Environmental issues call upon citizens, organizations, and other agencies to grasp complex science concepts, address conflicting human values, and make difficult economic, political and ethical choices. The three curricular options in Environmental Studies—the majors in Environmental Policy and Environmental Science and the concentration in Environmental Studies—are designed to prepare students to deal effectively with these issues by integrating perspectives and methodologies from the natural sciences, the social sciences, and the arts and humanities.

The program is administered by the Center for Environmental Studies (CES), located in Harper House. Founded in 1967, CES was one of the first environmental studies programs at a liberal arts college. In addition to the academic program described below, CES is the focus of a varied set of activities in which students lead and participate, often with other members of the Williams community. CES offers extensive resources including databases, GIS facilities, and funding for student-initiated activities, summer research and internships. The Center administers the Hopkins Memorial Forest, a 2600-acre natural area northwest of campus, where field-study sites, a laboratory, and passive-recreation opportunities may be found in all seasons. CES also operates the Environmental Analysis Laboratory in Morley Science Center.

The Program in Environmental Studies offers three distinct curricular options: students may decide to pursue either a major in Environmental Policy or Environmental Science or to complement a major in a different area with a concentration in Environmental Studies. Students may not double-major in Environmental Policy and Environmental Science or combine either major with a concentration in Environmental Studies.

The ENVI majors share a common “core” of five courses: ENVI 101, 102, 203, 302, and 402. The core courses have been designed to be taken in sequence, with ENVI 302 and ENVI 402 normally reserved for senior majors and concentrators. ENVI 101 is a broad introduction to the field, emphasizing the humanities and social sciences, ENVI 203 is a course in ecology (offered by the Biology department) that provides a unified conceptual approach to the behavior of living things in the natural world. ENVI 302 is an experiential course that puts teams of students to work on projects of immediate significance in the Berkshires. ENVI 402, the senior seminar, is an opportunity for majors and concentrators to draw together their interdisciplinary educational experiences and apply what they have learned to specific environmental issues. The core course structure affords students freedom to explore and to specialize in diverse fields of study, while sustaining a focus on environmental questions throughout their time at Williams. Students who choose to pursue a concentration in Environmental Studies are strongly encouraged, but not required, to take ENVI 102. The other four “core” courses listed above are required for the concentration.

Credit for AP, IB, A-levels and other pre-Williams courses: At this time ENVI does not allow students to place out of ENVI 101. Placement out of ENVI 102 may be granted to students who have achieved a score of 5 on the AP-Environmental Science test or a score of at least 6 on the International Baccalaureate Environmental Systems and Societies exam. A student meeting these thresholds and requesting to be excused from ENVI 102 should provide the ENVI Program Chair with the AP or IB course and syllabus and a statement detailing their reasons for requesting placement; the ENVI 102 course instructors will evaluate equivalency of the previous AP / IB experience with that of ENVI 102 for the year in which the placement is requested. Placement out of ENVI 102 does not reduce the total number of courses required for completion of either the ENVP or ENVS major.

Placing your path through an ENVI major: Some courses required for ENVI Science or ENVI Policy majors have prerequisites, and we strongly suggest that you do some advance planning to avoid being blocked from a required course because you lack the necessary prerequisite course(s). For example, ENVI 203, Ecology, a core course for all ENVI majors and the concentration, has prerequisites of BIOL 101 and 102, ENVI 101 or 102, or permission of the instructor. For that reason and others, we recommend that students who are planning to pursue the Biology track of the ENVI Science major take BIO 101 in the fall semester and BIO 102 in the spring semester of their first year at Williams. There are other examples as well. We recommend that students who are planning to pursue the Chemistry track of the ENVI Science major take CHEM 151 or 153 or 155 in the fall semester and CHEM 156 in the spring semester of their first year at Williams. Similarly, students interested in the ENVI Geosciences track are advised to take one of the 100-level GEOS courses. Students who think they might wish to pursue the Political Economy track of the ENVI Policy major need to be aware that both of the courses that can be used to satisfy the Theory/Methods requirement (POEC 253 or ECON 255) have prerequisite
courses: POEC 253 requires a calculus course (130 or above) and an economics course; ECON 255 requires a calculus course (130 or above), an economics course, and either STAT 101 or 201.

Advising in Environmental Studies

Students interested in pursuing a major or concentration sponsored by CES should seek advising from program faculty as early as possible. Students who decide to major in either Environmental Policy or Environmental Science are required to identify a track through the major and a faculty advisor from the list below at the time of declaration. Both the advisor's signature and that of the Chair of Environmental Studies are required on the major declaration form.

<table>
<thead>
<tr>
<th>Track:</th>
<th>Advisors for 2014-15:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Political Economy</td>
<td>Bradburd, Paul</td>
</tr>
<tr>
<td>Political Theory and Law</td>
<td>Gardner, Paul</td>
</tr>
<tr>
<td>Society &amp; Culture</td>
<td>Howe, French, Hildago, Merrill, James Manigault-Bryant</td>
</tr>
<tr>
<td>Environmental Biology</td>
<td>Art, Banta, Edwards</td>
</tr>
<tr>
<td>Environmental Chemistry</td>
<td>Richardson, Thoman</td>
</tr>
<tr>
<td>Environmental Geosciences</td>
<td>Cook, Karabinos</td>
</tr>
</tbody>
</table>

Study Away:

Many study away options are available to students in Environmental Studies, including the Williams Mystic program. Students considering either a semester or year away should consult both the Chair of Environmental Studies and the Dean in charge of study abroad as early as possible to discuss their options. Up to two courses for the majors and three courses for the concentration may be taken outside of Williams. Approval for courses taken elsewhere must be granted in writing by the Chair of Environmental Studies. You can find general study away guidelines for the Environmental Studies Concentration here. You can find general study away guidelines for the Environmental Studies Majors here.

Honors in Environmental Studies

A student earns honors in Environmental Policy, Environmental Science or Environmental Studies by successfully completing a rigorous independent research project under the supervision of a member of the CES faculty. Juniors who wish to apply for the honors program should submit a 5-page proposal to their intended advisor and the Chair of Environmental Studies by the end of spring break. If a student wishes to work with a faculty member not affiliated with CES, the student must also identify a co-advisor from within the program. Students will be notified by the end of the semester whether or not their proposal has been approved.

Students in the honors program are required to present their preliminary findings at a meeting of CES students, faculty and staff in November. The final research project should be reported as a written thesis and presented orally before a faculty committee convened for that purpose. Environmental Studies concentrators may undertake an honors thesis and submit it to both their major department and Environmental Studies; petitions for a joint honors project should be approved by the department chair and the Chair of Environmental Studies by the end of the junior year. Majors and concentrators who pursue honors in Environmental Policy, Environmental Science or Environmental Studies alone should enroll in ENVP 493-494, ENVS 493-494, or ENVI 493-494, Senior Research and Thesis. Students interested in starting their honors project under the supervision of a member of the CES faculty may contact a Chair of its faculty. Juniors who wish to apply for the honors program should submit a five-page proposal to their intended advisor by the end of the semester whether or not their proposal has been approved.

Because most research requires sustained field, laboratory or archival work that is difficult to combine with conventional coursework, students are strongly encouraged to spend the summer before senior year doing honors research. Funds to support student research are available from restricted endowments of the CES, and an open competition is held each spring to allocate funding resources. Some departments also provide limited support for summer thesis research. Students and their faculty sponsors should plan the thesis with the possibility of summer research in mind.

Honors will be awarded on the basis of the academic merit and originality demonstrated by the student and in the completed thesis. The following timeline has been established for students pursuing honors in 2014-15:

- Thursday, October 30 (7:00 pm) Preliminary presentation of research results
- Friday, May 1 (7:00 pm) Defense of honors thesis
- Friday, May 15 (5:00 pm) Delivery of final thesis to Chair of Environmental Studies

Failure to meet any of these deadlines will result in removal from the honors program.

THE MAJOR IN ENVIRONMENTAL POLICY

The major in Environmental Policy brings together core courses in Environmental Studies with relevant coursework in related fields including economics and political science, history, anthropology, religion, sociology, and literature. The goal of the Environmental Policy major is to combine scientific literacy with an understanding of the economic, political and cultural structures involved in institutional decision-making on environmental matters. There are three tracks to the major: 1. Political Economy, 2. Political Theory and Law, and 3. Society and Culture; each consists of 11 courses—seven required courses, a theory/methods course and three electives. Environmental Policy majors are encouraged to take GEOS 214: Remote Sensing and GIS.

Requirements for the Major in Environmental Policy

“Core” courses required for all ENVP majors (7):

ENVI 101 Nature and Society
ENVI 102 Intro to Environmental Science
ECON 110 Principles of Microeconomics*
ENVI 203 Ecology
ENVI 302 Environmental Planning Workshop
ENVI 307 Environmental Law
ENVI 402 Senior Seminar

* Environmental Policy majors will be exempt from taking Econ 110 if they received a score of 5 on the Microeconomics AP exam, a 6 or 7 on the higher-level Economics IB examination, or an A or B in economics in A-levels.

For the Political Economy track:

One theory/methods course:

POEC 253 Empirical Methods in Political Economy
or ECON 255 Econometrics

Three additional electives, at least one of which must be a “policy” course from Group PE-A below.
Group PE-A
ECON 204/ENVI 234  Economics of Developing Countries
ECON 213/ENVI 213  Introduction to Environmental and Natural Resources Economics
ECON 228/ENVI 228  Water as a Scarce Resource
ECON 229  Law and Economics
ECON 383  Cities, Regions and the Economy
ECON 386/ENVI 386/ECON 518  Environmental Policy and Natural Resource Management
ECON 457  Public Economics Research Seminar
ENVI 208  Science and Politics in Environmental Decision Making
ENVI 283/PSCI 283  Dirty Politics: Regulating Hazardous Chemicals and Wastes
ENVI 309/HSCI 309/SCST 309/PSCI 301  Environmental Politics and Policy
ENVI 328/PSCI 328  Global Environmental Politics
HIST 371/ENVI 371  The History of U.S. Environmental Politics
MAST 351/ENVI 351/PSCI 319  Marine Policy

Group PE-B
ENVI 209  Ecologies of Place
ENVI/ANTH/JLST 210  Governing Nature
ECON 229  Law and Economics

For the Political Theory and Law track:
One theory/methods course:
ENVI 309/PSCI 301/HSCI 309/SCST 309  Environmental Policy
or ENVI 328  Global Environmental Politics
or ECON 386  Environmental Policy and Natural Resource Management
or MAST 351  Marine Policy

Three electives chosen among:
ANTH 210/ENVI 210/JLST 210  Governing Nature
ECON 204/ENVI 234  Economics of Developing Countries
ECON 213/ENVI 213  Introduction to Environmental and Natural Resources Economics
ECON 228/ENVI 228  Water as a Scarce Resource
ECON 229  Law and Economics
ECON 386/ENVI 386/ECON 518  Environmental Policy and Natural Resource Management
ENVI 208  Science and Politics in Environmental Decision Making
ENVI 209/ANTH 209/AMST 209  Ecologies of Place: Culture, Commodities and Everyday Life
ENVI 283/PSCI 283  Dirty Politics: Regulating Hazardous Chemicals and Wastes
ENVI 309/HSCI 309/SCST 309/PSCI 301  Environmental Politics and Policy
ENVI 328/PSCI 328  Global Environmental Politics
HIST 371/ENVI 371  The History of U.S. Environmental Politics
MAST 351/ENVI 351/PSCI 319  Marine Policy
PSCI 201  Power, Politics, and Democracy in America
PSCI 216  American Constitutionalism I: Structures of Power
PSCI 235/ENVI 235  Environmental Political Theory
PSCI 273/ENVI 273  Politics without Humans?
PSCI 331  Knowledge and Politics
PSCI 333  The Sublime in Politics and Political Thought

For the Society and Culture track:
One theory/methods course:
ENVI 217  Environmental Humanities: Theory and Practice (Same as AMST 216) (D)
or ENVI 209 Ecologies of Place: Culture, Commodities and Everyday Life or
ENVI 239 Introduction to Ecocriticism: North-South Dialogues on Nature and Culture (Same as COMP 238) (D)

Three additional electives, at least one of which must be a “policy” course from Group SC-A below:

Group SC-A
ECON 204/ENVI 234  Economics of Developing Countries
ECON 213/ENVI 213  Introduction to Environmental and Natural Resources Economics
ECON 228/ENVI 228  Water as a Scarce Resource
ECON 229  Law and Economics
ECON 383  Cities, Regions and the Economy
ECON 386/ENVI 386/ECON 518  Environmental Policy and Natural Resource Management
ECON 457  Public Economics Research Seminar
ENVI 208  Science and Politics in Environmental Decision Making
ENVI 283/PSCI 283  Dirty Politics: Regulating Hazardous Chemicals and Wastes
ENVI 309/HSCI 309/SCST 309/PSCI 301  Environmental Politics and Policy
THE MAJOR IN ENVIRONMENTAL SCIENCE

The major in Environmental Science brings together core courses in Environmental Studies with relevant coursework in a specific scientific discipline. The goal of the major in Environmental Science is to provide training in one of the natural sciences as well as an understanding of the complex array of natural, social and political factors involved in environmental issues. Five courses are common to all Environmental Science majors; there is also a methods requirement and three disciplinary tracks, each comprised of five additional courses. The three disciplinary tracks are a) Environmental Biology, b) Environmental Chemistry, and c) Environmental Geosciences. Students majoring in Environmental Science should investigate the courses required for their chosen track and consult their advisor to plan an appropriate schedule for completing the major, including any prerequisites not listed below. Courses cannot be double-counted within the major; for example, a course used to fulfill the methods requirement cannot also be used as an elective. The availability of required courses may vary slightly from year to year, and occasionally substitutions may be authorized by the Chair of Environmental Studies. Students seeking to place out of particular courses on the basis of AP, IB or A-level exams should consult the Chair of Environmental Studies.

