gog 414; Computer Mapping (3)
A Gog 431; Climatic Change (3)
A Gog 479; Fundamentals of Applied GIS (3)
A Gog 485; Advanced Remote Sensing of the Environment (3)
A Gog/Pln 496; Geographic Information Systems (3)
A Geo 420; Instrum. Anal. in Environ. Sci. (3)
A Geo 435; Geohydrology (3)

DEPARTMENT OF EAST ASIAN STUDIES

Faculty
Professors
Charles M. Hartman, Ph.D.
Indiana University
Christopher J. Smith, Ph.D.
University of Michigan
Kwan Koo Yun, Ph.D. (associate faculty)
Stanford University
Associate Professors
Susanna Fessler, Ph.D. (Department Chair)
Yale University
Mark Blum, Ph.D.
University of California, Berkeley
Anthony DeBlasi, Ph.D.
Harvard University
James M. Hargett, Ph.D.
Indiana University
Assistant Professors
Andrew Sangpil Byon, Ph.D.,
University of Hawaii
Fan Pen Chen, Ph.D.
Columbia University
Jennifer Rudolph, Ph.D. (associate faculty)
University of Washington
Associate Professors
Angie Y. Chung, Ph.D.
University of California, Los Angeles
Youqin Huang, Ph.D.
University of California, Los Angeles
Lecturer
Michiyo Kaya Wojnovich, M.S.
University at Albany
Teaching Assistants: 4

The Department of East Asian Studies offers courses in the languages and cultures of the three major civilizations of East Asia: China, Japan and Korea. The department provides instruction in elementary, intermediate and advanced Chinese and Japanese, and Korean. There are also courses taught in English on Chinese, Japanese, Korean literature, philosophy, history, geography, economics and political science.

Careers

Graduates of the Department traditionally enter careers in teaching, international trade, U.S. government security, and the travel industry. The degree is also excellent preparation for professional graduate programs in business administration (M.B.A.), law, librarianship, and Teaching English as a Second Language. The department strongly encourages students interested in East Asian Studies to double-major. Combinations with particularly strong employment potential are East Asian Studies and economics, business, and political science.

Special Programs or Opportunities

The University maintains exchange programs in China with Beijing University, Fudan University, Nanjing University, and Nankai University. These programs provide students an opportunity to study Chinese language and selected topics in the humanities and social sciences in China for one academic year. The university also maintains a similar exchange program with Kansai University and Tokyo University of Foreign Studies in Japan and with Yonsei University in Seoul, Korea. All departmental majors are strongly encouraged to participate in these exchange programs in order to gain first-hand experience of life in contemporary East Asia.

B.A. in Chinese/M.BA. Degree Program

The Department of East Asian Studies and the School of Business offer a five-year B.A./M.B.A. Degree Program in Chinese and Business Administration. Students in this program fulfill requirements for the Chinese major during their freshman, sophomore, and junior years. The junior year is spent at Fudan University in Shanghai, where students receive additional language training and participate in internship programs arranged with international businesses. The fourth and fifth years focus on completing the requirements for the M.B.A. degree.

B.A. in Japanese/M.BA. Degree Program

The Department of East Asian Studies and the School of Business offer a five-year B.A./M.B.A. Degree Program in Japanese and Business Administration Students in this program fulfill requirements for the Japanese major during their freshman, sophomore, and junior years. The junior year is spent at Kansai Gaidai University in Osaka, where students receive additional language training. The fourth and fifth years focus on completing the requirements for the M.B.A. degree.

Degree Requirements

The Department of East Asian Studies offers three concentrations or degree tracks. Each is a separate and distinct course of study leading to the B.A. degree. These are 1) the Major in Chinese Studies, 2) the Interdisciplinary Major in East Asian Studies, and 3) the Interdisciplinary Major in Japanese Studies. Requirements for these programs are as follows:

Major in Chinese Studies

One Introductory course-100 level: (choose **1** from the following)

A Eas 103; A Eac 170

Language: (the following are required)

A Eac 201, A Eac 202, A Eac 301, A Eac 302

Three intermediate prerequisites: (choose **3** from the following) A Eas 255, A Eas 205; A Eac 210, A Eac 211, A Eac 212, A Eac 280, A Eac 281, A Eac 379, A Eac 380

One 300-level Seminar: (choose **1** of the following) A Eac 390, A Eac 395, A Eac 398; A Eas 392, A Eas 393, A Eas 399

One upper level elective-300 or 400 level: (choose **1** from the following) Any A Eac 300-level course or A Eas 495

