

COLLEGE OF THE ENVIRONMENT

The College of the Environment at Wesleyan University was created with a belief in the resilience of the human spirit and a desire to develop a long-term vision of human and ecosystem health. There are four parts to the College of the Environment: the environmental studies (ENVS) linked major or a minor, an annual think tank, research opportunities, and community outreach. Our mission, simply stated: to change the world.

The I (<https://catalog.wesleyan.edu/departments/envs/ugrd-envs/>) linked-major program in environmental studies (ENVS) is the secondary major to a primary major (see Undergraduate tab, at top right, for details). Students cannot obtain the BA degree with ENVS as their only major. Students must complete all the requirements for graduation from their primary major in addition to those of ENVS as their linked major. Each student will work closely with an ENVS advisor to develop an individual course of study. ENVS requires an introductory course, the sophomore seminar, six elective courses, the senior colloquium, and a senior capstone project (thesis, essay, performance, etc.) on an environmental topic that is researched, mentored, and credited in the primary major program, although other options are possible. In addition, students must take one course in any subject that fulfills the writing essential capability.

A minor in environmental studies is also offered (see Undergraduate tab, at top right, for details).

More information about the College of Environment can be found here. (<https://www.wesleyan.edu/coe/>)

AFFILIATED FACULTY

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VISITING FACULTY

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- Undergraduate Environmental Studies Major (<https://catalog.wesleyan.edu/departments/envs/ugrd-envs/>)
- Undergraduate Environmental Studies Minor (<https://catalog.wesleyan.edu/minors/ugrd-envs-mn/>)

ENVS125 Community Gardening

This course will provide students with skills and hands-on training so they can garden and grow food for themselves and their community.

Students will participate in UConn's Master Gardener Program, which has been offered to members of the community for 40 years and is well-respected in the gardening and farming community. Course topics will include: "botany, plant pathology, soils, entomology, pesticide safety, integrated pest management (IPM), woody ornamentals, herbaceous ornamentals, vegetables, trees and small fruits, turf grass, invasive plants, weeds, water quality, environmental factors affecting plant growth, and diagnostic techniques for the home gardener."

Hands-on training and application of the skills learned from the UConn Master Gardner Program will take place at Long Lane Farm on Wesleyan University's campus or at home for students learning remotely.

Students who complete this course will receive a certificate and name badge designating them as a University of Connecticut Certified Master Gardener.

This course is offered in partnership by the College of the Environment, Allbritton Center for the Study of Public Life, and UConn Extension Master Gardener Program.

Offering: **Host**
 Grading: **OPT**
 Credits: **1.00**
 Gen Ed Area: **NSM-ENVS**
 Identical With: **CSPL115**
 Prereq: **None**

ENVS130F Thinking Animals: An Introduction to Animal Studies (FYS)

In 1789, British philosopher Jeremy Bentham wrote: "The question is not, 'Can they reason?' nor, 'Can they talk?' but, 'Can they suffer?'" This question, which challenged the social and legal norms of the 18th century that denied sentience to non-human animals, has influenced disciplines across the social sciences and humanities to focus on what has more recently become known as, "the question of the animal." Bentham's question has sparked centuries of debate about the sentience of non-human animals and our relationship to them. In this course, we will examine a range of theories and representations of "the animal" to understand the desire to tame or objectify animals (through zoos, factory farming, and taxidermy), as well as why they are often conceived of as guardians of inaccessible experience and knowledge, and how the human and its various gendered, classed, and racial manifestations have been conceived of through and against notions of animality. Readings may include Poe, Kafka, Derrida, Bataille, Haraway, and Coetzee (among others).

Offering: **Crosslisting**
 Grading: **OPT**
 Credits: **1.00**

Gen Ed Area: **HA-COL**
 Identical With: **COL130F, FGSS130F**
 Prereq: **None**

ENVS135 American Food

This course investigates topics in the history of food production from the colonial period to the present, with emphasis on the American contribution to the development of world food systems and cultures of consumption. Topics to be addressed include the production of agricultural commodities, development of national markets, mass production of food, industrialization of agriculture, and the recent emergence of organics, slow food, and local movements.

Offering: **Crosslisting**
 Grading: **A-F**
 Credits: **1.00**

Gen Ed Area: **SBS-HIST**
 Identical With: **HIST135**
 Prereq: **None**

ENVS186 Justifying Space: The History and Future of Space Exploration Visions

This will be a seminar class about the changing visions and motivations for space exploration, historically and to the present day. Readings will include historical perspectives such as those of K. Tsiolkovsky, H.G. Wells, Arthur C. Clarke, Gerard O'Neil, and Carl Sagan, the poetry of Diane Ackerman, the newsletters of space enthusiast organizations such as the National Space Society, the L5 society, and the Planetary Society, as well as more current readings from the popular and space policy literature. Perspectives will also include other cultural reference frames through readings from the literatures of Afrofuturism and Chinese science fiction. Through selected readings from both the fiction and nonfiction literature, students will become familiar with the history of space advocacy, and the various idealistic and utopian predictions and visions that have been associated over time with ideas of human crewed and uncrewed space exploration. We will look critically at how past visions and promises have measured up against the reality of space exploration and also, through this lens, critically examine the visions and motivations being espoused by today's range of government and corporate space organizations and enthusiasts.

Offering: **Host**
 Grading: **OPT**
 Credits: **1.00**
 Gen Ed Area: **SBS-ENVS**

Prereq: **None**

ENVS188 Neotropical Aquatic Ecosystems: Their Importance, Sustainable Use and Conservation (CLAC 1.0)

This course will examine why the Orinoco and Amazon basins in South America harbor a biological richness much larger than other river basins around the world. About 50% of all higher plant species of the world are included in these basins. Data on vertebrates showed that about 3,000 freshwater fish species, thousands of birds (migratory and local), and hundreds of amphibians, reptiles, and mammals have been found so far in those basins geographically included in six countries: Bolivia, Brazil, Colombia, Ecuador, Peru, and Venezuela. We will examine the key factors that have affected their historical-geological development, the actual richness, and the threats to sustainable development and conservation. We will ask questions about the nature and interactions of the key factors and agents that harbor and transformed the high ichthyological and other aquatic biota diversity, reflected by the wide range of landscapes and aquatic ecosystems included in those basins. We will try to identify fragile aquatic ecosystems depending upon the biological richness, endemism, importance for local communities, and potential threats. We will examine the current trends in the fisheries, forest exploitation, and agriculture for human consumption, noting that stocks of many species of fish are in steep decline, and that current fishing practices are not sustainable. Finally, the major impacts and threats faced by the fishes and aquatic ecosystems of the Orinoco River Basin are discussed with the purpose of studying potential plans for sustainable development. The course is presented in a reading/discussion format in which all readings, writings, and discussions will be in Spanish.

Offering: **Host**
 Grading: **A-F**
 Credits: **1.00**

Gen Ed Area: **NSM-ENVS**
 Identical With: **LAST188, CGST266**
 Prereq: **SPAN221**

ENVS197 Introduction to Environmental Studies

This interdisciplinary study of human interactions with the environment and the implications for the quality of life examines the technical and social causes of environmental degradation at local and global scales, along with the potential for developing policies and philosophies that are the basis of a sustainable society. This will include an introduction to ecosystems, climatic and geochemical cycles, and the use of biotic and abiotic resources over time. It includes the relationship of societies and the environment from prehistoric times to the present. Interrelationships, feedback loops, cycles, and linkages within and among social, economic, governmental, cultural, and scientific components of environmental issues will be emphasized.

Offering: **Host**
 Grading: **OPT**
 Credits: **1.00**

Gen Ed Area: **NSM-EES**
 Identical With: **BIOL197, E&ES197**
 Prereq: **None**

ENVS201 Sophomore Seminar in Environmental Studies

This course is designed to introduce students to critical methods for conducting research on environmental issues. Students will gain in-depth experience with methods and paradigms of inquiry from multiple lenses including arts, humanities, and the social and natural sciences as a primer for performing research in the ENVS major. We will explore environmental theory and management at various levels of organization from ecosystems to human communities and countries. This course will challenge the students to rethink the human-environment relationship by recasting policy and science in the context of social-ecological systems. Students will be responsible for weekly writing assignments and discussions on the critical environmental issues of our time. Through the process of reflection, writing, and discussion, students will engage in deep inquiry, exploration, and research of environmental issues and

their potential solutions. In the process, students will learn and apply the four stages of scholarly research: (1) critique contemporary theory, (2) identify critical questions and research needs; (3) analysis; and (4) synthesis.

Offering: **Host**

Grading: **OPT**

Credits: **1.00**

Gen Ed Area: **SBS-ENVS**

Prereq: **[E&ES197 or BIOL197 or ENVS 197] OR E&ES199**

ENVS203 The Secrets of Ancient Bones: Discovering Ancient DNA and Archaeology

New analyses of ancient DNA preserved for millennia in bones and soils have revolutionized the field of archaeology. Suddenly, archaeologists have gained new insight into human origins, past population migrations, ancient diseases, plant and animal domestication, and even the factors that contributed to the extinctions of megafauna such as woolly mammoths. Recent genetic case studies will provide a lens for learning about the archaeology of diverse world regions and time periods, from Oceania to Mesoamerica and from the Paleolithic through recent history. Topics will include: human evolution and genetic relationships between humans, Neanderthals, and Denisovans; the peopling of the globe; extinction and de-extinction; domestication and the origins of agriculture; paleodiseases and paleodiets; and ethics in genetic research.

Offering: **Crosslisting**

Grading: **OPT**

Credits: **1.00**

Gen Ed Area: **SBS-ARCP**

Identical With: **ARCP203, ANTH212**

Prereq: **None**

ENVS204 Extreme Landscapes of the Anthropocene

The "Anthropocene," a term coined to categorize the current geological epoch, has become a way in which social scientists can critically and creatively engage with the impact of humanity on the ecological well-being of the Earth. The interdisciplinary and uncertain nature of this subject matter provides space for experimental writing styles, innovative approaches to storytelling, and critical discussion and debate. This course is designed to explore and challenge the term "Anthropocene," questioning how narrative and drama are entangled in the dissemination of complex truths, for better or worse.

In this course, we will consider texts, short films, and other mixed media that investigate the everydayness of extreme landscapes, from "capitalist ruins" to the depleting seas. We will dive into the social, political, economic, and scientific power-scapes that influence narratives about the environment, from late liberal ideology to corporate influence on science and the news. Through the course materials and activities, we will question how to communicate complex information with a broad range of people, particularly surrounding issues of climate change, sustainability, and environmental justice. Each student will build their own writing portfolio of short essays for specific audiences. The class will collectively build and design a storytelling website where they can share their work. Students are encouraged to apply an ethics of care and the art of "non-judgmental attention" to their critical engagement with the Anthropocene.

Offering: **Crosslisting**

Grading: **OPT**

Credits: **1.00**

Gen Ed Area: **SBS-SISP**

Identical With: **SISP204, WRCT204, ANTH204**

Prereq: **None**

ENVS205 Sciences as Social and Cultural Practices

Philosophers long construed scientific knowledge as achieved and assessed by individual knowers, but recent work has recognized a greater epistemic role for scientific communities, disciplines, or practices and has taken seriously the social and cultural context of scientific research. This course surveys some of the social, cultural, and political aspects of the sciences that have been

most important for scholars in science studies, including differences between experimental, field, and theoretical science; the role of disciplines and other institutions in the sciences; interactions between science and its various publics; the politics of scientific expertise and science policy; the globalization of science; the social dimensions of scientific normativity, from metrology to conceptions of objectivity; race and gender in science; and conceptual exchanges between sciences and other discursive practices. The concept of the social will also receive critical attention in its purported contrasts to what is individual, natural, rational, or cultural.

Offering: **Crosslisting**

Grading: **OPT**

Credits: **1.00**

Gen Ed Area: **SBS-SISP**

Identical With: **SISP205, PHIL288**

Prereq: **None**

ENVS206 Public Policy

This course will provide a survey of several key public policies. It will begin with an exploration of the policy-making process and policy design. The remainder of the course will be devoted to the examination of several key public policy areas including criminal justice, education, social welfare, economic policy, and environmental protection regulation. By integrating theoretical literature with case studies of different policies written from a variety of perspectives, the course aims to develop analytical skills as well as an appreciation for the technical and political complexities of policy-making.