Requirements for the Major in Environmental Science

Five required courses:

- **Biol 203/ENVI 203** Ecology
- **ENVI 101** Nature and Society: An Introduction to Environmental Studies
- **ENVI 102** Introduction to Environmental Science
- **ENVI 302** Environmental Planning Workshop
- **ENVI 402/MAST 402** Senior Seminar

A methods course:

- **CHEM 364/ENVI 364** Instrumental Methods of Analysis
  or **GEOS 214/ENVI 214** Remote Sensing and Geographic Information Systems
  or **MATH 310** Mathematical Modeling of Ecological Systems
  or **STAT 201** Statistics and Data Analysis
  or **STAT 231** Statistical Design of Experiments

A five-course disciplinary track:

**for Environmental Biology**

Two electives at the 300+ level from Group EB-A:

- **Group EB-A**
  - **BIOL 302/ENVI 312** Communities and Ecosystems
  - **BIOL 305** Evolution
  - **BIOL 308** Integrative Plant Biology: Fundamentals and New Frontiers
  - **BIOL 315** Microbiology: Diversity, Cellular Physiology, and Interactions
  - **BIOL 422/ENVI 422** Ecology of Sustainable Agriculture
  - **CHEM 341/ENVI 341** Toxicology and Cancer
Three electives from Group EB-B:
- BIOL 102  The Organism
- BIOL 134/ENVI 134  The Tropics: Biology and Social Issues
- BIOL 220/ENVI 220  Field Botany and Plant Natural History
- GEOS 101/ENVI 105  The Co-Evolution of Earth and Life
- GEOS 103/ENVI 103  Global Warming and Natural Disasters
- GEOS 104/ENVI 104/MAST 104  Oceanography
- GEOS 215/ENVI 215  Climate Changes
- GEOS 226T/ENVI 226T/MAST 226T  The Oceans and Climate
- MAST 211/GEOS 210  Oceanographic Processes

for Environmental Chemistry:
One introductory Chemistry course (Group EC-A):
- CHEM 151  Introductory Concepts of Chemistry
  or CHEM 153  Introductory Concepts of Chemistry: Advanced Section
  or CHEM 155  Principles of Modern Chemistry

  All four of the following courses (Group EC-B):
- CHEM 155  Principles of Modern Chemistry or CHEM 256 Foundations of Modern Chemical Sciences
- CHEM 156  Organic Chemistry: Introductory Level
- CHEM 251  Organic Chemistry: Intermediate Level or CHEM 255 Organic Chemistry Intermediate Level-Special Laboratory Section
- CHEM 341/ENVI 341  Toxicology and Cancer

for Environmental Geosciences
One introductory Geosciences course (Group EG-A):
- GEOS 101/ENVI 105  The Co-Evolution of Earth and Life
  or GEOS 103/ENVI 103  Global Warming and Natural Disasters
  or GEOS 104/ENVI 104/MAST 104  Oceanography

Two 200-level required courses (Group EG-B):
- GEOS 201/ENVI 205  Geomorphology
- GEOS 215/ENVI 215  Climate Changes

One of the following electives (Group EG-C):
- MAST 211/GEOS 210  Oceanographic Processes or
- GEOS 205/ENVI 207  Earth Resources
- GEOS 206/ENVI 206  Renewable Energy and the Sustainable Campus or
- GEOS 226/ENVI 226/MAST 226  The Oceans and Climate
- GEOS 231/ENVI 231  The River

One 300+-level elective in Geosciences

CONCENTRATION IN ENVIRONMENTAL STUDIES
The environmental Studies concentration provides students with an opportunity to explore how humans interact with the environment, including physical, biological, philosophical, and social elements. The concentration is designed so that students will understand the complexity of issues and perspectives and appreciate that most environmental issues lack distinct disciplinary boundaries. The goal of the concentration is to educate students to be well-informed, environmentally-literate citizens of the planet who have the capacity to become active participants in the local and global community. To this end, the concentration is designed to develop the capability to think in interdisciplinary ways and to use synthetic approaches to solve problems while incorporating the knowledge and experiences gained from majoring in other departments at the College. The concentration in Environmental Studies consists of four core courses and one elective course from each of the three categories below: The Natural World, Humanities, Arts and Social Sciences; and Environmental Policy.

Requirements for the Concentration in Environmental Studies
- BIOL 203/ENVI 203  Ecology
- ENVI 101  Nature and Society: An Introduction to Environmental Studies
- ENVI 302  Environmental Planning Workshop
- ENVI 402/MAST 402  Senior Seminar: Perspectives on Environmental Studies

Distribution Courses
In order to earn the concentration a student must take one course from each of the following three groups. Courses may be counted both toward the concentration in Environmental Studies and toward a disciplinary major.

Students can check with the Chair of Environmental Studies to see if other courses not listed here might count as electives.

The Natural World
- BIOL 134/ENVI 134  The Tropics: Biology and Social Issues
Variations from the requirements of the concentration must be approved in writing by the Chair of Environmental Studies. Students are urged to consult with program faculty and the Chair as soon as they develop an interest in the concentration or if they intend to participate in study away opportunities.

In addition to courses fulfilling the concentration requirements, the following are offered:

Environmental Studies 397, 398 Independent Study of Environmental Problems
Environmental Studies 493-W31-494 Senior Research and Thesis

Winter study courses play an important role in the program, offering opportunities to experiment in fields unfamiliar to the student, and for interdisciplinary topics to be developed by faculty working alone and in teams. Students are urged to review each year’s winter study offerings bearing in mind their interests in the environment.

ENVI 101(F)  Nature and Society: An Introduction to Environmental Studies
This course introduces environmental studies as an interdisciplinary field of learning. It will provide a survey of a broad range of environmental problems, cases, and questions, from climate change to sustainable agriculture, from toxic waste to species extinction. We will also examine the intellectual traditions, authors, and historical developments that have most profoundly shaped our understanding of these issues. Keeping a constant eye on the complexities of life in the twenty-first century, we will explore many of the different theories and methods that inform environmental scholarship, activism, and policy-making in a variety of cultural arenas and across geographical scales. Along the way, we will read works by philosophers, economists, journalists, historians, sociologists, and many others.

Class Format: lecture/discussion
Requirements/Evaluation: evaluation will be based on participation, in-class exercises, several writing assignments and a final exam
Prerequisites: none
Enrollment Limit: 35
Expected Class Size: 35
Dept. Notes: required course for students wishing to complete the Environmental Studies concentration

Distributional Requirements:
Division 2
Other Attributes:
AMST Space and Place Electives
ENVI Core Courses
ENVP Core Courses
ENVS Core Courses
INST - Urbanizing World Electives

Fall 2014
LEC Section: 01 MW 11:00 12:15 Instructor: Nicolas Howe
LEC Section: 02 TF 01:10 02:25 Instructor: Brian McCammack

ENVI 102(S)  Introduction to Environmental Science
Environmental science is the interdisciplinary study of the Earth's systems through the synthesis of physical, chemical, geological, and biological perspectives. This course introduces students to the scientific methods used to assess human impacts on the environment. Weekly readings on local, regional and global issues will include scientific literature. Part of each class will be spent on the discussion of scientific data and any related policy issues. While class time will focus primarily on a broad range of environmental issues, in the lab students will focus on the local Hoosic River Watershed. Field and laboratory exercises will generate data that students will analyze, interpret and compare to historic data sets. As the Hoosic River is ultimately connected to the Atlantic Ocean via the Hudson River, knowledge gained through the exploration of the local watershed in the lab will be applied where possible to other regions of the world in class. Examples of topics explored are: the hazards of everyday things, climate change, human impacts on water quality and quantity, atmospheric pollution, tracing pollution and its effects, and the impact of climate change on the spectrum of natural hazards and resources. During laboratory sessions we use local field sites and computer models to analyze recent disasters/hazards, trends in weather and climate and options for mitigating future impacts.

Class Format: two 75-minute workshop/discussion sessions, and one 3-hour field/laboratory session each week
Requirements/Evaluation: lab reports; class discussion participation; reaction papers on readings; periodic long tests; independent project presentation and paper
Prerequisites: none; no seniors without permission of the instructors
Enrollment Limit: 36
Expected Class Size: 36
Enrollment Preferences: first-year students;
Dept. Notes: it is a required course for the majors in Environmental Policy & Environmental Science

Distributional Requirements:
Division 3
Other Attributes:
ENVI Natural World Electives
ENVP Core Courses
ENVS Core Courses
EXPE Experiential Education Courses

Spring 2015
LEC Section: 01 TR 08:30 09:45 Instructor: Alex Apotsos
LAB Section: 02 T 01:00 04:00 Instructor: Alex Apotsos
LAB Section: 03 R 01:00 04:00 Instructor: Alex Apotsos

ENVI 103(F)  Global Warming and Natural Disasters
Crosslistings: GEOS 103/ENVI 103
Secondary Crosslisting
The destruction caused by recent storms such as Irene and Sandy, devastation of prolonged drought in the African Sahel, catastrophic flooding and mudslides in SE Asia and sea level encroachment on the Alaska coast are visible examples of natural disasters that may be modulated by climate change. Global climate change, together with environmental degradation and the explosive growth of urban areas, has the potential to increase the severity and impact of natural disasters. In this course we globally examine geological and climatological processes that "set up" natural disasters such as hurricanes, floods, landslides, droughts, extreme temperatures, and coastal surges, as well as the processes that condition availability of water resources. We study in detail the causes and anticipated consequences of human alteration of global climate and its impact on the spectrum of natural hazards and resources. During laboratory sessions we use local field sites and computer models to analyze recent disasters/hazards, trends in weather and climate and options for mitigating future impacts.

Class Format: lectures, 3 hours per week; laboratory, 2 hours per week
Requirements/Evaluation: evaluation based on written reports from laboratories, class participation, two hour exams and a final exam
Prerequisites: none
Enrollment Limit: 20
Expected Class Size: 20
Enrollment Preferences: first- and second-year students
Distributional Requirements: Division 3
Other Attributes: ENVI Natural World Electives
ENVS Group EB-B Electives
ENVS Group EG-A Electives
GEOS Environmental Geosciences Courses
SCST Related Courses

Fall 2014
LEC Section: 01 MWF 09:00 09:50 Instructor: David Dethier
LAB Section: 02 M 01:00 03:00 Instructor: David Dethier
LAB Section: 03 W 01:00 03:00 Instructor: David Dethier

ENVI 104(S) Oceanography
Crosslistings: GEOS 104/ENVI 104/MAST 104
Secondary Crosslisting
The oceans cover about 72% of Earth’s surface, yet we know the surface of Venus better than our own ocean floors. Why is that? This integrated introduction to the oceans covers formation and history of the ocean basins; the composition and origin of seawater; currents, tides, and waves; ocean-atmosphere interactions; oceans and climate; deep-marine environments; coastal processes; productivity in the oceans; and marine resources. Coastal oceanography will be investigated on an all-day field trip, hosted by the Williams-Mystic program in Connecticut.
Class Format: lecture/discussion, three hours per week; laboratory, two hours per week in alternate weeks/one all-day field trip
Requirements/Evaluation: evaluation will be based on two hour exams, lab work, participation in the field trip, and a final exam
Prerequisites: none;
Enrollment Limit: 50
Expected Class Size: 50
Enrollment Preferences: first-year and second-year students
Extra Info: may not be taken on a pass/fail basis; not available for the Gaudino option
Distributional Requirements: Division 3
Other Attributes: ENVI Natural World Electives
ENVS Group EB-B Electives
ENVS Group EG-A Electives
EXPE Experiential Education Courses
GEOS Environmental Geosciences Courses
GEOS Earth Surface Processes + Life Courses

Spring 2015
LEC Section: 01 MWF 11:00 11:50 Instructor: Mea Cook
LAB Section: 02 M 01:00 03:00 Instructor: Mea Cook
LAB Section: 03 T 01:00 03:00 Instructor: Mea Cook

ENVI 105(F) The Co-Evolution of Earth and Life
Crosslistings: GEOS 101/ENVI 105
Secondary Crosslisting
Our planet is about 4.6 billion years old, and has supported life for at least the last 3.5 billion of those years. This course will consider the inter-related nature of Earth and the life that inhabits it, starting with the first living organisms and progressing to the interaction of our own species with the Earth today. Students will investigate the dynamic nature of the Earth-life system, examine many of its feedbacks, and learn about the dramatic changes that have occurred throughout the history of the Earth. We will ask questions such as: How did the Earth facilitate biologic evolution, and what effects did those biologic events have on the physical Earth? When did photosynthesis evolve, how can we detect that in the rock record, and how did this biological event lead to profound changes in the environment? How and why did animals evolve and what role did environmental change play in the radiation of animal life? How did the rise and radiation of land plants affect world climate? How do plate tectonics, glaciation, and volcanism influence biodiversity and evolutionary innovation? What caused mass extinctions in the past and what can that teach us about our current extinction crisis? Labs will involve hands-on analysis of rocks, fossils, and real-world data as well as conceptual and analytical exercises; field trips will contextualize major events in Earth history and will help students learn to read the rock record. Through these investigations, the class will provide a comprehensive overview of Earth history, with special attention paid to the geological and paleontological history of the northeastern United States.
Class Format: lecture; one laboratory per week plus one all-day field trip
Requirements/Evaluation: evaluation will be based on lab work, short quizzes, midterms, a writing project, and a final exam
Prerequisites: none
Enrollment Limit: 30
Expected Class Size: 30
Enrollment Preferences: underclassmen
Distributional Requirements: Division 3
Other Attributes: ENVI Natural World Electives
ENVS Group EB-B Electives
ENVS Group EG-A Electives
GEOS Earth Surface Processes + Life Courses

Fall 2014
LEC Section: 01 MWF 10:00 10:50 Instructor: Phoebe Cohen
LAB Section: 02 M 01:00 03:00 Instructor: Phoebe Cohen
ENVI 108(S)  Energy Science and Technology (Q)
Crosslistings: PHYS 108/ENVI 108

Energy use has skyrocketed in the United States and elsewhere in the world, causing significant economic and political shifts, as well as concerns for the environment. This course will address the physics and technology of energy generation, consumption, and conservation. It will cover a wide range of energy sources, including fossil fuels, hydropower, solar energy, wind energy, and nuclear energy. We will discuss energy use in transportation, manufacturing, building heating, and building lighting. Students will learn to compare the efficiencies and environmental impacts of various energy sources and uses.