Faculty-Initiated Interdisciplinary Major with a Concentration in East Asian Studies

One introductory course-100 level: (choose **1** from the following) A Eas 103, A Eas 104; A Eac 170; A Eaj 170; A Eak 170

Language: (any combination of **10 credits** from the following): A Eac 101, A Eac 102, A Eac 201, A Eac 202, A Eac 301, A Eac 302, A Eac 310, A Eac 311; A Eaj 101, A Eaj 102, A Eaj 201, A Eaj 202, A Eaj 301, A Eaj 302, A Eaj 410, A Eaj 411; A Eak 101, A Eak 102, A Eak 201, A Eak 202, A Eak 301, A Eak 302

One Course history requirement: (choose **1** from the following) A Eaj 384, A Eaj 385; A Eac 379, A Eac 380

Two Intermediate prerequisites: (choose **2** from the following) A Eas 255, A Eas 261, A Eas 265; A Eac 280, A Eac 281, A Eac 266, A Eac 210, A Eac 211, A Eac 212; A Eaj 210, A Eaj 212; A Eas 205

Two 300-level Seminars: (choose **2** of the following) A Eas 392, A Eas 393, A Eas 399; A Eac 390, A Eac 395, A Eac 398; A Eaj 396, A Eaj 391; A Eas 394

Two Upper level electives-300 or 400 level: (choose **2** from the following) Any two A Eas, A Eac, A Eaj and/or A Eak 300 level course or A Eas 495

Faculty Initiated Interdisciplinary Major with a Concentration in Japanese Studies

One Introductory course-100 level: (choose **1** from the following) A Eas 103, A Eas 104; A Eaj 170; A Eac 170; A Eak 170

Language: (the following are required) A Eaj 201, A Eaj 202, A Eaj 301, A Eaj 302

Three Intermediate prerequisites: (Choose **3** from the following) A Eas 255; A Eaj 210, A Eaj 212, A Eaj 384, A Eaj 385; A Eas 261, A Eas 266, A Eas 205

One 300-level Seminar: (choose **1** of the following) A Eaj 391, A Eaj 396; A Eas 394, A Eas 392, A Eas 393, A Eas 399

One upper level electives-300 or 400 level: (choose **1** from the following) Any A Eaj 300-level course or A Eas 495

Honors Program in the Three East Asian Studies Majors

Students in the Honors Program are required to complete all requirements for the major in *Chinese Studies* or the *Faculty-Initiated Interdisciplinary Major with a concentration in Japanese Studies* or the *Faculty-Initiated Interdisciplinary Major with a Concentration in East Asian Studies*. Students must also complete the following requirements:

A structured sequence of 12 credits of 200-, 300-, or 400-level courses, drawn from the department's regular course offerings. This sequence of courses will be designed to ensure that the student follows a rigorous training and thorough mastery of the discipline.

During the fall semester (preferably of the senior year), students will complete A Eas 495 (3 credits), Colloquium in East Asian Studies (directed readings and conferences involving appropriate members of the faculty, to be offered only when requested by students eligible for the honors program. Six credits of intensive work culminating in a major project (or series of projects). The student's project must be approved (in writing) by the Department Honors Committee at the outset of the project. The project will be formally evaluated by the Department Honors Committee no later than the mid-term point in the second semester of the senior year. The final version of the project must be submitted by the last day of classes during the second semester of the senior year.

Students may file an application for admission to the honors program in the second semester of their sophomore year or in the junior year. Junior transfers may apply at the time of their admission to the University. To be eligible for admission to the honors program, the student must have declared one of the three majors in the department. The student must also have completed at least 12 credits of course work within that major. In addition, the student must have an overall GPA of at least 3.25, and 3.50 in the major, both of which must be maintained in order to graduate with honors.

Courses in Chinese Studies

A Eac 101L Elementary Chinese I (5)
An introduction to modern Chinese (Mandarin) with emphasis on speaking, reading and writing. Basic fluency in the spoken language is developed through intensive use and repetition of fundamental sentence patterns and vocabulary. Students learn both traditional full-form characters and the simplified versions in use on mainland China. May not be taken by students with any previous knowledge of any Chinese language.

