

Environmental Studies Program

"If we are to make the transition to a sustainable and decent future in a world of 10 to 12 billion people in the next 50 years, the size of the 'human footprint' must be reduced by 50 to 90 percent. This transition will require broad changes in our ideas, perception, and values-which makes it, in large part, a challenge to educational institutions."

David Orr ~ Professor of Environmental Studies

In the words of Alfred North Whitehead, "first-hand knowledge is the ultimate basis of intellectual life." Maintaining a century-and-a-half commitment to active learning at Oberlin College, the Environmental Studies Program fuses the intellectual rigor of multiple academic disciplines with the first-hand knowledge of real-world practice. The resulting experience prepares students with the critical thinking and practical know-how necessary to develop solutions to contemporary environmental challenges. Oberlin's Environmental Studies Program is designed to provide the skills and knowledge necessary to develop environmental solutions for the problems of the 21st century.

An Innovative Interdisciplinary Curriculum

Ecological design, an emerging field focused on how to remake the human presence in the world in ways that are calibrated to the constraints and opportunities imposed by the natural world, serves as a central focus of the program.

To understand environmental problems, students must cross disciplinary boundaries and explore a wide variety of viewpoints. At Oberlin, the environmental studies curriculum provides undergraduates with the transdisciplinary experiences needed to fully comprehend, analyze and address complex environmental issues. Environmental Studies majors take courses in the natural sciences, social sciences, and humanities, and have opportunities to apply lessons learned both locally and around the world.

All students take Environment and Society and Environmental Policy, four intermediate courses, and complete their major requirements through a combination of courses in natural science, politics, philosophy, history, and many other disciplines. A wide range of electives are offered in energy

technology, transcendentalism, systems modeling, sustainable agriculture, environmental education and literature, among others.

Honors Program

Students who establish a strong academic record are encouraged to pursue an honors project, which involves proposing, executing, and defending an interdisciplinary thesis during their senior year.

The Adam Joseph Lewis Center for Environmental Studies

In 2000 the program moved into new state-of-the-art facilities that provide hands-on experience with sustainable design and technology and a locus for interdisciplinary exchange of ideas. The center:

- Generates its energy from photovoltaic solar cells
- Purifies all wastewater on-site by ecological means
- Uses environmentally responsible materials including those with high recycled content, sustainably harvested wood, and products of service – those intended to keep being recycled and re-used.
- Monitors, regulates, and displays the ecological performance of the building and landscape in real-time
- Incorporates an instructional landscape including an organic garden, orchard, a small restored forest, and wetland

Linking the Curriculum and the Local Community

The campus and surrounding community serve as extensions of Oberlin's Environmental Studies curriculum, enabling students to gain first-hand experience in developing local and regional solutions to environmental challenges. For example:

- Environmental Studies majors have been instrumental in the clean-up of the Black River, one of 43 toxic hot-spots in the Great Lakes.
- Oberlin's Youth Energy Project has engaged Oberlin students in the local schools to teach primary and secondary schools students about solar technology, biodiesel, and energy efficiency.
- Student projects have led to the development of a more sustainable local food system through programs that link the college food supply to local farmers. The

program has played an instrumental role in creating Oberlin's first community-supported organic farm, in increased purchasing of local foods for the college, and in composting of a significant fraction of college wastes.

- Students and faculty have pioneered the restoration of a variety of local wetland ecosystems. As part of this work, the Environmental Studies Program developed and manages an extensive experimental wetland restoration facility that includes six hydrologically isolated wetland cells that are used by students and faculty to study wetland function and the efficacy of different management approaches to achieving high species diversity.
- Environmental Studies students have been instrumental in working with the community to promote renewable energy. Through a unique community-based agreement with the City of Oberlin, the college purchases 60% of its electricity from renewable and salvaged sources. Profits from the sale of this "green power" are allocated to a sustainable energy reserve fund that one Environmental Studies student used to build a wind monitoring tower to investigate the feasibility of wind power. Following an honors thesis on community-scale biodiesel, a recent graduate developed, "Full Circle Fuels", a downtown gas station that sells exclusively biofuels (ethanol and biodiesel) and specializes in converting vehicles to run on waste grease and cooking oil.
- Students played a central role in developing the nation's first "Campus Resource Monitoring System" that provides students with real-time and historical display of their electricity use in college dormitories.