Class Format: lecture twice a week.
Requirements/Evaluation: evaluation will be based on weekly assignments, two hour tests, and a final project; all of these will be substantially quantitative.
Prerequisites: high school physics, high school chemistry, and mathematics at the level of MATH 130 (formerly 103)
Enrollment Limit: 40
Expected Class Size: 40

Distributional Requirements:
Division 3
Quantitative/Formal Reasoning
Other Attributes:
ENVI Natural World Electives

Spring 2015
LEC Section: 01 01 MR 01:10 02:25 Instructor: Jefferson Strait

ENVI 134  The Tropics: Biology and Social Issues (D)
Crosslistings: BIOL 134/ENVI 134

Secondary Crosslisting
Intended for the non-scientist, this course explores the biological dimensions of social issues in tropical societies, and focuses on specifically on the peoples and cultures of tropical regions in Africa, Asia, Latin America, Oceania, and the Caribbean. Tropical issues have become prominent on a global scale, and many social issues in the tropics are inextricably bound to human ecology, evolution, and physiology. The course begins with a survey of the tropical environment of humans, including major climatic and habitat features. The next section focuses on human population biology, and emphasizes demography and the role of disease particularly malaria and AIDS. The final part of the course covers the place of human societies in local and global ecosystems including the challenges of tropical food production, the importance of organic diversity, and the interaction of humans with their supporting ecological environment.
This course fulfills the EDI requirement. Through lectures, debates and readings, students confront social issues in the tropics from the perspective of biologist. This builds a framework for lifelong exploration of human diversity.

Class Format: lecture/debate, three hours per week
Requirements/Evaluation: evaluation will be based on two hour exams, a short paper, panel preparation, and a final exam
Prerequisites: none
Enrollment Limit: 60
Expected Class Size: 60

Enrollment Preferences: preference given to seniors, juniors, sophomores, and first-year students—in that order
Dept. Notes: does not count for major credit in Biology; does not satisfy the distribution requirement in the Biology major

Distributional Requirements:
Division 3
Exploring Diversity
Other Attributes:
ENVI Natural World Electives
ENVS Group EB-B Electives
INST African Studies Electives
PHLH Biomedical Determinants of Health
SCST Elective Courses

Not Offered Academic Year 2015
LEC  Instructor: Joan Edwards

ENVI 203(F)  Ecology (Q)
Crosslistings: BIOL 203/ENVI 203

Secondary Crosslisting
This course combines lectures with field and indoor laboratory exercises to explore factors that determine the distribution and abundance of plants and animals in natural systems. The course begins with an overall view of global patterns and then builds from the population to the ecosystem level. An emphasis is given to basic ecological principles and relates them to current environmental issues. Selected topics include population dynamics (competition, predation, mutualism); community interactions (succession, food chains and diversity) and ecosystem function (biogeochemical cycles, energy flow).

Class Format: lecture/laboratory, six hours per week
Requirements/Evaluation: evaluation will be based on problem sets, lab reports, hour exams, and a final exam
Prerequisites: BIOL 101 and 102, or ENVI 101 or 102, or permission of instructor
Enrollment Limit: none
Expected Class Size: 35

Dept. Notes: it is a required course for the majors in Environmental Policy & Environmental Science and Environmental Studies concentration; satisfies the distribution requirement in the Biology major

Distributional Requirements:
Division 3
Quantitative/Formal Reasoning
Other Attributes:
ENVI Core Courses
ENVP Core Courses
ENVS Core Courses

Fall 2014
LEC Section: 01 MWF 10:00 10:50  Instructor: Joan Edwards

LAB Section: 02 M 01:00 04:00  Instructor: Joan Edwards
ENVI 205(F) Geomorphology
Crosslistings: GEOS 201/ENVI 205

Class Format: lecture/discussion, three hours per week; laboratory, three hours per week/student projects; weekend field trip to the White Mountains
Requirements/Evaluation: evaluation will be based on two hour exams, a project, lab work and class participation
Prerequisites: any 100-level GEOS course or consent of the instructor
Enrollment Limit: 18
Expected Class Size: 15
Distributional Requirements:
Division 3
Other Attributes:
AMST Space and Place Electives
ENVI Natural World Electives
ENVS Group EG-B Electives
GEOS Earth Surface Processes + Life Courses

Fall 2014
LEC Section: 01 TR 08:30 09:45 Instructor: David Dethier
LAB Section: 02 T 01:00 04:00 Instructor: David Dethier

ENVI 206(S) Renewable Energy and the Sustainable Campus
Crosslistings: GEOS 206/ENVI 206

Class Format: seminar, three hours per week
Requirements/Evaluation: evaluation will be based on an hour exam, class participation that includes a seminar presentation, and a research project that investigates some aspect of campus energy use and greenhouse-gas emissions
Enrollment Limit: 20
Expected Class Size: 20
Enrollment Preferences: sophomores
Distributional Requirements:
Division 3
Other Attributes:
AMST Space and Place Electives
ENVI Natural World Electives
ENVS Group EG-C Electives
EXPE Experiential Education Courses
GEOS Environmental Geosciences Courses
GEOS Earth Surface Processes + Life Courses

Spring 2015
LEC Section: 01 TR 09:55 11:10 Instructor: David Dethier

ENVI 207 Earth Resources
Crosslistings: GEOS 205/ENVI 207

Class Format: lecture
Requirements/Evaluation: one hour exam, a final exam, lab exercises, and class participation
Prerequisites: one 100-level GEOS course or permission of instructor
Enrollment Limit: 18
Expected Class Size: 18
Enrollment Preferences: sophomores and Geosciences majors
Extra Info: may not be taken on a pass/fail basis
Distributional Requirements:
Division 3
Other Attributes:
ENVI Natural World Electives
ENVI 208  Science and Politics in Environmental Decision Making (D)
This course explores the relationship between science and politics in environmental decision-making. How do legislators know when a species is endangered and warrants protection? What precautions should be applied in allowing genetically modified foods onto our plates? Can we, and should we, weigh the risks of malaria against the impacts of pesticides used to control those mosquitoes that transmit the disease? How has the global community come together to understand the risks from global climate change, and how has this understanding shaped our policy responses? What are some of the limits of science in shaping policy outcomes? In addressing these and other questions, we will pay particular attention to how power relations and existing institutions shape knowledge, and whose knowledge, is taken on board in decision-making, be it at the local, national or global level. We will delve into how these dynamics shape policy outcomes and we will also examine novel approaches for incorporating the knowledge of traditionally disempowered groups, including indigenous and local communities.

Class Format: lecture/discussion with some role-play exercises
Requirements/Evaluation: several shorter writing assignments and a final project
Prerequisites: none
Enrollment Limit: 19
Expected Class Size: 15
Dept. Notes: satisfies the "policy elective" requirement of the Environmental Policy major and the "Environmental Policy" requirement of the Environmental Studies concentration
Distributional Requirements:
Non-divisional
Exploring Diversity
Other Attributes:
ENVI Environmental Policy
ENVP PE-A Group Electives
ENVP PTL-A Group Electives
ENVP SC-A Group Electives
PHLH Environmental Health

Not Offered Academic Year 2015
LEC Instructor: Pia Kohler

ENVI 209(F)  Ecologies of Place: Culture, Commodities and Everyday Life
Crosslistings: ENVI 209/ANTH 209/AMST 209

Primary Crosslisting
This course will explore the environmental implications of everyday life in modern America. It will ask how cultural, political, economic, and ecological systems interact to produce ordinary places and vernacular landscapes, from campuses to cul-de-sacs, farms to forests, nation-states to national parks. Combining approaches from cultural geography, environmental history, and political ecology, it will focus on the hidden lives of "things"—the commodities and technologies that form the basic building blocks of place: food, oil, water, wood, machines. With strong emphasis on local-global relations, it will look beneath the surface of the ordinary to reveal the complex networks of power, meaning, and matter that connect "here" to "there," "now" to "then," and "us" to "them." In so doing, it will pursue parallel goals: to understand the socio-spatial processes shaping today's global environment; and to explore the cultural systems through which those processes are understood and contested. Topics will include the bottled water controversy, factory farming and local agriculture, the political economy of lawns, and the cultural politics of invasive species.

Class Format: lecture/discussion
Requirements/Evaluation: three 5- to 7-page essays and several shorter writing assignments
Prerequisites: none
Enrollment Limit: 20
Expected Class Size: 20
Enrollment Preferences: none; open to first-year students
Distributional Requirements:
Division 2
Other Attributes:
AMST Critical and Cultural Theory Electives
AMST Space and Place Electives
ENVI Humanities, Arts + Social Science Electives
ENVP PE-B Group Electives
ENVP PTL-A Group Electives
ENVP SC Theory/Method Courses
ENVP SC-B Group Electives

Fall 2014
LEC Section: 01 TR 08:30 09:45 Instructor: Nicolas Howe

ENVI 210(S)  Governing Nature (W)
Crosslistings: ANTH 210/ENVI 210/JLST 210

Secondary Crosslisting
This course analyzes the regulation of natural resources, primarily in today's United States. We will study how shared definitions of nature and, hence, nature's resources are instituted in law and policy and the extent to which these legal mandates shape actual landscapes. We will examine the workings of government bureaucracies—for example, the U.S. Forest Service and the National Park Service—to see how their understanding and administration of natural resources operate on the ground and affect local communities. We will consider an array of questions: What is the relationship between nature and what anthropologists call "the State"? Does scientific expertise command authority? When is the governance of natural resources synonymous with the governance of people? To what extent are taken-for-granted terms like "endangered" in reality social and legal constructs? In order to unpack these and other puzzles, we will turn to historical works and ethnography, focusing on insights from political and environmental anthropology. We will also read legal doctrine, such as the Wilderness Act of 1964 and judicial opinions regarding tribal sovereignty and fishing rights. Our case studies will range from rivers and national forests in the American Southwest to local conservation issues in the Berkshires, including land trusts.

Class Format: seminar
Requirements/Evaluation: active participation, two 5- to 7-page papers on assigned readings, one 12- to 15-page research paper
Prerequisites: none
Enrollment Limit: 19
Expected Class Size: 19
Enrollment Preferences: Anthropology and Sociology majors, ENVI majors/concentrators and Justice and Law concentrators
In contemporary societies, race remains an enduring impediment to the achievement of equality. Generally understood as a socially meaningful way of classifying human bodies hierarchically, race manifests itself in a number of arenas, including personal experience, economic production and distribution, and political organization. In this course, we will explore how race organizes in local and global environmental issues, like pollution and climate change. We will begin with a review of some of the landmark texts in Environmental Studies that address "environmental racism," like Robert Bullard's *Dumping in Dixie* and David Pellow's *Garbage Wars*. We will examine how and to what extent polluting facilities like landfills, oil refineries, and sewage treatment plants are disproportionately located in communities of color; we will also pay attention to how specific corporations create the underlying rationale for plotting industrial sites. After outlining some of the core issues raised in this scholarship, we will turn to cultural productions—like literature, film, and music—to understand how people of color respond to environmental injustice and imagine the natural world.

**Class Format:** lecture/discussion

**Requirements/Evaluation:** evaluation will be based on class participation, 2-3 short papers (5-7 pages), and a self-scheduled final

**Prerequisites:** none

**Enrollment Limit:** 20

**Distributional Requirements:** Division 2

**Exploring Diversity**

**Other Attributes:**
- AFR Core Electives
- AMST Comp Studies in Race, Ethnicity, Diaspora
- ENVI Humanities, Arts + Social Science Electives
- ENVP SC-B Group Electives

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Fall 2014

**LEC Section:** 01 TR 11:20 12:35  Instructor: James Manigault-Bryant

**ENVI 212(F.S) African American Environmental Culture from Slavery to Environmental Justice (D) (W)**

**Crosslistings:** ENVI 212/AMST 214/AFR 218

**Primary Crosslisting**

Until the environmental justice movement rose to prominence over the past few decades and invited a more critical perspective on the connection between race and the environment, popular understanding of the American environmental (and environmentalist) tradition had effectively been whitewashed. But why? This course will work to find answers to that question while unearthing the deeper roots of African American environmental culture in conversation with key moments in African American history; from slavery to sharecropping, from migration and urbanization to environmental justice. With an interdisciplinary approach that considers sources as diverse as slave narratives, fiction, poetry, songs, photographs, maps, and ethnographies, we will consider African American intellectuals, writers, and visual and musical artists not always associated with environmental thought, from W.E.B. Du Bois and Zora Neale Hurston to the Black Panthers and Marvin Gaye.

Evaluation considers active, informed participation in class discussion based on assigned readings, midterm and final exams, and three 5-7 page essays. Students are also expected to research and respond to one news article exploring some aspect of the intersection between race and the environment over the course of the semester, and to share your findings with the class for discussion. This course fulfills the Exploring Diversity Initiative requirement by examining the themes of empathetic understanding and power and privilege. Among many other paths of inquiry, we will examine how African American environmental culture has evolved in conversation with an historical context of discrimination, racism, and inequality.

**Class Format:** seminar

**Requirements/Evaluation:** evaluation considers weekly written responses and active, informed participation in class discussion based on assigned readings; two 6- to 8-page essays; and a 12- to 15-page final essay revising and expanding an earlier essay

**Prerequisites:** none

**Enrollment Limit:** 20

**Expected Class Size:** 15

**Enrollment Preferences:** open to first-year and continuing students

**Distribution Notes:** carries Division 2 credit

**Extra Information:** students also expected to research and respond to at least one news article exploring some aspect of the intersection between race and the environment over the course of the semester, and share your findings with the class for discussion. This course may not be taken on a pass/fail basis; not available for the Gaudio option

**Distributional Requirements:** Division 2

**Exploring Diversity**

**Writing Intensive**

**Other Attributes:**
- ENVP SC-B Group Electives

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Spring 2015

**SEM Section:** 01 02:35 03:50  Instructor: Natalie Vena

**ENVI 211(F) Race and the Environment (D)**

**Crosslistings:** AFR 211/ENVI 211/SOC 211/AMST 211

**Secondary Crosslisting**

In contemporary societies, race remains an enduring impediment to the achievement of equality. Generally understood as a socially meaningful way of classifying human bodies hierarchically, race manifests itself in a number of arenas, including personal experience, economic production and distribution, and political organization. In this course, we will explore how race organizes in local and global environmental issues, like pollution and climate change. We will begin with a review of some of the landmark texts in Environmental Studies that address "environmental racism," like Robert Bullard's *Dumping in Dixie* and David Pellow's *Garbage Wars*. We will examine how and to what extent polluting facilities like landfills, oil refineries, and sewage treatment plants are disproportionately located in communities of color; we will also pay attention to how specific corporations create the underlying rationale for plotting industrial sites. After outlining some of the core issues raised in this scholarship, we will turn to cultural productions—like literature, film, and music—to understand how people of color respond to environmental injustice and imagine the natural world.