Offering: **Crosslisting**

Grading: **A-F**

Credits: **1.00**

Gen Ed Area: **SBS-GOVT**

Identical With: **GOVT206**

Prereq: **None**

ENVS207 Introduction to Archaeology

What can fragments of pottery, stones, and bones reveal about the lives of people who lived thousands or even millions of years ago? What does the archaeological record reveal about human evolution, past human diets and health, ancient socioeconomic systems, and the emergence of early cities? And how can we preserve archaeological sites and artifacts for future generations? This course will introduce students to the interdisciplinary field of archaeology. We will discuss key methods and principles that archaeologists use to study the human past while covering a survey of world prehistory from the earliest stone tools to the archaeology of contemporary material culture. Students will have the opportunity to examine real archaeological artifacts—including artifacts excavated from historic Middletown—and will be encouraged to think critically about the ways that archaeology informs our understanding of both the past and the present.

Offering: **Crosslisting**

Grading: **A-F**

Credits: **1.00**

Gen Ed Area: **None**

Identical With: **ARCP204, ANTH214**

Prereq: **None**

ENVS208 System Mapping for Social and Environmental Impact

In recent years, growing interest in social entrepreneurship has pushed students to "solve" complex social and environmental problems with new ventures of their own design. Unfortunately, this approach often overlooks a critical foundation of social change: understanding the root causes of problems and the contexts that surround them before seeking solutions.

In this six-week, half-credit class, students will study a problem and the systems that surround it. By the end of the course, students will create a "systems map" that documents the economic, political, and cultural factors behind their problem, as well as the current "solutions landscape."

Offering: **Crosslisting**

Grading: **Cr/U**

Credits: **0.50**

Gen Ed Area: **SBS-ALLB**

Identical With: **CSPL257, AFAM257**

Prereq: **None**

ENVS210 Evolution in Human-Altered Environments

Human activities have altered natural environments and, indeed, have created entirely novel ecosystems such as cities and high-input farms. This course examines how these human alterations to the environment affect the evolution and coevolution of diverse organisms. Starting with an intensive overview of microevolutionary processes, we will consider a number of contemporary scenarios: evolutionary response to environmental contaminants, exploitation of natural populations, and global climate change; evolution in urban and agricultural ecosystems; and the evolutionary impact of nonnative, invasive, and genetically modified organisms.

Offering: **Crosslisting**

Grading: **A-F**

Credits: **1.00**

Gen Ed Area: **NSM-BIOL**

Identical With: **BIOL215, BIOL515**

Prereq: **[BIOL182 or MB&B182]**

ENVS211 History of Ecology

The word "ecology" has come to have many meanings and connotations: a scientific field dealing with the relation of organisms and the environment, a way of thinking about the world emphasizing holism and interconnection, a handmaiden of the environmental movement, to name a few. This course covers the history of ecology as a scientific discipline from the 18th-century natural history tradition to the development of population, ecosystem, and evolutionary ecology in the 20th century, situating the science in its cultural, political, and social contexts. Along the way, it traces the connections between ecology and economic development, political theory, ideas about society, the management of natural resources, the preservation of wilderness, and environmental politics. How have scientists, citizens, and activists made use of ecological ideas, and to what ends? How have they understood and envisioned the human place in nature? How have the landscapes and places in which ecologists have done their work shaped their ideas? Other major themes include the relationship between theories of nature and theories of society, ecology and empire, the relationship between place and knowledge about nature, the development of ecology as a professional discipline, the role of ecologists as environmental experts, the relationship between the state and the development of ecological knowledge, and the relationships among ecology, conservation, agriculture, and environmentalism.

Offering: **Crosslisting**

Grading: **OPT**

Credits: **1.00**

Gen Ed Area: **SBS-HIST**

Identical With: **HIST221, SISP221**

Prereq: **None**

ENVS212 Introduction to Ethics

This course will begin with some ancient questions about values. We find that two ancient approaches to right living (Platonic-Stoic and Aristotelian) differ radically over how much experience or society can teach us about what is good. Yet both insist that moral life is essentially connected to individual happiness.

Turning next to modern ideas of moral action (Kantian and utilitarian), we find that they both emphasize a potential gulf between individual happiness and moral rightness. Yet, like the ancients, they disagree over whether morality's basic insights derive from experience.

The last third of the course explores more recent preoccupations with ideas about moral difference, moral change, and the relation between morality and power. Especially since Marx and Nietzsche, moral theory faces a sustained challenge from social theorists who allege moral norms and judgments serve hidden ideological purposes. Some have sought to repair universal ethics by giving an account of progress or the overcoming of bias, while others have argued for plural or relative ethics. Ecological critics have challenged moral theorists to overcome their preoccupation with exclusively human interests and ideals. What kinds of moral reflection might be adequate to problems of global interdependence?

Students will come to understand the distinctive insights and arguments behind all of the positions considered, to recognize more and less cogent lines of response to them, and to shape their own patterns of moral reasoning through careful reflection.

Offering: **Crosslisting**

Grading: **OPT**

Credits: **1.00**

Gen Ed Area: **HA-PHIL**

Identical With: **PHIL212**

Prereq: **None**

ENVS214 Climate Change Economics and Policy

This course introduces students to the role of applied economics in climate change policy and analysis. Students will learn how economists view climate change causes, mitigation, adaptation, and policy challenges. Key topics include: economics of market failures, socially optimal greenhouse gas emissions, overview of theoretical and real-world policies to reduce emissions, evaluating the relative abatement costs of command and control versus market-based policies, valuing climate change impacts, evidence of adaptation strategies in the economy, discounting costs and benefits across multiple generations, impacts of uncertainty on optimal policy design, the role of international cooperation and consequences of unilateral action, and distributional effects.

Offering: **Crosslisting**

Grading: **OPT**

Credits: **1.00**

Gen Ed Area: **SBS-ECON**

Identical With: **ECON210**

Prereq: **ECON110**

ENVS215 Humans, Animals, and Nature

A variety of important issues are central to understanding the complexity of relationships between humans, nonhumans, and the rest of nature. The goals of the course are to help students to think critically, to read carefully, to argue well, and to defend their own reasoned views about the moral relations between humans, animals, and nature.

Offering: **Crosslisting**

Grading: **A-F**

Credits: **1.00**

Gen Ed Area: **SBS-PHIL**

Identical With: **PHIL215, SISP214**

Prereq: **None**

ENVS216 Ecology

Ecology is the scientific study of interactions between organisms and their environment, both biotic and abiotic. We will look at how these interactions shape fundamental characteristics of populations, communities, and ecosystems. Topics will include predation, competition, symbioses, and effects of stress and resource limitation in diverse environments. We will cover important consequences of interactions such as coevolution, population outbreaks, ecological coexistence, patterns of biodiversity, ecological succession, species invasions, food web dynamics, nutrient and energy cycling, variation in ecosystem goods and services, and global change.

This course emphasizes several learning goals in biology, including skill in formulating original ideas and experiments, using quantitative and graphical tools and interpreting quantitative information, and scientific writing.

Offering: **Crosslisting**

Grading: **OPT**

Credits: **1.00**

Gen Ed Area: **NSM-BIOL**

Identical With: **BIOL216**

Prereq: **[BIOL182 or MB&B182]**

ENVS220 Conservation Biology

This course will focus on the biology of conservation rather than cultural aspects of conservation. However, conservation issues will be placed in the context of ethics, economics, and politics. We will cover the fundamental processes that threaten wild populations, structure ecological communities, and determine the functioning of ecosystems. From this basis, we will explore important conservation issues such as habitat loss and alteration, overharvesting, food web alteration, invasive species, and climate change. We will use readings from the primary literature and field projects to learn about current research methods used in conservation biology.

Offering: **Crosslisting**

Grading: **A-F**

Credits: **1.00**

Gen Ed Area: **NSM-BIOL**

Identical With: **BIOL220**

Prereq: **[BIOL182 or MB&B182]**

ENVS221 Environmental Policy

Arguably, environmental protection is the most complex and fascinating regulatory policy area. This course explores U.S. environmental regulation. We will examine the key features of policy and administration in each major area of environmental policy. Moreover, we will place regulation in a larger context and examine the factors that shape the environmental decisions of various economic actors. Although the course focuses primarily on domestic policy, at various points in the course we will draw both on comparative examples and the challenges associated with coordinating national policies and practices on an international level.

Offering: **Crosslisting**

Grading: **OPT**

Credits: **1.00**

Gen Ed Area: **SBS-GOVT**

Identical With: **GOVT221**

Prereq: **None**

ENVS222 Metabolism and Technoscience

This course will investigate the scientific idea of metabolism through the lens of technoscience. Metabolism is a flexible and mobile scientific idea, one that has been applied at the micro-level of analysis within biological organisms, at the meso-level of social collectivities, and at the macro-level of global ecologies. Metabolism encompasses all of the biological and technosocial processes through which bodies (both human and not human) and societies (again, human and not) create and use nutrients, medicines, toxins, and fuels. The lens of technoscience enables us to investigate the technological and scientific practices that define and drive metabolic processes within sciences, cultures, and political economies. These processes implicate forces of production, consumption, labor, absorption, medicalization, appropriation, expansion, growth, surveillance, regulation, and enumeration. Accordingly, as we will learn, metabolism is also a profoundly political process that is inextricably linked to systems that create structural and symbolic violence as well as modes of resistance and struggle. In these contexts, we will interpret some of the most pressing metabolic crises facing human societies, including ecological disaster, industrial food regimes, metabolic health problems, and industrial-scale pollution.

Offering: **Crosslisting**

Grading: **A-F**

Credits: **1.00**

Gen Ed Area: **SBS-SISP**

Identical With: **SISP215**

Prereq: **None**

ENVS223 Traditional China: Eco-civilization and Its Discontents

This course introduces students to the history of China from ancient times to the middle of the Ming Dynasty circa 1450. This is a period when China invented and reshaped its cultural identity by moving into new frontiers and creatively incorporating foreign ideas with indigenous practices. It is also a period when the natural environment was drastically transformed by agrarian civilizations and nomadic neighbors.

The course places concepts of sustainability in the center of the history of traditional China. We will draw on translations of Chinese literary texts including poetry, classical prose, and novels to explore the relationship between power and social inequities as we explore the everyday politics of agrarian civilizations through China's transformation from feudal ages to the imperial period. Did competing regimes/dynasties create a sustainable political and economic system? Did bureaucrats improve the well-being of the population and maintain the balance of the ecosystem? Or did they deplete natural resources to meet their short-term needs? How did Confucian, Legalist, Buddhist, and Daoist teachings alter the dynamics of production and consumption? To what extent did traditional Chinese philosophies promote the ethos of ecojustice?

Offering: **Crosslisting**

Grading: **OPT**

Credits: **1.00**

Gen Ed Area: **SBS-HIST**

Identical With: **HIST223, CEAS223, WLIT224**

Prereq: **None**

ENVS225 Liminal Animals: Animals in Urban Spaces

This course examines the major ways in which nonhuman animals influence and are influenced by human-built environments, with specific attention to the ethical, political, and social dimensions of human-animal interactions in these spaces. Discussions, films, readings, and an independent research project will introduce students to key concepts related to urban/suburban animal life. Specifically, it will focus on topics including the use of animals for food, the use of animals as spectacle or entertainment, animals as human companions, urban wildlife, "invasive" species, "vermin" and "problem" animals, animals and the law, ecological webs, and human encroachment in animal spaces.

Offering: **Host**

Grading: **A-F**

Credits: **1.00**

Gen Ed Area: **None**

Prereq: **None**

ENVS226 Invasive Species: Biology, Policy, and Management

Invasive species account for 39 percent of the known species extinctions on Earth, and they are responsible for environmental damages totaling greater than \$138 billion per year. However, the general population has little knowledge of what invasive species are or what threats they pose to society. In this course, we will explore the biological, economic, political, and social impacts of invasive species. We will begin by exploring a definition of an invasive species and looking at the life history characteristics that make them likely to become pests. Then we will consider the effects of invasive species expansion on the conservation of biodiversity and ecosystem function, as well as their global environmental and political impacts. Finally, we will explore the potential future changes in invasive species distributions under a changing climate.

Offering: **Crosslisting**

Grading: **A-F**

Credits: **1.00**

Gen Ed Area: **NSM-BIOL**

Identical With: **BIOL226, E&ES240**

Prereq: [E&ES197 or BIOL197 or ENV5197] OR [BIOL182 or MB&B182] OR E&ES199

ENV5228 Going Green, German-Style: The Relationship to Nature, 1800--Today

Few countries display as active a commitment to protect natural resources and the environment as Germany. Its focus on renewable energies, recycling, and conservation in general is unique even by European standards, and in the U.S., Germany's policies on sustainability and environmental preservation are often held up as models. It is important to recognize, however, that Germans did not achieve this degree of environmental awareness overnight. Rather, it represents the result of centuries of contemplating, controlling, and conserving nature and cannot simply be transferred to other cultures. In this course, we will examine the German (and European) cultural tradition by analyzing artworks and texts from the past two centuries that have both expressed and shaped salient attitudes and emotional responses. The goals of the course are to provide insight into Germany's long and complicated history of defining and relating to nature and to allow you to reflect critically on your own attitudes toward nature and the environment.

