Environmental Studies

Director: Girdler
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The concentration in environmental studies is based upon the recognition that environmental and resource problems are not just biological, geological, economic, or political. Therefore, the concentration is structured as an interdisciplinary study by selecting appropriate courses from the natural and social sciences, as well as the humanities, in order to pool knowledge from across traditional disciplinary lines. This information is essential for an interdisciplinary assessment, analysis, and evaluation of environmental problems.

Students interested in environmental studies are urged to keep this interest in mind when selecting a site for study abroad. If approved ahead of time by the Director, up to one course from study abroad can count toward the completion of the concentration. Moreover, pursuing these interests abroad emphasizes the important international dimensions of many environmental issues while often permitting students to gain familiarity with some problems (and their possible solutions) in other countries. Courses from study abroad sites in Costa Rica, Ecuador, Kenya, and Thailand are particularly suitable.

The Concentration in Environmental Studies

Six units are required.

Take at least **one course from each** of the four numbered groups listed below (* indicates that a course has a pre-requisite course, usually a 100-level course in the same department), and **two additional** courses from any of the groups or the additional elective list. Study Abroad courses, Independent Study courses, and Senior Individualized Projects may be approved on a case by case basis; please consult with the Program Director.

**Four required courses (one from each of four numbered groups below):**

1. **Natural Science**
   
   BIOL 115 Environmental Science (*to be taken as early as possible*)

2. **Social Science**
   
   ECON 235 Environmental and Resource Economics* (*highly recommended*)
   
   ANSO 232 Nature and Society
   
   ANSO 252 Political Ecology of Waste*
   
   ANSO/ENVS 350 Political History of Western Environmental Thought*
   
   ANSO/ENVS 365 Humans and Non-Humans*
   
   POLS 267 Environmental and Political Theory

3. **Arts & Humanities**
   
   ARTX 234 Structure & Space
   
   ENGL 151 Reading the World: Environments: Gardens
ENGL 156 RTW: Social Justice
ENGL 217 World Indigenous Literatures
ENGL/SEMN 435 American Indian Literature and the Law*
HIST 212 American Environmental History
HIST 217 History of Leisure and Recreation in America
PHIL 108 Ecological Philosophy
PHIL 310 Critical Social Theory

4. Senior Seminar (must have senior standing to enroll)
   ENVS 490 Senior Seminar
   ENVS/SEMN 401 Energy & Environmental Policy
   SEMN 408 Slow Farming

Two additional elective courses selected from any courses listed above or below:

Elective Courses (do not count as one of four required categories):
   BIOL/ENVS 195 Science and Social Justice
   BIOL 224 Ecology & Conservation*
   BIOL 232 Plant Biology
   CHEM 240 Analytical Chemistry*
   BIOL 396 Entomology*
   BIOL 485 Topics in Biology: Trees*

* indicates that a course has a pre-requisite, usually a 100-level course in the same department

Note: New courses with environmental or sustainability themes may be approved throughout the year that are not on the elective list. Students are encouraged to ask the Program Director for permission to count such courses as electives for the concentration. Additional special topics one-time course offerings may count as electives depending on content (e.g. ENGL, RELG); please discuss the suitability of these courses with the Program Director.
Environmental Studies courses

ENVS/BIOL 195 Science and Social Justice
Why does anyone become a scientist? What problems do you want to solve? This course is intended for first year students who are interested in exploring the STEM fields (Science, Technology, Engineering and Mathematics) and also want to empower their communities to address some of society's most vexing problems. We will take an interdisciplinary scientific approach to issues such as lead in pipes and paint, sinking coastal cities, contested genomes, and conflicts between technology and culture. At the same time we will necessarily confront intersecting ethical and social factors that set the context for these issues, such as race, gender, citizenship status, colonial history, and access to healthcare and education. No prior knowledge of any scientific discipline is required to be successful in this course, although we will be doing science. Note: You must co-enroll in the laboratory section of this course.

ENVS/ANSO 350 Political Histories of Western Environmental Thought
This course explores a partial (Western) history of how humans have understood themselves in relation to nature. To do so, this course relies on a landmark text in the field along with a series of primary texts, tracing the continuities and ruptures in thought during different historical periods have engaged with the idea of nature and the place of the human within it. Although, the course relies mostly on a broadly defined Western thought tradition in this course but students are encouraged to undertake research on other traditions and bring those into the classroom. 
Prerequisite: ANSO-103

ENVS/ANSO 365 Humans and Non-Humans
What does it mean to be human? What is the history of the notion of the human, and who or what has been excluded from it? What does it mean to study non-humans through a humanistic frame? How can we know non-human beings? What kinds of knowledges exist at the edges of the discourse on the human? This course will introduce students to these issues through a combination of readings that engage with the field known as new materialisms to consider the ways in which the study of humanity has been challenged by new modes of thinking about being, producing situated answers to these questions.

ENVS/SEMN 401 Energy & Environment Policy Worldwide
National patterns of energy use and approaches to environmental policy vary over a wide range around the World. An intelligent analysis of these divergent behaviors and their environmental and financial consequences requires input from the fields of Science, Political Science, and Economics, and is also informed by international experiences. Possible careers involving environmental science, engineering and politics/policy will be discussed. 
Prerequisite: Senior standing and ECON 235, POLS-105, POLS-106, or POLS-267

ENVS 490 Environmental Studies Senior Seminar
Examination and analysis of selected contemporary environmental and resource problems and issues from an interdisciplinary perspective. In addressing these issues, special attention is given to the application and integration of principles, theories, and analytical techniques introduced in the core courses. Topics covered in the seminar are likely to vary annually as new problems, policies, and solutions develop.
Prerequisite: Core courses plus senior standing, or permission.

ENVS/BIOL 495 Urban Ecology
Currently, over 50% of the world population lives in urban or urbanizing areas. This course examines the ecology and thoughtful management of urban systems. We will assess how social, biological, physical, and chemical sciences act on urban ecosystems and we will apply these branches of science to issues currently faced by urban inhabitants (plants and animals). We will also discuss how urban planning affects issues related to climate change, social justice, human health, pollution, ecosystem health, and aesthetics. Without humans, there would be no urban areas, therefore we will pay particular attention to how humans fit into and change ecosystems.
Prerequisite: Must have taken BIOL-115 or BIOL-224. Open to students with Junior or Senior standing. Initially open to students with Biology Major or ENVS Concentration.

ENVS 593 Senior Individualized Project
Each program or department sets its own requirements for Senior Individualized Projects done in that department, including the range of acceptable projects, the required background of students doing projects, the format of the SIP, and the expected scope and depth of projects. See the Kalamazoo Curriculum -&gt; Curriculum Details and Policies section of the Academic Catalog for more details.
Prerequisite: Permission of department and SIP supervisor required.
conditions.

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