A Eac 102L Elementary Chinese II (5)
Continuation of A Eac 101L. Prerequisite(s): A Eac 101L. [FL]

A Eac 150L China Through Western Eyes (3)
American and European perceptions of China from the 13th century to the present, emphasizing the origin(s) and influence of these Western perspectives. Readings range from the travel journals of Marco Polo to recent reports. [HU]

A Eac 160M (= A Gog 160M) China: People and Places in the Land of One Billion (3)
An introduction to the human and physical geography of China. After a brief survey of China's historical geography and development, the course focuses on post-liberation China and the urban, economic, social and demographic problems associated with modernization. A Eac 160G & A Gog 160G are the writing intensive versions of A Eac 160M & A Gog 160M; only one of the four courses may be taken for credit. [IL OD SS]

A Eac 160G (= A Gog 160G) China: People and Places in the Land of One Billion (3)
A Eac 160G & A Gog 160G are the writing intensive versions of A Eac 160M & A Gog 160M; only one of the four courses may be taken for credit. [OD IL SS WI]

A Eac 170L China: Its Culture and Heritage (3)
Survey of the essential elements of traditional Chinese civilization and their transformation in the 20th century. Focus is on the development of basic Chinese social, political and aesthetic ideas. Conducted in English; no knowledge of Chinese required. [BE HU]

A Eac 172 (= A Rus 172) Concepts of Self: Chinese & Russian Women's Autobiography (3)
The course examines Chinese and Russian women's autobiographies from a broad spectrum of classes, ages, professions and periods. It examines and compares how culture and history shaped the women's self-presentation. The works studied include: Ding Ling, "Miss Sophie's Diary," Xiao Hong, *Market Street*, Anchee Min, *Red Azalea*, Nagrodskaia, *The Wrath of Dionysus*, and several selection of autobiographies from Tsarist Russia. Only one of A Each 172 and A Rus 172 may be taken for credit.

A Eac 180 (= A Arh 281) Introduction to Chinese Art and Culture (3)
The course combines a rapid survey of Chinese art with selected readings in Chinese literature to present an introduction to the visual and written culture of traditional China. Evidence from archaeology, sculpture, architecture, and painting will be viewed and analyzed to illustrate such topics as the origins and multiethnic character of Chinese civilization, the nature of the Chinese writing system, the growth of religious systems, and the development of the bureaucratic state. No prior knowledge of Chinese or Art History is required.

A Eac 201L Intermediate Chinese I (5)
Speaking, reading, and writing modern Chinese, including continued study of both full-form and simplified characters, introduction to dictionaries, principles of character formation and classification, and the phonetic writing system (chu-yin-fu-hao). Prerequisite(s): A Eac 102L or equivalent.

A Eac 202L Intermediate Chinese II (5)
Continuation of A Eac 201L. Prerequisite(s): A Eac 201L or equivalent.

A Eac 210L Survey of Classical Chinese Literature in Translation I (3)
An introduction to the major works of Chinese literature from The Book of Songs (1100–600 B.C.) to poetry and prose writings of the Sung dynasty (960–1279). [HU OD]

A Eac 211L Survey of Classical Chinese Literature in Translation II (3)
An introduction to the major works of Chinese literature from the Yüan dynasty (1279–1368) to the Ch'ing period (1644–1911), with emphasis on plays, poems and fiction. [HU OD]

A Eac 212L Modern Chinese Literature in Translation (3)
Survey of literature in China from the May Fourth Movement (1919) to the present, including works written after the Cultural Revolution in the 1960's. Special attention is called to the impact of the West on modern Chinese writers in the 1920's and 1930's. [HU OD]

A Eac 280L (= A Arh 280L) Chinese Painting (3)
Introduces students to the major works of traditional Chinese painting and analyzes those works to arrive at an understanding of life in traditional China. The major class activity will be viewing, discussing and analyzing slides of Chinese paintings. Only one of A Arh 280L & A Eac 280L may be taken for credit. [AR]

A Eac 290 Ideology and Reality in Contemporary China (2–3)
The roles of literature and politics from the Yenan Forum of 1942 to the present. Ideological and social forces that have shaped the literature of the period into a political and moral weapon in national wars, class struggles, and in effecting social reforms. Knowledge of Chinese not required

A Eac 301 & 302 Advanced Chinese I & II (3, 3)
A survey of a wide variety of materials written in modern Chinese, including selections from the works of major 20th-century writers, newspaper articles from both Taiwan and mainland China, and readings from the Great Proletarian Cultural Revolution. Students will view and study at least one full-length Chinese movie. Equal emphasis is placed on enhancing reading, writing and oral communication skills. Class is conducted entirely in Chinese. Prerequisite(s): A Eac 202L or equivalent for A Eac 301; A Eac 301 or equivalent for A Eac 302.

