ENVIRONMENTAL STUDIES

Overview and Contact Information

Environmental Studies is a cross-divisional department with natural science, social science, humanities, and interdisciplinary courses. Our students learn about the origins and impacts of, as well as potential solutions to, environmental issues by studying the behavior of natural systems and their interactions with political, economic, social, and cultural factors. Because the study of environmental concerns is inherently interdisciplinary, students develop integrative thinking skills and a broad foundation of knowledge in their time at Mount Holyoke College. Environmental Studies majors graduate with the intellectual tools, practical skills, and depth of understanding to confront environmental challenges of the present and future.

Please note that the departments of Geology, Geography and Environmental Studies plan to launch in Fall 2023 a new department and a new major and minor. Details of the transition plan to the new major and minor are awaiting final approval, but students who entered the College before Fall 2023 will at least remain eligible to complete the existing majors/minors in Geology, in Geography, and in Environmental Studies.

Contact Information

Timothy Farnham, Chair (Fall 2022)
Catherine Corson, Chair (Spring 2023)
Deborah LaBonte, Academic Department Coordinator

302 Clapp Laboratory
413-538-2898
https://www.mtholyoke.edu/academics/find-your-program/environmental-studies/

Learning Goals

The department emphasizes approaches to learning that engage students more actively in the scientific, social/human, and global dimensions of environmental study. Each approach is a fundamental component of environmental literacy.

- **Interdisciplinary Thinking:** Students develop the ability to integrate knowledge using modes of inquiry that conceptually organize and link ideas, methods, and data from several fields.
- **Critical Thinking:** Students cultivate the capacity to listen and think analytically and critically by questioning assumptions, evaluating evidence, and articulating well-reasoned arguments. They also develop quantitative and qualitative methodological expertise.
- **Depth of Knowledge:** Students gain a solid understanding of how the natural world operates, how it has been impacted by human activities, and how it has influenced human actions and development through time. They recognize that solving environmental challenges requires knowledge of the underlying physical and biological processes involved as well as the complex ways these processes interact with cultural, historical, political, and economic forces.
- **Intercultural Competence:** Students appreciate the diverse cultures that make human society, and develop perspectives, skills, and knowledge to engage with values, beliefs, attitudes, and behaviors of communities other than their own in environmental education, activism, development projects, and domestic and international research projects.
- **Global Consciousness:** Students recognize and understand global, national, regional, and local environmental concerns, perspectives, and experiences, including the impacts of economic, cultural, and political contexts on various communities and resources.

Skills

In order to meet the above goals, the Environmental Studies curriculum places a strong emphasis on habits of critical thinking and questioning across academic disciplines:

- **Problem Identification, Assessment, and Solution:** Students gain analytical skills in determining the scale and parameters of environmental problems. They develop an in-depth understanding of the scientific method, employing both quantitative and qualitative analyses to clarify and understand data. They become familiar with scientific, historical, and ethical analyses of environmental problems and are able to propose imaginative and creative solutions appropriate to specific issues, based on in-depth study of local to global factors.
- **Communication and Information Literacy:** Students recognize the breadth depth of environmental information, across a range of formats and fields. They strengthen writing and communication skills and develop a broad foundation of information literacy. They learn how to formulate and articulate questions, frame research projects, locate needed resources, evaluate information, and make critical judgments about the presentation of research. They are able to synthesize, present, and use this information in a way that helps answer a question, solve a problem, or educate self or others.
- **Reflective Learning and Application of Knowledge:** Students practice and develop their capacity for reflective learning in all courses, but especially in the capstone senior seminar. They develop the skills for peer feedback, self-reflection, and assessment of learning impacts. Experiential learning opportunities (e.g., community-based work, internships, and study abroad) allow students to increase their range of interactions with diverse peoples. They also develop leadership and decision-making skills including facility in working constructively with diverse perspectives, personalities, and groups. They develop pre-professional confidence in future options for environmental work in a range of government, education, business, and non-profit contexts.

These core foundational approaches and skills are important in all facets of environmental studies and will serve graduates well in their post-college lives and careers.

Faculty

This area of study is administered by the Department of Environmental Studies with participation from faculty members of related departments:

Catherine Corson, Miller Worley Professor of Environmental Studies
Steven Dunn, Professor of Geology, Teaching Spring Only
Michelle Markley, Professor of Geology
Thomas Millette, Director of the Geo-Processing Lab; Professor of Geography, Teaching Fall Only
Lauret Savoy, David B. Truman Professor of Environmental Studies, Teaching Fall Only
Alan Werner, Professor of Geology
A minimum of 44 credits:

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<tr>
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<tr>
<td>ENVST-100</td>
<td>Introduction to Environmental Studies ¹</td>
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<tr>
<td>or ENVST-150D</td>
<td>Introductory Topics in Environmental Studies: 'Introduction to the Histories and Theories of Development'</td>
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One Science with Lab Course: ⁴