**Class Format:** lecture/discussion

**Requirements/Evaluation:** evaluation will be based on class participation, 2-3 short papers (5-7 pages), and a self-scheduled final

**Prerequisites:** none

**Enrollment Limit:** 20

**Distributional Requirements:** Division 2

**Exploring Diversity**

**Other Attributes:**
- AFR Core Electives
- AMST Comp Studies in Race, Ethnicity, Diaspora
- ENVI Humanities, Arts + Social Science Electives
- ENVP SC-B Group Electives

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Spring 2015

**SEM Section:** 01 02:35 03:50  Instructor: Natalie Vena

**ENVI 211(F) Race and the Environment (D)**

**Crosslistings:** AFR 211/ENVI 211/SOC 211/AMST 211

**Secondary Crosslisting**

In contemporary societies, race remains an enduring impediment to the achievement of equality. Generally understood as a socially meaningful way of classifying human bodies hierarchically, race manifests itself in a number of arenas, including personal experience, economic production and distribution, and political organization. In this course, we will explore how race organizes in local and global environmental issues, like pollution and climate change. We will begin with a review of some of the landmark texts in Environmental Studies that address "environmental racism," like Robert Bullard's *Dumping in Dixie* and David Pellow's *Garbage Wars*. We will examine how and to what extent polluting facilities like landfills, oil refineries, and sewage treatment plants are disproportionately located in communities of color; we will also pay attention to how specific corporations create the underlying rationale for plotting industrial sites. After outlining some of the core issues raised in this scholarship, we will turn to cultural productions—like literature, film, and music—to understand how people of color respond to environmental injustice and imagine the natural world.

**Class Format:** lecture/discussion

**Requirements/Evaluation:** evaluation will be based on class participation, 2-3 short papers (5-7 pages), and a self-scheduled final

**Prerequisites:** none

**Enrollment Limit:** 20

**Distributional Requirements:** Division 2

**Exploring Diversity**

**Other Attributes:**
- AFR Core Electives
- AMST Comp Studies in Race, Ethnicity, Diaspora
- ENVI Humanities, Arts + Social Science Electives
- ENVP SC-B Group Electives

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Fall 2014

**LEC Section:** 01 TR 11:20 12:35  Instructor: James Manigault-Bryant

**ENVI 212(F.S) African American Environmental Culture from Slavery to Environmental Justice (D) (W)**

**Crosslistings:** ENVI 212/AMST 214/AFR 218

**Primary Crosslisting**

Until the environmental justice movement rose to prominence over the past few decades and invited a more critical perspective on the connection between race and the environment, popular understanding of the American environmental (and environmentalist) tradition had effectively been whitewashed. But why? This course will work to find answers to that question while unearthing the deeper roots of African American environmental culture in conversation with key moments in African American history; from slavery to sharecropping, from migration and urbanization to environmental justice. With an interdisciplinary approach that considers sources as diverse as slave narratives, fiction, poetry, songs, photographs, maps, and ethnographies, we will consider African American intellectuals, writers, and visual and musical artists not always associated with environmental thought, from W.E.B. Du Bois and Zora Neale Hurston to the Black Panthers and Marvin Gaye.

Evaluation considers active, informed participation in class discussion based on assigned readings, midterm and final exams, and three 5-7 page essays. Students are also expected to research and respond to one news article exploring some aspect of the intersection between race and the environment over the course of the semester, and to share your findings with the class for discussion. This course fulfills the Exploring Diversity Initiative requirement by examining the themes of empathetic understanding and power and privilege. Among many other paths of inquiry, we will examine how African American environmental culture has evolved in conversation with an historical context of discrimination, racism, and inequality.

**Class Format:** seminar

**Requirements/Evaluation:** evaluation considers weekly written responses and active, informed participation in class discussion based on assigned readings; two 6- to 8-page essays; and a 12- to 15-page final essay revising and expanding an earlier essay

**Prerequisites:** none

**Enrollment Limit:** 20

**Expected Class Size:** 15

**Enrollment Preferences:** open to first-year and continuing students

**Distribution Notes:** carries Division 2 credit

**Extra Information:** students also expected to research &respond to at least one news article exploring some aspect of the intersection between race and the environment over the course of the semester, and to share your findings with the class for discussion. This course may not be taken on a pass/fail basis; not available for the Gaudio option

**Distributional Requirements:** Division 2

**Exploring Diversity**

**Writing Intensive**

**Other Attributes:**
- ENVP SC-B Group Electives

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Spring 2015

**SEM Section:** 01 02:35 03:50  Instructor: Brian McCammack

**ENVI 213(S) Introduction to Environmental and Natural Resources Economics (Q)**

**Crosslistings:** ECON 213/ENVI 213

**Secondary Crosslisting**
Economists love free markets, but many people fear that market-driven economic growth and consumption are endangering the natural environment. In fact, core economic theories predict that people and firms, left to their own devices, will often tend to pollute too much, conserve too little, overfish common waters, and cut down too many trees. These predictions seem to be borne out by the world's environmental problems. Fortunately, economics offers tools to address these issues, and these tools are increasingly gaining attention in the policy world. In this course, we will survey environmental and natural resource economics, fields that work to inform policy with attention to both natural assets and human needs. We will focus on real-world problems, mostly from a microeconomic perspective. Underlying issues in these fields include: why markets might be inefficient where the environment and natural resources are concerned; whether and how to value the benefits we receive from the environment; and how to carefully evaluate policies. We will study the economists' perspective on sustainability and we'll discuss how sustainability, growth, and human wellbeing relate to one another. We will study the use of non-renewable resources (like oil) and renewable resources (like trees and fish), and we will spend some time talking about energy and energy policy. We will examine issues related to pollution, looking at traditional "command and control" regulations and at market-based pollution control policies. Climate change is a pressing global problem, and we will study current and proposed climate policies and the role economics can play. We may cover other topics, including international development, food, agriculture, and water.

**Class Format:** lecture

**Requirements/Evaluation:** problem sets, short papers, a midterm, and a final exam

**Prerequisites:** ECON 110

**Enrollment Limit:** 40

**Expected Class Size:** 30

**Enrollment Preferences:** preference to sophomores if course is overenrolled

**Distributed Requirements:**

- Division 2
- Quantitative/Formal Reasoning

**Other Attributes:**

- ENVI Environmental Policy
- ENVP PE-A Group Electives
- ENVP PTL-A Group Electives
- ENVP SC-A Group Electives
- MAST Interdepartmental Electives
- POEC Comparative POEC/Public Policy Courses

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**Spring 2015**

**LEC Section:** 01 MR 01:10 02:25  Instructor: Sarah Jacobson

**ENVI 214(S) Remote Sensing and Geographic Information Systems**

**Crosslistings:** GEOS 214/ENVI 214

**Secondary Crosslisting**

This class provides a practical look at fast-evolving methods used to integrate information about the Earth's surface with spatial data collected by disciplines such as archaeology, economics, the field sciences, history and political science. Remote sensing involves collection and processing of data from satellite and airborne sensors to yield environmental information about the Earth's surface and lower atmosphere. Remote sensing allows regional mapping of rock materials, analysis of vegetation cover and measurement of urban areas and land-use change over time. A Geographic Information System (GIS) links satellite-based environmental measurements with spatial data such as topography, transportation networks, and political boundaries, allowing display and quantitative analysis at the same scale using the same geographic reference. This course covers concepts of remote-data capture and geographic rectification using a Global Positioning System (GPS), as well as principles of remote sensing, including linear and non-linear image enhancements, convolution filtering, and image classification. Principles of GIS include display and classification, spatial buffers, logical overlays and techniques of spatial analysis. Weekly labs focus on training in the application of techniques using data from the region and other areas of North America.

**Class Format:** lecture, three hours per week; laboratory, three hours per week

**Requirements/Evaluation:** based on weekly lab exercises, an hour exam and a final project

**Prerequisites:** at least one introductory course in BIOL, ENVI, or GEOS

**Enrollment Limit:** 15

**Expected Class Size:** 15

**Enrollment Preferences:** Geosciences and Biology majors and Environmental Studies majors and concentrators

**Distributed Requirements:**

- Division 3

**Other Attributes:**

- ENVI Natural World Electives
- ENVS Methods Courses
- EXPE Experiential Education Courses
- GEOS Solid Earth Courses
- GEOS Environmental Geosciences Courses
- GEOS Earth Surface Processes + Life Courses

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**Spring 2015**

**LEC Section:** 01 MW 11:00 12:15  Instructor: Paul Karabinos

**LAB Section:** 02 M 01:00 04:00  Instructor: Paul Karabinos

**ENVI 215(F) Climate Changes (Q)**

**Crosslistings:** GEOS 215/ENVI 215

**Secondary Crosslisting**

In recent years, there has been a growing public and scientific interest in the Earth's climate and its variability. This interest reflects both concern over future climate changes resulting from anthropogenic increases in atmospheric greenhouse gases and growing recognition of the economic impact of "natural" climate variability (for example, El Niño events), especially in the developing world. Efforts to understand the Earth's climate system and predict future climate changes require both study of parameters controlling present day climate and detailed studies of climate changes in the past. In this course, we will review the processes that control the Earth's climate, like insolation, the greenhouse effect, ocean circulation, configuration of continents, and positive and negative feedbacks. At the same time, we will review the geological record of climate changes in the past, examining their causes. Laboratory exercises and problem sets will emphasize developing problem solving skills and using quantitative analyses to assess if a given explanation is possible and reasonable. These exercises will include developing and applying numerical models of the radiative balance of earth and the carbon cycle.

**Class Format:** lecture, three hours per week; one three-hour lab per week

**Requirements/Evaluation:** evaluation will be based on lab exercises and problem sets (25%), three hour exams (50%), and a final project (25%) where students will collect, analyze, and interpret data

**Prerequisites:** 100-level course in GEOS, CHEM, or PHYS or permission of instructor

**Enrollment Limit:** 20

**Expected Class Size:** 20
Enrollment Preferences: Geosciences majors

Distributional Requirements:

Quantitative/Formal Reasoning

Other Attributes:

ENVI Natural World Electives
ENVS Group EB-B Electives
GEOS Environmental Geosciences Courses
MAST Interdepartmental Electives

Fall 2014
LEC Section: 01 W 08:00-09:15 Instructor: Mea Cook

LAB Section: 02 R 01:00-04:00 Instructor: Mea Cook

ENVI 217(S) Environmental Humanities: Theory and Practice (D)

Primary Crosslisting

Crosslistings: ENVI 217/AMST 216

How does culture shape our use and imagination of the physical environment? And how does the physical environment shape culture in turn? These are the central questions of the environmental humanities. This course will explore the various ways in which scholars from a broad range of disciplines have sought to answer these questions by incorporating insights from social theory and cultural criticism. Focusing on studies of socio-environmental conflict in the United States and Latin America from the time of European colonization to the present, it will examine key works from environmental history, ecocriticism, environmental philosophy, and cultural geography, and it will survey the major methodological and theoretical commitments that unite these fields. Emphasis will be placed on environmental justice and the ideological critique of modernity. How have scholars made environmental sense of liberalism, colonialism, capitalism, nationalism, sexism, and racism? How have these “isms” influenced our relations with the natural world, and how can the humanities help us both understand and change these relations for the better? This course fulfills the Exploring Diversity requirement.

Class Format: lecture/discussion

Requirements/Evaluation: three 5-7-page essays; several shorter writing assignments

Prerequisites: ENVI 101 or permission of instructor

Expected Class Size: 15

Distributional Requirements:

Division 2

Exploring Diversity

ENVI Humanities, Arts + Social Science Electives
ENVP SC Theory/Method Courses

Spring 2015
LEC Section: 01 TR 09:55-11:10 Instructor: Nicolas Howe

ENVI 219(F) Topics in Sustainable Agriculture

Primary Crosslisting

Crosslistings: ENVI 219/ANTH 218

What does sustainability mean in the context of agricultural practice, food production, and consumption? This course encourages students to think analytically and critically about the meanings and practices of sustainability in the context of food and agriculture. We examine diverse regional and historic contexts to explore how concerns about sustainability in relation to agricultural production and food consumption emerged, and explore the contemporary incarnations of sustainable agriculture in organic, fair trade, and local agriculture as well as in debates around food miles, biofuels, and genetic modification. Cutting across each of these individual topics, we will think about the connections between production and consumption, ecology and society. By the end of this course, it is expected that students will develop a multifaceted understanding of the social, political and cultural dimensions of sustainable food and agriculture.

Class Format: lecture

Requirements/Evaluation: students will be required to submit discussion questions before each class, complete a short writing assignment each week, and prepare a mid-term essay and final research paper

Prerequisites: none

Expected Class Size: 19

Distributional Requirements:

Division 2

ENVI Humanities, Arts + Social Science Electives
ENVI Environmental Policy
ENVP SC-B Group Electives
PHIL Nutrition and Food Security

Fall 2014
LEC Section: 01 TF 01:10-02:25 Instructor: Shaila Seshia Galvin

ENVI 220(F) Field Botany and Plant Natural History

Secondary Crosslisting

Crosslistings: BIOL 220/ENVI 220

This field-lecture course covers the evolutionary and ecological relationships among plant groups represented in our local and regional flora. Lectures focus on the evolution of the land plants, the most recent and revolutionary developments in plant systemics and phylogeny, and characteristics of plant families and cultural and economic uses of plants, native species. The labs cover field identification, natural history, and ecology of local species.