A Eac 310 Classical Chinese I (3)
Introduction to the literary Chinese language and classical Chinese culture through readings of simple texts selected from early classics, including the Chuangtzu and Records of the Grand Historian. Prerequisite(s): A Eac 202L or permission of the instructor.

A Eac 311 Classical Chinese II (3)
Continuation of A Eac 310. Prerequisite(s): A Eac 310 or permission of the instructor.

A Eac 350 (= A Gog 350) Urban Development in China (3)
Provides a comprehensive understanding of urban development in China. Reviews the history of urban development in China and examines the demographic, social, economic, and cultural dimensions of the urbanization process. Analyzes the emerging urban land and housing markets, and the changing urban landscape.

A Eac 357 (= A His 357, A Wss 357) Chinese Women and Modernity (3)
Chinese women and their search for and encounter with modernity will be the focus of this class. What have been the concerns of Chinese women? What forms have women's movements taken in the Chinese context? What has been the role of women in creating a modern Chinese state and society? These and other questions will be examined over the course of the semester.

A Eac 379 (= A His 379) History of China I (3)
This course is a survey of China's historical development from prehistory to the founding of the Ming Dynasty in the fourteenth century. We will concern ourselves especially with the transformation of Chinese social structure over time, the relations between the state and the social elite, and the relationship between China's intellectual, political, and social histories. Prerequisite(s): junior or senior standing, or 3 credits in East Asian Studies or History. [BE]

A Eac 379Z (= A His 379Z) History of China I (3)
A Eac 379Z is the writing intensive version of A Eac 379; only one may be taken for credit. [BE]

A Eac 398 (= A His 398) Change in Medieval China (3)
This course focuses on the dramatic change that China underwent between the eighth and the fourteenth centuries. We will examine this transformation from several historical perspectives: political history, economic history, social history, intellectual history, and cultural history in order to better understand China's shift from aristocratic to literati society. Prerequisite(s) A Eac 379, A His 379, A His 177, or permission of instructor.

A Eac 380 (= A His 380) History of China II (3)
This course is a survey of China's history during the late imperial and modern periods. It begins in the late 14th century and concludes with the present day. Of particular interest is China's international position and the interplay between political, social, and intellectual history during this period. Prerequisite(s): junior or senior standing, or 3 credits in East Asian Studies or History.. [BE]

A Eac 380Z (= A His 380Z) History of China II (3)
A Eac 380Z is the writing intensive version of A Eac 380; only one may be taken for credit. [WI] [BE]

A Eac 389 Topics in Chinese Literature, History, and Culture (3)
This course will focus on a selected topic or major work of traditional or modern Chinese literature or history for intensive study. This course is conducted solely in English; knowledge of Chinese is not required. May be repeated for credit when the topic varies. Prerequisite(s): A Eas 103L or A Eac 170L or A Eac 210L or A Eac 211L or A Eac 212L or permission of the instructor.

A Eac 390 Classical Chinese Poetry (3)
This class surveys Chinese poetry written in traditional verse forms, beginning with works from the *Book of Poetry* (600 BC) and concluding in the eighteenth century. Major poets will include Qu Yuan, Du Fu, Li Bo, and Su Shi. The course will begin with the major linguistic and rhetorical elements of Chinese poetry and proceed to introduce elements of traditional Chinese poetics. No knowledge of Chinese is required. All readings and discussions will be in English. Prerequisite(s): Any one of the following courses: A Eac 103L, A Eac 170L, A Eac 210L, or A Eac 211L

A Eac 458 (= A His 458) New Orders in Asia (3)
This class examines the international orders in place in Asia from the days of nineteenth-century imperialism to the search for a twenty-first century post-Cold War order. The focus will be on political, cultural, and economic interactions among the three main East Asian powers: China, Japan, and the US.

A Eac 470Z (= A Gog 470Z) China After Deng Xiaoping (3)
This course examines some of the issues associated with modernization and economic development in Post-Deng Xiaoping China. The course focuses on the era of economic reform associated with Deng, and is particularly concerned with the social, spatial and political ramifications of China's entry into the global economy. Prerequisite(s): any of the following: A Eac 160M/G or 170L, or A Gog 102G/M or 220M [WI]

A Eac 471 (= A Arh 480) Yüan and Sung Painting (3)
A seminar on Chinese painting during the Sung and Yüan Dynasties (960-1368) with research into selected paintings. The course will combine a detailed survey of painting during this period with examination of selected topics such as the rise of literati painting, Court painting as government art, and painting as political expression during the Sung-Yüan transition. Prerequisite(s): A Eac 180/A Arh 281 or A Eac/A Arh 280L and permission of instructor.

