2013-14 SUSTAINABILITY COURSES & COURSES THAT CONTAIN SUSTAINABILITY

COLGATE UNIVERSITY

SUSTAINABILITY COURSES

BIOLOGY

BIOL 101: Topics in Organismal Biology: This course introduces students to the complexities of biodiversity, from the ecosystem to the genetic level. By examining the factors affecting the structure and function of terrestrial, marine, and freshwater communities students learn about the diversity of organisms in these systems. Students gain an appreciation for the roles of evolutionary and ecological history, as well as modern ecological interactions, in shaping the biodiversity across the globe. This course also exposes students to the many ways that human activities affect biodiversity.

BIOL 103: Topics in Adaptation: Nearly every habitat on Earth, from thermal hot springs to the polar ice caps, is home to some form of life. Within those environments, organisms make their living in remarkable and varied ways. This course explores how organisms "work," with an emphasis on extraordinary feats of survival. The course content crosses many of the traditional hierarchical divisions in biology, integrating cellular biology, physiology, and ecology to come to a greater understanding of how organisms function within their environmental contexts. Course pedagogy includes some lecture, problem-based learning, and group problem solving. This course is an entry for students intending to major in the life sciences and is also for students in other majors with an interest in the life sciences.

BIOL 181: Evolution, Ecology, and Diversity: This course concentrates on the evolutionary biology of organisms and the ecological processes that influence the distribution and abundance of plants and animals, as well as their interactions. The history of biological diversification (including the origin of life; the evolution of prokaryotes and eukaryotes; and the invasion of land by plants, fungi, and animals) are discussed. In addition, the mechanisms of evolution, including natural selection, adaptation, and extinction, are studied. Topics in population ecology as they relate to evolutionary processes including physiological and behavioral ecology, population growth, and species interactions (e.g., competition, predation, mutualism) are also covered; there is a strong focus on the physical, chemical, and biological factors that affect populations. The credit-bearing laboratory **BIOL 181L** must be taken concurrently with **BIOL 181**. Projects in the laboratory and field include experiments designed to understand evolutionary principles and to test ecological hypotheses.

BIOL 306: Medical and Forensic Botany: The great majority of people understand that plants are fundamental to life: They produce life sustaining oxygen, cleanse the air of carbon dioxide, provide material for construction, and more. Yet few people appreciate that modern medicine has its roots in the chemistry of plants. From headaches and malaria to AIDS and hypertension, most modern drug treatments originated from plant extracts. Even in the modern world of sophisticated synthetic chemistry, 25 percent of all prescriptions contain plant extracts or active principles prepared from plants. More than providing pain relief and disease cures, the search of effective medical botany has shaped cultures, created fierce wars, and contributed to the modern issues of bio-prospecting, drug wars, and crime scene investigation. This course delves into issues of medical and forensic botany from multiple perspectives. Students develop a greater understanding of basic plant biology and phyto-chemistry, and learn how many cultures have utilized plants for curative and destructive means. Students also examine how plant-derived drugs have disrupted both ancient and modern cultures, and have shaped the scientific method and modern drug creation. Finally, the class examines how plants play significant roles in early and modern forensics by focusing on major cases whose decisions have hinged on plant evidence. Prerequisite: **BIOL 181** (formerly **BIOL 211**). (Formerly **BIOL 230**.)

BIOL 403/403L: Field Ecology: This course examines the role of plants in the ecological world by studying the biological and historical factors affecting the structure of plant communities, with an emphasis on field and lab work. The topic is approached by viewing plants as individuals, members of populations, communities, and as key integrators of ecosystems. The course examines individual plants from a functional perspective by relating morphological and physiological traits with biological and biochemical processes, to understand spatiotemporal patterns of plant distribution in their natural environments. Beyond the individual, the course explores population

and community dynamics and combines this knowledge to understand better the organization of plant communities and the roles they play in ecosystems. The course includes reading from the primary literature and requires oral and written critical analysis of the literature. The credit-bearing laboratory **BIOL 403L** must be taken concurrently with **BIOL 403**. Prerequisite: Completion of any one. **BIOL 201–206** course or permission of instructor. (Formerly **BIOL 328/328L**.)

BIOL 359/359L: Ecosystem Ecology: Ecosystem ecology is the study of both the organisms (biotic) and the environment (abiotic) as an integrated system and the processes that link them: energy transformations and biogeochemical cycling. Emphasizing plant systems, the course introduces students to fundamental ecosystem processes such as primary productivity, decomposition, nutrient cycling, plant-soil interactions, and energy balance. Students also study the major element cycles (carbon, nitrogen, phosphorus) and how these vary among ecosystems as different as the arctic tundra and tropical rainforest. An important theme of the course is the relationship between ecosystem processes and pressing global environmental issues such as global warming, biodiversity loss, and rising carbon dioxide levels. The credit-bearing laboratory, **BIOL 359L**, must be taken concurrently with **BIOL 359**. This course is not recommended for first-year students, except by permission of instructor.

BIOL 330: Conservation Biology: The widespread loss of species and concerns over how to maintain maximum genetic variability in populations are at the heart of this course. Topics include biological diversity, its measurement, and differences in diversity among habitats. The course also considers threats to biological diversity such as habitat loss, exotic species introductions, pollution, environmental variability, and catastrophic events. This information is used to consider various conservation strategies and sustainable development. Students take a global perspective in this course and consider how globalization affects biodiversity directly and indirectly.

BIOL 332: Tropical Ecology: This course addresses tropical ecology starting with the discoveries and theories of early explorers to modern theories of biogeography of species richness. Students also learn about human impacts on tropical diversity and the sustainability of tropical ecosystems. Students use seminal papers as readings and discuss questions that are still debated by tropical ecologists: Why are the tropics so diverse? How is this diversity maintained? How do communities respond to disturbance? And how does global warming affect communities and species richness? In this course, students design experiments and write proposals on field projects that are executed during the extended study portion of the course (**BIOL 332E**), which is required. The 0.5-credit extended study course is a three-week trip to Costa Rica, Central America, where students visit some of the ecosystems studied in the course.

BIOL 336: Advanced Ecology: This course emphasizes the quantitative aspects of ecology by exploring mathematical models of competition and predation, the use of diversity and community similarity indices, population regulation models, island biogeography, key factor analysis, food web analysis, and examining community and ecosystem level processes. In addition to text-book readings, students also read papers from primary literature on topics covered in class. The credit-bearing laboratory **BIOL 336L** must be taken concurrently with **BIOL 336**. The laboratory portion includes field trips to examine terrestrial and aquatic communities exposing students early in the semester to field methods; for the remainder of the semester, students design and conduct a small research project.

BIOL 340: Marine Biology: This course provides students with a comprehensive analysis of marine ecological processes and in-depth examination of the biology of marine organisms. Broad ecological concepts are emphasized in a survey of marine habitats ranging from the intertidal rocky shore to deep sea hydrothermal vents. The diversity of marine organisms is considered in the context of their physical and chemical environments, and their interspecific interactions. In addition, students deliberate in written reports and class presentations on specific ways in which humans impact the marine environment.

CHEMISTRY

CHEM 100: The Chemistry of Altered and Natural Environments: To grapple with the complex environmental questions faced by modern society, the science that explains the phenomenon we observe must be understood. From endocrine disruptors to the ozone hole, global warming to plastics, and nuclear technology to acid rain, chemical principles allow one to understand, predict, and potentially mitigate the consequences of environmental changes in our modern age. This course provides an introduction to chemical principles and their application toward environmental issues. It focuses on those principles that are crucial in understanding environments and present-day environmental challenges. This course is designed for students who are interested

in environmental science and environmental studies. There is no prior chemical knowledge expected, and there are no prerequisites.