Class Format: lecture

Requirements/Evaluation: evaluation will be based on exams, field quizzes, field notebook and a class project

Prerequisites: none

Enrollment Limit: 40

Expected Class Size: 25

Enrollment Preferences: seniors, Biology majors, and Environmental Studies majors & concentrators

Dept. Notes: satisfies the distribution requirement in the Biology major
ENVI 221 Introduction to Urban Studies: Shaping and Living the City

Crosslistings: LATS 220/AMST 221/ENVI 221

Secondary Crosslisting

Generally, cities have been described either as vibrant commercial and cultural centers or as violent and decaying urban slums. In an effort to begin to think more critically about cities, this course introduces important topics in the interdisciplinary field of Urban Studies. Specifically, we will discuss concepts and theories used to examine the peoples and structures that make up cities: In what ways do socio-cultural, economic, and political factors affect urban life and development? How are cities planned and used by various stakeholders (politicians, developers, businesses, and residents)? How do people make meaning of the places they inhabit? We will pay particular attention to the roles of race, ethnicity, class, and gender in understanding and interpreting urban communities. Texts include works by anthropologists, historians, sociologists, cultural critics, cultural geographers, and literary writers.

Class Format: lecture/discussion

Requirements/Evaluation: evaluation will be based on attendance and class participation, several short writing assignments (1-2 pages), two creative group projects and presentations, a midterm essay (5-7 pages) and final essay (8-10 pages)

Prerequisites: none

Enrollment Limit: 20

Expected Class Size: 20

Enrollment Preferences: first and second year students as well as American Studies majors and Latina/o Studies concentrators

Extra Info: may not be taken on a pass/fail basis

Distributional Requirements:
Division 2

Other Attributes:
AMST Comp Studies in Race, Ethnicity, Diaspora
AMST Space and Place Electives
ASAM Related Courses
ENVI Humanities, Arts + Social Science Electives
ENVP SC-B Group Electives
EXPE Experiential Education Courses
INST - Urbanizing World Electives
LATS Core Electives

Not Offered Academic Year 2015

LEC Instructor: Merida Rua

ENVI 223T/F Colonial Landscapes: Latin America's Contemporary Environmental Literature (D) (W)

Crosslistings: RLSP 223/ENVI 223/COMP 263

Secondary Crosslisting

"It is not by coincidence that our societies are both racist and anti-ecological," wrote the Chilean sociologist Fernando Mires in his now-classic study, The Discourse of Nature. This tutorial explores works of contemporary literature that implicitly and explicitly link Latin America's ongoing environmental crisis to the region's long and multi-layered history of colonialism: novels by Sylvia Iparraguirre (Argentina), Mayra Montero (Puerto Rico), Gismonda Belli (Nicaragua), Luis Sepúlveda (Chile); poetry by Homero Aridjis (México); essays by Octavio Paz (México), Eduardo Viveiros de Castro (Brazil), and more. Representing a wide variety of geographies, literary styles and ideological perspectives, these writers nevertheless converge in challenging us to consider the effects of environmental crisis within structures of power that are radically unequal at the local, national, and global levels; and to recognize that consciousness of environmental vulnerability can prompt new forms of inclusion and community as well as exclusion. Topics to be explored also include the role of indigenous cosmologies in contemporary environmental politics, the place of urban ecologies within the environmental imaginary, and the ongoing debates among academic critics and others regarding the scope and methodologies of ecocriticism as an approach to Latin American literature.

Students have the option of tutorial in Spanish or in English; partners will be assigned accordingly. Each tutorial pair will meet with me for one hour during the week, during which time we will discuss a 5-page paper that one of the partners has submitted the night before. This adds up to a substantial amount of (reading and) writing for each student in the course, i.e., six 5-page essays over the course of the semester. This tutorial meets the goals of the Exploring Diversity Initiative by challenging students to position themselves, intellectually and imaginatively, in the space of those excluded from modernity’s material benefits as they struggle to brace themselves against its catastrophic environmental effects.

Class Format: tutorial

Requirements/Evaluation: each tutorial pair will meet with me for one hour during the week, during which time we will discuss a 5-page paper that one of the partners has submitted the night before

Prerequisites: none

Enrollment Limit: 10

Expected Class Size: 10

Enrollment Preferences: students majoring in Spanish or Environmental Studies

Distributional Requirements:
Division 1
Exploring Diversity
Writing Intensive

Other Attributes:
ENVI Humanities, Arts + Social Science Electives

Fall 2014

LEC Section: 01 MWF 09:00 09:50 Instructor: Henry Art

LAB Section: 02 T 01:00 04:00 Instructor: Henry Art

LAB Section: 03 W 01:00 04:00 Instructor: Henry Art

ENVI 224 The Rise and Fall of Civilizations
Crosslistings: ANTH 214/ENVI 224

Secondary Crosslisting

Over the centuries, philosophers and historians have asked how societies evolved from simple hunter-gatherer bands to complex urban civilizations. Human prehistory and history have shown the repeated cycles of the rise, expansion and collapse of early civilizations in both the Old and New World. What do the similarities and differences in the development of these first civilizations tell us about the nature of societal change, civilization and the state, and human society itself? The course will examine these issues through an introductory survey of the earliest civilizations in Mesopotamia, Egypt, India, Mesoamerica and South America. Classical and modern theories on the nature, origin, and development of the state will be reviewed in light of the archaeological evidence.

Class Format: lecture/class discussion

Requirements/Evaluation: midterm, final exam, paper, two quizzes

Prerequisites: none

Enrollment Limit: 30

Expected Class Size: 25

Distributional Requirements: Division 2

Other Attributes:
ENVI Humanities, Arts + Social Science Electives

Not Offered Academic Year 2015

LECT 227/LATS 227/AMST 227/ENVI 227

Crosslistings: GEOS 226/ENVI 226/MAST 226

Secondary Crosslisting

The oceans are a fundamental part of Earth's climate system. Ocean currents redistribute heat and water vapor around the globe, controlling temperature and precipitation patterns. Marine phytoplankton blooms and air-sea gas exchange modulate the atmospheric carbon dioxide concentration. The dynamic interaction of the atmosphere and the sea surface results in multi-year climate variations such as the El Niño-Southern Oscillation. This course will examine gradual and abrupt climate shifts from Earth's history and the ocean's role in driving, amplifying or dampening the changes, the ocean's response to anthropogenic greenhouse gas emissions, and the projected impacts of continued emissions and climate change on the ocean in the coming decades and millennia. We will analyze articles from the scientific literature that lay out the theory on the ocean's influence on climate, reconstruct past climate and ocean changes, test the mechanisms responsible for those changes, and with that knowledge, project the consequences of continued anthropogenic greenhouse gas emissions. Topics may include the climate effects of opening and closing seaways with plate tectonics, ocean feedbacks that amplify the intensity of ice ages, the instability of ocean circulation during ice-sheet retreat, the evolution of the El Niño-Southern Oscillation with changing carbon dioxide through the geologic past and the next century, ocean heat and carbon dioxide uptake during the last century and into the future, and the impact on sea level, seafloor methane reservoirs, ocean acidification, oxygenation and marine ecosystems.

Class Format: tutorial

Requirements/Evaluation: each student will write five 5-page position papers; evaluation based on the critical analysis of reading from the scientific literature through writing and discussion

Prerequisites: GEOS 104, GEOS 210 or permission of instructor

Enrollment Limit: 10

Expected Class Size: 10

Enrollment Preferences: sophomores and juniors

Extra Info: may not be taken on a pass/fail basis

Distributional Requirements: Division 3

Writing Intensive

Other Attributes:
ENVI Natural World Electives
ENVS Group EB-B Electives
ENVS Group EG-B Electives
GEOS Environmental Geosciences Courses
GEOS Earth Surface Processes + Life Courses
MAST Interdepartmental Electives

Spring 2015

LECT Section: T1 M 8:00 8:50 Instructor: Mea Cook

ENVI 227 Utopias and Americas

Crosslistings: REL 227/LATS 227/AMST 227/ENVI 227

Secondary Crosslisting

Where does the term "new world" come from? What do we mean by "utopia," "utopian," and "utopianism?" What relationships exist between the people who imagine utopias and the lands they inhabit? This course considers the relationship between utopian imaginations and the imaginations of the lands and peoples in the Western hemisphere. We will spend some time studying utopian theory, ancient proto-utopias, and utopias in Latin America, though our main focus will be on particular examples of utopianism in the U.S.A. We will attend to particular instances of utopian social dreaming that re-imagine time, space, environment, gender, family, education, and power. While the U.S.A. is the main focus of the class, students are encouraged to pursue and bring to class utopian perspectives from other parts of the Americas. Students are also strongly encouraged to take questions from class and engage utopian images not listed on this syllabus but pertinent to our classroom learning.

Class Format: seminar

Requirements/Evaluation: evaluation will be based on class participation, short weekly writing assignments, a 5-page midterm paper, and a 10- to 15-page final research paper examining an American utopia

Prerequisites: none

Enrollment Limit: 19

Expected Class Size: 12

Distributional Requirements: Division 2

Other Attributes:
AMST Comp Studies in Race, Ethnicity, Diaspora
AMST Space and Place Electives
ENVI Humanities, Arts + Social Science Electives
LATS Core Electives
REL North American Religions Courses

Not Offered Academic Year 2015

LECT Instructor: Jacqueline Hidalgo

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ENVI 228T(S)  Water as a Scarce Resource (W)
Crosslistings: ECON 228/ENVI 228

Secondary Crosslisting
For a variety of reasons including environmental pollution, urbanization, changing agricultural techniques, resource mismanagement, and the consequences of climate change, water is becoming a scarce resource even in places where it was relatively plentiful in the past, and it is likely to become an increasingly scarce resource over the coming decades. In this course we will use basic economic models to consider policy issues relating to water: Is access to water a basic human right, and if so, what market and non-market mechanisms should play a role in water allocation? Does public ownership of water improve the way it is provided and used? Why do societies differ in their approaches to allocating water and are some systems better than others? What does it mean to have a property right to water? Could private property rights to water help address the water pollution problem? How can societies change their water-related property rights, regulations and social institutions when individuals have implicit or explicit rights to the institutional status quo? Who has the right to water that crosses international boundaries? How should societies allocate water across generations?

Class Format: tutorial, meeting with the instructor in pairs for an hour each week; a 5- to 7-page paper every other week (5 in all), prepare and present a written critique of their partners' papers in alternate weeks, and revise and re-write one of their five papers
Requirements/Evaluation: evaluation will be based on the quality of the papers and on the quality of the student's oral presentations and commentary on the work of his/her colleagues
Prerequisites: ECON 110 or equivalent
Enrollment Limit: 10
Expected Class Size: 10
Enrollment Preferences: first-year students and sophomores intending to major in Economics and/or to major or concentrate in Environmental Policy or Environmental Science or Environmental Studies, and to students who are already major or concentrators in those subjects

Distributional Requirements:
Division 2
Other Attributes:
Writing Intensive

Spring 2015
TUT Section: T1 TBA  Instructor: Ralph Bradburd

ENVI 231(S)  The River
Crosslistings: GEOS 231/ENVI 231
Secondary Crosslisting
Rivers are everywhere. They fill our reservoirs, carry shipping, provide electrical power and feed millions of people. Rivers flush away our waste, potentially profoundly affecting the ocean. Rivers build land and destroy land: they transport the sediment and nutrients that construct agricultural land, and sometimes they flood that land. In this course we will consider a wide range of questions about rivers: How do they come from? Where does the water go? How do rivers erode their banks and carve their channels? How do they move sediments? What is the chemistry of river water? How do our activities change river chemistry, and how does that affect the environment? When, how, and why do rivers flood? How can we predict and control flooding? What happens when rivers reach the ocean? How do rivers evolve over time, and how does that affect people and their livelihoods?
Three lectures a week, and 4-6 local field trips. This course is linked to an all-expenses-paid seven-day Spring Break field trip to the Mississippi River (Baton Rouge, New Orleans, Cajun country, the delta swamps, and barrier islands), during which students will get first-hand experience with topics covered during the course. Participation in the Spring Break trip is not required for successful completion of the course, but course enrollment is necessary to attend the trip.

Class Format: lecture/lab
Requirements/Evaluation: evaluation will be based on two exams, participation in local field trips, and writing assignments (daily during the spring break trip in addition to a 5-page final paper)
Prerequisites: one Geosciences course or permission of instructor
Enrollment Limit: 10
Expected Class Size: 10
Enrollment Preferences: students who commit to the Spring Break trip, and to sophomores and Geosciences majors
Extra Info: may not be taken on a pass/fail basis; not available for the Gaudino option
Trip is linked to a Spring Break field trip; No travel costs: Transportation, accommodation, and food covered by the College

Distributional Requirements:
Division 3
Other Attributes:
Writing Intensive

Spring 2015
LEC Section: 01 MWF 09:00 09:50  Instructor: Ronadh Cox
LAB Section: 02 M 01:00 04:00  Instructor: Ronadh Cox

ENVI 234  Economics of Developing Countries
Crosslistings: ECON 204/ENVI 234
Secondary Crosslisting
This course is an introduction to the economics of development. The central question is: why are some people and nations poor? And what can governments (or donors) do to reduce poverty? Possible topics include agricultural productivity, health, education, microfinance, child labor, corruption, resource utilization and pollution, and intellectual property rights. We shall also discuss the extent to which market-friendly reforms (such as trade liberalization) can reduce poverty.