A Eac 497 Independent Study in Chinese (1–6)
Projects in selected areas of Chinese studies, with regular progress reports. Supervised readings of texts in Chinese. May be repeated once for credit when topics differ. Prerequisite(s): two 300-level Chinese courses and equivalent, or permission of instructor.

Courses in Japanese Studies

A Eaj 101L Elementary Japanese I (5)
Designed for the acquisition of a basic competence in modern standard Japanese in the areas of speaking, reading and writing. Format will be lecture with drill and discussion. Five class hours a week will be enhanced with a one-hour language lab. Not open to students with previous knowledge of the Japanese language.

A Eaj 102L Elementary Japanese II (5)
Continuation of A Eaj 101L. Aural comprehension, speaking, reading and writing will be emphasized. The format will be lecture will drill and discussion, and one hour in the language lab. Prerequisite(s): A Eaj 101L or permission of instructor.[FL]

A Eaj 130 Beginning Business Japanese (3)
Introduction to the basics of spoken and written Japanese, focusing on daily life and office/business situations. Designed for working professionals, students in business and related fields, and those who plan to work in Japanese companies.

A Eaj 170L Japan: its Culture and Heritage (3)
Survey of the essential elements of traditional Japanese civilization and their transformation in the post-Meiji era and twentieth century. Focus on the development of basic Japanese social, political, and aesthetic ideas. Conducted in English; no knowledge of Japanese is required. [BE HU]

A Eaj 201L Intermediate Japanese I (5)
Concentrates on the reading and analysis of language texts. A large amount of time is devoted to the understanding of Japanese grammar and oral practice. The format will be lecture with drill and discussion. Prerequisite(s): A Eaj 102L or permission of instructor.

A Eaj 202L Intermediate Japanese II (5)
Continuation of A Eaj 201L. The course will concentrate on the reading and analysis of language texts. A large amount of time is devoted to the understanding of Japanese grammar and oral practice. The format will be lecture with drill and discussion. Prerequisite(s): A Eaj 201L or permission of instructor.

A Eaj 210L Survey of Traditional Japanese Literature (3)
This course presents a survey of the major works of traditional Japanese literature from the 9th to the 19thcentury, including the Tosa Journal, the Pillow Book, and Essays in Idleness. The course is conducted solely in English; knowledge of Japanese is not required. [HU]

A Eaj 212L Modern Japanese Literature in Translation (3)
Survey of prose literature in Japan from the Meiji Restoration (1868) to the present. Emphasis is placed on pre-war writers and their quest for modernity. [HU]

A Eaj 301 & 302 Advanced Japanese I & II (3,3)
Acquisition of complex structures through intensive oral/aural and reading/writing practice. Discussion, authentic written materials, videotapes and audio tapes are incorporated. Prerequisite(s): A Eaj 202L or equivalent for A Eaj 301; A Eaj 301 or equivalent for A Eaj 302.[OD], [OD]

A Eaj 384 (= A His 384) History of Japan I (3)
This course is a survey of Japanese history from prehistory to the beginning of the seventeenth century. We will be especially concerned with the relationship between Japanese culture and continental civilization, the transformation of its social structure, the relationship between civil and military authority, and the interaction of intellectual, political, and social history. Prerequisite(s): junior or senior standing, or 3 credits in East Asian Studies or History. [BE]

A Eaj 384Z (= A His 384Z) History of Japan I (3)
A Eaj 384Z is the writing intensive version of A Eaj 384; only one may be taken for credit. [WI] [BE]

A Eaj 385 (= A His 385) History of Japan II (3)
This course is a survey of modern Japanese history. It covers the period from the early seventeenth century to the present day. The focus is on the interconnections between political, social, and intellectual history during Japan's emergence as a world power. Prerequisite(s): junior or senior standing, or 3 credits in East Asian Studies or History. [BE]

A Eaj 385Z (= A His 385Z) History of Japan II (3)
A Eaj 385Z is the writing intensive version of A Eaj 385; only one may be taken for credit. [WI] [BE]

A Eaj 389 Topics in Japanese Literature, History, and Culture (3)
This course will focus on a selected topic or major work of traditional or modern Japanese literature or history for intensive study. This course is conducted solely in English; knowledge of Japanese is not required. May be repeated for credit when the topic varies. Prerequisite(s): A Eas 104L or A Eaj 170L or A Eaj 210L or A Eas 212L or permission of the instructor.