CHEM 477: Environmental Chemistry: This half-semester 0.50-credit course uses a firm grounding in chemistry to seek answers to the complex environmental questions faced by modern society. The scientific literature is used to explore a variety of topics, such as: legacy and emerging contaminants, natural cycles and their anthropogenic perturbations, and energy production.

ECONOMICS

ECON 228: Environmental Economics: An introduction to the study of environmental problems with the perspective and analytical tools of economics. Sources of market failure with respect to environmental issues are discussed, and methods for analyzing environmental policies are developed. These tools are applied to current issues of pollution, resource use, and sustainability. Prerequisite: ECON 151 or permission of instructor.

ECON 234: Gender in the Economy: An examination of the role of gender in our economic system. This course studies the causes and implications of sexual division of labor and the dynamic relationship of production and reproduction in a historical and contemporary context. A critical analysis of the implicit and explicit gender bias of the discourse of economics is an integral part of this course.

ECON 238: Economic Development: This course explores the content of economic development. It examines both the successes of the developed world and the limits of development elsewhere. Specific topics include the role of population growth, the importance of agriculture, structural change, and globalization.

ECON 328: Natural Resource Economics: A study of the optimal allocation of scarce natural resources under conditions of imperfect markets. This course is intended for students interested in applying microeconomic theory to public policy questions regarding natural resources. Topics include environ-mental quality, policy, and regulation; renewable resources (fisheries, forests, and water resources); and non-renewable resources (global warming, energy use, and mineral extraction).

ECON 333: Urban Economics: Cities are major centers of economic activity. This course describes the formation and characteristics of urban areas. Coverage begins with analysis of how cities arise due to utility-maximizing decisions of households and profit-maximizing decisions of firms. The course then describes features of cities including economies of scale, sources of urban economic growth, land-use patterns, housing, segregation, government policy, and local public goods provision.

ECON 342: Labor Economics: Economics of the demand for and supply of labor in various market settings and the determination of wages and employment. Topics include time allocation and labor supply, demand for labor, investment in human capital and education, wage differentials and wage discrimination, and other issues of current interest.

ECON 348: Health Economics: This course applies economic principles and tools to study the health-care market. It looks at the structure, cost, and distribution of resources within the health-care sector. The course focuses on the socio-economic determinants of health, demand and supply of health insurance, hospital competition, physician practice, government intervention in the health-care market, and comparisons of health-systems around the world.

ECON 428: Seminar in Resource and Environmental Economics: This course is an advanced study of current resource and environmental issues. It explores the reasons for, and the welfare implications of, some of the pressing resource and environmental issues facing humankind today. Topics may include the study of energy use and its implications for local and global environments; the interaction between economic development and population growth and its impact on resource use and the environment; and the local and global implications of deforestation. The economic, scientific, and political framework surrounding the issues is explored.

ECON 433: Seminar in Economics of Race and Ethnicity: This seminar studies how several economic fields — including labor economics, public economics, economic growth and development, and international trade — have contributed to economists' understanding of economic issues related to race and ethnicity. Topics might include discrimination, disparities in economic outcomes across groups, the macroeconomic benefits and costs

of diversity and segregation, and the economic consequences of immigration. Other topics may be considered as well.

ECON 448: Seminar in Health Economics: This seminar presents an advanced study of issues in health economics. Topics include demand for health care, the insurance market, and implications of employer-provided insurance. On the provision side, hospital and physician markets are analyzed with a focus on measuring quality, pay-for-performance, and competitive effectiveness research. Other topics might include public health issues such as obesity and substance use, as well as comparative health-care systems.

EDUCATIONAL STUDIES

EDUC 219: Education for Peace and Nonviolence: An overview on how to educate for peace and nonviolent societies. Students begin by developing theories about human conflict and then explore multiple approaches toward resolving these conflicts — at the interpersonal level, the structural level, and all the spaces in between.

EDUC 241: Queering Education: LGBTQ youth have traditionally been marginalized in schools. K–12 education offers few curricular and institutional spaces where queer identities are affirmed and queer voices are heard. From sex education to the prom, most schools and educators operate under the ahistorical guise of heteronormativity — a term used to describe ideologies and practices that organize and privilege opposite-sex gender relations and normative gender and sexual identities. Using critical lenses developed by queer and feminist theorists and critical pedagogues, this course seeks both to explore how heteronormativity operates in a variety of educational spaces and how students and educators are confronting these processes by using schools as sites of resistance.

EDUC 303: Gender, Education, and International Development: A study of gender and gender-sensitive policies in international education and development discourse. The emphasis on rights and democracy for women and men from historically disadvantaged groups has not always been accompanied by the transformation of fundamentally unequal and unjust social institutions. This course explores the politics of gender through a cross-cultural lens that draws on theory and practice in Asia, Africa, Latin America, Eastern Europe as well as the industrialized world.

EDUC 205: Race and Education: An examination of how the concepts of race, ethnicity, and culture play, have played, and continue to play a major role in the American educational system. Students study issues such as social justice, racial and ethnic identity, immigration, integration (desegregation/resegregation), race relations, socioeconomic inequality, language programs, and transformative education. In order to engage in critical dialogue, a wide range of educational research and policies concerning these issues are explored.

EDUC 312: Women and Education: An examination of the structure, content, and expression of school curriculum to reveal ways that gender identity is formed as a moment in the general process of the reproduction of cultural consciousness. This course is of particular interest to those interested in the ways in which questions of gender should inform classroom practices and institutional structures.

ENGLISH

ENGL 365: Science and Nature Writing: A survey of the literature of science and the natural world. How do scientists translate empirical knowledge into precise and poetic language? How do naturalists craft compelling stories about the behavior of, say, barnacles or glaciers? In this course, students look for answers in texts by scientists, naturalists, medical doctors, and laypeople. The final assignment is to write either an analytical or a creative paper. Authors include Edward Abbey, Wendell Berry, Rachel Carson, Annie Dillard, Loren Eieseley, Gretel Ehrlich, Atul Gawande, Stephen Jay Gould, Barbara Hurd, Barry Lopez, John McPhee, Sherwin Nuland, David Quammen, Janisse Ray, Oliver Sacks, Richard Selzer, Lewis Thomas, and Terry Tempest Williams. (Post-1800 course.)

ENVIRONMENTAL STUDIES

ENST 232: Environmental Justice: In the wake of the environmental movement and the civil rights movement there rose a crosscurrent of issues combining problems of social justice and environmental issues. During the past two decades, this crosscurrent has swelled to produce a new social movement: the environmental justice movement. This course explores the terms and ideas of environmental justice by addressing the key issues of environmental racism, distributive justice, political and cultural representation in environmental struggles, alternative theories of justice generated from disenfranchised groups, grassroots politics, and concepts of environmental identity. These issues are introduced and discussed mainly in the context of the U.S. environmental justice movement, with some international context highlighted periodically.

ENST 233: Global Environmental Health Issues: Environmental health is a field of interdisciplinary study that integrates human society and behavior with ecological processes to understand environmental dimensions of human health. This 0.5-credit course focuses on knowledge generated in the natural and social sciences that concerns human-environmental interactions and its implications for human health risk. It introduces students to the conceptual and empirical underpinnings of the direct and indirect relationships between environment and health, approaches to measuring these relationships, and the ways in which health policies, programs, and clinical practices have been organized to reduce risk at various geographic scales: locally, nationally, and internationally. Regional implications of global climate and other global processes provide an important context for the course. This course also explicitly demonstrates the importance of an interdisciplinary approach to investigating questions in global environmental health and the complexity of environmental analysis.

ENST 316: Nature, Technology, and the Human Prospect: This course explores the complex interrelationships among Nature, technology, and people, especially the interactions that reconfigure what it means to be human. The aggregate significance of modern technologies is radically transforming the natural and human-built world in good and bad ways, even within remote societies and ecosystems. How do technologies control or influence the ways people value parts of the world over other parts, the ways they value the moment over the future and the past, the ways they value rapid change and innovation over long-standing traditions and slow-changing landscapes? These are some of the complex moral issues raised by the technological enhancement across the globe that is examined by careful reading, writing, argumentative discourse.