- BIOL-145 | Introductory Biology ²                                  | 4       |
- BIOL-160 | Integrated Introduction to Biology and Chemistry        |         |
- CHEM-150 | General Chemistry: Foundations of Structure and Reactivity |         |
- CHEM-160 | Integrated Introduction to Biology and Chemistry        |         |
- PHYS-100 | Foundations of Physics                                  |         |
- PHYS-110 | Force, Motion, and Energy                               |         |
- PHYS-150 | Phenomena of Physics                                    |         |
- NEURO-100 | Introduction to Neuroscience and Behavior                |         |

Intermediate Core ³

One Natural Science Course: ⁴

- ENVST-200 | Environmental Science                                   | 4       |
- BIOL-223  | Ecology                                                 |         |
- GEOL-203  | The Earth’s Surface                                     |         |

One Social Science Course: ⁴

- ENVST-210 | Political Ecology                                       | 4       |
- ENVST-241 | Environmental Issues                                    |         |
- ECON-219 | Environmental Economics                                 |         |

One Humanities Course: ⁴

- ENVST-240 | The Value of Nature                                     | 4       |

Senior Seminar

- ENVST-390 | Senior Seminar in Environmental Studies                 | 4       |

Additional Electives ⁴

Three courses at the 300 level ⁵

Two additional electives at any level

Total Credits ⁴

A full list of the approved courses (p. 3) for each intermediate core area appears at the end of the Environmental Studies Courses section. Students should consider concentrating their electives in a particular area of Environmental Studies. For example, if students are interested in climate change policy, they can look for elective courses that help both to broaden and to focus their studies.

Independent study may be substituted for one of the 300-level courses, with approval of advisor. Independent study cannot be substituted for ENVST-390.

Additional Specifications

- When declaring their Environmental Studies major, students must choose an advisor who can help them select the elective courses that best suit their curricular goals.

- In the fall semester of their junior year, students must submit a paragraph to their advisor describing their plan for choosing their electives. This written plan can include specific courses or a general field of concentration that guides the selection of courses.

- Students may take up to two 200- or 300-level courses off campus (study abroad, Five Colleges, etc.). Two additional 200- or 300-level courses may be taken within the Five Colleges. All off-campus courses are subject to advisor approval.

- Students who declare an environmental studies major automatically fulfill the College’s "outside the major" requirement.

Requirements for the Minor

A minimum of 20 credits:

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From the approved Environmental Studies course lists: ¹, ²

8 credits in natural sciences above the 100 level ⁸
8 credits in social sciences and/or humanities ⁸

Total Credits ²

1 A full list of the approved courses (p. 3) for the minor appears at the end of the Environmental Studies Courses section.
2 At least one course must be at the 300 level

Additional Specifications

- These courses should be chosen from the list of approved courses. The list is included in this catalog and is also available at the department office or website or from any member of the environmental studies faculty. Other courses may be counted toward the minor, with the approval of the environmental studies department chair.

- Courses in the same department as the student’s major may not be counted towards the minor in environmental studies.

¹ Or a 4 or 5 on the Environmental Studies AP exam
² BIOL-145 or any of its offerings; for example BIOL-145AB, BIOL-145EX, BIOL-145GW, BIOL-145MB, or BIOL-145RG.
³ A full list of the approved courses (p. 3) for each intermediate core area appears at the end of the Environmental Studies Courses section.
⁴ Students should consider concentrating their electives in a particular area of Environmental Studies. For example, if students are interested in climate change policy, they can look for elective courses that help both to broaden and to focus their studies.
⁵ Independent study may be substituted for one of the 300-level courses, with approval of advisor. Independent study cannot be substituted for ENVST-390.
⁶ These courses should be chosen from the list of approved courses. The list is included in this catalog and is also available at the department office or website or from any member of the environmental studies faculty. Other courses may be counted toward the minor, with the approval of the environmental studies department chair.
⁷ Courses in the same department as the student’s major may not be counted towards the minor in environmental studies.
Course Advice

In addition to courses in Environmental Studies, many courses for the major and minor in environmental studies are offered by other departments. Appropriate courses taken at Amherst, Hampshire, or Smith colleges or the University of Massachusetts may be counted toward the major or minor with the approval of environmental studies advisor. Courses taken at other colleges or universities, or through accredited field studies around the world, may also be counted toward the major or minor with the approval of environmental studies advisor.

Selecting Initial Courses

Students interested in environmental issues should register for a 100-level Environmental Studies course during their first year. An introductory course is required for both the major and the minor in environmental studies and provides a broad overview of the field. It also gives students a good sense of how to continue their studies in the environmental field.

Other courses that are very useful for first-year students include:

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<td>GEOG-105</td>
<td>World Regional Geography</td>
<td>4</td>
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<tr>
<td>GEOG-107</td>
<td>Introduction to the Physical Environment</td>
<td>4</td>
</tr>
<tr>
<td>GEOL-103</td>
<td>Oceanography</td>
<td>4</td>
</tr>
<tr>
<td>GEOL-107</td>
<td>Environmental Geology</td>
<td>4</td>
</tr>
<tr>
<td>PHYS-104</td>
<td>Renewable Energy</td>
<td>4</td>
</tr>
<tr>
<td>STAT-140</td>
<td>Introduction to the Ideas and Applications of Statistics</td>
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A 100-level science course with lab is a required prerequisite for the 200-level science courses that environmental studies majors and minors must take.