Class Format: lecture/discussion
Requirements/Evaluation: short papers/exams
Prerequisites: ECON 110
Enrollment Limit: 40
Expected Class Size: 35
Enrollment Preferences: sophomores if course is overenrolled

Distributional Requirements:
What happens to environmental priorities and perspectives when the economy crashes? Since 2008, the "Great Recession" has been disastrous not only for Americans' financial well-being, but also for the political will to take action on climate change (to name just one environmental issue). But it wasn't always this way. The 1930s, one of the most traumatic decades of the twentieth century in America, actually spurred environmentally-conscious action in an economic context far worse than what we are experiencing today. Why? This class will explore the many...
ways Americans understood their diverse local environments and took action to save them during the Great Depression. Although the Dust Bowl is perhaps the most iconic of these environmental upheavals during the 1930s, this course will explore diverse geographical regions: from the Appalachian mountains to the (de)forested Upper Midwest, from the agricultural South to the Dust Bowl plains and the water-starved West. In each region, we will trace the impacts of economic turmoil on the environment and the people who depended on it for their livelihoods, as well as the way the economic disaster paved the way for the federal government’s unprecedented intervention in environmental matters. Key texts will include John Steinbeck's *The Grapes of Wrath* (along with the John Ford film adaptation) and Aldo Leopold's *A Sand County Almanac.*

**Class Format:** seminar/discussion  
**Requirements/Evaluation:** evaluation based on attendance and participation, weekly written responses to readings, two 5-7 page essays, and a final examination consisting of essays and identifications  
**Prerequisites:** none  
**Enrollment Limit:** 25  
**Expected Class Size:** 15  
**Distributional Requirements:**  
Division 2  
Writing Intensive  
**Other Attributes:**  
ENVI Humanities, Arts + Social Science Electives  
ENVP SC-B Group Electives  

**Spring 2015**  
**SEM Section:** 01 MR 01:10 02:25  
**Instructor:** Brian McCammack  

**ENVI 273(F)  Politics without Humans?**  
**Crosslistings:** PSCI 273/ENVI 273  
**Secondary Crosslisting**  
Are human beings the only beings who belong in politics? And is political involvement a unique or defining aspect of what it means to be human? Such questions are increasingly complex as the boundaries of "the human" become blurred by the rise of artificial intelligence, robotics, and brain implants: shifting attitudes towards both animal and human bodies; and the automation of economic and military decisions (buy! sell! attack! retreat!) that used to be the prerogative of human actors. How do visions of politics without humans and humans without politics impact our thinking about longstanding questions of freedom, power, and right? Can and should the link between humans and politics survive in an age in which "posthuman" or "transhuman" entities become central characters in the drama of politics? This class will consider these questions through readings, films and artifacts that bring political theory into conversation with science fiction, popular literature on the so-called "singularity" (the merger of humans with computers), science and technology studies, evolutionary anthropology, "new materialist" philosophy, and feminist theory.  
**Class Format:** lecture/seminar  
**Requirements/Evaluation:** class participation, three 6- to 8-page papers  
**Prerequisites:** none  
**Enrollment Limit:** 35  
**Expected Class Size:** 15  
**Extra Info:** please note that this is an introductory-level course with no prerequisites. First year students and those with no background in political theory are welcome, as are more experienced students  
**Distributional Requirements:**  
Division 2  
**Other Attributes:**  
ENVI Environmental Policy  
ENVP PTLA Group Electives  
ENVP SC-B Group Electives  
PSCI Political Theory Courses  

**Fall 2014**  
**LEC Section:** 01 MW 11:00 12:15  
**Instructor:** Laura Ephraim  

**ENVI 283 Dirty Politics: Regulating Hazardous Chemicals and Wastes**  
**Crosslistings:** ENVI 283/PSCI 283  
**Primary Crosslisting**  
Since consumers were first introduced to the promise of "better living through chemistry," society has had to wrestle with the impacts, often far removed in place and time, resulting from a rapid proliferation of hazardous chemicals and wastes. Policy responses, be they at the local, national or global scale, are often limited to reactionary efforts to counter releases into the environment, are constrained by the prevalent use of the technologies in question, and further bring to the fore key challenges of environmental justice and risk management.

How then are we to regulate DDT without adversely affecting our fight against mosquito-borne malaria? How might we preserve the ozone layer? How do visions of politics without humans and humans without politics impact our thinking about longstanding questions of freedom, power, and right? Can and should the link between humans and politics survive in an age in which "posthuman" or "transhuman" entities become central characters in the drama of politics? This class will consider these questions through readings, films and artifacts that bring political theory into conversation with science fiction, popular literature on the so-called "singularity" (the merger of humans with computers), science and technology studies, evolutionary anthropology, "new materialist" philosophy, and feminist theory.  
**Class Format:** seminar  
**Requirements/Evaluation:** class presentations, weekly writing assignments, participation in negotiation simulations, one 12- to 18-page research paper and class participation  
**Prerequisites:** ENVI 101 or permission of instructor  
**Enrollment Limit:** 19  
**Expected Class Size:** 15  
**Enrollment Preferences:** environmental policy majors, environmental science majors, environmental studies concentrators, and political science majors  
**Dept. Notes:** satisfies the "Environmental Policy" requirement for the Environmental Policy major and the environmental studies concentration  
**Distributional Requirements:**  
Division 2  
**Other Attributes:**  
ENVI Environmental Policy  
ENVP PE-A Group Electives  
ENVP PTL-A Group Electives  
ENVP SC-A Group Electives  
PHLH Environmental Health  
POEC Comparative POEC/Public Policy Courses  
PSCI Research Courses  

**Not Offered Academic Year 2015**  
**SEM Instructor:** Pia Kohler
ENV 287  The Dynamics of Globalization: Society, Religion and the Environment (D)
Crosslistings: REL 287/ENVI 287
Secondary Crosslisting
This course offers a theoretical reflection on the social, cultural and environmental dynamics of globalization and their consequences for the nature and place of religion. Rather than argue for or against globalization, we first examine the nature of this new configuration and its relation to (post)modernity, asking questions such as: What are the cultural and social dynamics of globalization? What are the effects on the nature of the state and the political practices that take place in the global world? What are its environmental consequences? We then shift to examining the role of religion, especially the increased relevance is a function of the socio-cultural transformations that globalization brings about, particularly the loss of community and the increasing atomization of individuals. We conclude by examining some of the perspectives created by the new religious expressions that attempt to respond to this situation, from personal spiritual quests as manifested in interest in Buddhism, ecology or mountain climbing, to various forms of fundamentalism, such as Evangelicalism, the fastest growing religious movement in the Americas, and the most radical forms of Islamicism. Reading list: Harvey, The Condition of Postmodernity; Castells, The Rise of the Network Society; Bauman, Globalization; Kivisto, Multiculturalism in a Global Society; Cusanova, Public Religions in the Modern World; Ortner, Life and Death on Mt. Everest; Matthews, Global Cultural/Individual Identity; Shuck, Mark of the Beast; Roy, Globalized Islam.
Requirements/Evaluation:  a class presentation and a research paper (15 pages)
Prerequisites:  none
Expected Class Size:  22
Enrollment Preferences:  Religion majors and Environmental Studies concentrators
Distributional Requirements:
Division:  Exploring Diversity
Other Attributes:
ENVI Humanities, Arts + Social Science Electives
ENVP SC-B Group Electives
INST Economic Development Studies Electives
REL Contemporary Critical Inquiry Courses

Not Offered Academic Year 2015
LEC  Instructor:  Georges Dreyfus

ENV 291  Religion and the American Environmental Imagination (W)
Crosslistings: ENV 291/REL 291/SOC 291
Primary Crosslisting
This course examines the relationship between religious and environmental thought in the modern United States. Focusing on the complex and closely linked legacies of Christianity, secularism, and popular spirituality, we will explore the religious and anti-religious roots of contemporary environmental discourse. Along the way, we will pursue a set of vexing questions about environmental thought: Is environmentalism a religion? If so, what kind of religion is it? If not, why not (and why do we even ask)? Is anti-environmentalism religiously motivated? Could religion be the cause of our ecological crisis? Could it be the solution? For answers, we will look to the writings of thinkers such as John Muir, Edward Abbey, Rachel Carson, Aldo Leopold, and Wendell Berry, as well as a number of lesser-known authors. We will read these authors alongside recent scholarship in the social sciences and humanities to understand how their thinking was influenced by social and environmental trends such as urbanization, industrialization, immigration, and globalization. We will also ask how religion has intersected with gender, race, class, and ethnicity to shape environmental politics in the twenty-first century. Finally, we will pay particularly close attention to episodes of conflict and cooperation between the environmental movement and religious conservatives during the past forty years, and we will analyze popular religious media from this period alongside the writings and visual productions of environmentalists.
Class Format:  seminar
Requirements/Evaluation:  a 15- to18-page research paper and several shorter writing assignments
Prerequisites:  ENV 101 or permission of instructor
Enrollment Limit:  19
Expected Class Size:  19
Enrollment Preferences:  Environmental Studies majors and concentrators
Distributional Requirements:
Division:  2
Writing Intensive
Other Attributes:
ENVI Humanities, Arts + Social Science Electives
ENVP SC-B Group Electives

Not Offered Academic Year 2015
LEC  Instructor:  Nicolas Howe

ENV 302(F)  Environmental Planning Workshop
This interdisciplinary course introduces the theories, approaches, methodologies, and legal framework of environmental planning and provides students with experience in the planning process through project work in the Berkshire region. The first part of the course introduces the students to planning literature through analysis and discussion of case studies. In the second part of the course students tackle an actual planning problem. Small teams of students, working in conjunction with a client in the community and under supervision of the instructor, conduct a planning project, using all the tools of an environmental planner. The project work draws on students' academic training, extracurricular activities, and applies interdisciplinary knowledge and methodologies. The course includes several class presentations and culminates in a public presentation of each team's planning study. This course also includes field trips, town meetings, interviews, survey work, and computer mapping labs.
Class Format:  seminar discussion/project lab
Requirements/Evaluation:  short written exercises, class presentations, public presentations, and final group report
Prerequisites:  ENV 101 and BIOL/ENVI 203, or permission of instructor; open to juniors and seniors only
Enrollment Limit:  16
Expected Class Size:  16
Enrollment Preferences:  Environmental Policy majors, Environmental Studies majors and Environmental Studies concentrators
Dept. Notes:  required course for students wishing to complete the majors in Environmental Policy & Environmental Science and the Environmental Studies concentration
Distributional Requirements:
Non-divisional
Other Attributes:
ENVI Core Courses
ENVP Core Courses
ENVS Core Courses
EXPE Experiential Education Courses
ENVI 303  Cultures of Climate Change (W)
Crosslistings: ENVI 303/SOC 303

Primary Crosslisting
This course asks why people think and talk about climate change in such very different ways. Climate change is a physical phenomenon that can be observed, quantified, and measured. But it is also an idea, and as such it is subject to the vagaries of cultural interpretation. Despite scientific agreement about its existence and its causes, many people do not see climate change as a serious problem, or as a problem at all. Many others see it as the most serious problem our species has ever faced. What are the sources of this disparity? Why can't we agree about climate change? How does something as complex and confusing as climate change become a "problem" in the first place? This course will explore a broad array of factors, from religion to race, class to colonialism. It will focus especially closely on the communication of scientific knowledge, risk perception, and environmental ethics, and it will apply a range of theories from the social sciences and humanities to a set of concrete case studies. In the climate change debate, culture matters. By investigating how culture shapes the politics and policy of climate change, students will develop the interpretive skills required to understand not just this most contentious of issues, but environmental issues in general.

Class Format: seminar
Requirements/Evaluation: a 15- to 18-page research paper and several shorter writing assignments
Prerequisites: ENVI 101
Enrollment Limit: 19
Expected Class Size: 19
Enrollment Preferences: ENVI majors and concentrators first; ANSO majors second
Distributional Requirements:
Division 2
Writing Intensive
Other Attributes:
ENVI Humanities, Arts + Social Science Electives

Not Offered Academic Year 2015
SEM

ENVI 307(F)  Environmental Law
Crosslistings: ENVI 307/PSCI 317

Primary Crosslisting
We rely on environmental laws to make human communities healthier and protect the natural world, while allowing for sustainable economic growth. Yet, despite 40 years of increasingly varied and complex legislation, balancing human needs and environmental quality has never been harder than it is today.

Environmental Studies 307 analyzes the transformation of environmental law from fringe enterprise to fundamental feature of modern political, economic and social life. ENVI 307 also addresses the role of community activism in environmental law, from local battles over proposed industrial facilities to national campaigns for improved corporate citizenship. By the completion of the semester, students will understand both the successes and failures of modern environmental law and how these laws are being reinvented, through innovations like pollution credit trading and "green product" certification, to confront globalization, climate change and other emerging threats.

Class Format: seminar
Requirements/Evaluation: based on several short writing assignments, a term research project, and active participation in class.
Prerequisites: ENVI 101 or permission of instructor
Enrollment Limit: 25
Expected Class Size: 25
Dept. Notes: required course for students wishing to complete the major in Environmental Policy; satisfies the "Environmental Policy" requirement for the Environmental Studies concentration
Distributional Requirements:
Division 2
Other Attributes:
AMST Space and Place Electives
ENVI Environmental Policy
ENVP Core Courses
JLST Enactment/Applications in Institutions
MAST Interdepartmental Electives
POEC U.S. Political Economy + Public Policy Course
SCST Elective Courses

Fall 2014
LEC Section: 01 M 07:00 09:40  Instructor: David Cassuto

ENVI 309(S)  Environmental Politics and Policy (W)
Crosslistings: ENVI 309/HSCI 309/SCST 309/PSCI 301

Primary Crosslisting
This course will provide an overview of environmental policy-making, with an emphasis on the ways in which policies are developed and implemented at the local, state and national level. Special attention will be paid to the variety of actors that shape environmental outcomes, including legislators, administrators, the science community, civil society and the private sector. Following an examination of different models of environmental policy-making, this course will focus on several case studies, including on the management of public lands, air and water pollution, climate change and endangered species protection.