A Eaj 391 World War II: The Japanese View (3)
This course will examine several works of Japanese literature (in translation) written during and after World War II. The works include and essay, novels, short stories, a play, and poetry. Attention will be given to the question of how the Japanese perceived their role in the war, the nature of the war itself, and if these changed with the passing of time. Prerequisites(s): A Eaj 212 or permission of the instructor.

A Eaj 396 Meiji Literature in Translation (3)
This course will examine several works of Japanese prose literature (in translation) written during the Meiji Period (1868-1912). The works include an essay, novels, and short stories. Attention will be given to the question of modernity, the nature of the novel, and European influence on Japanese literature. No knowledge of Japanese required. Prerequisite(s): A Eaj 212 or permission of the instructor.

A Eaj 410 Readings in Modern Japanese Literature (3)
This is an advanced course in Japanese language for students who have completed at least three years of college Japanese. The class will read selected passages from major works of modern Japanese literature. Lecture and discussion will be in Japanese. Prerequisite(s): A Eaj 302 or permission of instructor.

A Eaj 411 Readings in Modern Japanese Literature (3)
This is a continuation of A Eaj 410. Class will read selected passages from major works of Japanese literature. Lecture and discussion will be in Japanese. Prerequisite(s): A Eaj 410 or permission of instructor.

A Eaj 423 Practicum in Teaching Japanese (2)
This course is an introduction to the theory and practice of teaching Japanese as a foreign language, designed for those who contemplate a career teaching Japanese at the secondary or college level. Focus is on attaining practical experience through class observation and a supervised classroom practicum. Prerequisite(s): fluency in Japanese; permission of instructor. *S/U* graded

A Eaj 497 Independent Study in Japanese (1–6)
Projects in selected areas of Japanese studies, with regular progress reports; or supervised readings of texts in Japanese. May be repeated once for credit when topics differ. Prerequisite(s): A Eaj 302 permission of instructor.

Courses in Korean

A Eak 101L Elementary Korean I (5)
An introduction to modern Korean, with emphasis on speaking, reading and writing. Format will include both lecture and drill sessions. Not open to students with any previous knowledge of the Korean language.

A Eak 102L Elementary Korean II (5)
Continuation of A Eak 101L. Prerequisite(s): A Eak 101 or equivalent.. [FL]

A Eak 170 Korea: Its Culture and Heritage (3)
Survey of the essential elements of traditional Korean civilization, early contacts with the West, and modern development. Focus on the evolution of basic Korean social, political, economic, and aesthetic ideas. Conducted in English; no knowledge of Korean is required. [BE]

A Eak 201L Intermediate Korean I (5)
Concentration on reading, writing, and speaking at the intermediate level. Emphasis on vocabulary drills, grammar exercises, and pattern practice. Prerequisite(s): A Eak 102 or equivalent.

A Eak 202L Intermediate Korean II (5)
Continuation of A Eak 201L. Enhancement of reading, writing, and speaking skills will be emphasized. Students will also master several Korean proverbs. Prerequisite(s): A Eak 201 or equivalent.

A Eak 301 Advanced Korean I (3)
Acquisition of complex structures through intensive oral/aural and reading/writing practice. Discussion, authentic written materials, videotapes and audio tapes are incorporated. Prerequisite(s): Eak 202L or equivalent. [OD]

A Eak 302 Advanced Korean II (3)
This course is a continuation of A Eak 301. Prerequisite(s): A Eak 301 or equivalent. [OD]

A Eak 389 Topics in Korean Literature, History, and Culture (3)
This course will focus on a selected topic or major work of traditional or modern Korean literature or history for intensive study. This course is conducted solely in English; knowledge of Korean is not required. May be repeated for credit when the topic varies. Prerequisite(s): A Eak 101L, or A Eak 170L, or permission of the instructor.

A Eak 497 Independent Study in Korean (1-6)
Projects in selected areas of Korean studies, with regular progress reports; or supervised readings of texts in Korean. May be repeated once for credit when topics differ. Prerequisite(s): Two 300-level Korean courses or equivalent, or permission of instructor.