Intermediate Courses

Intermediate courses for the major and minor should be chosen from the list approved by the environmental studies faculty. Other courses may be counted toward this requirement with the approval of environmental studies advisor.

Advanced Courses

All majors must complete ENVST-390, and complete three other 300-level courses. Independent study (ENVST-395) may be substituted for one of the required advanced courses (though not ENVST-390), with approval of advisor.

ENVST Course Offerings

ENVST-100 Introduction to Environmental Studies

Not Scheduled for This Year. Credits: 4

This course introduces students to the field of environmental studies and to some of the scientific, historical, political, economic and cultural aspects of environmental concerns. Through interdisciplinary lenses, we explore the complexities of many issues and problems such as climate change, threats to biodiversity, and toxic environments. In addition to fostering an understanding of their origins, the course focuses on potential solutions.

Applies to requirement(s): Meets No Distribution Requirement
T. Farnham

ENVST-104 Renewable Energy

Not Scheduled for This Year. Credits: 4

We will examine the feasibility of converting the entire energy infrastructure of the US from one that is dependent on fossil fuels to one that utilizes mostly renewable sources of energy. We will examine the potential scale of energy production and the associated costs, natural resource requirements and land usage needs for both renewables, such as solar, wind and biofuel, and non-renewables, such as coal, natural gas, petroleum and nuclear. By applying extensive use of basic algebra and an elementary understanding of the physical processes underpinning each energy technology, we will arrive at a number of urgent conclusions about the challenges facing our energy infrastructure.

Crosslisted as: PHYS-104
Applies to requirement(s): Math Sciences
A. Arango

ENVST-150 Introductory Topics in Environmental Studies

ENVST-150DV Introductory Topics in Environmental Studies: 'Introduction to the Histories and Theories of Development'

Fall. Credits: 4

What is so compelling about the idea of development? Why does it fail much of the global south? Do colonialism and capitalism have anything to do with it? Why do hunger, poverty, inequality, unemployment, and ecological crises persist in the so-called developed world? What are the parameters of the proposed solutions to underdevelopment such as neoliberal market reforms versus those of alternative models? What are the connections between development and environmental issues? development and war? Can development be sustainable? Are gender and race incidental or central to these issues? This course engages these questions through readings, lectures, discussions, and writing assignments.

Applies to requirement(s): Social Sciences
K. Surprise

ENVST-150PH Introductory Topics in Environmental Studies: 'Introduction to Environmental and Public Health'

Spring. Credits: 4

This course offers a broad introduction to the problems and solutions in the field of environmental and public health. Students will read about and discuss issues that occur in both industrialized and developing countries. Topics include the biological, physical, and chemical agents of environmental contamination; methods used in epidemiology and toxicology to evaluate environmental hazards; policies currently in place to reduce health risks and protect populations from exposure; and emerging global environmental health problems.

Applies to requirement(s): Meets No Distribution Requirement
G. Peltier
ENVST-181 From Local to Global: Food Justice and the Challenge of Feeding 10 Billion People

*Not Scheduled for This Year. Credits: 4*

Humans currently produce enough food to feed the 7.6 billion people on Earth. Despite this fact, 815 million people went hungry in 2017 and this number is on the rise. With a growing population, we will need to increase food production, but first we must fix our current food system and ensure equitable food access for all peoples. This class will frame the problem at the local and global scales by covering topics including: food security; food sovereignty; food justice; and the connections between race, food, and health. We will then investigate how to create an equitable and sustainable food system, with a focus on urban community gardening in cities and towns close to Mount Holyoke.

**Applies to requirement(s):** Meets No Distribution Requirement

**Other Attribute(s):** Community-Based Learning

**J. Albertine**

**Notes:** This course will include field trips on Friday afternoons. This course can be taken for 200-level credit through a community-based learning optional component.

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ENVST-200 Environmental Science

*Fall. Credits: 4*

Most of the environmental challenges we face are complex and interdisciplinary in nature. This course introduces students to the scientific principles, concepts, and methodologies required to both understand the interrelationships of the natural world, as well as to identify and analyze environmental problems and think critically about alternative solutions for addressing them. Key concepts from ecology, biogeochemistry, and other fields inform our study of climate change, water resources, soil sustainability, food production, and other topics. Fundamental and emerging issues are examined using regional case studies, hands-on problem solving, and field and laboratory experiments in this interdisciplinary field-based course.

**Applies to requirement(s):** Math Sciences

**G. Peltier**

**Restrictions:** This course is limited to Environmental Studies majors.; Course limited to sophomores, juniors and seniors

**Prereq:** One 100-level lab science. Coreq: ENVST-200L.

**Advisory:** One course in statistics is recommended.

**Notes:** Pre-registration will open to environmental studies majors only. In the second week of pre-registration, remaining seats and waitlisting will be open to all sophomores, juniors, and seniors.