ENST 321: Global Environmental Justice: Global environmental justice examines both procedural and distributive inequities as well as injustices in political relationships among nation states. Additionally, it places emphasis on a variety of global political issues, which have evolved from environmental concerns that transcend national boundaries. This intermediate course expounds on the concepts and theories of environmental justice from an international perspective. It evaluates the international frame of environmental justice from a human rights perspective and its applicability to different case studies. A close examination of the theoretical North-South relationship, in terms of dependency and exploitation of peripheral (South) countries by core (North) countries, is central to the course. It analyzes a constellation of issues labeled as global environmental justice, such as tribal exterminations, dislocations of marginalized communities, and resource conflicts. Real world examples of environmental justice cases are critically assessed to develop an understanding of the complex relationships among actors that lead to environmental injustices.

ENST 333: Environmental and Community Health in Africa (A Case Study in Rural Uganda): The majority of this 0.50 credit extended study is held in villages proximate to Bwindi Impenetrable National Park in southwestern Uganda. The curriculum focuses on health issues including disease prevalence and access to health care in remote villages adjacent to national parks. Ecological dimensions of human health are considered including infectious disease transmission, sanitation and access to water, nutrition and household environment. Students participate in the following educational projects with a diverse array of community leaders: 1) training workshops in research methods for clinical and community health; 2) field studies with health professionals to improve health data collection; and 3) community outreach to understand environmental and community health assets and needs in the region. Ideally, students should bring background and interests in environmental studies, biology and geography.

ENST 336: Renewable Energy: Research and Implementation: Finding energy resources that minimize damage to the environment is a challenge that today's students will face throughout their lives. This course introduces students to renewable energy technologies as well as the issues involved in carbon capture and storage from fossil fuels. Class meetings are augmented with field trips to sites at which renewable energy technology is being researched or implemented. Prerequisite: permission of instructor.

ENST 336E: Alternative Energy: Research and Implementation in Norway: This 0.50–credit extended study gives students the opportunity to learn about current research on renewable energy in Norway and also learn about a very different set of beliefs regarding environmental protest than is common in the United States. Norway has a strong commitment to mitigating global warming that is shown both in its support of research on renewable

energy and its willingness to tax fossil fuel energy. In addition to visiting research labs and government offices, students also see some of Norway's famous fjords and glaciers in order to understand the northern landscapes that are threatened by global warming.

ENST 344: Managing Complexity: America's Public lands: Public land management is inherently complex. Typically there are multiple interested parties and potentially competing goals such as wilderness preservation, recreational accessibility, and resource exploitation. Also, the management of public lands may rest with several agencies. Management decisions made in pursuit of one goal often have implications for other goals, stakeholders, and management agencies. Complexity theory offers a new perspective for understanding the complicated workings of ecosystems, economies, and political systems. Such complex adaptive systems are characterized by feedback loops, chaos, nonlinear dynamics, self-organization, and emergence. The aims of this course are to investigate alternative public land management strategies and apply complexity theory 1) to model qualitatively the intricacies of both natural and human-built systems, 2) to propose and evaluate fresh ecological strategies and management policies for conserving public lands, and 3) to investigate new procedures for mitigating tension among competing interests in the use of public land. The course includes some weekend field trips.

ENST 390: Community-based Study of Environmental Issues: This project-based, interdisciplinary course examines current environmental issues in the context of community-based learning. Topics for investigation are selected by faculty, usually in conjunction with the campus sustainability coordinator, the Upstate Institute, or directly with local and regional agencies or organizations. Students get practical experience working in interdisciplinary teams to examine environmental issues with a goal of developing relevant recommendations. Prerequisites: at least two courses related to environmental studies; ENST 202 and ENST 232 are strongly recommended.

ENST 490: Seminar in Environmental Studies: In this senior seminar, students discuss the relevant literature (from multiple disciplines) and do research on one or more selected environmental issue or issues, chosen by the instructor. Topics differ from year to year. The goal is to achieve an advanced, interdisciplinary understanding of contemporary environmental issues. Prerequisites: open to senior environmental studies majors and minors, or others by permission of instructor.

GEOGRAPHY

GEOG 111: Global Shift: Economy, Society, and Geography: This course introduces students to the geographic perspective as a way of enriching their critical understanding of the increasingly globalized world of the early 21st century and the roles played by particular places within this global system. The course focuses particularly on contemporary patterns and processes of change in human well-being throughout the world, the factors and dynamics that underpin this change, and their complex interrelations with the natural and built environment. To this end, this course examines the implications for social and economic development in diverse world regions of phenomena such as international migration, infectious disease epidemics, urbanization, foreign direct investment, democratization movements, and global media. Case studies are drawn from industrialized countries of the Global North, transition economies and societies of the former Soviet Bloc, emerging economies of Asia, and the developing economies of Latin America and Africa.

GEOG 121: Earth, Society, and Sustainability: The spatial scale, magnitude, and pace of human-induced environmental changes over the past 300 years are unprecedented. It is essential to undertake reasoned assessments of the complex and interrelated political, socioeconomic, technological, cultural, and biophysical factors leading to environmental changes if society is to manage them appropriately. This course is an introduction to the major environmental problems of resource depletion, pollution, and ecosystem transformation. It explores the effects of environmental changes on society, as well as societal responses to them, and enhances understanding of the causes of these changes from multiple theoretical perspectives.

GEOG 131: Environmental Geography: The objective of this course is to provide students with a general understanding of the processes and spatial distribution of the Earth's primary physical systems and the ways in which humans interact with these systems. Course emphasis is divided into three areas: atmospheric processes, the spatial dynamics of vegetation and soils, and landform development. Students are introduced to the basic physical processes and interactions that operate within each of these categories, with special focus on the ways in which these factors relate to contemporary environmental problems. *This course counts toward the Natural Sciences and Mathematics area of inquiry requirement.*

GEOG 205: Climate and Society: Human-induced climate change — global warming — is the defining environmental and social issue of our times. That people are dramatically altering the climate is now the resounding consensus in the scientific community. Potential short- and long-term impacts include biodiversity loss, sea-level rise and coastal flooding, more intense storms, threats to human health, and disruptions of freshwater supplies and food security. But while the global community increasingly understands the basic processes driving climate change and is starting to appreciate the consequences of a warmer world, the coupled social and biophysical dynamics of global warming are complex and the issue remains controversial. This course explores climate-society relationships in industrial and pre-industrial periods, and considers the multifaceted natural and human dimensions of global warming. It also highlights the integrative natural and social science modes of analysis commonly used in the discipline of geography.

GEOG 314: Population Issues and Analysis: This course analyzes the role of population dynamics in ecological, social, and economic organization and change. Methods of incorporating demographic analysis into scientific and policy research are introduced. Approaches to assessing the implications of population growth are studied. The course considers the relationship of population to a range of policy concerns including environmental change, social welfare, and security; the status of women; poverty and economic development; and race and ethnic relations.

GEOG 320: Globalization, Development, and Environment: This course approaches international development via geography's integrative perspective. It analyzes the concepts of development, sustainability, underdevelopment and post-development as well as the evolution of development theory, policy, and praxis. Particular attention focuses on contemporary issues of sustainable development such as environmental degradation, population displacement, rapid urbanization, the informal economy, transnational corporations, grassroots social movements, and post-conflict development. The course places the study of development within a global framework, considering the impact of colonialism, economic restructuring, the role of international organizations, and the implications of international economic and environmental policy for developing countries. Students have the opportunity to apply the concepts studied to specific developing countries or international issues of their choice.