Class Format: seminar
Requirements/Evaluation: evaluation is based on several shorter writing assignments, a semester-long research project, and participation
Prerequisites: ENVI 101 or permission of instructor
Enrollment Limit: 19
Expected Class Size: 19
Enrollment Preferences: Environmental Policy & Environmental Science majors & Environmental Studies concentrators; but other students interested in public policy are welcome
Dept. Notes: requirement for the Environmental Policy major and the Environmental Studies concentration
Class Format: lecture/laboratory, six hours a week

Requirements/Evaluation: evaluation will be based on lab reports, a midterm exam, a term project presentation, and a final project paper

Expected Class Size: 28

Prerequisites: BIO/ENVI 203 or 220

Secondary Crosslistings: BOL/ENVI 312

Distributional Requirements: satisfies the distribution requirement in the Biology major

Other Attributes: ENVI Environmental Policy

Writing Intensive

Division 3

Quantitative/Formal Reasoning

Not Offered Academic Year 2015

LEC Instructor: Henry Art

ENVI 313 Chicago

Crosslistings: BOL/ENVI 312/AMST/312/ENVI 313

Secondary Crosslistings: "The city of big shoulders has plenty of room for diversity," reads the official visitor's website for the City of Chicago. Focusing on this claim, this course asks students to think critically about what kind room has been made for diversity—social, spatial, and ideological. Additionally we examine the ways in which diverse social actors have shored their way into the imagined and physical landscape of the city. Working with ethnography, history, literature, critical essays, and popular culture, we will explore the material and discursive constructions of Chi-Town and urban life among its residents. Appreciating these constructions we also consider how Chicago has served as a key site for understandings of urbanity within a broader national and global context.

Class Format: discussion

Requirements/Evaluation: evaluation will be based on attendance and class participation, group presentations and discussions, 5 critical briefs (2-pages) and a book review essay (12-15 pages)

Prerequisites: none

Expected Class Size: 20

Enrollment Preferences: American Studies majors, Latina/o Studies concentrators and students who have taken LATS 220/AMST 221

Distributional Requirements: Division 2

Other Attributes: AMST Comp Studies in Race, Ethnicity, Diaspora

ENVI Humanities, Arts + Social Science Electives

ENVP SC-B Group Electives

LATS Core Electives

Not Offered Academic Year 2015

LEC Instructor: Merida Rua

ENVI 318 California: Myths, Peoples, Places (W)

Crosslistings: BOL/ENVI 318/AMST 318/REL 318/COMP 32/ENVI 318

Secondary Crosslistings: "Now I wish you to know about the strangest thing ever found anywhere in written texts or in human memory...I tell you that on the right-hand side of the Indies there was an island called California, which was very close to the region of the Earthly Paradise." As far as we know, the name "California" was first written in this passage by Garcí Rodríguez de Montalvo, ca. 1510. Within a few decades, it came to be placed first on the peninsula of Baja California and then upon a region stretching up the Western coast of North America. What aspects of this vision are still drawn upon in how we imagine California today? How did certain narratives of California come to be, who has imagined California in certain ways, and why? What is the relationship between certain myths, the peoples who have imagined them, and the other peoples who have shared California dreams? In this course, we will examine some of the myths that surround California by looking at a few specific moments of interaction between the peoples who have come to make California home and the specific places in which they have interacted with each other. Of special interest will be imaginations of the Spanish missions, the Gold Rush, agricultural California, wilderness California, California as "sprawling multicultural dystopia," and California as "west of the west."

Class Format: seminar
Requirements/Evaluation: this course will be mostly discussion oriented, with grading based upon participation, short writing exercises, one 3-page review essay with mandatory revision, one 5- to 8-page midterm review essay, and a final 10- to 15-page comparative review essay
Prerequisites: none
Enrollment Limit: 19
Expected Class Size: 15
Enrollment Preferences: none
Distribution Notes: meets Division 1 requirement if registration is under COMP; meets Division 2 requirement if registration is under LATS, AMST, ENVI or REL
Distributional Requirements:
Division 2
Writing Intensive
Crosslistings:
AMST Comp Studies in Race, Ethnicity, Diaspora
AMST Space and Place Electives
ENVI Humanities, Arts + Social Science Electives
ENVP SC-B Group Electives
LATS Core Electives

ENVI 320(S) Cultivating the Local: Place-based Productions of Food and Agriculture
Crosslistings: ENVI 320/ANTH 320
Primary Crosslisting
This course explores the relation between ideas and practices relating to nature, food and agriculture, and specific formations of place, locality and region. Through this course we will lay conceptual and theoretical foundations for understanding the productions of place, nature, food and agriculture, and the interconnections among them. How do socially constructed ideas about nature, agrarian landscapes, and even particular environmental qualities such as soil and water, shape the formation of categories such as city, country, and region or even of specific food products? Through what processes do particular food products come to be distinctively place-based? How do we understand the seeming shift to place-based agriculture and food production, in the context of an industrialized and increasingly intricate global food system that has often homogenized and standardized food production? How is locality produced through food and agriculture, and how are food and agriculture produced through claims to locality and place? These interconnections, and the relations of power interlaced in them, are salient in contemporary praxis, and the course builds on grounded, conceptual understandings to explore contemporary phenomena such as the appellation d’origine contrôlée in France’s wine producing regions, the development of Geographic Indication within the World Trade Organization, the formation of “Organic Uttarakhand” that is the subject of my own research, and the affective economies generated through artisanal food production. Through an interdisciplinary approach that brings together scholarship in anthropology, social and cultural history, sociology, and cultural geography, this course aims to foster expansive, grounded and critical understandings about the connections among nature, food, agriculture and place-making.
Class Format: seminar
Requirements/Evaluation: students are required to submit reading responses before each class, complete a take-home mid-term, and design and conduct an original research project which will provide the basis for a final research paper
Enrollment Limit: 19
Expected Class Size: 19
Distributional Requirements:
Division 2
Other Attributes:
ENVI Humanities, Arts + Social Science Electives
ENVP SC-B Group Electives
PHLH Nutrition and Food Security

Spring 2015
SEM Section: 01 TF 01:10 02:25 Instructor: Shaila Seshia Galvin

ENVI 3261(F) Time and Space
Crosslistings: ANTH 326/ENVI 326
Secondary Crosslisting
Often considered a mere backdrop to daily life, this course challenges that time and space are not inert, but are instead social products. Exploring a span of western science and philosophy ranging from the Enlightenment to contemporary debates in and about post-modernism, we interrogate the concepts of time and space by situating them across cultural and temporal contexts. This course provides an introduction to classic and contemporary social science literatures on the sociocultural production and experience of time and space, including by such figures as Bakhtin, Lefebvre, and Benjamin. We will further take up anthropological analyses of concrete ethnographic materials from contexts in (but not limited to) the Amazon, New York City, Mombai, Melanesia, Paris, and Appalachia. Topics of major concern include memory, ritual, narrative, deixis, chronology and time-reckoning, embodiment, landscape, planetarity and cosmopolitanism, as well as the spatiotemporal organization of contemporary industrial and post-industrial societies.
Class Format: tutorial
Requirements/Evaluation: weekly writing assignments and tutorial attendance every week
Prerequisites: none; open to first year students
Enrollment Limit: 10
Expected Class Size: 10
Enrollment Preferences: Anthropology and Sociology majors
Extra Info: may not be taken on a pass/fail basis
Distributional Requirements:
Division 2

Fall 2014
TUT Section: 01 TBA Instructor: LaShandra Sullivan

ENVI 328 Global Environmental Politics
Crosslistings: ENVI 328/PSCI 328
Primary Crosslisting
This seminar draws on the last four decades of international efforts to regulate the environmental commons. The process of negotiating and implementing international environmental treaties will be a core focus of the course, yet emphasis will also be placed on emerging non-state means of addressing global environmental challenges. A variety of challenges faced in global environmental policymaking (compliance, participation by civil society and industry, incorporation of science, efficiency.) will be examined through the study of several international regimes, including on climate change, endangered species, biodiversity, biosafety and chemicals management.
Class Format: seminar
Toxicology and Cancer

**Course Title:** Toxicalogy and Cancer

**Course Description:** What is a poison and what makes it poisonous? Paracelcus commented in 1537: "What is not a poison? All things are poisons (and nothing is without poison). The dose alone keeps a thing from being a poison." Is the picture really this bleak; is modern technology-based society truly swimming in a sea of toxic materials? How are poisons metabolized and how do they lead to the development of cancer? What is cancer and what does it take to cause it? What biochemical defense mechanisms exist to counteract the effects of poisons? What are the safety levels set by regulatory agencies largely based on historical, anecdotal, and animal data? Are these levels appropriate? What is a poison? Paracelcus commented in 1537: "What is not a poison? All things are poisons (and nothing is without poison). The dose alone keeps a thing from being a poison." Is the picture really this bleak; is modern technology-based society truly swimming in a sea of toxic materials? How are poisons metabolized and how do they lead to the development of cancer? What is cancer and what does it take to cause it? What biochemical defense mechanisms exist to counteract the effects of poisons? What are the safety levels set by regulatory agencies largely based on historical, anecdotal, and animal data? Are these levels appropriate?

**Course Objectives:** The course objectives are to:

1. Understand the fundamentals of modern chemical toxicology and the induction and progression of cancer.
2. Explore the safety levels set by regulatory agencies and their appropriateness.
3. Discuss the biochemical defense mechanisms and their effectiveness.
4. Examine the historical, anecdotal, and animal data used to set safety levels.
5. Analyze the implications of modern technology on the environment and human health.

**Course Format:** The course format consists of lectures, discussions, and laboratory experiments. Students are expected to participate actively in class discussions and complete assigned readings.

**Required Text:** To be announced.

**Prerequisites:** CHEM 156; may be taken concurrently with CHEM 251/255; a basic understanding of organic chemistry

**Enrollment Limit:** 30

**Expected Class Size:** 24

**Instructor:** Walter Johnston

**Fall 2014**

**Sem Section:** 01 MR 02:35 03:50  Instructor: Walter Johnston
ENVI 346(F)  Environmental Psychology
Crosslistings: PSYC 346/ENVI 346

Secondary Crosslisting
This is a course in social psychology as it pertains to the natural environment. We will consider how the environment influences aspects of human psychology (e.g., the psychological implications of humans' disconnection with nature), as well as how human psychology influences the environment (e.g., why some people engage in environmentally destructive behaviors despite holding proenvironmental attitudes). At the core of this course is an attempt to examine various ways in which research and theory in social psychology can contribute insights to understanding (and encouraging) environmentally responsible behavior and sustainable practices, both here at Williams and globally. Because human choice and behavior play such an important role in environmental problems, a consideration of human psychology may therefore be an important part of the solution.

Class Format: empirical lab course

Requirements/Evaluation: a series of papers, two essay exams, written and oral reports of research
Prerequisites: PSYC 242 recommended, PSYC 201, or a comparable course in statistics and research methodology, is also recommended.
Enrollment Limit: 16
Expected Class Size: 16

Enrollment Preferences: Psychology majors and Environmental Studies concentrators

Distributional Requirements:
Division 2

Other Attributes:
ENVI Humanities, Arts + Social Science Electives
ENVP SC-B Group Electives
PSYC Area 4 - Social Psychology
PSYC Empirical Lab Course

Fall 2014
SEM Section: 01 TR 09:55 11:10 Instructor: Kenneth Savitsky

LAB Section: 02 T 01:00 04:00 Instructor: Kenneth Savitsky

ENVI 351(F,S) Marine Policy
Crosslistings: MAST 351/ENVI 351/PSCI 319

Secondary Crosslisting
This seminar utilizes the interdisciplinary background of the other Williams-Mystic courses to examine national and international contemporary issues in our relationship with ocean and coastal resources. This seminar takes a topical approach to the study of marine law and policy, examining fisheries, harbor development, coastal zone management, admiralty law, law of the sea, marine pollution, and shipping.

Class Format: lecture, discussions, guest lectures by active professionals, and includes coastal and near-shore field trips, and 10 days offshore

Requirements/Evaluation: an independent research paper, a presentation, and a final exam

Dept. Notes: this course satisfies the Environmental Policy requirement for the Environmental Policy major and the Environmental studies concentration

Extra Info: offered only at Mystic Seaport

Distributional Requirements:
Division 2

Other Attributes:
ENVI Environmental Policy
ENVP PTL Theory/Method Courses
ENVP PE-A Group Electives
ENVP PTL-A Group Electives
ENVP SC-A Group Electives
EXPE Experiential Education Courses
POEC International Political Economy Courses

Fall 2014
LEC Section: 01 TBA Instructor: Catherine Hall

Spring 2015
LEC Section: 01 TBA Instructor: Catherine Hall

ENVI 353(F,S) Apocalypse in Post-War America: Environmental Fear From the Atomic Age to Climate Change (W)
Crosslistings: ENVI 353/AMST 353

Primary Crosslisting
One dominant strain of the postwar American environmental imagination has been fear, from diffuse anxiety to paralyzing terror. This course will explore this culture of fear through a variety of topics in postwar American environmental consciousness, including the specter of atomic annihilation, the anti-ecotoxics and environmental justice movements, food security, and climate change. We will also explore issues surrounding the idea of wilderness, the relation of native peoples and other minority groups with the landscape, the natural environment in urban spaces, human labor in the natural environment, and the ways in which a variety of disciplinary perspectives such as law, politics, and public health inform our historical understanding of environmental fear. Key texts will include Kurt Vonnegut's Cat's Cradle, Rachel Carson's Silent Spring, and Cormac McCarthy's The Road.