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ENVST-210 Political Ecology

*Fall. Credits: 4*

This course will explore the historical, political, economic, social, and cultural contexts in which human-environment interactions occur. We will cover critical topics and trends in the field of political ecology, from its early manifestations to more recent expansions. Using case studies from the global south and north, we will discuss factors that shape social and environmental change across scales from the personal to the global, and we will examine the role of gender, race, class, and power in struggles over resources. Students will become familiar with the academic debates in which political ecologists are engaged, and they will apply the concepts discussed in a case of their choice.

**Applies to requirement(s):** Social Sciences; Multicultural Perspectives

**Other Attribute(s):** Writing-Intensive

**C. Corson**

**Restrictions:** Course limited to sophomores, juniors and seniors

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ENVST-216 Global Environmental Justice

*Fall and Spring. Credits: 4*

Many of the world’s most urgent issues, like Black Lives Matter, biodiversity conservation, or Indigenous self-determination, are also environmental justice challenges. This course will survey the theories, concepts, and perspectives on environmental justice at local and global scales. We will first apply a global perspective in understanding environmental justice, environmental racism, and environmentalism. A second part of the course will emphasize the justice dimensions of responses to pressing global environmental issues (such as food). A third part will focus on ‘decolonizing’ the meanings of environmental justice, and on its intersectional dimensions -- for example, by analyzing the diverse definitions of justice of social movements and collectives.

**Applies to requirement(s):** Social Sciences; Multicultural Perspectives

**S. Cifuentes**

**Prereq:** ENVST-100.

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ENVST-222 Reading North American Landscapes

*Not Scheduled for This Year. Credits: 4*

We explore the origin and anatomy of North America’s most distinctive landscapes, including many national parks and monuments. We “visit” spectacular locales, including Yosemite, Yellowstone, and the Grand Canyon. We also consider how the continent’s geologic history has influenced human action and experience. By “reading” the land we can see the complex layering of natural and cultural histories that influence a “sense of place.” Reading the land can also provide a sense of how various peoples have used and shaped Earth’s surface differently, and how these differences have contributed to a spectrum of environmental impacts.

**Applies to requirement(s):** Meets No Distribution Requirement

**L. Savoy**

**Restrictions:** Course limited to sophomores, juniors and seniors

**Instructor permission required.**

**Prereq:** 4 credits from geology or a related subject; or high school earth science.

**Advisory:** Priority given to students in Environmental Studies.

**Notes:** This course is reading intensive.

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ENVST-233 Topics in Environmental Studies

**ENVST-233CS Topics in Environmental Studies: ‘Introduction to Environmental Entrepreneurship: Campus Sustainability’**

*Not Scheduled for This Year. Credits: 4*

Mount Holyoke has recognized our role in global resource use and has a strong sustainability mission, with the goal to become carbon neutral by 2037. This course is a project-based experiential learning course that will use the Mount Holyoke campus as a case study to find solutions. Entrepreneurial teams will identify environmental hotspots on campus through use of existing datasets as well as collect additional needed data. We will then identify solutions that can be implemented over the short-term and at minimal cost to increase campus sustainability as well as identify larger projects for the future. Students will use entrepreneurship methods to assess projects for cost and feasibility.

**Applies to requirement(s):** Meets No Distribution Requirement

**Other Attribute(s):** Community-Based Learning

**J. Albertine**

**Prereq:** Any 100-level ENVST course, or any EOS course, or FYSEM-110PH. Coreq: ENVST-233CSL.

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ENVST-238 Topics in Environmental Studies

**ENVST-238CS Topics in Environmental Studies: ‘Introduction to Environmental Entrepreneurship: Food for a Sustainable Future’**

*Not Scheduled for This Year. Credits: 4*

Mount Holyoke has recognized our role in global resource use and has a strong sustainability mission, with the goal to become carbon neutral by 2037. This course is a project-based experiential learning course that will use the Mount Holyoke campus as a case study to find solutions. Entrepreneurial teams will identify environmental hotspots on campus through use of existing datasets as well as collect additional needed data. We will then identify solutions that can be implemented over the short-term and at minimal cost to increase campus sustainability as well as identify larger projects for the future. Students will use entrepreneurship methods to assess projects for cost and feasibility.

**Applies to requirement(s):** Meets No Distribution Requirement

**Other Attribute(s):** Community-Based Learning

**J. Albertine**

**Prereq:** Any 100-level ENVST course, or any EOS course, or FYSEM-110PH. Coreq: ENVST-233CSL.
ENVST-233EP Topics in Environmental Studies: 'Environmental Pollution'
Not Scheduled for This Year. Credits: 4
Humans are increasing the amount of pollutants in the environment, particularly through the burning of fossil fuels and other industrial practices. As human population increases exponentially, our consumption and production of waste and pollution do the same. This class will investigate where the pollutants come from, their presence in the environment, and the biological effects of these pollutants. There will be a special emphasis on how the pollutants that humans produce feed back to affect human health. While this class is primarily science based, we will also address topics in environmental justice and environmental policy.
Applies to requirement(s): Math Sciences
Other Attribute(s): Writing-Intensive
J. Albertine
Prereq: ENVST-100, ENVST-150PH, or other 100-level science course.