GEOG 321: Gender, Justice, and Environmental Change: This course explores how the environment (both physical and social) shapes, and is shaped by, the roles of men and women in society. The course addresses environmental issues from the dual perspective of gender relations and social justice to advance our understandings of the fundamental relationship between human activities and our physical and social environments. To this end, we work across diverse geographies to explore 1) the social relations underlying environmental problems; 2) the ways in which gender, class, race, and ethnicity intersect in environmental issues; and 3) the social and environmental processes that underlie the construction of gender and the life-worlds of the individuals in those 'geographies'. We bring a global perspective to the issues by drawing out local-global linkages. Case studies are drawn from North America, Latin America, Africa, and Asia.

GEOG 322: Ecologies of the City: With half of the world's population living in and around cities, the needs of urban-based populations and economies dominate non-urban peoples, places, and habitats worldwide. This course begins with an introduction to political ecology, a body of knowledge combining political economy and cultural ecology. Political economy is the study of how different societies are connected globally, and cultural ecology is the study of the relationship between a society and its natural environment. Although political ecology largely focuses on places and cultures of "pristine" or "native" nature in "other" countries, this course turns to urban settings to explore how people understand urban areas and what their relationship to the environment in these areas is. Case studies of specific places (from small cities in upstate New York to global cities in distant countries) are used to learn about urban political ecological issues through readings, assignments, discussion, and interaction with local/regional experts on urban environmental problems. Students apply their knowledge about urban political ecology both collaboratively, in a final project conducted in a workshop-type setting, and individually, in a final term paper.

GEOG 324: International Environmental Policy: As awareness of global environmental problems grows, questions arise as to how social, cultural, and biophysical contexts define how humans use and manage natural resources, on both community and national scales of analysis. This course uses geographic perspectives on nature-society interactions to consider the decision-making processes of natural resource managers, from local farmers to policy actors at the national and international levels. Case studies in Africa and Latin America are used to explore the environmental (biophysical) and political constraints on the management of natural resources.

GEOG 325: Water and Society: No natural substance is more vital to human existence or used in more different ways than fresh water. This course considers the natural and social processes (with primary focus on the latter) that shape water use both within and outside of the United States, including physical factors, technology,

economics, culture, law, and political systems and ideologies. The focus is on the services that water provides, the causes and consequences of water scarcity, and the ways in which water's services might be obtained in more sustainable ways.

GEOG 326: Environmental Hazards: Environmental hazards are threats to people and the things they value. Hazards are a complex mix of natural processes and human actions; thus, they do not just happen, but are caused. This course emphasizes the role of institutions, technology, and human behavior in hazard creation, as well as ways in which society responds to hazards of multiple origins: case studies center on earthquakes, hurricanes, and wildfire (natural hazards); toxic pollution (technological hazards); and malaria and invasive species (biological hazards). A key theme explores ways in which society may mitigate the risk of environmental hazards and manage them more effectively.

GEOG 328: Sustainability and Natural Resources: This course uses social science perspectives on sustainability and sustainable development to analyze the production and consumption of major natural resources. The course addresses the following questions: What are natural resources, and how do their geographies combine with those of wealth and poverty, of political power and technological and institutional capacity, to affect the potential for actions towards sustainable development? How is our understanding of sustainable resource development enriched by critical perspectives from the social sciences about the meaning of such contested concepts as sustainability and development, and about issues of equity, power, participation, property rights, and unequal impacts (of both resource depletion and environmental policies)? How can the three dimensions (environmental, social, economic) of sustainability better guide the production and consumption of natural resources, renewable or nonrenewable, in different places and by different actors? The topical and regional focus of the course varies from year to year; it may, for example, focus on oil (or energy more generally), on minerals, or on biological and genetic resources; and on specific geographic areas, such as central New York, Latin America, or the Arctic.

GEOG 329: Environmental Security: As climate change intensifies and the human population of the planet is likely to reach 9 billion by 2050, it is increasingly important to understand the impacts of environmental change on security. This course combines the perspectives of physical geography with emergent approaches in geopolitics and peace and conflict studies to trace an important shift in the very idea of security that has accompanied growing political awareness of the insecurities associated with anthropogenic climate change and biological degradation. Students review the shift from the "national security" discourses characteristic of an era marked by a bipolar geopolitical order, to the planetary scale "environmental security" discourses of a present in which resource scarcity is increasingly bound up with conflict. In an effort to trace this critically important environment/security nexus, the course takes the following trajectory: First, students are introduced to global conflict and environmental trends, particularly climate change; second, against this background, student learn about different perspectives on this nexus and how it can be analyzed using different methods; third, students apply their gained knowledge to regional case studies that illustrate the complexity and variety of the topic. Finally, the last section of the course discusses policies and options for addressing conflicts arising — at least in part — from environmental factors.

GEOG 332: Weather and Climate: This course focuses on the principles of meteorology and climatology with particular emphasis on Earth/energy dynamics, atmospheric circulation, and middle latitude climatology. Elements of Earth's energy system are used first to establish the basic causal forces that drive all weather phenomena. These concepts are extended into a section on atmospheric forces and thermodynamics, and used to build an understanding of the middle latitude climate system, including middle tropospheric circulation vorticity concepts and surface cyclone and anticyclone development. During this process, students perform several exercises that focus on atmospheric data analysis and forecasting. These exercises make use of numerous online meteorological data resources and culminate in a case study project involving the detailed analysis of a significant weather event. *This course counts toward the Natural Sciences and Mathematics area of inquiry requirement.*

GEOLOGY

GEOL 101: Environmental Geology: How do geologic processes and events directly influence human societies? How have humans changed the Earth? Fundamental geologic concepts such as plate tectonics, geologic time, and surficial processes are used as a basis for understanding a variety of natural geologic hazards including earthquakes, volcanoes, landslides, floods, and coastal erosion. Real-world examples of the interplay between human activities and the environment include soil and groundwater contamination, mineral and energy resource development, and threats to the Earth's biodiversity. Also, the course takes a closer look at the geologic

record of global change and the debate over global warming. This course is an interdisciplinary approach to environmental geosciences. Three lectures and one laboratory session per week.

GEOL 135: Oceanography: A study of the major contemporary concepts of biological, chemical, geological, and physical oceanography. The nature and origin of ocean basins by global plate tectonics, sedimentation, seawater composition, water masses, oceanic circulation, waves, tides, life in the sea, biological productivity, and human impact are all discussed. The importance of the ocean as a dynamic ecosystem is stressed throughout the course.

GEOL 217: Coastal Geology: A study of coastal geomorphology, sediments, and wave-related processes active in the present and geologic past. Major topics to be considered include beach, nearshore, and estuarine processes, barrier-island and salt-marsh development, Pleistocene sea-level fluctuations, human modifications and impacts, and erosional-depositional patterns induced by the interaction of physical and biological factors of the coastal environment.

GEOL 310: Environmental Economic Geology: This course examines the global distribution of mineral resources, the economic and engineering factors that govern their availability, and the environmental effects of their production and use. Mineral resources to be considered include ferrous and non-ferrous metals, precious metals, and energy fuels. Topics to be explored, in addition to the origin, nature, and geological settings of the world's great mineral deposits, include mineral law, mineral exploration and production, strategic mineral reserves, minerals and human health, and environmental impact of mining and use, and remediation.

GEOL 350: Paleoclimatology: Earth's climate has fluctuated widely in the past, between droughts, warm periods, and ice ages. In fact, climate change is a certainty. The planet is currently faced with potential abrupt climate change resulting from human-induced environmental modification. Paleoclimatology, the study of past climates and environments of the Earth, provides a long-term perspective on the nature of global climate variability that is critical for evaluating the sensitivity of the Earth system to past, present, and future changes. This course provides students with an overview of paleoclimatology by examining the use of proxy records such as marine and lake sediment sequences, ice cores, tree rings, corals, and historical data to reconstruct past climatic conditions. Dating methods are introduced, and seminal publications in paleoclimatology are reviewed in tandem with current research papers addressing outstanding questions in paleoclimatology. Throughout, students critically analyze their current understanding of past climates and environments, and identify promising directions for future research. Topics include abrupt climate change, human evolution and climate, biosphere-climate interactions, and paleoclimate modeling.