Offering: **Crosslisting**

Grading: **A-F**

Credits: **1.00**

Gen Ed Area: **HA-GRST**

Identical With: **GRST228, GELT228**

Prereq: **None**

ENV5230F The Simple Life (FYS)

As the human population grows toward nine billion and our planet's carrying capacity comes under increasing pressure, many observers believe the human project itself is at risk. What human beings have accomplished is probably unique in the history of the universe; once lost to war, famine, and ecological collapse, the understandings and physical creations of our cultures will be irrecoverable. We must ask ourselves, with considerable urgency, the following questions: How do our values, our economic systems, and our behaviors--as individuals, groups, societies, and cultures--affect the conditions under which we, future generations, and the plants and animals with which we share the earth might live in the future? To what extent and at what cost can technology enable us to adapt to changes already under way? Should we take an "après moi, le déluge" attitude or try to prolong the life of our species, and if so, in what form? Does the so-called simple life, as conceptualized in different times and places, offer any useful models? Does living "green" make sense? What about environmental (in)justice? This course will draw on texts from a variety of periods and disciplines, written in a range of styles and from many perspectives, to examine how these questions and others can be approached. Creative thinking will be strongly encouraged. We will pay particular attention to contemporary sustainability initiatives and threats to the environment in the present moment.

Offering: **Crosslisting**

Grading: **OPT**

Credits: **1.00**

Gen Ed Area: **HA-GRST**

Identical With: **GRST230F, GELT230F**

Prereq: **None**

ENV5233 Geobiology

Fossils provide a glimpse into the form and structure of ancient ecosystems. Geobiology is the study of the two-way interactions between life (biology) and rocks (geology); typically, this involves studying fossils within the context of their sedimentary setting. In this course we will explore the geologic record of these interactions, including the fundamentals of evolutionary patterns, the origins and evolution of early life, mass extinctions, and the history of the impact of life on climate.

Offering: **Crosslisting**

Grading: **OPT**

Credits: **1.00**

Gen Ed Area: **NSM-EES**

Identical With: **E&ES234, BIOL233**

Prereq: **E&ES101 OR E&ES115 OR E&ES199 [ENV5197 or BIOL197 or E&ES197]**

ENV5235 Calderwood Seminar in Public Writing: Engaging Sustainability

This writing-intensive seminar gives students practice in developing skills to communicate with the public about the science of sustainability. Despite some successes, the environmental challenges widely known and discussed for the past fifty years remain and have grown since that time. The many problems we face are hard to deal with in isolation, and no amount of effort seems enough to keep up as the problems worsen. The climate crisis is a case in point. Maybe we haven't worked hard enough, or maybe we've been going about sustainability the wrong way. It is easy to see the need for change and hard to know what that change should look like in detail.

Engaging Sustainability explores the intersection of these now critical challenges--extinction, climate change, and many others--as well as the physical and social constraints on action to address them. Our aim is to identify the pressure points for an effective response, within the geo-ecosystem and the human systems embedded within it, and then to focus on making change.

Calderwood Seminars in Public Writing emphasize writing for general audiences about expert subject matters. Students work with their peers to learn the skills that will enable them to translate scientific understanding for the public. The course affords students the opportunity to acquire a science-based understanding of sustainability as well as the tools to effectively use their knowledge to move the public discussion. Students will have the opportunity to explore public communication in the form of blog posts, wikipedia articles, lectures, interviews, book reviews, comments, and editorials. Emphasis will be placed on public exposition and argumentation. The course will employ an intensive author/editor model to produce writing that is polished and persuasive.

Please note that this course is intended for upper-level students who have experience with environmental and sustainability studies.

Offering: **Crosslisting**

Grading: **OPT**

Credits: **1.00**

Gen Ed Area: **NSM-PHYS**

Identical With: **PHYS105**

Prereq: **None**

ENV5236 Nuclear Power Plant Design and the Three Mile Island, Chernobyl and Fukushima Accidents

This course provides an introduction to radiation, nuclear physics, and nuclear power plant design. It will trace the steps that led to the three most well-known nuclear power plant accidents: Three Mile Island, Chernobyl, and Fukushima. It provides information useful for evaluating the impact of nuclear power on environmental decision-making.

Starting with a history of the atomic discoveries and fundamental physics that led to the atomic bomb production at the end of WWII, the course will then trace the design steps that allowed commercial nuclear power plants to evolve from those weapon-making discoveries. Finally it will trace the accidents and the aftermath from the Three Mile Island, Chernobyl, and Fukushima nuclear power accidents.

Offering: **Crosslisting**

Grading: **A-F**

Credits: **1.00**

Gen Ed Area: **NSM-EES**

Identical With: **E&ES236**

Prereq: **None**

ENV5237 Introduction to History: Environment

Humans have profoundly altered the character of Earth's environment since the advent of agriculture and settled societies some 10,000 years ago. This course is

a study of the historical relationship between human beings and their habitats, with additional attention to arid lands as places of settlement, cultivation, and development. We explore how global problems such as climate change, biodiversity attenuation, and depletion of fossil soils, fuels, and water are linked to social problems such as economic inequality, food insecurity, conflict, and declining public health. The course reviews evidence of major environmental problems; considers how varied academic disciplines address them; and models a historical approach to understanding environmental change.

The course is divided into two parts: "Environmental Concepts," and "Case Studies." In Spring 2022, the case studies will be devoted to biodiversity.

Offering: **Crosslisting**

Grading: **OPT**

Credits: **1.00**

Gen Ed Area: **SBS-HIST**

Identical With: **HIST190, SISP190**

Prereq: **None**

ENVS241 Labor and Development Economics in Latin America

This course will look specifically at the literature of labor markets and related human capital accumulation in Latin America, which has emerged as an entirely separate area of research in recent years. A large part of this literature in Latin American economic development focuses on urban labor markets, health, and education. The focus of this literature is often on various subsets of the population such as gender and different ethnic groups or rural/urban population. Economic and social policies and external shocks to the local environment will be of particular interest to understand their impact on local economic outcomes. The focus will be foremost on Latin America and cities in Latin America and drawing at times on evidence from across the world for comparison with the Latin America region.

Students will read recent economic research papers, drawing on journal articles and policy papers in this area, and discuss the theoretical and empirical results from research and its implication for economic policy. Students are expected to actively present and discuss research results and work on individual or group projects. Basic quantitative methods will be taught throughout the course, relating to economic research papers, and the course will also draw on the resources provided by the Quantitative Analysis Center (QAC).

Offering: **Host**

Grading: **A-F**

Credits: **1.00**

Gen Ed Area: **SBS-ECON**

Identical With: **ECON218, LAST341**

Prereq: **ECON101 OR ECON110**

ENVS242 Quantitative Methods for the Biological and Environmental Sciences

This course offers an applied approach to statistics used in the biological, environmental, and earth sciences. Statistics will be taught from a geometric perspective so that students can more easily understand the derivations of formulae. We will learn about deduction and hypothesis testing as well as the assumptions that methods make and how violations affect applied outcomes. Emphasis will be on analysis of data, and there will be many problem sets to solve to help students become fluent with the methods. The course will focus on data and methods for continuous variables. In addition to basic statistics, we will cover regression, ANOVA, and contingency tables.

Offering: **Crosslisting**

Grading: **A-F**

Credits: **1.00**

Gen Ed Area: **NSM-BIOL**

Identical With: **BIOL242, BIOL542, E&ES270, E&ES570**

Prereq: **None**

ENVS245 Climate, Change, and the Ancient World

Climate change has recently become shorthand for Global Warming, the clearcutting of rainforests, and the burning of fossil fuels. Yet while anthropogenic climate change on the global scale is indeed a modern phenomenon, climate change itself is nothing new, and human societies have been negotiating their natural world for millennia: adapting to changing conditions by inventing new technologies, adopting new social structures, and even modifying the landscapes around them.

Examples from around the world, including Africa, the Mediterranean, Australia, the Americas, Asia, and the British Isles, will be used to examine how past societies perceived and interacted with their environments. Aspects of collecting, analyzing and interpreting various climate proxies, and the theoretical foundations for interpreting their relevance to archaeological questions, will constitute major components of this course.

Offering: **Crosslisting**

Grading: **A-F**

Credits: **1.00**

Gen Ed Area: **SBS-ARCP**

Identical With: **ARCP245**

Prereq: **None**

ENVS248 Environmental Investigation and Remediation

This course will cover environmental investigation and remediation methods in varying geologic settings and how they have changed over time due to regulatory changes and advances in technology. An introduction to various aspects of environmental consulting will be incorporated throughout the term using case studies, guest lecturers, and emerging trends and research from online sources.

Offering: **Crosslisting**

Grading: **A-F**

Credits: **1.00**

Gen Ed Area: **NSM-EES**

Identical With: **E&ES248**

Prereq: **E&ES101 OR E&ES115 OR E&ES199 OR E&ES197**

ENVS250Z Pandemic and the Environment

The COVID-19 pandemic is a global disturbance with important environmental causes, effects, and interactions. We will explore four key topics, evaluating what occurred and implications for future policy and practice. Wildlife: SARS-CoV-2 is a zoonotic disease, facilitated by "bush meat" markets and development of habitat that bring wildlife in close proximity to each other and humans. Stay-at-home orders, and temporary abandonment of human spaces released wildlife from constraints, while exposing the nature of our interdependence. Air pollution: Rates of hospitalization and mortality are greatest for those living with chronically high levels of air pollution, particularly PM

We will examine these themes through readings and apply our understanding of scientific process, peer-review, sources of data, context, voice, and audience.

Offering: **Host**

Grading: **A-F**

Credits: **1.00**

Gen Ed Area: **NSM-ENVS**

Prereq: **None**

ENVS251 Genes to Greens: The Biology of Food Production

Climate change and rapid advances in biological technology are shifting the ways humans grow food. We can now produce food more efficiently than ever, but are losing arable land to harsh and unforgiving climates. We also must grapple with ethical questions about which natural resources we should sacrifice for the good of the global food supply. In this course, students will gain an understanding of plant physiology, traditional agricultural techniques, and traditional and modern crop breeding strategies. Students will engage in the current debates surrounding food production.

Offering: **Crosslisting**

Grading: **OPT**

Credits: **1.00**

Gen Ed Area: **NSM-BIOL**

Identical With: **BIOL259**

Prereq: **None**

ENVS252 Industrializations: Commodities in World History

This course defines "industrialization" broadly to encompass the development and application of systematic knowledge to agriculture and manufacturing in 18th- to 21st-century societies. Although special attention will be devoted to the British and American examples, the course will be organized by commodity rather than nationality, focusing on traffic in materials used in production of food, clothing, and medicines, for example, cotton, rubber, guano, wheat, bananas, and quinine.

Offering: **Crosslisting**

Grading: **A-F**

Credits: **1.00**

Gen Ed Area: **SBS-HIST**

Identical With: **HIST252**

Prereq: **None**

ENVS253 Energy Sustainability: An examination of US, New England and Connecticut Energy

This course will survey the state of energy generation and use in Connecticut, New England, and the U.S. It will include fundamental characteristics of fossil, nuclear, and renewable energy, plus their impact on the local and national energy grid. It will examine how utilities maintain power, including the variable nature of many renewable sources. The course will also examine fuel reliability and impact on local and global air pollution. The course will examine pathways forward for the local and national energy grid. One to two site visits may be incorporated as part of the class, with potential sites including: ISO New England (Holyoke, Mass.), Trash-to-Energy (Hartford, Conn.), combined cycle plant, Kleen Energy plant (Middletown, Conn.), and Combined Heat & Power (UConn Cogen).

Offering: **Crosslisting**

Grading: **A-F**

Credits: **1.00**

Gen Ed Area: **NSM-EES**

Identical With: **E&ES253**

Prereq: **None**

ENVS254 Architecture of the 20th Century

The course considers influential works in architecture, its theory and criticism, and ideas for urbanism, mostly in Europe and the United States, from about 1900 to the present. Early parts of the semester focus on the origin and development of the modern movement in Europe to 1940, with attention given to selected American developments before World War II. Later parts of the course deal with Western architecture from 1945 to the present, including later modernist, postmodernist, and deconstructivist work, urbanism and housing, computer-aided design, green buildings, and postwar architecture in Latin America and Japan and in postcolonial India and Africa. Major movements and architects considered include the Viennese Secession, the Bauhaus, Le Corbusier, Mies van der Rohe, Frank Lloyd Wright, Alvar Aalto, and Louis Kahn, among many others.