ENVST-240 The Value of Nature
Not Scheduled for This Year. Credits: 4
Through this seminar, students develop an in-depth knowledge of and articulate vocabulary for the significant and diverse ways that humans value the natural world - utilitarian, scientific, aesthetic, naturalistic, symbolic, ethical, and spiritual. We use these different typologies of human environmental values as frameworks for readings and discussion, extending our examination to historical and cultural variations in values, competing perspectives of the natural world, and other value concepts, including intrinsic and transformative value. We examine the concept of biophilia and probe the role values play in the concern over losses of biological diversity and its implications.
Applies to requirement(s): Humanities
Other Attribute(s): Speaking-Intensive, Writing-Intensive
J. Farnham
Prereq: ENVST-100 or ENVST-150PH.

ENVST-241 Environmental Issues
Not Scheduled for This Year. Credits: 4
In this course, we will explore the different facets of numerous environmental policy issues and review the substantive aspects, legal themes, and regulatory structure of the major federal environmental laws. The laws covered in this course include the National Environmental Policy Act, the Clean Air Act, the Clean Water Act, the Endangered Species Act, and others. The course objectives are for the student to learn the basic regulatory characteristics of the major laws and to become well-versed in the current environmental issues which we will focus upon throughout the semester, such as global climate change, ocean degradation, energy resources, and biodiversity loss.
Applies to requirement(s): Meets No Distribution Requirement
T. Farnham
Prereq: ENVST-100, or ENVST-150PH, or ENVST-150DV.

ENVST-245A Topics in Environmental Studies: 'Environmental Pollution'
Not Scheduled for This Year. Credits: 4
The course is designed for students interested in learning about qualitative research on environmental issues. We will discuss the logic of qualitative social research and examine a range of methods, considering the specific advantages and limitations of different techniques. Students will also discuss ethical issues, including the challenges of conducting research in cross-cultural settings, reflect on our own underlying assumptions, motivations and values in research, and consider what it means to decolonize methodologies. The course is designed as a hands-on course in which each student will pick a research topic of interest (on an environment-society problem) and then share and discuss weekly assignments in class.
Applies to requirement(s): Social Sciences
Other Attribute(s): Speaking-Intensive, Writing-Intensive
C. Corson
Prereq: 8 credits of social science or humanities courses.
Advisory: Students from a variety of disciplines are welcome.

ENVST-251 Research, Ethics, and Justice
Spring. Credits: 4
The course is designed for students interested in learning about qualitative research on environmental issues. We will discuss the logic of qualitative social research and examine a range of methods, considering the specific advantages and limitations of different techniques. Students will also discuss ethical issues, including the challenges of conducting research in cross-cultural settings, reflect on our own underlying assumptions, motivations and values in research, and consider what it means to decolonize methodologies. The course is designed as a hands-on course in which each student will pick a research topic of interest (on an environment-society problem) and then share and discuss weekly assignments in class.
Applies to requirement(s): Social Sciences
Other Attribute(s): Speaking-Intensive, Writing-Intensive
C. Corson
Prereq: 8 credits of social science or humanities courses.
Advisory: Students from a variety of disciplines are welcome.

ENVST-295 Independent Study
Fall and Spring. Credits: 1 - 4
The department
Instructor permission required.

ENVST-316 Restoration Ecology
Not Scheduled for This Year. Credits: 4
A key test of our ecological knowledge is whether we can successfully apply it to create or restore ecosystems that have been damaged or destroyed. As we take on the role of restoration ecologists this semester, we will use principles and methods of ecology, conservation biology, hydrology, soil science, and related disciplines to learn about the theory, practice, and politics of ecosystem restoration. This course emphasizes fieldwork, interdisciplinary teamwork, and ecological planning to evaluate and design restoration projects in our surrounding communities and regional landscapes. On a few occasions, meetings may last until 5:05 pm so that we can go on fieldtrips that are farther from campus.
Applies to requirement(s): Math Sciences
Other Attribute(s): Community-Based Learning
K. Ballantine
Prereq: ENVST200 or at least 8 credits of 200 or 300-level laboratory science.