GEOL 415: Seminar on Reefs: Reefs are "organic fantasias," some of the most visually stunning and biologically diverse ecosystems on our planet. This course focuses on their biology and geology, evolutionary history, and conservation. Complex ecologic partnerships that have contributed to the evolutionary success of reefs in the past two billion years are examined to predict their survival in a modern environmental context. Students research why reefs are sensitive environmental indicators, how ancient reefs yield clues about past climate change, and the ways in which modern reefs monitor the health of world oceans. Seminar discussions are based on multidisciplinary research; on oral and poster presentations, debates, review panels, and symposia; and on interactions with invited speakers. These are enhanced by an investigation of modern and Pleistocene (fossil) reefs during an optional field trip to the tropics over spring break (or in January).

GEOL 426: Marine Environments: This course examines modern and ancient marine environmental systems via intensive study of current scientific literature. The course emphasizes the interplay between organisms, physical and chemical environmental parameters, and the sedimentary record of environmental change. Long-term changes in global ecosystem characteristics are thoroughly considered, and the impact of human activity on modern marine systems is addressed. Students complete an individual research project using original data from regional sedimentary sequences.

GEOL 430: Seminar on Acid Rain: Acid rain — more properly termed acid deposition — is a worldwide environmental problem that adversely affects lakes and streams, forest ecosystems, plants and animals, and human health. The course examines this environmental issue from the beginning of the industrial revolution to the present. The science of acid rain — from why and how it forms to what we know about its effects on ecosystems, earth materials, and people — is explored and discussed in detail. For decades New York State received some of the most acidic deposition in the United States; therefore a portion of course time is spent examining the effects of acid deposition in central New York and the Adirondack Mountains, and the potential for recovery of ecosystems to pre-acid rain conditions. Finally, links between science and policy are explored through examination of the Clean Air Act and events leading up to this and subsequent landmark environmental enactments by Congress.

HISTORY

HIST 218: The African American Struggle for Freedom and Democracy: This course surveys the presence of African Americans in the United States and their struggle for freedom under the concept of democracy. The course examines African origins, the Middle Passage, the creation of an African American culture in slavery, the Civil War and Reconstruction, the growth of black communities in the face of hostility, the African American impact on American culture, the Civil Rights movement, and the continuing struggle by African Americans to make democracy real.

HIST 220: American Environmental History: This course investigates the place of the natural world in American history, drawing on episodes ranging from the Columbian encounter up to today. It measures the impact of Americans on their environment and the degree to which aspects of that environment have shaped human history in turn. Throughout the course, students explore the ways Americans have understood their relationship to nature over the last 500 years. They also apply the methods of environmental history to their own investigation of a particular American place.

HIST 228: The Caribbean: Conquest, Colonization, and Self-Determination: This course surveys Caribbean history from European conquest and colonization to political independence. It introduces students to the salient features of the region's history from the initial contact between European settlers and the indigenous peoples; through the rise of plantations and African slavery, the struggles for freedom, post-slavery social and economic developments; to the rise of nationalism leading to political self-determination, and the new American imperialism.

HIST 322: Race and Ethnicity in Latin America: This course examines the history of racial and ethnic difference in Latin America, focusing on how racial and ethnic labels were bestowed, claimed, and disputed; what these implied for personal and collective identity; and how other social hierarchies (such as class and gender) operated alongside race and ethnicity in determining status. Attention is also paid to how ideas of race and ethnicity changed over time, especially in moments of economic or political crisis, and how these ideas were taken up by different social groups and in pursuit of various agendas (revolutionary, nationalistic, modernizing, etc.). The course spans the colonial period to the present, with case studies from Mexico, Brazil, the Caribbean, and the Andes.

HIST 327: Authoritarianism, Dictatorship, and Democracy in the Caribbean: This course examines the political development of the Caribbean from European occupation and colonization to the present. The imperial and societal foundations of authoritarianism in the Caribbean are studied, as are the popular democratic impulses arising especially since the end of slavery and culminating in self-governing "democratic" political regimes.

CORE

CORE 101: Energy and Sustainability: Fossil fuels, which were deposited on Earth over hundreds of millions of years, will largely be exhausted over the course of a few hundred years. As the public has become aware of how quickly non-renewable resources are being used, sustainability has become a goal. This class focuses on energy use as the impediment to sustainability that will probably have the greatest impact on American lifestyle in coming years. Students learn what the scientific method can tell them about this coming revolution. How is quantitative knowledge helpful in discovering problems and formulating policy, and what are its limitations? The focus is on energy use in the home, with students completing a class project in which they measure energy use in a house in Hamilton and determine how it could be powered from sustainable energy sources. Students also discuss what, if anything, should be done to promote a national transition to sustainable energy sources.

CORE 102: Molecules, Energy, and Environment: When reduced to fundamentals, virtually all of our environmental problems deal with chemicals in the wrong place: noxious and reactive gases in our atmosphere, insecticides and toxic metals in our ground and drinking water, and spilled nuclear wastes. Unfortunately, many citizens in our society do not understand the fundamentals of these environmental problems. This course–designed for students without experience in other university-level science courses–explores the chemistry behind some of our more pressing environmental dilemmas. Topics include some consequences of fossil fuel combustion (the greenhouse effect, acid rain, urban smog), the ozone hole, nuclear energy/wastes, and

groundwater contamination. The emphasis is on how the science behind these problems, what we know about how the problems have come about, and what we can do, if anything, to ease the problems. This course is for the student who has not taken college-level chemistry, but is concerned about our threatened environment.

CORE 103: Remote Sensing of the Environment: Remote sensing is the art and science of obtaining information about a phenomenon through a device that is not in contact with the object. The remote sensing process involves collection and analysis of data about energy, reflected from or emitted by an object. Remote sensing is used to better understand, measure, and monitor features and human activities on earth. After an introduction to the interplay among science, technology, and remote sensing, students examine the development of remote sensing technology. Students focus on the physical principles upon which remote sensing is based, explore the basic tools of photography and photography interpretation, and consider the principles of acquiring and interpreting data collected by non-photographic sensors. Throughout the semester, students consider how remote sensing has improved our understanding of biophysical processes using a case-study approach to demonstrate the theoretical underpinnings. Finally, consideration is given to the ethical implications of remote sensing.

CORE 107: Conserving Nature: This course is a study of the conservation and management of natural resources, including forests, soils, streams, and wild animals. A scientific approach is used to understand the ways that people affect natural resources through their actions. Particular attention is paid to management activities, such as hunting and timber harvest. Students are confronted with the limitations of science in guiding moral decisions. Thus, the class also examines the role of ethical analysis in natural resource issues. Scientific and ethical approaches are used to formulate well-conceived opinions regarding how natural resources ought to be managed locally, nationally, and internationally. The course involves several weekend field trips.

CORE 114: Ecology, Ethics, and Wilderness: This course explores the ways in which modern science, employing abstractions, logic, and quantification, effectively describes the workings of the natural world and provides a framework for considering new ethical relationships among humans, nonhumans, and the nonliving world. The course examines the ways in which scientific concepts, such as deep geologic time and Earth history, biological evolution and coevolution, and ecosystem dynamics can inform humans about radical moral stances (e.g., biocentrism, deep ecology). Also, the course investigates whether a scientific perspective, in and of itself, is sufficient to resolve pressing environmental problems, most of which are the outcome of complex social, economic, political, philosophical, and historical forces that operate on regional and global scales.

