ENVIRONMENTAL STUDIES

The field of Environmental Studies addresses some of the most critical and complicated issues of our time: those regarding environmental change and the future of humanity. The systems that make up planet Earth are simultaneously comprehensible and complex, predictable and chaotic, robust and fragile. Changes in one part of this system of systems may have far-reaching implications for other parts. As citizens of Earth, we cannot afford to remain ignorant of the global environmental consequences of our daily activities.

A degree in Environmental Studies prepares students for a wide spectrum of careers, including environmental law, consulting, policy making, technical innovation, teaching and research. Students in the major select one of two tracks: Environmental Science or Environmental Policy.

The Environmental Science field integrates principles and methods of the natural sciences (Biology, Chemistry, Geology, and Physics) in order to understand the Earth's systems, the impact of human activities on these systems, and how these effects may be mitigated. The program in Environmental Studies prepares students for careers in conservation, ecosystem restoration, environmental consulting and research in government non-profit organizations and businesses. To be a responsible environmental scientist, however, one must have some awareness of environmental policy issues.

Environmental Policy focuses on how human economic, social, and governmental systems influence human interactions with the environment. The program in Environmental Policy prepares students to work in a variety of public and private sector settings including the EPA, DOE, regional planning commissions, community development programs, legal firms, private consulting and planning firms, etc. To be a responsible environmental policy maker, one must have some background in the science of the environment.

The strength and rigor of the Environmental Studies program at Lawrence is documented by the fact that several Lawrence students (Gustavo Setrini in 2001, Clara Muggli in 2002, and Stephen Rogness in 2003) have been awarded the prestigious Udall Scholarship.

CURRICULUM

The Environmental Studies Major

Whether you select the Environmental Science or Environmental Policy track, you will take a series of core courses at the introductory, intermediate and advanced levels, addressing scientific, political and economic aspects of environmental issues at increasing levels of sophistication, culminating with a capstone course in which you carry out independent research on a topic of your choosing. Because environmental issues often involve analysis of large data sets and making decisions based on probabilistic models, students in both tracks also take an introductory course in statistics.

A particularly distinctive part of the Environmental Studies program at Lawrence is an annual symposium organized around a particular topic with both scientific and policy components (e.g., sustainable agriculture; Great Lakes water levels, green buildings). Each year, two or three nationally recognized experts on the selected topic are brought to campus. In the weeks before a visit by one of the speakers, students - together with environmental studies faculty read and discuss papers suggested by the speaker. The speakers meet with students in the seminar following their public lectures, providing students with an opportunity to interact directly with scientists and policy makers at the forefront of environmental issues. The final products of this course have included, a campus wide environmental management plan, the planning and implementation of a ¼ acre organic garden on campus, and strategies for inclusion of green building techniques in future construction and renovation projects.

Beyond the core sequence, environmental science students take six courses in the sciences, including three upper level courses from a single department. Science-track students also take three courses in environmental social sciences, and complete their degree by selecting two additional courses from a wide range of environmental studies electives. In the environmental policy track, students choose two introductory science courses from biology, geology, and chemistry, and six courses from environmental economics, education, government policy, anthropology and/or philosophy, and an additional two from the list of environmental studies electives.

The Environmental Studies Minor

The minor in Environmental Studies is designed to complement a major in any field. To complete the minor, you will take the introductory and intermediate core courses in environmental studies, two introductory science courses and two social science courses.

STUDENT RESEARCH

You will be able to conduct significant research projects relating to different aspects of the environment, either assisting a faculty member on his or her own research or exploring an area of your own choosing. These projects frequently culminate in senior honors projects, including:

Robert Boeckman '06, "Comparison of Winter Limnology of Grenlie Lake, WI Over a 30-Year Period"

Gretchen Gerrish '98, "Effect of Little Rock Lake Experimental Acidification on Diaptomus minutus: Investigation of the Diapause Egg Bank"

Brooke Miller '02, "Aquifer characterization and mineral reactions in a reclaimed wetland, Menasha, Wisconsin"

Thomas Murphy '03, "Ecotourism: Ethical Deliberation and Variable Implementation"

Martha Nelson Growdon '03, "Urban Pollutant Removal and Seasonality in Two Wetland Detention Basins on Apple Creek, in Appleton, Wisconsin"

Stephen Rogness '04, "Mining and the Clean Water Act"

Michael Schrimpf '06, "The Phytoplankton Community Structure of Southern Green Bay: Trophic Gradient and Seasonal Dynamics"
Sara Vacek '98, "An Ecological Water Quality Assessment of the Heckrodt Wetland Reserve, Menasha, Wisconsin"
Amanda Wick '02, "Comparative Study of Models for Implementation of Environmental Policy"

OFF-CAMPUS STUDY AND INTERNSHIPS

Lawrence students may earn credits toward a degree in Environmental Studies by attending the Semester in Environmental Science or the Sea Semester at Woods Hole, Massachusetts.