Offering: **Crosslisting**

Grading: **A-F**

Credits: **1.00**

Gen Ed Area: **HA-ART**

Identical With: **ARHA254**

Prereq: **None**

ENVS257 Environmental Archaeology

Archaeological materials provide long-term records of how humans have modified past environments and how human societies respond to environmental change. In this course, students will learn how data from ancient plants, animals, and soils can be analyzed in order to draw interpretations about past human-environmental interactions. We will also discuss key topics in

environmental archaeology, including the long-term environmental impacts of plant and animal domestication and debates over environmental causes for the "collapse" of civilizations such as the ancient Maya. The course will involve hands-on preparation and cataloging of plant and animal specimens to add to the Wesleyan Environmental Archaeology Laboratory comparative collections. Students must be available for one weekend class meeting to complete the first stage of animal skeleton preparation.

Offering: **Crosslisting**

Grading: **OPT**

Credits: **1.00**

Gen Ed Area: **SBS-ARCP**

Identical With: **ARCP257, ANTH257, E&ES257**

Prereq: **None**

ENVS259 Development, Disasters, and Beyond

Development is one of the most important ideas of our time—it is a powerful way of organizing the world (Third and First Worlds, or North and South) and intervening in it to bring about certain kinds of cultural, political, and economic transformations. Our purpose in this course is to critically examine the ideas, practices, institutions, and effects of development through an anthropological lens. While development is certainly a potent way to exert power over and regulate Third World Others, it is also a fiercely contested space of struggle and a discourse of entitlement. Rather than position development as all bad or all good, this course aims to keep this messiness of development in focus and approaches it both as a project of rule and a project of rights. We will take up specific topics such as neoliberalism and structural adjustment, humanitarianism, dams, environment, and empowerment.

Offering: **Crosslisting**

Grading: **OPT**

Credits: **1.00**

Gen Ed Area: **SBS-ANTH**

Identical With: **ANTH259**

Prereq: **None**

ENVS260 Global Change and Infectious Disease

This course will cover how human demands upon the environment have come back to bite us through infectious diseases. The most devastating infections, now and in the past, have spilled into humanity from other animals through our quest for food, either through hunting and trade of wild animals (COVID-19 and HIV) or through agriculture (smallpox and measles). Additionally, taking over huge swaths of land has fragmented natural habitats, with the result that some pathogens have increased in abundance (Lyme disease) and some pathogens have moved closer to humanity when humans have encroached on natural lands (Ebola). Living at high density in interconnected cities has sustained the severe infections that became humanity's childhood diseases (mumps, measles, smallpox); high densities have also brought us diseases brought by fecally-contaminated water, as well as those diseases brought by the animals that cohabit our cities and suburbs (rats, robins). Our demand on energy has brought us global warming, which is transporting tropical diseases, such as malaria, poleward from the tropics; the extreme weather events of a changed world are leading to outbreaks of zoonotic diseases (hantaviruses). Moreover, our penchant for transporting wild animals and ourselves has had the potential to spread any local flare-up of any novel disease to the whole world (plague, COVID-19). We will discuss how, even if we mitigate every existing human infection, we should expect an unending stream of new pathogens. We will discuss technological solutions to infectious diseases, as well as how changes in our ethics might help contain existing pathogens and avoid future spillovers.

Lectures will cover these and other topics. There will be two 65-minute lectures each week, with frequent opportunities for students to break out into smaller sections to figure out interesting biological challenges. There will also be a 30-minute discussion each week for each of 12 discussion sections (probably about 15 students each). These discussions will focus mostly on how policy

changes might best mitigate the environmental disturbances that are bringing us infections.

The course has no formal prerequisites and will introduce material from ecology and microbiology, as needed, to allow students to read and interpret the recent literature on global change and infectious disease.

Offering: **Crosslisting**

Grading: **A-F**

Credits: **1.00**

Gen Ed Area: **NSM-BIOL**

Identical With: **BIOL173**

Prereq: **None**

ENVS261 Science Materials For a Malagasy Classroom

Students will design and produce a variety of educational science materials to be used in a fifth grade classroom in Madagascar. These items include a science logo, bookmarks, educational science games, posters, and a comic book with conservation themes for children. Students who are interested in design and natural history as a means through which to communicate science themes on wildlife endemism, evolution, and climate change would be appropriate for this course. All students will need to conduct independent research into science topics, distill down the salient features, and use that information to design elementary school materials. Working both individually and in teams, students will conceive, design, critique, and move into product production (MakerSpace). In addition, prototypes of the materials will be reviewed and rated by fifth graders in a Middletown elementary school for feedback.

Offering: **Crosslisting**

Grading: **A-F**

Credits: **1.00**

Gen Ed Area: **NSM-BIOL**

Identical With: **BIOL161, IDEA261**

Prereq: **None**

ENVS263B Curatorial Workshop: Art and the Ecological Imagination, 1840-1870

This course examines the emergence of an "ecological consciousness" in art during the mid-19th century through readings, discussion, and firsthand study of works in the Davison Art Center print collection. Although the term "ecology" was first coined in 1866, 19th-century thinkers had long been concerned with the interrelationship of organisms, including humans' place and impact on nature. This class examines how visual artists before Impressionism contributed to the 19th century's "ecological imagination" through their representations of landscapes. Known as the "Barbizon School," this group of artists left the metropolis of Paris to immerse themselves in the wild and rugged terrain of the Fontainebleau Forest while also embarking on journeys to remote regions of France. These members of the first artists' colony seceded from the French Academy of Fine Arts and pursued strategies of independence that were allied at the time with radical politics. In their works they experimented with new materials and approaches to composition that included but no longer prioritized humans, in order to foreground processes of transformation internal to nature itself. The consciousness that artists forged through painting and printmaking led them to become among the world's first conservationists; they successfully petitioned the French government to protect parts of the Forest of Fontainebleau some 20 years before the creation of the first National Park in the United States.

The first half of the course will be devoted to reading and discussion; the second half will center on the study of works in the Davison Art Collection, which includes a superb collection of original and experimental prints by Barbizon School artists. The final project will be the curation of a temporary exhibition of works from the collection, including a selection and arrangement of works, explanatory texts, and a public gallery talk.

Offering: **Crosslisting**

Grading: **A-F**

Credits: **1.00**

Gen Ed Area: **HA-ART**

Identical With: **ARHA263B, RL&L235B**

Prereq: **None**

ENVS264 Waterways: Maritime World History

Human history has been shaped by the sea. Whether as a source of food, a frontier, a boundary, or a bridge, the sea has represented a site of both opportunity and danger. This course will examine the way humans have responded to their marine and maritime environments, both in terms of the technologies they have developed to navigate and exploit them but also insofar as the sea has shaped the way humans think about themselves. While our inquiry will extend into the deep past and the early development of human culture and civilization, we will focus on maritime history over the past millennium, the development of oceanic worlds, the rise of the "age of sail" between the 16th and 19th centuries, and the transformation of global navigation and politics with the rise of steam, diesel, and nuclear power.

Offering: **Crosslisting**

Grading: **A-F**

Credits: **1.00**

Gen Ed Area: **SBS-GOVT**

Identical With: **HIST264**

Prereq: **None**

ENVS267 Development in Question: Conservation in Africa

"Why not plant trees?" In 1977 Wangari Maathai started the Green Belt Movement, a popular environmental revolution, in Kenya. Then in the 1990s Nigeria Ken Saro-Wiwa fought for the rights of local communities against the multi-national oil industry. Like many African activists, scientists, and farmers, they placed African experiences at the center of environmental policy and conservation. Yet, popular images of the continent's environment in perpetual crisis blame African practices or disregard African efforts. Such depictions of "desertification" or "over grazing" have impacted international and governmental policy. Recent scholarship suggests that such common perceptions of the environment in Africa and conservation policy are misleading. This course will allow students to critically study the history of environmental management on the continent and the development of the idea of conservation. We will examine game park politics, the history of resource extraction, climate change, and other pressing environmental concerns. We will also study diverse African environmental perspectives from the guardians of sacred forests to activists such as Wangari Maathai and Ken Saro-Wiwa.

Offering: **Crosslisting**

Grading: **A-F**

Credits: **1.00**

Gen Ed Area: **SBS-HIST**

Identical With: **HIST267, SISP267**

Prereq: **None**

ENVS268 North America Before Columbus

Sometime before the end of the Pleistocene, people living in Siberia or along the Pacific Coast of Asia traveled east and found an hemisphere of arctic, temperate, and tropical climates uninhabited by other humans. Over the next 12,000 years or more, populations diversified into, and thrived in, a range of environments--the last great experiment in human adaptation. This course will follow that process as it unfolded across the continent of North America, from the earliest Paleoindians through 1491. Particular emphasis will be on the nature and timing of the colonization(s) of North America from Asia, the impact of environmental diversity across the continent, and the rise of complex societies.

Offering: **Crosslisting**

Grading: **A-F**

Credits: **1.00**

Gen Ed Area: **SBS-ANTH**

Identical With: **ANTH268, ARCP268**

Prereq: **None**

ENVS270 Environmental Philosophy

This course offers philosophical resources for understanding and addressing environmental concerns. At the same time, we will recognize how ecological insights challenge some of the most influential ideas in the European philosophical tradition--human-centered and individualist accounts of existence, agency, knowledge, and value.

Shared questions may include:

Is there a coherent way of distinguishing "nature" from the non-natural?

What can we understand about non-human experience and value?

How do people become motivated to recognize and respond to problems whose effects play out in far-away or unfamiliar bodies?

How do concepts of moral responsibility apply to climate change?

How does environmentally directed action relate to social justice?

When there are ecological impacts attached to choices that are conventionally seen as matters of personal liberty (such as food choices, living arrangements, reproductive choices), how do we constructively engage with one another?

Despite near consensus about our times being rife with environmental crises, concepts like "environment" and "nature" defy any straightforward account. Similarly, it seems even when people come together around problems of injustice and unsustainability, they may not share any clear positive account of justice or of sustainability.

Rather than be defeated by the lack of shared foundational concepts, students will become familiar with at least three patterns of critique--each of these being not a theory or kind of information but a set of skills with perceptual, conceptual, and dialogical aspects. These three patterns of critique are ecological critique, standpoint critique, and sustainability critiques, and they correspond roughly to three traditional domains of philosophy: inquiry into being (metaphysics), inquiry into knowledge and understanding (epistemology), and inquiry into norms and ideals for action (ethics).

Understanding these three patterns of critique allows students to address emerging environmental problems more effectively, recognizing the intertwined relations among empirical inquiry, moral accountability, and social justice.

Offering: **Crosslisting**

Grading: **OPT**

Credits: **1.00**

Gen Ed Area: **SBS-PHIL**

Identical With: **PHIL270**

Prereq: **None**

ENVS273 Environmental Politics in East Asia

This is an upper-division course on the environmental politics of East Asia. It will focus on the major environmental issues of our time (pollution, conservation, energy, waste, environmental justice, etc.), and how East Asian countries are coping with them from both policy and politics perspectives. It will cover both transnational and international efforts, as well as national and local initiatives. The course will require that students "do" environmental politics as well as study environmental politics through a civic engagement component.

This course will be taught fully remote in spring 2021 in order to make it possible for students located abroad to take the course. There will be voluntary opportunities for in-person interactions at several points during the course for those who are located on campus.

Offering: **Crosslisting**

Grading: **A-F**

Credits: **1.00**

Gen Ed Area: **SBS-GOVT**

Identical With: **GOVT273, CEAS273**

Prereq: **None**

ENVS275 The American Landscaping in Painting, Literature, Science and the Popular Imagination

In a time of global warming, the issue of mankind's relationship with the natural landscape has never been more pressing. The course will focus on how the field of 19th-century American landscape painting helped stimulate new ideas about our place in the environment--for example spurring the creation of America's National Parks as well as of city parks and greenspaces designed to look natural, such as Central Park in New York. This course will also explore the notion of landscape more largely. What is our personal landscape, and how does it help define our personal identity? How can you detect traces of history in the landscape? In what ways is the American landscape unique, and how did scientists, writers and painters discover and respond to these qualities? How should we respond to the crisis of global warming, which is rapidly transforming and upending our familiar landscape and even placing human existence at risk?

Offering: **Host**

Grading: **A-F**

Credits: **1.00**

Gen Ed Area: **HA-ENVS**

Prereq: **None**

ENVS279 Eating Others: Histories and Cultures of Animal Edibility

For many people, animals form a significant and cherished part of their diet. Indeed, humans have used other animals as sources of nutrients for hundreds of thousands of years. What can these animal-based dietary practices tell us about humans and their relationships with other animals? Of course, these inter-species relationships have varied as radically across time and cultures as the dietary practices that have shaped them. To better understand some of these practices and the relationships they generate, this course will explore the following questions: How did animal-based food practices develop from pre-domestication to the contemporary era of industrialized animal agriculture? How have cultural categories of "edibility" developed in different cultural contexts? What is meat, and how does it differ from inedible flesh? How has gender, class, race, sexuality, and other categories of difference intersected with and shaped animal consumption practices in different times and contexts? How has animal consumption shaped and been shaped by animal ethics, philosophy, and scientific knowledge production? How has large-scale animal consumption contributed to the ecological crises of the Anthropocene, and how have these in turn affected animal consumption practices? What is the future of animal-based food?