CORE 120: Earth Resources: Management of the Earth's energy, mineral, and water resources is a subject of ongoing controversy and debate. This debate revolves around two related issues: the diminishing supply of some resources and the environmental cost of resource extraction and energy production. This course examines the origin and geologic setting of Earth's resources, and how these factors influence resource exploration, extraction, and use. Environmental and economic aspects of resource extraction are explored. Students examine the public debate about resource management and conservation, as well as the roles of politics and the media in shaping this debate. This course emphasizes student-led discussions of case studies dealing with current resource-related topics. The purpose of this course is to create a framework in which resource issues can be evaluated, integrating the scientific and social issues inherent in resource development.

CORE 123: Climate Change and Human History: As the “Global Warming Summit” made clear, anthropogenic activity has the potential to dramatically alter global climate. The increased introduction of greenhouse gases, sulfate aerosols, and dust through human activities may result in a variety of regional responses, including warming and cooling, changes in precipitation, and drought patterns, and rising sea level. Climate change as a force driving human history, however, is not unique to the 20th century. The primary objectives of this course are to present case studies that demonstrate the strong role of climate in driving human evolution, adaptation, and societies; and to assess the relationships between climate forcing and man, with a view toward understanding the potential consequences of modern anthropogenic impacts.

CORE 128: Global Change and You: Our planet is currently undergoing a level of abiotic and biotic change that is unprecedented in recent history. There is widespread consensus in the scientific community that much of this change is anthropogenic. This course introduces students to recent data on climate change and inferred causes and consequences of that change. Throughout the course, the way in which humans influence these changes and also the ways in which these changes impact humans are explored. The main focus of this course is the carbon cycle, specifically on numan energy consumption, food production, and water use, and how they are linked to biodiversity loss. The many sides of issues (e.g., biofuels) are explored and debated throughout the course. The immediate consequences of global change are demonstrated in a required weekend field trip to the Adirondacks in the third week of classes to learn about the effects of pollution and climate on our local ecosystems.

CORE 154: Caribbean Ecology and Environmental Concerns: When we think of the Caribbean, the first images that come to mind are beautiful, clear, blue oceans, white sandy beaches, never-ending sunshine, and perpetual serenity with laid-back populations. Yet, these images do not capture the presence of the myriad ecological and social concerns of the region. What are the different ecological settings of these islands, ranging from the terrestrial to the marine? What are the human-environment interactions within these ecological contexts? How have these interactions led to stressors within the ecological settings, and what are the implications of these stressors? This course seeks to address how these questions are answered through the use of science and also seeks to highlight some of the limitations of science when contending with complex ecological and social systems, using the Caribbean region as the area of focus.

CORE 159: Ecology and the Quality of the Environment: A mix of interlocking problems is reaching crisis levels on our planet, which is the only home for us and a rich diversity of other life forms. The bad news is the growing growing evidence that we are depleting the Earth's natural capital at unprecedented and accelerated rates by living in ways that are eventually unsustainable. This seminar introduces students to a variety of ecological principles that explain the nature of the environment. Topics include human population dynamics, matter and energy resources, ecosystems, and others. The master ecological concepts are applied to current world environmental problems to help explain water pollution, hazardous waste disposal, renewable and nonrenewable resources, etc. Environmental degradation and pollution are approached from an ecological perspective, but students also search environmental ethics and economic and political aspects for potential solutions.

MIDDLE EASTERN STUDIES AND ISLAMIC CIVILIZATION

MIST 351: Israel/Palestine Conflict: This course focuses on the longstanding struggle between Israelis and Palestinians, as well as on the history of the way the conflict has been defined (e.g., an Arab-Israeli conflict, a religious war between Jews and Muslims, etc.). The course profiles episodes in the history of the conflict–and of the efforts to resolve it–in light of contemporary developments across the globe. The war of 1948 is analyzed in light of the decolonization struggles following World War II, just as the "Six Day War" of 1967 is studied in light of Cold War politics. In addition to focusing on flashpoints in history of the conflict, the course also examines international agendas for ending it. Repeated U.S. efforts to broker a peace are analyzed in light of geopolitical developments elsewhere. Students become well-versed in the historical and social developments of the conflict and study the various treaties, armistice agreements, and memoranda that have guided efforts to bring it to a conclusion. They also study outstanding issues in the contest between Israel and the Palestinian Authority, as well as current peace and armistice proposals.

PEACE AND CONFLICT STUDIES

PCON 111: Introduction to Peace and Conflict Studies: This course provides an introduction to the interdisciplinary study of peace and conflict, as well as to the peace and conflict studies major. It focuses on attempts to study and explain the evolution of warfare and the dynamics of peace from the early Modern period to today's most imminent and controversial security issues. This course explores the relationships between global and historical patterns of mass violence, the theoretical paradigms that attempt to account for these patterns, and the various disciplinary and methodological approaches used to explore war and peace at all levels of analysis. Open to first-year and sophomore students.

PCON 225: Theories of Peace and Conflict–War, State, and Society: This course examines problems of institutional systems and the articulation of power. Students are introduced to critical evaluation of the major theoretical approaches to the study of power and politics. The course considers rationalist, functionalist, and interpretive approaches in the social sciences, as they relate to questions of peace and conflict. Students examine the specific operative theories that have emerged out of these intellectual traditions — theories of state formation, security, international norms, and transnational networks — as they have been incorporated into and further developed in the study of peace and conflict. Students test major theories on case studies linked to major world events. For example, deterrence theory is examined in light of the end of the Cold War.

PCON 301: International Human Rights and Advocacy: The gap between the promise of international human rights law and its actual practice is vast. For many advocates and activists, the gap is a source of frustration as international human rights laws and norms rarely translate into basic protections at the level of the individual. This course is designed to make students aware of the contentious nature of human rights, both in theory and in practice. It is premised on the idea that human rights are constantly claimed and developed, if not made anew, by

multiple actors--whether as rights-holders, advocates, or otherwise, and that this takes place in the context of intense struggle between state and non-state actors. Students examine both the international human rights regime and the struggle for human rights, and how they interact in practice. The course takes a purposeful right-based and victim-centered approach, with the goal of introducing student to the profession of human rights advocacy. Prerequisites: PCON 111, 218, or 225, or permission of instructor.

PCON 314: Media War: Peace and Conflict in the Digital Age: The first purpose of the course is to demonstrate to the student the central importance of media in defining the reality of war, peace, and violence in modern culture. The second goal is to introduce, in a selective manner, film, art, and written works that shaped these definitions. The primary framework is chronological, beginning with a survey of images of war and peace in art and covering in detail World War I and World War II, and ending with current images of war and of preparations for nuclear war. The secondary framework distinguishes types or degrees of war: World War I and World War II, civil wars (Spain) and genocide (the Armenians, the Jews in Europe); struggles of national liberation (Vietnam and Algeria); and prospects of global holocaust, this last creating new imagery — both positive and negative — in art, poetry, fiction, and film. Methods of evaluation: examination and journals.

PHILOSOPHY

PHIL/ENST 202: Environmental Ethics: This course is an introduction to the field of environmental ethics. Some of the major figures and philosophies in the environmental movement are philosophies in the environmental movement are studied and critically analyzed with a particular emphasis on the ethical reasoning and its influences on environmental policies and practices. Topics include the historical development of the environmental movement, central debates between preservationist and conservationist ethics, intrinsic and instrumental evaluations of the natural environment and its inhabitants, animal rights and the ethical treatment of animals, shallow and deep ecological distinctions, and anthropocentric versus biocentric and ecocentric evaluations of nature.

PHIL 333: Topics in Environmental Philosophy: This course involves a critical examination of selected fundamental issues and theories in environmental philosophy. Precise issues and themes vary from year to year, but may include sustainability and moral obligations to future generations; the nature of the good life for humans; the status of environmental values; recent work in environmental ethics theories including deep ecology, social ecology, and ecofeminism; the moral and metaphysical status of human modifications to the world, including environmental restoration and genetic engineering; and aesthetics of the natural world. An emphasis is placed on exploring the connections between philosophical theory and environmental policy and practice.