Class Format: seminar

Requirements/Evaluation: evaluation based on attendance and participation, weekly written responses to readings, structuring and leading discussion during one class meeting, a final research paper proposal, 5-7 page draft, and a final 12-15 page research paper

Prerequisites: none

Enrollment Limit: 15

Expected Class Size: 10

Distributional Requirements:
Division 2
Writing Intensive

Other Attributes:
ENVI Humanities, Arts + Social Science Electives
ENVP SC-B Group Electives

Fall 2014
SEM Section: 01 W 01:10 03:50 Instructor: Brian McCamack

Spring 2015
SEM Section: 01 Cancelled
ENVI 364 (F) Instrumental Methods of Analysis
Crosslistings: CHEM 364/ENVI 364
Secondary Crosslistings
This course provides the student an understanding of the applicability of current laboratory instrumentation both to the elucidation of fundamental chemical phenomena and to the measurement of certain atomic and molecular parameters. Experimental methods, including absorption and emission spectroscopy in the x-ray, ultraviolet, visible, infrared, microwave, and radio frequency regions, chromatology, electrochemistry, mass spectrometry, magnetic resonance, and thermal methods are discussed, with examples drawn from the current literature. The analytical chemical techniques developed in this course are useful in a wide variety of scientific areas. The course also covers new developments in instrumental methods and advances in the approaches used to address modern analytical questions.
Class Format: lecture, three hours per week; laboratory, four hours per week
Requirements/Evaluation: evaluation is based on class participation, problem sets, oral presentation and discussion of selected topics, laboratory work, and an independent project
Prerequisites: CHEM 153 or 256 and 251/255; may be taken concurrently with CHEM 256 with permission of instructor
Enrollment Limit: 18
Expected Class Size: 8
Distributional Requirements:
Division 2
Other Attributes:
ENVI Natural World Electives
ENVP Group EB-A Electives
ENVP Methods Courses
MTSC Related Courses

Fall 2014
LEC Section: 01 TR 08:30 09:45 Instructor: Patrick Barber
LAB Section: 02 T 01:00 05:00 Instructor: Patrick Barber
LAB Section: 03 M 01:00 05:00 Instructor: John Thoman
LAB Section: 04 W 01:00 05:00 Instructor: Patrick Barber

ENVI 371 The History of U.S. Environmental Politics
Crosslistings: HIST 371/ENVI 371
Secondary Crosslistings
The politics surrounding the environment today are a super-heated source of conflict, at the same time that most opinion polls show that Americans widely embrace many environmental protections. While environmental concerns have long been a part of local politics in America, this course will largely explore the emergence and prominence of environmental issues in national politics from the first organized conservation efforts in the late nineteenth century to the present-day concerns with the global environment. Throughout the course, we will investigate both how changes in the environment have shaped American political decisions and how political decisions have altered the American, as well as the global environment, with particular attention to which groups of people have had, or have not had, access to political processes and institutions.
Class Format: lecture/discussion
Requirements/Evaluation: evaluation will be based on class participation, weekly critical writing, an analytical essay, and a final exam
Prerequisites: none; open to all
Enrollment Limit: 25
Expected Class Size: 20
Enrollment Preferences: History, Environmental Policy, and Environmental Science majors or prospective majors if the course is over-enrolled
Distributional Requirements:
Division 2
Other Attributes:
ENVI Humanities, Arts + Social Science Electives
ENVP PE-A Group Electives
ENVP PTL-A Group Electives
ENVP SC-A Group Electives
HIST Group F Electives - U.S. + Canada

Not Offered Academic Year 2015
LEC Instructor: Karen Merrill

ENVI 386 Environmental Policy and Natural Resource Management (Q)
Crosslistings: ECON 386/ENVI 386/ECON 518
Secondary Crosslistings
Policymakers in developed and developing countries struggle to manage natural resources and to protect the environment from excessive degradation while attending to pressing human needs. Economics has a rich body of advice to help achieve these goals. In this course, we will study environmental policy and natural resource management from a microeconomic (and, to a lesser extent, macroeconomic) perspective. We will explore relevant economic theory, look for empirical evidence in scholarly studies, and study actual policies as they have been implemented. The course is undergirded by concepts like sustainability, welfare within and across generations, market failure, and valuation of environmental assets. We will continually emphasize issues of efficiency and equity. Again and again we will see that the challenges are both technical and ethical, as society is forced to make troubling tradeoffs. Topics in the class will include pollution (with a focus on climate change and on incentive-based policies like tax and “cap-and-trade”), management of nonrenewable and renewable resources (including resources like oil, forests, and fisheries), and energy (with its obvious links to resource use and climate change). We will also examine the relationship between development and the environment, touching on controversial topics such as the “natural resources curse” and the relationship between economic growth and the demand for environmental quality.
Class Format: seminar
Requirements/Evaluation: problem sets, paper, brief presentation, a midterm, and a final exam
Prerequisites: ECON 251, familiarity with statistics
Enrollment Limit: 25
Expected Class Size: 20
Enrollment Preferences: senior Economic majors and CDE masters
Dept. Notes: this course satisfies the Environmental Policy requirement for the Environmental Policy major and the Environmental studies concentration
Distributional Requirements:
Division 2
Quantitative/Formal Reasoning
Other Attributes:
ENVI 388 Urbanization and Development

Crosslistings: ECON 388/ECON 517/ENVI 388

Secondary Crosslisting

At current rates of growth, the combined population of urban areas in developing countries will double in the next 30 years. The land area devoted to urban use is expected to double even more quickly. The costs of providing housing and infrastructure to accommodate this growth are enormous, but the costs of failing to accommodate urban development may be even larger. The decisions made in response to these challenges will affect the economic performance of these countries and the health and welfare of urban residents. By affecting global patterns of energy use, these decisions will have broader impacts on the entire planet. This course will focus on these challenges. What are the economic forces that drive the process of urbanization, and how does the level of urbanization affect economic development? How are policies towards housing, transportation, public finance and development affected by urbanization? What policy choices are available, and which are most likely to succeed in dealing with the challenges of urban growth?

Class Format: lecture/discussion
Requirements/Evaluation: a midterm and a final exam, plus a paper that evaluates specific problems, policy alternatives, and provides some analysis of relevant data
Prerequisites: ECON 251 plus POEC 253, ECON 255, 502 or 503; undergraduate enrollment limited and requires instructor's permission
Distributional Requirements: Division 2
Other Attributes: ENVI Environmental Policy
INST - Urbanizing World Electives
POEC Comparative POEC/Public Policy Courses

Not Offered Academic Year 2015

LEC Instructor: Stephen Sheppard

ENVI 397(F) Independent Study of Environmental Problems

Individuals or groups of students may undertake a study of a particular environmental problem. The project may involve either pure or applied research, policy analysis, laboratory or field studies, or may be a creative writing or photography project dealing with the environment. A variety of nearby sites are available for the study of natural systems. Ongoing projects in the College-owned Hopkins Forest include ecological studies, animal behavior, and acid rain effects on soils, plants, and animals. Students may also choose to work on local, national, or international policy or planning issues, and opportunities to work with town and regional planning officials are available. Projects are unrestricted as to disciplinary focus. Students should consult with faculty well before the start of the semester in which they plan to carry out their project.

Class Format: independent study
Prerequisites: approval by the Chair of Environmental Studies
Distributional Requirements: Non-divisional

Not Offered Academic Year 2015

IND Section: 01 TBA Instructor: Ralph Bradburd

ENVI 398(S) Independent Study of Environmental Problems

Individuals or groups of students may undertake a study of a particular environmental problem. The project may involve either pure or applied research, policy analysis, laboratory or field studies, or may be a creative writing or photography project dealing with the environment. A variety of nearby sites are available for the study of natural systems. Ongoing projects in the College-owned Hopkins Forest include ecological studies, animal behavior, and acid rain effects on soils, plants, and animals. Students may also choose to work on local, national, or international policy or planning issues, and opportunities to work with town and regional planning officials are available. Projects are unrestricted as to disciplinary focus. Students should consult with faculty well before the start of the semester in which they plan to carry out their project.

Class Format: independent study
Prerequisites: approval by the Chair of Environmental Studies
Distributional Requirements: Non-divisional

Spring 2015

IND Section: 01 TBA Instructor: Ralph Bradburd

ENVI 402(S) Senior Seminar: Perspectives on Environmental Studies

Crosslistings: ENVI 402/MAST 402

Primary Crosslisting

The Environmental Studies and Maritime Studies programs provide students with an opportunity to explore the myriad ways in which humans interact with diverse environments at scales ranging from local to global. As the capstone course for Environmental Studies and Maritime Studies, this seminar will bring together students who will have specialized in the humanities, social studies and/or the sciences and will provide an opportunity for exchange among these disciplinary streams. Readings and discussion will be organized around a common theme. Over the course of the seminar, students will develop a sustained independent research project on a topic of their choice with numerous opportunities for collaboration.

Class Format: seminar
Requirements/Evaluation: evaluation is based on active participation, discussion leading, several smaller assignments and capstone project
Prerequisites: ENVI 302 or MAST 351 Maritime Policy or permission of instructor
Enrollment Limit: 20
Expected Class Size: 19
Enrollment Preferences: limited to senior Environmental Policy and Environmental Science majors and Environmental Studies and Maritime Studies concentrators
Dept. Notes: required course for students wishing to complete the Environmental Policy & Environmental Science majors and the Environmental Studies or the Maritime Studies concentrations
Distribution Notes: no division 1, 2 or 3 credit
ENVI 422(S)  Ecology of Sustainable Agriculture
Crosslistings: BIOL 422/ENVI 422
Secondary Crosslisting
A seminar / field course investigating patterns, processes, and concepts of stability in human-dominated, food production ecosystems. As a capstone course, the course will draw upon the experiences that students have had in biology and environmental studies courses. Topics will include: the relationships among diversity, ecosystem function, sustainability, resilience, and stability of food production and distribution systems, nutrient pools and processing in human-dominated ecosystems. Two extensive field trips will be taken to agricultural operations in the region. Each student will present a seminar on a topic requiring extensive reading of primary resources and is responsible for leading the discussion that ensues. Reading question paper assignments will be due prior to the seminar. Criticism paper assignments will be made at approximately bi-weekly intervals and due two days after the seminar to which they relate.

Class Format: seminar; two 75 minute sessions per week
Requirements/Evaluation: evaluation will be based on writing assignments, seminar presentation, and course participation
Prerequisites: BIOL/ENVI 203 or BIOL 302 or permission of instructor
Enrollment Limit: 16
Expected Class Size: 16
Enrollment Preferences: open to juniors and seniors
Dept. Notes: Satisfies the distribution requirement in the major; the ENVS biology track; the Natural World distributional requirement of the Environmental Studies program
Distributional Requirements: Division 3
Other Attributes: ENVI Natural World Electives
ENVS Group EB-A Electives
PHLH Nutrition and Food Security

Spring 2015
SEM Section: 01 M 07:00 09:40 Instructor: Nicolas Howe

ENVI 424T  Conservation Biology (W)
Crosslistings: BIOL 424/ENVI 424
Secondary Crosslisting
This tutorial examines the application of population genetics, population ecology, community ecology, and systematic to the conservation of biological diversity. While the focus of this tutorial is on biological rather than social, legal, or political issues underlying conservation decisions, the context is to develop science-based recommendations that can inform policy. Topics include extinction, the genetics of small populations, habitat fragmentation, the impact of invasive species, restoration ecology, design of reserves and conservation strategies.
Format: tutorial/field trip, one to three hours per week. Requirements: evaluation will be based on 5 writing assignments, tutorial presentation, performance in the role of paper critic, & course participation
Prerequisites: BIOL/ENVI 203 or BIOL 302 or 305 or permission of instructor; open to juniors and seniors
Enrollment Limit: 10
Expected Class Size: 10
Enrollment Preferences: Biology majors who have not taken a 400-level course; then to senior Environmental Studies majors or concentrators
Dept. Notes: satisfies the distribution requirement in the Biology major
Extra Info: may not be taken on a pass/fail basis
Distributional Requirements: Division 3
Writing Intensive
Other Attributes: ENVI Natural World Electives

Not Offered Academic Year 2015
TUT  Instructor: Joan Edwards

ENVI 478(S)  Cold War Landscapes
Crosslistings: HIST 478/ENVI 478/AMST 478
Secondary Crosslisting
The Cold War between the United States and the Soviet Union set in motion dramatic changes to the natural and built environments of many nations between 1945 and 1991. Nuclear test and missile launch sites, naval installations, military production operations, and border securitizations are just a few of the most obvious ways in which the stand-off between the two countries altered rural and urban landscapes around the world. But one can also see the Cold War as setting in motion less immediately direct but nonetheless profound changes to the way that many people saw and planned for the environments around them, as evidenced, for instance, by the rise of the American suburb, the reconstruction of postwar Europe, and agricultural and industrial initiatives in many developing nations. We will begin this seminar by exploring several distinct "Cold War landscapes" in the United States, then move on to examining others in Europe and the Soviet Union. We will spend the final weeks of the semester discussing examples from other parts of the world. Our approach to our topics will be interdisciplinary throughout the semester, and students are welcome to write their research papers on any geographical area of the world.
Class Format: seminar
Requirements/Evaluation: evaluation will be based on class participation, weekly critical writing, and a final research paper
Prerequisites: none
Enrollment Limit: 15
Expected Class Size: 15
Enrollment Preferences: History, Environmental Policy, and Environmental Science majors if over-enrolled
Distributional Requirements: Division 2
Other Attributes:
AMST Space and Place Electives
ENVI Humanities, Arts + Social Science Electives
ENVP SC-B Group Electives
HIST Group C Electives - Europe and Russia
HIST Group F Electives - U.S. + Canada

Spring 2015
SEM Section: 01 W 01:10 03:50 Instructor: Karen Merrill

ENVI 493(F) Senior Research and Thesis: Environmental Studies
Environmental Studies senior research and thesis.
Class Format: independent study
Prerequisites: approval by the director of the Center
Extra Info: this is part of a full-year thesis (493-494)
Distributional Requirements: Non-divisional

Fall 2014
HON Section: 01 TBA Instructor: Ralph Bradburd

ENVI 494(S) Senior Research and Thesis: Environmental Studies
Environmental Studies senior research and thesis.
Class Format: independent study
Prerequisites: approval by the director of the Center
Extra Info: this is part of a full-year thesis (493-494)
Distributional Requirements: Non-divisional

Spring 2015
HON Section: 01 TBA Instructor: Ralph Bradburd

ENVP 493(F) Senior Thesis: Environmental Policy
Class Format: independent thesis
Distributional Requirements: Division 2

Fall 2014
HON Section: 01 TBA Instructor: Ralph Bradburd

ENVP 494(S) Senior Thesis: Environmental Policy
Class Format: independent thesis
Distributional Requirements: Division 2

Spring 2015
HON Section: 01 TBA Instructor: Ralph Bradburd

ENVS 493(F) Senior Thesis: Environmental Science
Class Format: independent thesis
Distributional Requirements: Division 3

Fall 2014
HON Section: 01 TBA Instructor: Ralph Bradburd

ENVS 494(S) Senior Thesis: Environmental Science
Class Format: independent thesis
Distributional Requirements: Division 3

Spring 2015
HON Section: 01 TBA Instructor: Ralph Bradburd