Courses in East Asian Studies

A Eas 103L Sources of East Asian Civilizations I (3)
A basic introduction to the primary texts that have contributed to the formative cultural foundations of Chinese and Korean civilizations. Readings will include the Analects of Confucius, the Tao te ching, and the Journey to the West. [BE HU]

A Eas 104L Sources of East Asian Civilizations II (3)
A basic introduction to the primary texts that have contributed to the formative cultural foundations of Korean and Japanese civilizations. Readings will include selections from the Tale of Genji and Basho's Narrow Road to the Deep North. [BE HU]

A Eas 140L Introduction to East Asian Cinema (3)
This course offers an introduction to East Asian cinema, with emphasis on movies produced in China and Japan. Lectures and class discussions will focus on the interpretation of cinematic texts, especially as they relate to cultural dynamics and social change. [AR]

A Eas 177 (= A His 177) Cultures and Societies of Asia: An Historical Survey II (3)
An introduction to the history and cultures of East Asia (China, Japan, and Korea), their major institutions and their religious and philosophical traditions form ancient times to the present. A Eas 177Z is the writing intensive version of A Eas 177; only one may be taken for credit.

A Eas 177Z (= A His 177Z) Cultures and Societies of Asia: An Historical Survey II (4)
A Eas 177Z is the writing intensive version of A Eas 177; only one may be taken for credit. *[WI]*

A Eas 180 (= A Gog 180) Asian America (3)
This course examines the history of the Asian experience in the United States (especially that of the Chinese, Japanese, Korean, and Southeast Asian communities). Topics include immigration, legal status, the transformation of Asian-American communities, their relationship with their native lands, and Asian-American self-representation in literature and film. [DP US*]

A Eas 190 Confucianism and the Samurai Ethics (3)
This course will examine primary texts in translation from Confucius' Analects to 20th century political propaganda in an effort to trace the origins and evolution of the ideas that formed the samurai ethic in Japan. Course taught in English; no knowledge of Chinese or Japanese necessary. [Oral discourse]

A Eas 205 East Asian Research and Bibliographic Methods (3)
This course will cover research and bibliographic methods in East Asian studies. Students will learn how to navigate library catalogs and the internet with specific emphasis on East Asian databases and resources. Students will also learn how to use East Asian reference materials, such as character dictionaries. Prerequisite(s): One year or equivalent of Chinese, Japanese, or Korean [IL]

A Eas 220 Chinese and Japanese Calligraphy (3)
Practical instruction in the artistic design and the different styles of written Chinese and Japanese with the traditional implements: brush, rice paper, ink plate and ink bar. Knowledge of Chinese or Japanese is not required.

A Eas 260 (= A His 260) China in the Revolution (3)
This course examines China's four great twentieth century revolutions: the 1911 Revolution, the 1949 Communist Revolution, the Great Proletarian Cultural Revolution, and the reforms of the 1980's and 1990's. Topics include authority and dissent, constituency mobilization, the relationship between urban and rural regions, and the changing nature of ideology in China.

A Eas 261 (=A Rel 261) Introduction to the Religions of Japan (3)
An introduction to the major religious traditions of Japan, particularly Shinto and Buddhism, this course will cover the major forms of religious expression in Japanese history from the earliest historical records to the so-called New Religions which arose in the twentieth century. Discussion will include the philosophical, artistic, social, and political dimensions of religion in Japanese society.

A Eas 265 (= A Rel 265) Introduction to Indian Buddhism (3)
An introduction to the story of Buddhism in South Asia. Focus is on the evolution of the Buddhist view of sentient life during its first 1500 years on the subcontinent as expressed primarily in doctrine, but cultural, artistic, social, and political issues will also be considered.

A Eas 266 (= A Rel 266) Introduction to the Religions of Japan (3).
An introduction to the heritage of Buddhism in East Asia. Focus is on the cultural interaction between Indian Buddhist notions of the human condition and the traditional religious and philosophical assumptions of China and Japan. Discussion will center on doctrine and the history of its transmission and understanding, including issues in language, artistic expression, and the establishment of the monastic community.

A Eas 270 (= A Wss 270) Women in East Asian Literature (3)
Female persona in East Asian literature will be examined in relation to their cultural background as well as the genres in which they appear. Women as rulers and lovers; as goddesses and prostitutes; exemplars and shrews. Conducted in English; no knowledge of the East Asian languages or cultures is required. Only one of A Eas 270 & A Wss 270 may be taken for credit.