ENVST-317 Perspectives on American Environmental History
Not Scheduled for This Year. Credits: 4
We explore the history of human-environment interactions in North America from precolonial times to the present from different cultural perspectives. How have such human activities as migration, colonization, and resource use depended on or modified the natural world? How have different cultural perceptions of and attitudes toward environment shifted through time and helped to reshape American landscapes? Case studies include ecological histories of Native America and Euro-America, slavery and land use, wilderness and conservation, and environmental racism and social justice. In addition to historical documents, we also consider scientific studies, literature, visual records, and oral tradition.
Crosslisted as: HIST-317
Applies to requirement(s): Humanities
Other Attribute(s): Speaking-Intensive, Writing-Intensive
L. Savoy
Instructor permission required.
Advisory: You must apply for admission to this course by completing the online application form. Please try to apply during advising week. Priority given to juniors and seniors in ENVST, HIST, and GEOG.
ENVST-321 Conference Courses in Environmental Studies
Selected topics in areas of environmental interest, determined by faculty expertise and student needs. Study in small groups or by individual students working with faculty.

ENVST-321CP Conference Courses in Environmental Studies: 'Political Economy of the Environment: Capitalism and Climate Change'
Fall. Credits: 4
Can an economic system predicated on infinite growth achieve sustainability on a finite planet? This question will likely define the twenty-first century. This course aims to grapple with this paradox, examining the relationships and tensions between the globally dominant form of economy - capitalism - and global climate change. We will explore the interwoven rise of capitalism and emergence of fossil fuel energy, as well as the global expansion of capitalism and the connections between resources, economic growth, and political power. We will engage with various theoretical approaches to capitalism-environment relations, such as metabolic rift theory, the second contradiction of capitalism, and the production of nature thesis. These theories provide insight into recent forms of capitalism (i.e. neoliberalism) and the increasing degradation and commodification of the environment. We end by studying contemporary debates, examining institutions and policies seeking to manage climate change from within liberal-capitalist frameworks, the emergence of the "green economy," and the politics of climate denialism, concluding with alternatives economies and the climate justice movement. This course will provide students with theoretical knowledge and analytical skills for understanding economy-environment relationships.

Applies to requirement(s): Social Sciences

K. Surprise

Restrictions: Course limited to sophomores, juniors and seniors

ENVST-321EQ Conference Courses in Environmental Studies: 'Food Equity and Empowerment' Change'
Fall. Credits: 4
This course uses a critical lens to examine the conflicts around equity and justice in our food systems, from production to consumption. Using race, ethnicity, gender and socioeconomic factors as the lens through which to examine the impacts associated with how we grow and consume food, this course seeks to understand an alternative to the dominant Western narrative on food systems. As a class, we will engage with readings, discussion and actual hands-on participation with food equity issues in the Pioneer Valley, so that we can reflect on our own power and privilege in the food system and come to a more holistic understanding of the challenges within the field.

Applies to requirement(s): Social Sciences; Multicultural Perspectives

O. Aguilar

Prereq: 8 credits in Environmental Studies or Geography including ENVST-100 or ENVST-150PH.

ENVST-321GW Conference Courses in Environmental Studies: 'Global Water and Health'
Spring. Credits: 4
Water is essential for life. Human health, both morbidity and mortality, is directly impacted by the scarcity of water and accessibility of safe drinking water. Amidst a changing climate, population pressures on finite water supplies continue to increase. This course will focus on the human health implications and challenges of water access, water scarcity, and water quality in different parts of the world. We will also discuss the disproportionate burden of water-related disease on children which impacts their long-term physical and cognitive development. Additionally, we will discuss threats to water quality including organic and inorganic contaminants as well as water-borne diseases.

Applies to requirement(s): Meets No Distribution Requirement

G. Peltier

Restrictions: This course is open to juniors and seniors

Prereq: ENVST-100 or ENVST-150PH.

ENVST-321HC Conference Courses in Environmental Studies: 'Human Health and Climate Change'
Not Scheduled for This Year. Credits: 4
Climate change presents a global public health problem, with serious health impacts predicted to manifest in varying ways in different parts of the world. Through this course, we will investigate these health effects which include increased respiratory and cardiovascular disease, injuries and premature deaths related to extreme heat, weather, and other disaster events, and changes in the prevalence and geographical distribution of food- and water-borne illnesses and other infectious diseases. We will critically review the literature documenting recent and current impacts and predictions for the future. We will also look at solutions in place for adapting to these changes.

Applies to requirement(s): Math Sciences

J. Albertine

Restrictions: This course is open to juniors and seniors

Prereq: ENVST-200.

ENVST-321TX Conference Courses in Environmental Studies: 'Toxic Entanglements: Environmental (In)Justice in the United States'
Not Scheduled for This Year. Credits: 4
Toxic water in Flint, Michigan. Oil pipelines through sacred sites in North Dakota. These manifestations of environmental injustice and inequality are only the most recent incarnations of larger legacies. Environments are never simply natural or given: they are imbued with unequal entanglements of gender, race, class, and power. Environmental justice asks questions about the ways in which environments are produced, and the relations of risk, harm, benefit, access, privilege, domination, oppression, and liberation therein. In this course, we will study the theory and practice of environmental (in)justice in the United States. We will briefly explore histories of environmental injustice in the U.S. (from colonization and slavery, to industrialization and pollution); past and current struggles over the siting of production facilities, toxic waste, and pollution; and recent events around water (be they floods, toxicity, or protection): Hurricane Katrina, Flint, and Standing Rock. We will pay particular attention to questions of food and justice, examining gender, race, and class in agricultural labor, corporate power in agribusiness, food deserts, food access/health and white privilege, and gender in alternative community food movements.