POLITICAL SCIENCE

POSC 152: Global Peace and War: This course is designed to provide students with an understanding of how international politics — politics between governments — differs from politics within a state. It considers how the international system has evolved and currently operates, and examines some of the enduring questions of international relations: Why there is war? How can war be avoided? Is international equality a prerequisite for order? Can order, justice, and cooperation be achieved in a non-institutionalized and non-hierarchical system?

POSC 208: Comparative Democracies: This course offers a comparative examination of the social bases of democracy and of different forms of constitutional government and competitive politics in advanced industrial societies. The theory and practice of representative and participatory democracy in selected West European countries are compared with nations in several other parts of the world. Other topics include the European Union, the Single European Act, and relationships with the rapidly changing nations of Eastern Europe.

POSC 335: US Environmental Politics: Public policies to protect the environment are among the most important and controversial issues in local, state, and national government. This course analyzes the politics of environmental protection in the United States through the use of social science theory and a variety of quantitative and qualitative methods. The course introduces frameworks for understanding environmental policy problems and reviews several important American environmental laws. Readings include social science “classics” on the environment, as well as recent scholarship on environmental politics and emerging environmental issues. Topics covered in the course include the politics of environmental science, environmentalism as a social movement, environmental lawmaking in Congress, bureaucracy and environmental regulation, federalism, environmental law, and environmental justice. Prerequisite:**POSC 150** or **ECON 151**.

RELIGION

RELG 236: Religion, Science, and the Environment: In the 17th century, religion lost its claim to the cosmos; the religious knowledge of the order of nature ceased to possess any legitimacy in the new paradigm of science that came to dominate the West. Until the 1960s, Christian thinkers considered it the great glory of Christianity that it alone among the world's religions had permitted purely secular science to develop in a civilization in which it was dominant. After several centuries of an ever-increasing eclipse of the religious significance of nature in the West and neglect of the order of nature, humans are now experiencing environmental crisis: global warming; the destruction of the ozone layer; climatic and weather pattern changes; soil erosion; death of animals, birds, and marine life; and the disappearance of some plant species. Today the very fabric of life is threatened and the future of our world hangs in the balance as nature is threatened by destruction caused by an environmental crisis that has gone unchecked for several centuries. What can be learned from religions of the world that will save humanity and nature? What is the relationship between religion, nature, science, and technology? Discussions include views from various religious traditions concerning nature, the concept of the human, notions of progress and destiny, faith and science, ecological theology, ecofeminism, justice and sustainability, and spirituality.

RELG 420: Religion, Nature, and Environmentalism in South Asia: Religious thought in South Asia is replete with images of sacred rivers, trees, mountains, stones, animals, plants, stars, and planets. From the extraordinarily strict vegetarian diet of Jainism, to the daily tending of Tulsi plants, regarded as the incarnation of a Hindu goddess, many Indic religious practices and rituals demonstrate reverence for the earth and nature. And yet, virtually all the countries of South Asia, from Tibet to Sri Lanka, are facing environmental crises of monumental proportions. Is it possible to transform people's religious reverence for elements of nature into concrete action to protect and conserve natural resources? Religion is one of the most powerful motivating forces in the world today; it is also among the most divisive. Can and should activists seek to enlist religious sentiments in the service of environmental projects? The course begins by examining the environmental history of South Asia paying particular attention to how the landscape and environment have shaped religious thought, and how religion has shaped people's relationship to the land. Students investigate several religious traditions found in South Asia, which may include Hinduism, Buddhism, Jainism, tribal religions, Christianity, and Islam. Through case studies, students examine how religious leaders have responded to various ecological crises to generate support for particular environmental projects and campaigns.

RUSSIAN AND EURASIAN STUDIES

REST/GEOG 323: Arctic Transformations: The Arctic is one of the most rapidly changing regions of the world today, environmentally, culturally, and politically. Rapid biophysical change occurs here today due to climate change, but equally noteworthy are cultural, social, and political transformations experienced by people living and working in the Arctic. People are under increasing pressure to change along with transformation of their biophysical environments, particularly as new actors express interest in the Arctic as space opening up to global transportation, mineral exploration, and trade and ecotourism. Within geography, interest in Arctic phenomena includes grappling with complex issues related to social and biophysical changes in this region, which often originate beyond the region but have specific meaning for the region. In this course, students investigate three vibrant areas of Arctic transformation: cultural transformation occurring among indigenous and local peoples, biological and physical transformation of the environment, and political transformation within and related to the region. Lectures, discussion, and a major research project related to these broad topics form the foundation for deeper understanding of how Arctic spaces are transforming socially and biophysically, and how local Arctic spaces are linked to global phenomena.

SOCIOLOGY AND ANTHROPOLOGY

SOAN 212: Power, Racism, and Privilege: The purpose of this course is to familiarize students with theoretical and historical perspectives of racial inequality and other ethnic and minority group relationships. The course primarily examines the relationship between racism and the socioeconomic and political development of the United States. Course readings, lectures, and discussions are intended to aid students in gaining a clear understanding of the role race and ethnicity have played in shaping contemporary US society as well as the larger social world we live in and to therefore contribute to each student's self-understanding and to a better

understanding of others whose racial-cultural backgrounds are different. Senior students are generally not admitted, except with permission of instructor.

SOAN 216: Sociology of War: In the modern world, war has usually been thought of as a clash between rival states. But, especially since the Second World War, much armed conflict has taken place between states and other kinds of entities — national liberation movements, criminal syndicates, warlords, terrorist groups. In an extreme case such as Somalia, states have totally disintegrated. This course asks what the consequences of this change are for our sociological understanding of the nature of warfare. It examines case studies of armed conflict in the present and recent past — Afghanistan, Kashmir, warlordism in West Africa, Northern Ireland, armed leftist movements in Western Europe during the 1970s; and in late colonial period and its aftermath, the Mau-Mau Rebellion, the Algerian war of independence, the Rhodesian War. A particular focus is on treating war as a cultural phenomenon, and to ask questions about the self-understandings of formal and informal military organizations and their consequences. Senior students are generally not admitted, except with permission of instructor.

SOAN 220: Gender, Sexuality, and Society: This interdisciplinary course explores gender and sexuality as primary markers of social inequality in our society and among the most salient organizing agents of our everyday lives. Course readings span several disciplines, including literature, history, philosophy, sociology, and psychology. Students analyze gender and sexuality using comparative historical and sociological perspectives. Subthemes of the course include culture, socialization, body and performance, intersectionality, essentialism, privilege, resistance, and social change. Senior students are generally not admitted, except with permission of instructor.

SOAN 245: Nature, Culture, and Politics: The words “nature” and “the environment” conjure up visions of wild animals and open landscapes, but are people part of nature, too? This course shows how nature and human culture are intertwined, both in terms of how we shape our environment as well as how it shapes us. Through a series of case studies, students explore this relationship, focusing especially on the way that nature and culture are “political”: inequalities, social problems and movements, and power relations all flow from the way that we interact with our environment. The course takes a global, comparative, and historical view of this process, and includes the following special topics: the rise of environmental awareness and environmental social movements; globalization and environmental values; consumption and the environment; environmental inequalities and justice; risk, technology, and environmental politics; and public policy and the environment. Senior students are generally not admitted, except with permission of instructor.

SOAN/ENST 319: Food: Food is fundamental — it sustains us and is essential for our survival — but food is more than just what we eat. Food is also a commodity with complex global markets and ecological impacts; it is highly regulated through our political processes and institutions; and it forms a key part of our culture and the social rhythms of everyday life. This course explores these many dimensions of food, focusing especially on key questions about where it comes from, how it is produced, and how it is embedded in our economic, political, and cultural institutions. Students enrolled in this course participate in a service learning internship at Common Thread Community Farm in Madison, NY. The course also involves field trips to and guest speakers from local food and farming communities.