This course will use ethnographies, historical and legal analyses, and philosophical inquiries to examine the histories and cultures of animal edibility. Specifically, it will focus on topics including human evolution, animal domestication, slaughter practices, industrialized animal agriculture, indigenous ecological ontologies, hunting, dairy and egg consumption, cannibalism, cultural conflicts over the edibility of specific species, and recent technological innovations that can produce animal products without animals.

Offering: **Host**

Grading: **OPT**

Credits: **1.00**

Gen Ed Area: **SBS-ENVS**

Identical With: **ANTH279**

Prereq: **None**

ENVS280 Environmental Geochemistry

A qualitative and quantitative treatment of chemical processes in natural systems such as lakes, rivers, groundwater, the oceans, and atmosphere. General topics include equilibrium thermodynamics, acid-base equilibria, the carbonic acid system, oxidation-reduction reactions in nature, and isotope geochemistry. If offered, the associated lab course (E&ES 251) must be taken concurrently. The

lab course is usually taught as a service-learning course in which students work with a community organization to solve an environmental problem. Previous classes have evaluated the energy potential of a local landfill and investigated the cause and possible remediation of local eutrophic lakes.

There are no official prerequisites but students should be comfortable with chemical concepts or should have taken introductory college chemistry or advanced high school chemistry courses.

Offering: **Crosslisting**

Grading: **A-F**

Credits: **1.00**

Gen Ed Area: **NSM-EES**

Identical With: **E&ES250**

Prereq: **None**

ENVS281 Environmental Geochemistry Laboratory

This course will supplement E&ES 250 by providing students with hands-on experience of the concepts taught in E&ES 250. The course will emphasize the field collection, chemical analysis, and data analysis of environmental water, air, and rock samples. This course is often taught as service-learning course where the class works with a community organization to solve an environmental problem. The course usually concludes with a public presentation of the work. Past service-learning projects have examined landfills, damned rivers, and polluted lakes.

Offering: **Crosslisting**

Grading: **A-F**

Credits: **0.50**

Gen Ed Area: **NSM-EES**

Identical With: **E&ES251**

Prereq: **None**

ENVS282 Sustainable Agriculture and Food Systems

This course explores strategies to create a sustainable agriculture and food system. The course will begin with an overview of the environmental issues associated with our agriculture and food system along with current production and consumption trends. Other topics covered in the course will include: environmental certification, starting and managing a farm, organic versus conventional farming, and the impact of diet choice on the environment.

Offering: **Host**

Grading: **A-F**

Credits: **1.00**

Gen Ed Area: **NSM-ENVS**

Prereq: **None**

ENVS283 Venezuela: The Effect of Oil Discovery on People, the Environment, and on Democracy

This course will examine the key factors that have affected the development of Venezuela and its environment from the pre-colonial period to the present. We will divide the history of Venezuela into two critical periods: before and after the discovery of oil. We will ask questions about the nature and interactions of the key factors and agents that transformed Venezuela from a colony to that of an economically independent country. By examining the pre- and post-oil economic periods separately, we will learn that the key factors, such as agriculture, land use, and European-colonial influence, changed dramatically, thereby transforming many sociopolitical institutions. The contrasts will include resilience to and eradication of diseases, human rights and slavery, land ownership, human health, impacts on biodiversity and human health, and protections of indigenous cultures. Ultimately we will examine the factors that have led to the collapse of democracy. We will read an interdisciplinary literature that includes anthropology, religion, sociology, environmental sciences, law, and history. The course is presented in a reading/discussion format in which all readings, writings, and discussions will be in Spanish.

Offering: **Host**

Grading: **OPT**

Credits: **1.00**

Gen Ed Area: **SBS-ENVS**

Identical With: **LAST383**

Prereq: **SPAN221**

ENVS285 Environmental Law and Policy

If you listen to, watch, or read environmental news and would like some history or perspective...If you would like some sense of where environmental law and policy may be going...and if you are prepared for a class which is as much about the open issues as the answers, then Environmental Law and Policy is for you. This course is taught using the Socratic (highly interactive) method and culminates in student run hearings in which you will prepare, present, and argue about issues from what is a "water" of the U.S. to recycling and reclamation to what is solid and hazardous waste?

Offering: **Host**

Grading: **OPT**

Credits: **1.00**

Gen Ed Area: **SBS-ENVS**

Prereq: **[ENVS197 or BIOL197 or E&ES197] OR E&ES199**

ENVS286 Plant Form and Diversity

The course begins with an overview of plant evolutionary history, then covers the basic structure and function of the plant body, the plant life cycle in nature, including interactions with animals, and ecological diversity of plants in contrasting habitats. Special events include a field trip to the Smith College Botanic Garden, two hands-on days for working with living specimens, and a special guest lecture by a local plant biologist.

Offering: **Crosslisting**

Grading: **A-F**

Credits: **1.00**

Gen Ed Area: **NSM-BIOL**

Identical With: **BIOL290, BIOL590**

Prereq: **[BIOL182 or MB&B182]**

ENVS287 Performing the Posthuman: Music and Auditory Culture in the Age of Animantities

"Animantities" takes seriously the aural and performance worlds of the nonhuman. "Posthuman," according to the Oxford English Dictionary (OED), refers to the idea that "humanity can be transformed, transcended, or eliminated either by technological advances or the evolutionary process; artistic, scientific, or philosophical practice which reflects this belief." This seminar engages questions of musical difference by addressing posthuman performance, the musicality of animals, music that imitates nonhuman sound worlds, and cross-species and multi-species performance. Throughout the course, we will think across varied types of sounds to explore and contextualize familiar questions about how we sing, play, perform, stage, and sound musical identity, examining the intersections among the humanities, science and technology studies, and the sonic arts. Our explorations will cross through the fields of musicology, ethnomusicology, and sound studies. By listening across different kinds of sound cultures, we will interrogate how traditions of listening shape our habits of perceiving others, how we hear nonhuman animals, how we incorporate nonhuman sounding into music composed by humans, how technology has played a role in the study and development of nonhuman and human musicality, and what it means to listen to and value sonic difference more broadly. Through discussions of musical and cultural difference that enrich ongoing discussions of race, gender, and sexuality, we will come to a stronger understanding of music's role in imagined and experienced natural worlds. Topics and case studies will include audio bird guides, new age nature recordings, multi-species "collaborative" performances, sampled and electronically rendered animal and nature performance in digital video games, wildlife field recordings and documentary sound design, forms of animal and environmental mimesis used by composers, the way nonhuman animal behavior influenced experimental music communities, and descriptions of the musicking of nonhuman animals by the National Audubon Society and other wildlife guides and field recording

initiatives. This seminar draws on the classroom community's interdisciplinary backgrounds and interests as well as readings and case studies that cross and challenge disciplinary boundaries. Students can succeed in this course without previous musical knowledge.

Offering: **Crosslisting**

Grading: **A-F**

Credits: **1.00**

Gen Ed Area: **HA-MUSC**

Identical With: **MUSC287**

Prereq: **None**

ENVS288 Music, Sound, and the Environment in the Anthropocene

In this course we will explore how environmental works have proliferated throughout the academy and how scholars across the humanities are re-evaluating the reciprocal relationships among society, culture, and the environment. Over the course of the semester we will explore the diverse and interconnected ways in which contemporary composers, popular musicians, sound artists, world music practices, and collaborative arts practitioners draw on natural and urban environments in order to comment on current environmental and energy issues, trauma, the relationships among the arts, humanities and science and technology studies, representations of the environment and the environmental past, and participate in social activism. Employing socially and environmentally engaged musicological analysis, this course will focus on five distinct areas: We will analyze how environmental sites and situations are represented in music; examine why environmentalist ideologies are integrated into the musical narratives and/or sonic choices made by the artist; address how artists conceptualize the environment and express their relationship to it; grapple with what motivates these artists to incorporate environmental commentary into their compositions, illustrating how sociocultural and environmental factors influence creative expression; and question how personal and societal values concerning relationships between society and the environment are disseminated and constructed through music. We will also explore the various ways in which nature, urbanity, and environment are constructed in the production, performance, consumption, and reception of music. Through our reading discussions, writing, and applied projects, some of the questions we will address include: How do the intersections of landscapes and cityscapes produce multifarious artistic responses? How are communities whose economy depend on, or historically depended on, energy and/or natural resource industries signified or evoked through music? How are past and present histories of place expressed, recorded, and remembered through detailed and affective sensory experience? How do we determine the health of our soundscapes? How is music and sound mobilized in social activism? How are notions of identity, as shaped by a physical environment and the ideologies connected to place, constructed and communicated? As we engage with the critical geography of sound, we will address the global networks, musical mobilities, circulation of sounds, traditions and musicians, and the ways in which landscape, mapping, urban planning, and landscapes are expressed in music.

Offering: **Crosslisting**

Grading: **A-F**

Credits: **1.00**

Gen Ed Area: **HA-MUSC**

Identical With: **MUSC288**

Prereq: **None**

ENVS290 Oceans and Climate

Earth's climate is not static. Even without human intervention, the climate has changed. In this course we will study the major properties of the ocean and its circulation and changes in climate. We will look at the effects of variations in greenhouse gas concentrations, the locations of continents, and the circulation patterns of oceans and atmosphere. We will look at these variations on several time scales. For billions of years, the sun's energy, the composition of the atmosphere, and the biosphere have experienced changes. During this time, Earth's climate has varied from much hotter to much colder than today, but the

variations were relatively small when compared to the climate on our neighbors Venus and Mars. Compared with them, Earth's climate has been stable; the oceans neither evaporated nor froze solid. On shorter time scales, different processes are important. We will look at these past variations in Earth's climate and oceans and try to understand the implications for possible climates of the future.

Offering: **Crosslisting**

Grading: **A-F**

Credits: **1.00**

Gen Ed Area: **NSM-EES**

Identical With: **E&ES260, E&ES560**

Prereq: **E&ES101 OR E&ES199 OR E&ES115 OR [E&ES197 or BIOL197 or ENVS197]**

ENVS291 East Asian Archaeology

This course will introduce students to remarkable archaeological discoveries from East Asia, focusing on the archaeology of ancient China, but also including finds from Japan, Korea, and Mongolia. Beginning with "Peking Man" and Asia's earliest hominin inhabitants, we will explore the lives of Paleolithic hunter gatherers, the origins of domestic rice and pigs, the emergence of early villages and cities, the origins of writing, ancient ritual systems, long-distance interactions through land and maritime Silk Roads, and the archaeology of Chinese diaspora populations living in the 19th Century United States. We will also consider the current state of archaeological research in East Asia, focusing on site preservation, cultural heritage management, and the political roles of archaeology.

Offering: **Crosslisting**

Grading: **A-F**

Credits: **1.00**

Gen Ed Area: **SBS-ARCP**

Identical With: **ARCP291, ANTH291, CEAS291**

Prereq: **None**

ENVS292 Techniques in Ocean and Climate Investigations

Weekly and biweekly field trips, and computer and/or laboratory exercises will allow us to see how climate and oceans function today and in the past. In addition to our data, we will most likely use the Goddard Institute for Space Studies climate model to test climate questions and data from major core (ocean, lake, and ice) repositories to investigate how oceans and climate function and have changed.

Offering: **Crosslisting**

Grading: **A-F**

Credits: **0.50**

Gen Ed Area: **NSM-EES**

Identical With: **E&ES261**

Prereq: **E&ES101 OR E&ES115 OR [E&ES197 or BIOL197 or ENVS197] OR E&ES199**

ENVS294 Current Environmental Issues in Latin America (CLAC 1.0)

This course will provide historical and current information on the development of environmental issues in Latin America. The information will be divided into assessing the use of the environment during (a) pre-Columbian and colonial periods and (b) the modern period. The organization, structure, and governance of the environment will be discussed, as will the development of public policies, management plans, factors that deteriorate, and the potential sustainable uses of the environment and its resources. We will be reading interdisciplinary literature including academic, reports, official governmental documents, and NGOs' projects dedicated to the diagnostic, development, and use of resources in Latin America. Finally, particular cases of Latin American countries such as Argentina, Brazil, Mexico, Costa Rica, Peru, and Venezuela will be studied. The course is presented in a reading/discussion format in which all readings, writings, and discussions will be in Spanish.