Applies to requirement(s): Social Sciences

K. Surprise

Restrictions: Course limited to sophomores, juniors and seniors

Prereq: 4 credits from a related subject.
ENVST-335 Wetlands Ecology and Management
Not Scheduled for This Year. Credits: 4
Although they cover ~0.6% of the earth’s surface, wetlands perform more ecosystem services per hectare than any other ecosystem type. Alarming is, over half of the earth’s wetlands have been lost to agriculture and development. With these wetlands were also lost the valuable ecosystem functions wetlands perform. This course takes an interdisciplinary approach to examine the biogeochemical, ecological, societal, and regulatory aspects of wetland ecosystems. Group discussion of primary scientific literature, as well as independent experimental design and the writing of a research proposal are core components. Field trips will sometimes keep us until 5:05 pm, and will provide an opportunity to explore these fascinating ecosystems in person.
Applies to requirement(s): Math Sciences
K. Ballantine
Prereq: ENVST-200 or at least 8 credits of 200- or 300-level laboratory science.

ENVST-338 History, Race, and the American Land
Not Scheduled for This Year. Credits: 4
Environmental justice is a key concern today. Yet ties between “race” and environment in what is now the U.S. have existed for centuries. In this research seminar we will explore how this country’s still-unfolding history, and ideas of race and nature, have marked the land, this society, and each of us as individuals. We will consider Indigenous, colonial European, and African senses of Earth; origins of placenames; contested terrains; migration and displacement; and other topics revealing the place of race. We’ll examine often-unrecognized connections, such as the siting of the nation’s capital and the economic motives of slavery. None of these links is coincidental and all touch us today.
Crosslisted as: HIST-338
Applies to requirement(s): Humanities; Multicultural Perspectives
L. Savoy
Restrictions: This course is open to juniors and seniors
Instructor permission required.
Prereq: ENVST-317.
Advisory: You must apply for admission to this course by completing the online application form. Priority given to juniors and seniors in ENVST, HIST, and GEOG.
Notes: This course is reading intensive.

ENVST-339 Indigenous and Decolonial Ecologies Governance
Spring. Credits: 4
From protesting pipelines in Standing Rock to fighting fires in Brazil, Indigenous peoples have been at the forefront of environmental struggles. But how do Indigenous peoples characterize relationships with land/territories? How do Indigenous and other marginalized groups contest colonialism when engaging with their territories, and in politics? What alternative worlds do they imagine? This course will seek to answer these questions in connection to theories, concepts, and cases focused on the Americas/Abya-Yala. It will further center Indigenous and other marginalized ways of knowing, worldviews, and lifeways, when analyzing issues like pollution, conservation, or environmental conflicts.
Applies to requirement(s): Meets No Distrib. Rqmt; Multicultural Perspectives
Other Attribute(s): Speaking-Intensive, Writing-Intensive
S. Cifuentes
Prereq: 8 credits in the department at the 200-level or above.

ENVST-342 Living in the Anthropocene: Development, Technology, Futures
Not Scheduled for This Year. Credits: 4
The concept of the Anthropocene (the “human epoch”) signifies that human activity has become the dominant physical force on the planet. Mainstream narratives envision three phases of the Anthropocene: industrial origins (1800 - 1950); global expansion and the nuclear age (1950 - 2000+); and an emergent third phase marked by massive shifts in land-use and biodiversity. This course undertakes a critical examination of the Anthropocene concept. We will analyze debates over geological demarcation, the term itself and the “anthropos” it embodies, and eco-modernist conceptions of a “good” Anthropocene. We aim to historically contextualize the socio-technical phases of the Anthropocene (industrial revolution, post-WWII global expansion, and contemporary globalization), situating them as processes emerging within a specific political-economic context (capitalism). Finally, we examine struggles over the socio-ecological entanglements shaping its future directions: urbanization, industrialized agriculture, genetic technology, and geoengineering/Earth System management. This course explores what it means to live in an era where a subset of one species can determine the conditions of possibility for life on the entire planet.
Applies to requirement(s): Social Sciences
Other Attribute(s): Speaking-Intensive, Writing-Intensive
K. Surprise
Restrictions: Course limited to sophomores, juniors and seniors

ENVST-346 Global Inequality, Smart Earth Technology, and Environmental Governance
Spring. Credits: 4
This course is an interdisciplinary advanced seminar for students interested in learning about global environmental governance and inequality. We review the major theories about the intertwined challenges of poverty and environmental degradation, explore how legacies of colonialism persist, and examine how actors from nation states to Indigenous Peoples influence official state negotiations. Finally, we explore how advanced technologies like artificial intelligence and environmental sensor networks, and novel financial instruments, such as cryptocurrencies and nature-based video games, are changing conservation. As a curriculum-to-career course, there is strong emphasis on research, writing and speaking skills needed to advocate for environmental sustainability and social justice.
Applies to requirement(s): Social Sciences; Multicultural Perspectives
Other Attribute(s): Speaking-Intensive, Writing-Intensive
C. Corson
Restrictions: This course is open to juniors and seniors
Prereq: 8 credits of social science or humanities courses.