Examples of recent internships in Environmental Studies:
-Acting as researcher and aide at the Mineral Policy Center, Washington, D.C.
- Assisting the editor at Earthwatch Institute in Boston.
- Working at the Heifer Project International near Little Rock, Arkansas
- Developing educational materials for the Paper Discovery Museum
-Developing an administrative program for youth fishing activities for the Appleton Parks and Recreation Department.
-Learning the ropes at a commercial organic farm in southeast Wisconsin.

AFTER LAWRENCE

-William Haas, '02, recently completed a Master's of Public Administration in Environmental Policy at Columbia University's Biosphere 2 program.
-Peter Stevens, '03, Is a graduate student in the Natural Resources Dept., at Cornell University.
-Amber Zuhlke, '03, works as an Outreach Specialist for WasteCap Wisconsin.
- Lindsay Scheef, '04, is a graduate student at Florida State University in the Biological Oceanography Program.
-Stephen Rogness,'04, is a Legislative Assistant at PennEnvironment.
-Beth Bernhardt, '05, is a Teaching Assistant at the Woods Hole Marine Biological Laboratories Semester in Environmental Science Program.

COOPERATIVE DEGREE PROGRAM

Lawrence offers a cooperative program in forestry with Duke University in which you can earn a bachelor's degree and a master's degree in five years. You spend three years at Lawrence, followed by two years at Duke's School of Forestry and Environmental Studies, where you will concentrate on forest resource production, resource science, or resource policy and economics.

At the end of your five-year course of study, you will have earned a Bachelor of Arts degree from Lawrence and the professional Master of Forestry or Master of Environmental Management degree from Duke.

STUDENT ORGANIZATIONS

Greenfire, a student organization dedicated to environmental issues, gives you the opportunity to be active in environmental debates on both a local and national scale. In addition to broadly educating the Lawrence community about important issues, Greenfire promotes an environmental cause of specific importance to the Lawrence community, writing a resolution every year during Earthweek and organizing the annual Earth Day celebration.

The Sustainable Lawrence University Gardens (SLUG) is an organic garden club that is responsible for the yearly operation and maintenance of Lawrence's ¼ acre organic garden.

LUCC, the Lawrence Student Government, has a standing committee on environmental issues, which works closely with the Environmental Studies faculty committee in arranging for visiting speakers and other events.

FACULTY

Marcia Bjornerud, professor of geology
University of Minnesota-Minneapolis, B.S.; University of Wisconsin-Madison, M.S., Ph.D.
Interests: structural geology, tectonics, rock and mechanics, earth history
Jeffrey Clark, associate professor of geology
Middlebury College, B.A.; Johns Hopkins University, Ph.D.
Interests: earth surface processes, geomorphology, human influences on the environment
Bart De Stasio, Jr., associate professor of biology
Lawrence University, B.A.; University of Rhode Island; Cornell University, Ph.D.
Interests: evolutionary ecology, aquatic biology, predator-prey interactions
John P. Dreher, Lee Claflin-Robert S. Ingraham Professor of Philosophy
St. Peter's College, B.A.; Fordham University, M.A.; University of Cologne; University of Chicago, Ph.D.
Interests: history of philosophy, environmental ethics, American pragmatism
William Hixon, assistant professor of government
Washington University, B.A., University of Rochester, M.A., Ph.D.
Interests: international trade, growth and technological change
Mark Jenike, associate professor of anthropology
Harvard College, B.A.; University of California, Los Angeles, Ph.D.
Interests: Behavioral ecology, human biology, nutritional anthropology and human evolution.
Joy Jordan, associate professor of statistics
Indiana University, B.A.; University of Iowa, M.S., Ph.D.
Interests: statistics education, assessment, order-restricted inference
Andrew Knudsen, assistant professor of geology
Hamilton College, B.A.; University of Idaho, Ph.D.
Interests: geochemistry, mineralogy, and environmental geology.
Yoko Nagase, assistant professor of economics
Aoyama Gakuin University, B.A.; University of Oregon, Ph.D.
Interests: environmental and resource economics
Karen Nordell Pearson, associate professor of chemistry
Northwestern University, B.A.; Iowa State University, Ph.D.
Interests: materials chemistry
Stewart Purkey, associate professor of education
Stanford University, A.B.; Reed College, M.A.; University of Wisconsin-Madison, Ph.D.
Interests: educational reform
Monica Rico, assistant professor of history
University of California-Berkeley, B.A., M.A, Ph.D.
Interests: British and American history, landscape history
Jodi Sedlock, assistant professor of biology
Loyola University, B.A., B.S.; University of Illinois at Chicago, Ph.D.
Interests: tropical ecology and conservation, foraging behavior, mammology
Matthew Stoneking, associate professor of physics
Carleton College, B.A.; University of Wisconsin-Madison, Ph.D.
Interests: non-neutral plasma physics, magnetic confinement of neutral plasmas
David Thompson, assistant professor of chemistry
Carleton College, B.A.; University of Wisconsin-Madison, Ph.D.
Interests: analytical instrumentation and physical analysis, chemistry of malaria, laser spectroscopy