Offering: **Host**

Grading: **A-F**

Credits: **1.00**

Gen Ed Area: **NSM-ENVS**

Identical With: **CGST267, LAST290**

Prereq: **SPAN221**

ENVS295 Saving Animals: The Politics of Rescue, Captivity, and Care

This course examines the major issues related to captive animal care and rescue across a wide variety of contexts, especially the current global extinction crisis, with specific attention to the ethical, political, and social dimensions of human-animal interactions. Discussions, films, readings, and an independent research project will introduce students to key concepts related to animal care and rescue. Specifically, the course will focus on topics including the ethical dilemmas of care, the politics of extinction and conservation, animal trafficking, wildlife rehabilitation efforts, wildlife refuges, captive animal sanctuaries, and zoos.

Offering: **Host**

Grading: **OPT**

Credits: **1.00**

Gen Ed Area: **NSM-ENVS**

Prereq: **None**

ENVS297 Food Security and Environmental Conservation (CLAC 1.0)

In this course students will research and discuss food security and the use of the environment in a selection of Latin American countries. We will ask questions about the basis of food production and availability. We will also examine the available information from public and private agencies about programs established by countries to ensure the food security of their inhabitants and the sustainable use and conservation of the environment. We will discuss concepts such as: food sovereignty and security as a food system in which the people who produce, distribute, and consume food also control the mechanisms and policies of food production and distribution; nutrition as a global and particular standard of food consumption; social justice related to the accessibility of food; and the human right to adequate food and freedom from hunger as one of the United Nations' objectives of the millennium. Students will look at particular cases in Latin America. The course is presented in a reading/discussion format in which all readings, writings, and discussions will be in Spanish.

Offering: **Host**

Grading: **A-F**

Credits: **1.00**

Gen Ed Area: **NSM-ENVS**

Identical With: **CGST268, LAST298**

Prereq: **SPAN221**

ENVS300 Sustainable Behavior Change

Very frequently, the default mode of influencing environmental behaviors is through increased information sharing and awareness raising. While these efforts are well-intentioned, psychological research indicates that in most cases, increased knowledge and awareness do little or nothing to alter behaviors because of the complexity and difficulty of changing ingrained habits.

Through this course, which is a required component of the Eco Facilitators Program, we will draw on extensive behavior change, communication, and social marketing research to introduce theory and practice that will increase your understanding of effective methods to influence behavior. You will develop theoretical knowledge, practical skills, and an opportunity to apply your learning within a residence hall setting.

Offering: **Host**

Grading: **A-F**

Credits: **0.50**

Gen Ed Area: **SBS-ENVS**

Prereq: **[E&ES197 or BIOL197] OR E&ES199**

ENVS301 The Art of Narrative Science

There is neither conflict nor antagonism between the realms of art and science. Indeed, the two infinitely complement and complete one another in ways so intimate, intricate, and oft-times invisible that only great storytelling, artful

narrative, can fully reveal them. A poet, through metaphor, builds bridges from entangled inscapes of thought and emotion to a place of shared understanding. A good narrative science writer must do the equivalent with the often recondite minutia of modern scientific exploration, and do so with ever-increasing urgency as new discoveries and insights mount daily across a broad array of disciplines.

As we'll be highlighting in our course readings, writing assignments, and class discussion, all the key tenets of good storytelling are at play in effective narrative science writing: voice, point of view, narrative arc, dramatic tension, setting and scenes, characters, action, and dialogue. Science, in this sense, is incidental to this course's primary concern. The singular challenge that science does pose to writers, however, is how not to be cowed and/or overwhelmed by the daunting complexities of the subject matter; how to, through your own powers of observation, accrued research, and fearless, persistent questioning, own the material in such a way that frees you to imaginatively represent it again to the lay reader as story.

In this course students will learn:

- 1) How to read effective creative nonfiction about scientific subjects and understand what techniques different writers use to achieve both clear and compelling narratives.
- 2) How to choose the subjects they'd like to write a story about and how to compose a proposal describing that story to prospective editors at a variety of different publications.
- 3) How to compile research and conduct interviews for their stories.
- 4) How to construct the story itself using all the techniques of effective storytelling in feature-length narratives.

Offering: **Host**

Grading: **A-F**

Credits: **1.00**

Gen Ed Area: **HA-ENVS**

Prereq: **None**

ENVS302 Extinction/Rebellion: Christianity and the Climate Crisis

Although this course is not devoted specifically to the subject of "XR"--the decentralized environmental activist organization and global campaign of civil disobedience--it borrows the movement's self-designation as a point of departure for an exploration of the historical, conceptual, and geopolitical significance of Christianity to the "Anthropocene." How is Christianity entangled among the "historical roots of our ecologic crisis"? What is "eco-theology"? How do ancient narratives of creation and traditional Christian teachings regarding the origin of humankind continue to shape modern, scientific, and popular assumptions about the natural world and our place in it? What does the book of Genesis have to say about commercial agriculture, ethical veganism, and the relation of divinity with the more-than-human, animal-vegetal-mineral web of life? Whence this "planet of slums" and whither Paradise or the Promised Land? Which elements of the Christian imagination enabled colonization of the New World, indigenous displacement and genocide, the transatlantic slave trade, and capitalist globalization? Is another world still possible, and could Christian thought and practice play a pivotal part in actualizing an alternative planetarity today? We will pursue these questions together by way of readings in theology, philosophy, critical science studies, ecology, geography, political economy, Black feminism, queer theory, and Indigenous studies. Ultimately, the course analyzes aspects of Christianity's intimate involvement in the history of climate change and considers how critical attention to this history may contribute to collective acts of rebellion against mass extinction.

Offering: **Crosslisting**

Grading: **OPT**

Credits: **1.00**

Gen Ed Area: **SBS-RELI**

Identical With: **RELI303, SISP313**

Prereq: **None**

ENVS303 Ukraine and Its Environment

International perspectives on environmental issues are critical in order to address the challenges facing the world. Developing an international perspective requires more than learning from printed literature—it requires in-country experience and the desire to be able to view issues through different cultural lenses. This course will provide such experience by learning about the diversity of Ukrainian environments, people, and cultures both in the classroom at Wesleyan and by traveling to Ukraine during Spring Break. During our time in Ukraine we will receive lectures in English from noted scholars, politicians, professors and scientists on topics such as environmental law, global environmental security, urban environment, environmental policy in developing states, and sustainable development for the developing world. We will travel and learn from scientists at Chernobyl about the regeneration of forest ecosystems, learn from agronomists about agriculture on the steppes, and learn from politicians and scholars about Ukrainian environmental policy and their views of U.S. policies. We will also enter into round table discussions with university students to exchange ideas about potential international solutions and approaches to environmental problems. These are just some of the experiences that are planned for our visit. Ukraine, as a pivotal democracy of the former Soviet Bloc, is an amazing place to witness how a nation wrestles with dramatic changes in policy. At the same time Ukraine is culturally diverse, which presents interesting challenges to formulating fair and cohesive policies.

Offering: **Host**

Grading: **A-F**

Credits: **1.00**

Gen Ed Area: **NSM-ENVS**

Identical With: **CGST303**

Prereq: **ENVS197 OR E&ES199**

ENVS304 Environmental Politics and Democratization

This course explores the role that environmental movements and organizations play in the development and transformation of democratic politics. It examines the political role of environmental movements in nondemocracies, transitioning democracies, and advanced democracies.

Offering: **Crosslisting**

Grading: **A-F**

Credits: **1.00**

Gen Ed Area: **SBS-GOVT**

Identical With: **GOVT304, CEAS304**

Prereq: **None**

ENVS306 Ecology and Natural History of Freshwater Fishes of South America

South America has the highest diversity of freshwater fishes anywhere in the world. In fact, there are more than twice the number of mammals and about the same number of birds in the world. Why has this remarkable radiation occurred in a relatively short period of time? How can so many fishes coexist in the same rivers, utilizing the same resources? In this intensive course, we will travel to Colombia during spring break (March 7-21) in order to gain firsthand knowledge about the ecology and natural history of freshwater fishes in South America. We will learn about the ecological and environmental factors that contribute to perhaps the largest biological radiation on the planet.

Students will obtain firsthand experience with the South American tropics, freshwater fishes, and with doing experiments in the field. Each day there will be a combination of lectures and field or laboratory exercises. We will travel to and explore fish ecology in different types of rivers at different elevations. Students will gather and analyze data about biological, physical, and environmental issues that are covered in the lectures. The habitats that we explore will be both terrestrial and freshwater rivers. Our base will be at the Instituto Humboldt in Villa de Leyva, Colombia. We will interact with Colombian students who are

studying ecology and biodiversity at the Institute in order to exchange ideas about current environmental issues.

All the costs of travel, lodging, and meals will be covered by the course.

Offering: **Host**

Grading: **A-F**

Credits: **1.50**

Gen Ed Area: **None**

Identical With: **BIOL306, E&ES306**

Prereq: **None**

ENVS307 The Economy of Nature and Nations

On many of the key environmental problems of the 21st century, from climate change to biodiversity conservation, the perspectives of ecology and economics often seem poles apart. Ecology is typically associated with a skeptical stance toward economic growth and human intervention in the environment, while economics focuses on understanding (and often, celebrating) human activities of production, consumption, and growth. At the same time, ecology and economics share a common etymology: both words spring from the Greek *oikos*, or household. They also share much common history. This course thus explores the parallel histories of economics and ecology from the 18th century to the present, focusing on changing conceptions of the *oikos* over this period, from cameralism's vision of the household as a princely estate or kingdom, continuing through the emergence of ideas about national or imperial economic development, and culminating in the dominant 20th-century recasting of economics as being centrally concerned with problems of resource allocation. Simultaneously, the course explores connections between changes in economics and the emergence of ecological science over this period, from Enlightenment natural history and early musings on the "economy of nature," to the design of markets for carbon credits today.

Offering: **Crosslisting**

Grading: **A-F**

Credits: **1.00**

Gen Ed Area: **SBS-HIST**

Identical With: **HIST307, SISP307**

Prereq: **None**

ENVS308 Comparative Urban Policy

Cities are home to more than half of the world's population, generate more than 80% of world GDP, and are responsible for 75% of global CO2 emissions. Once viewed as minor political players with parochial concerns, they are now—individually and collectively—major players on the global stage. This course will examine how cities are coping with the major policy issues governing our lives—from waste management and public safety to energy and housing policy. We will be examining how policies differ between big cities and small cities, what cities in the global North are learning from the cities in the global South, and how cities are bypassing toxic partisan politics in their nations' capitals to form global networks promoting positive change. The class will involve local field trips and participant observation to see how some of these urban issues are playing out in the City of Middletown.

Offering: **Crosslisting**

Grading: **A-F**

Credits: **1.00**

Gen Ed Area: **SBS-GOVT**

Identical With: **GOVT308, CEAS308**

Prereq: **None**

ENVS310 The Economics of Sustainable Development, Vulnerability, and Resilience

This course will build on the first principles of economics as applied to sustainable development and decision making under uncertainty. One of the course's major objectives will be to explore how efficiency-based risk analysis can inform assessments of vulnerability and resilience from uncertain sources of external stress in ways that accommodate not only attitudes toward risk but also

perspectives about discounting and attitudes toward inequality aversion. Early sessions will present these principles, but two-thirds of the class meetings will be devoted to reviewing the applicability of insights drawn from first principles to published material that focuses on resilience, vulnerability, and development (in circumstances where risk can be quantified and other circumstances where it is impossible to specify likelihood, consequence, or both). Students will complete a small battery of early problem sets that will be designed to illustrate how these principles work in well-specified contexts. Students will be increasingly responsible, as the course progresses, for presenting and evaluating published work on vulnerability and resilience--offering critiques and proposing next steps. Initial readings will be provided by the instructor and collaborators in the College of the Environment, but students will be expected to contribute by bringing relevant readings to the class from sources germane to their individual research projects. Collaboration across these projects will thereby be fostered and encouraged by joint presentations and/or presenter-discussant interchanges.

Offering: **Host**

Grading: **OPT**

Credits: **1.00**

Gen Ed Area: **SBS-ENVS**

Identical With: **ECON212**

Prereq: **ECON110**

ENVS312 Environmental and Resource Economics

This course examines the economic drivers of environmental problems and policies to combat environmental degradation. Topics include failures of the free market, the monetary value of ecosystems, resource utilization across a finite globe, and the unintended consequences of environmental policies. Applications will be gleaned from a vast array of real-world issues, including air quality, biodiversity, ecosystem services, fisheries, forests, oil and gas, public and private lands, transportation, waste management, water resources, wildlife, and other global environmental change phenomena.