ENVST-390 Senior Seminar in Environmental Studies
Fall. Credits: 4
This is the capstone course of the environmental studies major. The course explores linkages among the diversity of disciplines that contribute to the environmental studies major, illustrates how these disciplines that contribute to the environmental studies major are used in environmental decision making, enables students to inform one another’s roles as environmentalists, and provides students with opportunities to develop individual and cooperative projects.
Applies to requirement(s): Meets No Distribution Requirement
Other Attribute(s): Community-Based Learning
T. Farnham
Restrictions: This course is limited to Environmental Studies majors.
ENVST-395 Independent Study
Fall and Spring. Credits: 1 - 8
The department
Instructor permission required.

Courses Approved as Core Intermediate Courses

Group A: Natural Sciences

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<td>Introductory Biology II: How Organisms Develop</td>
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<td>BIOL-223</td>
<td>Ecology</td>
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<td>BIOL-226</td>
<td>Evolution: Making Sense of Life</td>
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<td>BIOL-315</td>
<td>Behavioral Ecology</td>
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<td>BIOL-323</td>
<td>Plant Growth and Development</td>
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<td>BIOL-325</td>
<td>Plant Diversity and Evolution</td>
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<td>BIOL-331</td>
<td>Conservation Biology</td>
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<td>CHEM-202</td>
<td>Organic Chemistry I</td>
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Environmental Studies

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<td>ENVST-222</td>
<td>Reading North American Landscapes</td>
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<td>ENVST-233EP</td>
<td>Topics in Environmental Studies: 'Environmental Pollution'</td>
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<td>ENVST-316</td>
<td>Restoration Ecology</td>
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<td>ENVST-321HC</td>
<td>Conference Courses in Environmental Studies: 'Human Health and Climate Change'</td>
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<td>ENVST-335</td>
<td>Wetlands Ecology and Management</td>
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<td>Atmosphere and Weather</td>
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<td>GEOG-230</td>
<td>Environmental Soil Science</td>
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Geology

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<td>History of Earth</td>
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<td>GEOL-203</td>
<td>The Earth's Surface</td>
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<td>GEOL-211</td>
<td>Uranium</td>
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<td>GEOL-227</td>
<td>Groundwater Geology</td>
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<td>GEOL-240</td>
<td>Geological Resources and the Environment</td>
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<td>GEOL-342HY</td>
<td>Seminar in Geology: 'Geology and Hydrology Underfoot'</td>
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<td>Seminar in Geology: 'Plastics in the Environment'</td>
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<td>GEOL-342WA</td>
<td>Seminar in Geology: 'Water Issues Worldwide'</td>
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Group B: Humanities and Social Sciences

Humanities

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<td>ARTH-290MV</td>
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Critical Social Thought

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<td>CST-249HE</td>
<td>Topics in Critical Social Thought: 'History of Energy'</td>
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<td>Advanced Topics: 'Love, Sex, and Death in the Anthropocene, or Living Through the Age of Climate Change and Other Disasters'</td>
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<td>CST-349EM</td>
<td>Advanced Topics: 'Flesh and Blood: Naturecultural Embodiments'</td>
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<td>Advanced Topics: 'Multi-Species Justice? Entangled Lives and Human Power'</td>
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<td>Topics in Creative Writing: 'Climate Changes Everything: Telling Stories at the End of the World As We Know It'</td>
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<td>Love, Sex, and Death in the Anthropocene, or Living Through the Age of Climate Change and Other Disasters</td>
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Environmental Studies

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<td>Perspectives on American Environmental History</td>
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Gender Studies

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<td>Topics in Asian History: 'History of Humans and Other Living Beings'</td>
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<td>HIST-247</td>
<td>Mountains and Modernity</td>
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<td>History, Race, and the American Land</td>
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Latina/o Studies

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<td>Special Topics in Latina/o Studies: 'U.S. Latinx Foodways'</td>
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Philosophy

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Spanish

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Social Sciences

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Economics

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<td>ECON-319</td>
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<td>ENVST-321CP</td>
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<td>ENVST-321EQ</td>
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<td>Living in the Anthropocene: Development, Technology, Futures</td>
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<td>ENVST-346</td>
<td>Global Inequality, Smart Earth Technology, and Environmental Governance</td>
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<td>GEOG-204</td>
<td>Human Dimensions of Environmental Change</td>
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<td>Political Geography</td>
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<td>GEOG-208</td>
<td>Global Movements: Migrations, Refugees and Diasporas</td>
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<td>GIS for the Social Sciences and Humanities</td>
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<td>Special Topics in Latina/o Studies: 'Latina/o/x Urbanism'</td>
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