SOAN 321: Black Communities: This course uses a social scientific approach to examine the circumstances and dynamics characterizing black communities in the contemporary United States. Key areas of inquiry include the operation of major social institutions shaping community life, social class divisions, health and housing prospects, and the ways that the intersections of racial/ethnic identity, class, and gender shape the experiences of community members. No first-year students are admitted.

SOAN 350: The Social World of the Oceans: Ships, Sailors, Ports, Trade, and Environmental Crisis: The course seeks to examine the life of the shipping industry, seafarers, and port cities, all crucial to our social understanding of a world where most global trade still moves in ships, and where there are strong signs of renewed naval competition. The course starts by looking at the rise and fall of British maritime dominance. It then focuses on the “container revolution,” the rise of the supertanker, and the current economics of shipping. There is strong attention to the maritime labor, the cultures of sailors, and the nature of port cities. The continuing importance of naval power and resurgent piracy are examined. Finally, the course addresses the current ecological catastrophe in the oceans.

LGBTQ STUDIES

LGBTQ 303: Queer Identities and Global Discourses: Queer identities are — and have long been — enmeshed within large-scale circuits of exchange engendered by the movement of people, ideologies, markets, and capital. This course considers transnational conceptualizations and circulations associated with gender or sexual nonconformity. In doing so, it emphasizes ways of interrogating queer citizenship that purposefully attend to dynamics exemplifying complex interactions on global and local scales. Rather than assuming a particular narrative, the course examines the way by which queer identities are variously constructed and contested.

WMST 350: Sexuality, Gender, and the Law: The course examines the effects of the U.S. legal system on the lives of the LGBTQ communities; the influence of religion, science, and culture on the laws affecting LGBTQ individuals; and the processes by which LGBTQ citizens may advance their legal rights. Constitutional theories such as equal protection, privacy, due process, liberty interests, and states' rights are applied to issues such as consensual sodomy, same-sex marriage, LGBTQ parenting, employment rights, military policy, and freedoms of public school students. The power of the U.S. Supreme Court to shape laws concerning LGBTQ issues not only for the present society but for future generations is also examined. Cases studied are supplemented with secondary works. These works include writings by traditional legal scholars as well as works by feminists, race-based scholars, and queer theorists to create a fuller perspective. Through this exploration into the legal reality of a marginalized group, students see how the U.S. legal system continues to evolve in its struggle to provide equality for all of its citizens. *This course counts toward the Social Relations, Institutions, and Agents area of inquiry requirement*.

COURSES THAT CONTAIN SUSTAINABILITY

ASIAN STUDIES

CHIN 406: Readings in Modern Literature: This course is designed to expand and consolidate students' aural and oral mastery of advanced vocabulary and grammatical patterns through the study of modern Chinese writers and their work. All readings are original works of literature (poetry, short fiction, familiar prose) written for Chinese readers. Conversation sessions take on the works themselves, as well as contemporary topics ranging from the modern Chinese family to women's issues, economic changes, and the urban experience.

BIOLOGY

BIOL 335: Limnology: This course is an introduction to freshwater ecology, including the study of the effects of physical, chemical, and geographical factors on the structure and function of freshwater lakes and streams. The effects of human activities on water quality are also examined. There are field trips to local lakes and streams. The credit-bearing laboratory **BIOL 335L** must be taken concurrently with **BIOL 335**. Laboratories develop skills in water chemistry; sampling, identification, and quantification of algae, aquatic plants, and animals; and the quantitative presentation of data. A small-scale research project is required.

ENGLISH

ENGL 208: Sex and the Global City: An introduction to literary study using the relationship between sexuality, literature, and the history of global cities as a jumping off point for considering the problems, practices, and possibilities of literary study. The course undertakes close reading of modern texts to discover how urban settings influence our understandings of racial and ethnic identity, gender roles, and multiple forms of sexual relationships. It also addresses the ways that the cosmopolitan city provides new forms and content for both modern identities and post-modern narratives. Works of literature are contextualized by a variety of critical and historical works from the modernist and post-modernist periods.

CORE

CORE 162: Foodwise: Food is essential for all of us to survive, but we often take food and food preparation for granted. Have you ever wondered why some food tastes as it does or how food preparation can alter the taste or consistency of a dish? What is a balanced diet and how do we strive to have one? In this course students explore

how understanding the science of food and cooking enhances our enjoyment of it as well as our benefit from it. Students look at the history and culture of human nourishment, and explore some of the controversial aspects of food and food technology, such as the use of additives, genetically modified organisms, and diets and weight loss programs. If you have an appetite for learning or are just food motivated, this course may appeal to your senses.

GEOLOGY

GEOL 330: Hydrogeology and Groundwater Pollution: Because the interdisciplinary area of Earth and environmental sciences has emerged as a critical focal point for studies of natural waters, this course is designed to examine the physical and chemical nature of water, its role in the global hydrologic cycle, and the impact of humankind on water resources. Topics covered include water resources and quality, surface- and ground-water hydrology and hydrodynamics, water-soil interactions, hydrogeochemistry, and ground-water contamination. The environmental consequences of human activity and development on water resources are considered through case studies of regional surface-water and ground-water problems. Lectures and discussion are supplemented with problem sets and exercises.

GEOGRAPHY

GEOG 336: Biogeography: This course focuses on the factors that influence plant and animal distributions at scales ranging from population to biome. To set the stage for discussing the geography of life, the course first examines the earth's physical setting. This leads to consideration of the fundamental processes determining plant and animal distributions. The interactions among these processes are also examined, thereby introducing the concept of the ecosystem. The functions of an ecosystem are discussed with focuses on energy and matter flow, population dynamics, succession, and disturbance. The culmination of these processes is reflected in broad-scale geographic patterns. Thus, the characteristics of the major biomes are examined. Finally, because humans and the environment are inextricably linked, this course explores several impacts humans have on the landscape, including fragmentation, extinction, and species introductions. *This course counts toward the Natural Sciences and Mathematics area of inquiry requirement.*

GEOG 251: Environmental Risk Communication: A half-semester 0.50 credit course. Social science research methodologies are multifaceted, and draw on both quantitative and qualitative approaches. Regardless of approach, however, high quality research is rooted in a sound conceptual design, the appropriate methods of data collection, processing, and analysis, and a theoretically informed interpretation of results. Students apply qualitative content analysis–an approach that facilitates the analysis of words, concepts, and relationships in texts, such as newspaper articles–to the study of environmental risk communication, and area of scholarship that analyzes flows of information, public discourse, and perceptions of environmental issues. Assignments build to a final project that incorporates qualitative data analysis software. A key goal of the course is to prepare students for upper-level undergraduate research.

GEOG 312: The American City: This course focuses on the restructuring of American cities in the late 20th century and the implications of that restructuring for the well-being of urban residents. Topics emphasized include the decentralization of people and jobs out of central cities and northeastern metropolitan areas, racial residential segregation, inner-city gentrification, urban public service provision issues, the role of new (Latin American and Asian) urban immigrants, and feminist perspectives on the American city.

GEOG 313: Geographical Political Economy: Asia in Globalization: Contemporary sociocultural and environmental issues cannot be understood without a good grasp of globalizing, yet place-specific political economic contexts in which these issues are embedded. The course aims to prepare students with conceptual and analytical foundations of economic geography with a particular attention to the roles of states, firms, and workers in the increasingly interconnected world. A strong empirical emphasis is given to Asia, although other world regions are addressed throughout the course for comparative and integrative purposes. Questions asked in this course include: what causes territorial economic growth and decline? How do place-specific economic structures influence policies? How are "the economy" and environment interrelated? Does advanced technology make geography irrelevant? Does economic growth produce socio-spatial inequality? In answering these questions, Asia offers a critical empirical arena to test theories and hypotheses, many of which have been developed primarily in the Euro-American contexts.