Offering: **Crosslisting**

Grading: **OPT**

Credits: **1.00**

Gen Ed Area: **SBS-ECON**

Identical With: **ECON310**

Prereq: **ECON301**

ENVS314 Environmentalism in a Global Age

Over the second half of the 20th century, popular movements in the United States and around the world achieved landmark protections for the environment. Yet in that same period, accelerating globalization and the emergence of transnational environmental issues like acid rain threatened to undercut the effectiveness of national laws and regulations. This seminar investigates how environmental activists have responded to a range of challenges in the global age, from economic development and species conservation to population growth and Malthusian family planning campaigns. As those two examples suggest, environmentalists have engaged with key developments in the modern world, in sometimes troubling ways. Although the subject matter is historical, this course will also focus on what the history of global environmentalism can contribute to contemporary advocacy, not least with regards to climate change.

Offering: **Crosslisting**

Grading: **A-F**

Credits: **1.00**

Gen Ed Area: **SBS-HIST**

Identical With: **HIST314**

Prereq: **None**

ENVS316 Community Research Seminar

Small teams of students will carry out research projects submitted by local community groups and agencies. These may involve social science, natural science, or arts and humanities themes. The first two weeks of the course will be spent studying the theory and practice of community research. Working with the

community groups themselves, the teams will then design and implement the research projects.

Offering: **Crosslisting**

Grading: **A-F**

Credits: **1.50**

Gen Ed Area: **SBS-SOC**

Identical With: **SOC316**

Prereq: **None**

ENVS317 Colonizing Space: Exploration, Extraction, and Inhabitation

In 2015, a bipartisan bill redirected funds from NASA to the private industry, solidifying the rise of "NewSpace" industries like SpaceX, Blue Origin, Virgin Galactic, and a slew of space mining companies. This course puts the intensifying NewSpace race in historical, mythological, and colonial context. It exposes the contemporary effort to dominate space as a boundless extension of the Christian-European dominion of the Earth, which has claimed divine or pseudo-divine sanction from the Doctrine of Discovery through Manifest Destiny, the Cold War, and the post-national victory of corporate capital. Is there a way to learn from other planets, moons, and asteroids without exploiting their "resources"? Can humans visit or even live on other worlds without ransacking them? And is there a way to heal our ravaged planet Earth in the process?

Offering: **Crosslisting**

Grading: **A-F**

Credits: **1.00**

Gen Ed Area: **SBS-RELI**

Identical With: **RELI317, SISP327**

Prereq: **None**

ENVS317F Colonizing Space: Exploration, Extraction, and Inhabitation (FYS)

In 2015, a bipartisan bill redirected funds from NASA to the private industry, solidifying the rise of "NewSpace" industries like SpaceX, Blue Origin, Virgin Galactic, and a slew of space mining companies. This course puts the intensifying NewSpace race in historical, mythological, and colonial context. It exposes the contemporary effort to dominate space as a boundless extension of the Christian-European dominion of the Earth, which has claimed divine or pseudo-divine sanction from the Doctrine of Discovery through Manifest Destiny, the Cold War, and the post-national victory of corporate capital. Is there a way to learn from other planets, moons, and asteroids without exploiting their "resources"? Can humans visit or even live on other worlds without ransacking them? And is there a way to heal our ravaged Planet Earth in the process?

Offering: **Crosslisting**

Grading: **OPT**

Credits: **1.00**

Gen Ed Area: **SBS-RELI**

Identical With: **RELI317F, SISP327F**

Prereq: **None**

ENVS318 The Politics of Death: The Living, the Dead, and the State

This course will explore the intersections between the living, the dead, and the state, focusing on the ways that death and the dead body raise particular questions and problems for different kinds of political regimes. The course will examine the collisions between the state and the dead, both symbolic and material, by investigating spaces where the state and death intersect in revealing ways: cemeteries, cremation, monuments, rituals, and religious institutions and cultures. The course will also follow, borrowing anthropologist Katherine Verdery's term, "the political lives of dead bodies," the ways in which states mobilize dead bodies to reconfigure the political order.

Offering: **Crosslisting**

Grading: **A-F**

Credits: **1.00**

Gen Ed Area: **HA-CHUM**

Identical With: **HIST318, REES318**

Prereq: **None**

ENVS320 More-Than-Human-Worlds: Theories, Fictions, Languages

How do we imagine the worlds of other life forms: what they know, what is meaningful to them, their ways of communicating? Which senses must we use and what forms of translation are necessary (if impossible) to turn their languages, their thoughts, their desires into our fictions or poetry or theory? What stories have been told and what stories could or should we tell in order to inspire more responsive and responsible relations between the diverse yet enmeshed worlds of human and non-human lives? These are some of the questions we will be asking as we move through a diverse range of writings about relations to other animals and to other worlds that are both within and beyond our own.

Offering: **Crosslisting**

Grading: **OPT**

Credits: **1.00**

Gen Ed Area: **HA-COL**

Identical With: **COL310**

Prereq: **None**

ENVS325 Healthy Places: Practice, Policy, and Population Health

The built environment influences many aspects of health and well-being: psychological stressors (crime, noise, and violence), what people eat, the water they drink, the air they breathe, where (or if) they work, the housing that shelters them, where they go for health care, what social networks are available for support, and how political power is distributed and public resources allocated. How cities, suburbs, and rural areas are managed; local policy; and planning and design decisions can all help determine whether the places we live will be threats to public health and, perhaps more important, to an aging society. The focus of this course connects the fields of planning, psychology, and public health to explore contemporary challenges (and innovations) in the 21st-century built environment. Students will explore the multiple forces that impact population health, how to analyze these determinants, and what roles planning and public health agencies, as well as other institutions such as local governments, civil society, the private sector, and communities themselves, can play in research and action aimed at improving physical and mental health.

Offering: **Crosslisting**

Grading: **A-F**

Credits: **1.00**

Gen Ed Area: **SBS-PSYC**

Identical With: **PSYC325**

Prereq: **None**

ENVS330 Special Topics: Ecopoetics - Experimental Poetry in the Anthropocene

How do poets speak for and from a world in flux and crisis? How do poets register and attempt to restore the degradation of the planet through language? How might altering the boundaries of conventional language use--through poetry--alter the bounds of conventional thinking and behaving, thus leading to more engaged and sustainable modes of living? This course, in part, will serve as a tour of contemporary ecopoets invested in looking at and caring for the current state of our planet through poetry. We will read poems that reflect the most critical environmental concerns of our time and we will learn to see how these poems resist closure and are instead guided by experimentation, exploration, and interrogation in an attempt at reorienting our attention and intention as inheritors of this planet.

This is a workshop for students committed to developing an understanding of ecopoetry's place in the more-than-literary world, as well as developing a personal ecopoetics from which to write, read, and live. Students will choose an environmental topic to research and write in service of for the semester and, by the end of the semester, each student will have written a project-centered collection of ecopoems. There will be bi-weekly presentations on the poetry collections we read, in-class writing experiments, and intensive workshops of one another's work. The class will culminate in an ecobook arts project and reflective essay.

Offering: **Crosslisting**

Grading: **OPT**

Credits: **1.00**

Gen Ed Area: **HA-ENGL**

Identical With: **ENGL340**

Prereq: **(ENGL216 AND ENGL336) OR ENGL337**

ENVS337 The Origins of Bacterial Diversity

Wherever there is life, there are bacteria. Free-living bacteria are found in every environment that supports eukaryotes, and no animal or plant is known to be free of bacteria. There are most likely a billion or more species of bacteria, each living in its unique ecological niche. This course will explore the origins of bacterial biodiversity: how bacteria evolve to form new species that inhabit new ecological niches. We will focus on how the peculiarities of bacterial sex and genetics facilitate bacterial speciation. Topics will include the characteristics of bacterial sex, why barriers to genetic exchange are not necessary for speciation in bacteria, the great potential for formation of new bacterial species, the evolutionary role of genetic gifts from other species, and the use of genomics to identify ecologically distinct populations of bacteria.

Offering: **Crosslisting**

Grading: **A-F**

Credits: **0.50**

Gen Ed Area: **NSM-BIOL**

Identical With: **BIOL337, BIOL537**

Prereq: **[BIOL182 or MB&B182]**

ENVS340 The Forest Ecosystem

This course examines basic ecological principles through the lens of forest ecosystems, exploring the theory and practice of forest ecology at various levels of organization from individuals to populations, communities, and ecosystems. Lectures, lab exercises, and writing-intensive assignments will emphasize the quantification of spatial and temporal patterns of forest change at stand, landscape, and global scales.

Offering: **Crosslisting**

Grading: **A-F**

Credits: **1.00**

Gen Ed Area: **NSM-BIOL**

Identical With: **BIOL346, BIOL546, E&ES238, E&ES538**

Prereq: **[BIOL182 or MB&B182] OR [ENVS197 or BIOL197 or E&ES197] OR E&ES199**

ENVS344 Renewable Energy and Negative Emission Technologies

This course explores renewable energy solutions society must transition to in order to mitigate global climate change. The course will focus on renewable energy technologies such as solar, wind (onshore and offshore), geothermal, biofuels, hydro, and wave power. It will also cover negative emission technologies including soil carbon sequestration, reforestation, and carbon capture and storage (CCS).

Offering: **Host**

Grading: **OPT**

Credits: **1.00**

Gen Ed Area: **NSM-ENVS, SBS-ENVS**

Prereq: **None**

ENVS347 Ethics, Ecology, and Moral Change

People commonly recognize that in facing global climate crises, we need to change our habits and practices. Yet our activities are bound up with our perceptions and with our embodied experience of value and possibility. This seminar dives into recent attempts to radically rework our ways of understanding and inhabiting the world. As the flip-side of environmental alienation is alienation from our embodiment, our sessions will incorporate movement and other challenges to sedentary classroom habits.

Given an account of thinking and action as always actively embodied and embedded in our surroundings, we will consider the hypothesis that shifts

in action emerge together with shifts in perception. Radical accounts of metaphor and its uptake will help us develop accounts of perceptual change. Our readings will follow a variety of metaphorical directions, including animism and animacies, affordance and hyperobject, process, event and intra-action, native and other, inflammation and balance, dwelling and death, consumption and sustainability. How -- and with what risks and unexpected outcomes -- can these patterns of recognition help in orienting us to the challenges of environmental interdependence and volatility?

This course benefits from collaborative visits with philosopher-dancer Jill Sigman, via Wesleyan's Creative Campus Initiative. Sigman will co-shape discussion and activities during at least two of our sessions.

Offering: **Crosslisting**

Grading: **OPT**

Credits: **1.00**

Gen Ed Area: **SBS-PHIL**

Identical With: **PHIL347**

Prereq: **None**

ENVS352 Energy and Modern Architecture, 1850-2020

This seminar explores the evolution of mechanical systems for heating, ventilating, and cooling in modern architecture from the mid-19th century to the present. The aim is to show how architects, engineers, fabricators, and urban governments worked to develop modern systems of environmental controls, including lighting, as means of improving both the habitability of buildings and health of their occupants. The course will trace the adaptation of technical innovations in these fields to the built environment and how those responsible for it sought to manage energy and other resources, such as funds and labor, to create optimal solutions for different building types, such as factories, theaters, assembly halls, office buildings, laboratories, art museums, libraries, and housing of various kinds, including apartment buildings for higher- and lower-income residents. An important theme will be the relationship of energy systems for individual buildings and urban infrastructure, including water systems, electrical, and other utilities. The last part of the course focuses on contemporary green, or sustainable, architecture, including passive and active solar heating, photovoltaics, energy-efficient cooling, LEED certification, wind and geo-exchange energy, green skyscrapers, net-zero energy buildings, vertical farming, and zero-carbon cities in the United States, Europe, and Asia.

Offering: **Host**

Grading: **A-F**

Credits: **1.00**

Gen Ed Area: **HA-ART**

Identical With: **ARHA352**

Prereq: **None**

ENVS353 Agricultural Food Webs

Ecological communities are structured by feeding interactions, and agricultural systems are no exception to this rule. This class will focus on attributes of food webs that impact agriculture, including topics such as natural biological control of insect pests, to soil microbes and nutrient cycling, to causes of honeybee colony collapse disorder. This course includes a rigorous survey of both ecological theory and applied environmental problems. Students will read primary literature from the fields of food web ecology and agroecology and discuss the implications through group work.

Offering: **Host**

Grading: **A-F**

Credits: **1.00**

Gen Ed Area: **NSM-ENVS**

Identical With: **BIOL354**

Prereq: **BIOL182 or BIOL197**

ENVS359 Space Design for Performance

In this course, students will study, construct, and deconstruct the performative space, whether in the theater or site-based, by analyzing the space as a context

to be activated by the body of the performer and witnessed by an audience. Through practical assignments, the class will learn the aesthetic history of the theatrical event (considering plays, rituals, street parades, and digital performances, among others), while developing and discovering the student's own creative process (visual, kinetic, textual, etc.). Students will be guided through each step of the design process, including close reading, concept development, visual research, renderings or drawings, model making and drafting.