A Eas 321M (= A Lcs 321M and A Gog 321M) Exploring the Multicultural City (3)
This course will explore the human dimensions and implications of ethnic diversity in the United States, focusing on New York City. The course utilizes a variety of methods to introduce students to the multicultural city, beginning in the classroom but ending with fieldwork in a specific New York neighborhood. A Eas 321M is equivalent in content to A Lcs 321M and A Gog 321M; only one of the three courses may be taken for credit. Prerequisite(s): A Gog 102M or 102G; or A Gog 120Z, or A Gog 125M, A Gog 160M or 160G; or A Gog 220M, or A Gog 240. [OD SS]

A Eas 345 (= A Rel 345) Ethical Issues in East Asian Thought (3)
This is a discussion course that looks at ethical issues of contemporary significance to the cultures of Asia. Students read contemporary academic discussions of how problems such as suicide, euthanasia, abortion, sexuality, cloning, etc. have been understood historically and in terms of contemporary social morality in India, China, Tibet, and Japan.

A Eas 357 (= A Rel 357) Zen Buddhism (3)
An introduction to the religious, philosophical, and artistic tradition of Zen Buddhism in China, Korea, and Japan and the West. This course looks at the birth and subsequent historical evolution of the Zen or Ch'an school of Buddhism in East Asia. We will look at the intersection of :Buddhist and Chinese presumptions about spirituality that gave rise to this unusual religious form, discussing precisely what is and is not iconoclastic about its tenets. The experience of American Zen communities will also be considered.

A Eas 362 (= A Eco 362) Economies of Japan and Korea (3)
A study of the economic growth of Japan and Korea and of current issues facing these economies. A Eco 362Z & A Eas 362Z are the writing intensive versions of A Eco 362 & A Eas 362; only one of the four courses may be taken for credit. Prerequisite(s): A Eco 110M and 111M or permission of instructor.

A Eas 362Z (= A Eco 362Z) Economies of Japan and Korea (3)
A Eas 362Z & A Eco 362Z are the writing intensive versions of A Eas 362 & A Eco 362; only one of the four courses may be taken for credit. Prerequisite(s): A Eco 110M and 111M or permission of instructor. [WI]

A Eas 392 East Asian Travel Literature (3)
This course will examine the traditions of travel writing in China and Japan. Students will read selections from both countries that cover a range from the 9th century to the 18th century. Half of the semester will focus on China and half on Japan. All readings will be in English; no knowledge of Chinese or Japanese is required. Prerequisite(s): Any one of the following, or permission of the instructor: A Eas 104, A Eaj 210; A Eas 104; A Eac 210, A Eac 211

A Eas 393 (= A Rel 393) Readings in Buddhist Texts (3)
This is an advanced course in the study of Buddhism that will focus on the close reading of Buddhist scriptures in English translation. Prerequisite(s): A Eas 265/A Rel 265; A Eas 266/.A Rel 266, or permission of the instructor.

A Eas 394 (= E Rel 394) Readings in Japanese Religious Studies (3)
This is an advanced course in the religious traditions of Japan. We will read English translations of religious texts native to the Japanese experience of religion, specifically Buddhist, Shinto, Confucian, and Folk. Prerequisite(s): One of the following: A Eaj 261/A Rel 261; A Eas 266/A Rel 266, A Eas 190, A Eas 357 or permission of the instructor.

A Eas 397 The Silk Road (3)
The course examines the history of various land links between China and India, which are known collectively as "The Silk Road." Special attention is given to the transmission of ideas (Buddhism), art forms, and commercial goods along this route, especially during the heyday of the Silk Road from about 600 to 1000 AD. The many discoveries made by Western archeologists in Central Asia in the late 19th and early 20th centuries are also considered, as well as issues related to their removal of Silk Road treasures to museums in Europe and around the world. Prerequisite(s): Any one of the following: A Eac 170; A Eas 103; A Eac 210, or A Eac 211.

A Eas 399 (= A His 399) Confucius and Confucianism (3)
This course surveys the main texts and themes in the development of the Confucian tradition from its origins in China through its spread in Japan and Korea to its reemergence in contemporary East Asia. The emphasis is on the way that the tradition has responded to social conditions. Particular attention will be paid to the relationship between Confucian intellectuals and political power. The rivalry with other traditions (e.g., Taoism, Buddhism, Marxism, Liberalism, etc.) will also be considered. Prerequisite(s): A His 177, A Eas 103, A Eas 190, A Eac 379, or permission of the instructor.

A Eas 495 Colloquium in East Asian Studies (3)
Directed readings and conferences involving several members of the faculty for students pursuing undergraduate honors in the Department of East Asian Studies. To be offered only when requested by students eligible for the honors program. Prerequisite(s): major in the department; junior or senior class standing; acceptance into the Honors Program.