In this course, special emphasis is given to contemporary performance as a mode of understanding cultural processes as a relational system of engagement within our ecosystem, while looking at environmental and sustainable design, materials, and the environmental impacts of processing. Students will create and design performance spaces, while realizing scale models and drawings and integrating the notions of design and environmental principles and elements.

Students will have the opportunity to develop skills using 3D-drafting and 3D-modeling software.

Offering: **Crosslisting**

Grading: **OPT**

Credits: **1.00**

Gen Ed Area: **HA-THEA**

Identical With: **THEA359, DANC359**

Prereq: **THEA105 OR THEA150 OR THEA185 OR ARST131 OR ARST190**

ENVS361 Living in a Polluted World

This course treats the occurrences and origins, natural pathways, toxicologies, and histories of the major environmental contaminants. We all know about lead and its effects on humans, but how about cadmium and hexachromium, or the many unpronounceable organic contaminants, usually referred to by some acronym (e.g., DDT, POPs)? We also deal with the larger topics of CO₂/climate change, the environmental nitrogen-oxide balance, and eutrophication of coastal waters (the "dead zones"). To be effective in this course, students will need basic high school/college-level proficiency in chemistry and math as we will delve into aspects of geochemistry, geology, toxicology, environmental law, and some simple modeling. The class consists of lectures, one problem set, one Hg-in-hair class study, and a class project on lead in drinking water in the Middletown area. This is also a service-learning course, providing environmental outreach to the larger Middletown community on local pollution.

Offering: **Host**

Grading: **OPT**

Credits: **1.00**

Gen Ed Area: **NSM-ENVS**

Identical With: **E&ES361**

Prereq: **None**

ENVS369 Ecological Resilience: The Good, the Bad, and the Mindful

This course will examine the concepts of resilience, fragility, and adaptive cycles in the context of ecosystem and social-ecological-system (SES) structures. These concepts have been developed to explain abrupt and often surprising changes in complex ecosystems and SES that are prone to disturbances. We will also include nonhierarchical interactions among components of systems (termed panarchy) to compare the interactions and dependencies of ecological and human community systems. A systems approach will be applied to thinking about restoration ecology, community reconstruction, and adaptive management theory.

All of the terms--resilience, fragility, adaptation, restoration, reconstruction--are fraught with subjectivity and valuation. We will use mindfulness and meditation techniques (including breathing and yoga) to more objectively and dynamically engage in the subject matter, leaving behind prejudice or bias. Students will be expected to approach these techniques with an open mind and practice them throughout the semester. The objective is to provide students with a

more comprehensive framework with which to gain deeper understanding and integration of the science with the social issues.

Offering: **Host**

Grading: **A-F**

Credits: **1.25**

Gen Ed Area: **NSM-ENVS**

Identical With: **E&ES342**

Prereq: **[E&ES197 or BIOL197] OR [BIOL182 or MB&B182]**

ENVS376 The Artist in the Community: Civic Engagement and Collaborative Dancemaking

This is a hybrid course in which we will combine theoretical analysis with practical application and project based-work. Students will explore how, in a collaborative community setting, performance and art-making can be used to address local issues, spark community dialogue, and encourage civic participation, and will consider the power dynamics and ethical issues that emerge. This hybrid course includes readings, seminar discussion, and community-engaged research, practice, and reflection. We will begin with an overview of artists who engage directly with communities, places, and environments, and we will explore new means of civic participation. Artists will include (among others): Allison Orr, Pablo Helguera, Ananya Chatterjea, Amie Dowling, Jawole Willa Jo Zollar, Marty Pottenger, Liz Lerman, John O'Neal, and Free Southern Theater/Junebug Productions.

A module on Forklift Danceworks's community-based practice will coach students in embedded artistic research, interviewing, and collaborative creation. Students will apply their learning by job-shadowing campus employees, with culminating creative projects connected to Forklift's performance project with Physical Plant employees (to take place in Oct. 2021).

Offering: **Host**

Grading: **A-F**

Credits: **1.00**

Gen Ed Area: **HA-ENVS**

Identical With: **DANC376, THEA376**

Prereq: **None**

ENVS381 Japan's Nuclear Disasters

The atomic bombings of Hiroshima and Nagasaki in 1945 are central to the history of the 20th century. This course examines the scientific, cultural, and political origins of the bombs; their use in the context of aerial bombings and related issues in military history; the decisions to use them; the human cost to those on whom they were dropped; and their place in history, culture, and identity politics to the present. Sources will include works on the history of science; military, political, and cultural history; literary and other artistic interpretations; and a large number of primary source documents, mostly regarding U.S. policy questions. In addition, we will be examining the development of the civilian nuclear industry in Japan with a focus on the nuclear meltdowns in Fukushima and other accidents. This is an extremely demanding course.

This interdisciplinary, experiential, and experimental course combines studio learning (movement studies and interdisciplinary, creative exploration) and seminars (presentations and discussions). No previous dance or movement study is required, and the course is not particularly geared toward dancers or performers. However, your willingness to experiment on and share movement is important. We encourage you to think about movement as a method of accessing human experiences and making distance malleable, a way to explore your own sensations, thoughts, and reactions in learning history.

Offering: **Crosslisting**

Grading: **A-F**

Credits: **1.50**

Gen Ed Area: **SBS-HIST**

Identical With: **HIST381, SISP381, CEAS384, DANC381**

Prereq: **None**

ENVS387 History of the End

How will it end? Scientific hubris, a nuclear event, an asteroid, environmental disaster, overpollution, resource scarcity, commodity price spikes, riots, social chaos, social control? This seminar investigates how people have imagined apocalypse and post-apocalypse over time, on the premise that fantasies of the end provide a window into the anxieties of the societies that produce them.

Offering: **Crosslisting**

Grading: **A-F**

Credits: **1.00**

Gen Ed Area: **SBS-HIST**

Identical With: **HIST387, SISP387**

Prereq: **None**

ENVS391 Senior Colloquium: Environmental Studies

This semester, students will be enrolled in one of three small-group discussion sections. Prior to a student's presentation, the student will record and post a 10-minute presentation in which they can use visuals, videos, and performances about the topic, plus strategies for their senior project. The student will also post a reading to provide all participants with some background into their topic. At the student's presentation in class, the student will lead a discussion on the materials they have made available. Students should come to class prepared to ask questions to the presenter. Students will each make two presentations during the semester.

In addition, we will work together on the development of research questions and abstracts for your projects. Our learning goals are to enhance the knowledge of each of the participants in the topics researched by the senior majors.

Offering: **Host**

Grading: **Cr/U**

Credits: **0.50**

Gen Ed Area: **None**

Prereq: **ENVS201**

ENVS392 Senior Colloquium: Environmental Studies

This semester, students will be enrolled in one of three small-group discussion sections. Prior to a student's presentation, the student will record and post a 10-minute presentation in which they can use visuals, videos, and performances about the topic, plus strategies for their senior project. The student will also post a reading to provide all participants with some background on their topic. During the student's presentation in class, the student will lead a discussion on the materials they have made available. Students should come to class prepared to ask questions of the presenter. Students will each make two presentations during the semester.

In addition, we will work together on the development of research questions and abstracts for student projects. Our learning goals are to enhance the knowledge of each of the participants in the topics researched by the senior majors.

Offering: **Host**

Grading: **Cr/U**

Credits: **0.50**

Gen Ed Area: **None**

Prereq: **None**

ENVS399 History and Geography

Maps are part of a broader family of value-laden images. This is a research seminar about the global history of cartography from 1490s to the recent past. We will study maps from the early modern and modern world and examine how maps were used as instruments of political power, shaped the imagination of peoples around the world, and inspired new ways to imagine our self-identity.

Offering: **Crosslisting**

Grading: **A-F**

Credits: **1.00**

Gen Ed Area: **SBS-HIST**

Identical With: **HIST399, CEAS214, SISP399**

Prereq: **None**

ENVS401 Individual Tutorial, Undergraduate

Topic to be arranged in consultation with the tutor.

Offering: **Host**

Grading: **OPT**

ENVS402 Individual Tutorial, Undergrad

Topic to be arranged in consultation with the tutor.

Offering: **Host**

Grading: **OPT**

ENVS403 Senior Essay: Environmental Studies

All ENVS majors are required to complete a senior capstone project in a form that is approved by their primary major with a topic that is approved by the student's ENVS advisor. In the event that the student cannot find a mentor for their capstone project, the student may complete a special written research project to meet the research requirement. The topic must be approved by the ENVS advisor and progress must be reported to both the ENVS advisor and the Program Director during the fall semester. The written project is a senior essay, using primary sources and must concern an environmental topic from the perspective of the student's primary major. The senior project is due at the senior thesis deadline. It will be the responsibility of the ENVS Program Director to find a suitable reader to evaluate the written work.

Offering: **Host**

Grading: **OPT**

ENVS404 Senior Essay: Environmental Studies

All ENVS majors are required to complete a senior capstone project in a form that is approved by their primary major with a topic that is approved by the student's ENVS advisor. In the event that the student cannot find a mentor for their capstone project, the student may complete a special written research project to meet the research requirement. The topic must be approved by the ENVS advisor and progress must be reported to both the ENVS advisor and the Program Director during the fall semester. The written project is a senior essay, using primary sources and must concern an environmental topic from the perspective of the student's primary major. The senior project is due at the senior thesis deadline. It will be the responsibility of the ENVS Program Director to find a suitable reader or to evaluate the written work.

Offering: **Host**

Grading: **OPT**

ENVS409 Senior Thesis Tutorial

Topic to be arranged in consultation with the tutor.

Offering: **Host**

Grading: **A-F**

ENVS410 Senior Thesis Tutorial

Topic to be arranged in consultation with the tutor.

Offering: **Host**

Grading: **A-F**

ENVS411 Group Tutorial, Undergraduate

Topic to be arranged in consultation with the tutor.

Offering: **Host**

Grading: **OPT**

ENVS412 Group Tutorial, Undergraduate

Topic to be arranged in consultation with the tutor.

Offering: **Host**

Grading: **OPT**

ENVS419 Student Forum

Student-run group tutorial, sponsored by a faculty member and approved by the chair of a department or program.

Offering: **Host**

Grading: **Cr/U**

ENVS420 Student Forum

Student-run group tutorial, sponsored by a faculty member and approved by the chair of a department or program.

Offering: **Host**

Grading: **Cr/U**

ENVS440 Painting II: The Shifting Landscapes of the Mind, Nature, and History

Since the beginning of time, people have created art to document events in nature and society and to convey ideas and emotions as they responded to shifting conditions in the world--be they man-made or natural. Before written language, visual expressions of morality, concepts of the future, and abstract thought in the sciences and religion were represented in painting. Whenever dramatic shifts were experienced in society, painting documented them and commented on them. In this class, the skills and knowledge gained in ARST239 will serve as the foundation upon which students will be challenged to become technically proficient while they explore the topic of shifting landscapes or the shifting viewpoints of the mind, history, and nature. The themes, prompts, and concerns addressed in this course will allow for any formal, conceptual, or stylistic form of expression to resolve them--each student will be working differently. The goal of this class is for students to become fluent with the medium and make aesthetic choices that can best convey their ideas about and responses to each prompt. Lectures and meaningful class discussions will provide information and feedback about historical and contemporary issues and the plans for work. Individual and group critiques as well as museum and gallery trips will complement class work.

Offering: **Crosslisting**

Grading: **A-F**

Credits: **1.00**

Gen Ed Area: **HA-ART**

Identical With: **ARST340**

Prereq: **(ARST131 AND ARST239)**

ENVS465 Education in the Field, Undergraduate

Students must consult with the department and class dean in advance of undertaking education in the field for approval of the nature of the responsibilities and method of evaluation.

Offering: **Host**

Grading: **A-F**

ENVS467 Independent Study, Undergraduate

Credit may be earned for an independent study during a summer or authorized leave of absence provided that (1) plans have been approved in advance, and (2) all specified requirements have been satisfied.

Offering: **Host**

Grading: **A-F**

Credits: **1.00**

Gen Ed Area: **None**

Prereq: **None**

ENVS469 Education in the Field, Undergraduate

Students must consult with the department and class dean in advance of undertaking education in the field for approval of the nature of the responsibilities and method of evaluation.

Offering: **Host**

Grading: **OPT**

Credits: **1.00**

Gen Ed Area: **None**

Prereq: **None**

ENVS491 Teaching Apprentice Tutorial

The teaching apprentice program offers undergraduate students the opportunity to assist in teaching a faculty member's course for academic credit.

Offering: **Host**

Grading: **OPT**

ENVS492 Teaching Apprentice Tutorial

The teaching apprentice program offers undergraduate students the opportunity to assist in teaching a faculty member's course for academic credit.

Offering: **Host**

Grading: **OPT**