After Graduation

The skills and knowledge gained through an Environmental Studies major help students find a variety of jobs in industry, government, non-profits and NGO's. Environmental Studies majors also pursue a wide variety of graduate degrees in fields including public policy, law, environmental science, agriculture, small business, environmental consulting, architecture, non-profit management, community organizing, public health, and public administration.

Environmental Studies Program Committee (ESPC) Faculty

The following faculty members serve on the ESPC and advise students interested in Environmental Studies:

JOHN E. PETERSEN, DIRECTOR

Associate Professor of Environmental Studies

B.A., Oberlin College, 1988

M.F.S., Yale University, 1992

Ph.D., University of Maryland, 1998

Research interests: systems ecology, ecological engineering and restoration, role of feedback control in ecological systems, experimental ecosystems, scale in ecology, ecology of the built environment.

MATTHEW ELROD

Associate Professor of Chemistry (2001)

B.A., Grinnell College, 1989

PhD. University of California, Berkeley, 1994

Research interests: Atmospheric chemistry; air pollution; climate change.

CYNTHIA FRANTZ

Assistant Professor of Psychology (2002)

B.A. Williams College, 1991

M.S. University of Massachusetts, Amherst, 1996

PhD. University of Massachusetts, Amherst, 2000

Research interests: Human's psychological relationship to the natural world, psychological benefits of exposure to nature, promotion of environmentally-friendly behavior.

MARY C. GARVIN

Assistant Professor of Biology

B.A., Hiram College, 1986

M.S., Louisiana State University, 1989

Ph.D., University of Florida, 1996

Research interests: Ecology of Arthropod-borne Diseases, Vector Ecology, Effect of Disease on Avian Demography. Dr. Garvin's research is field intensive and systems oriented, integrating ecological and physiological studies of arthropods, vertebrates and pathogens.

SYLVESTRE GAUDIN

Assistant Professor of Economics
Maîtrise, University of Paris-Sorbonne, 1985
M.A., Bowling Green University, 1990
Ph.D., Rice University, 2000
Research interests: Wealth, Social Status, and Neglect of Girls in India: Evidence from Immunization; using water bills as a conservation tool; qualitative feedback, economic incentives, and conservation; optimal groundwater use in growing cities with land subsidence

DENNIS HUBBARD

Associate Professor of Geology (1999)
B.S. University of Massachusetts (1971)
MS, University of South Carolina, 1974
PhD, University of South Carolina, 1977
Research interests: Sedimentary geology; coastal geomorphology; marine geology (coral reefs); coral-reef ecology

KATHRYN JANDA

Assistant Professor of Environmental Studies
B.A., Brown University, 1988
M.S., University of California at Berkeley, 1993
Ph.D., University of California at Berkeley, 1998
Research interests: voluntary environmental initiatives, institutional decision-making, ecological design practices, and energy-efficient technology adoption in buildings.

ROGER H. LAUSHMAN

Associate Professor of Biology
B.S., University of Kansas, 1979
M.S., Iowa State University, 1983
Ph.D., University of Georgia, 1988
Research interests: Population Genetics and Ecology, with particular emphasis on aquatic organisms. Use of electrophoresis and cytogenetics to study a variety of species. Population genetics of native grapes and crayfish.

T. SCOTT MCMILLIN

Chair and Associate Professor of English
B.A., University of Michigan, 1983
M.A., Syracuse University, 1989
Ph.D., Syracuse University, 1992
Research interests: 19th and 20th Century American literature; philosophical approaches to literature; nature writing; literary theory; currently working on a book that explores rivers in American life and literature.

LAURA MOORE

Assistant Professor of Geology (2002)
B.A., Colgate University, 1993
PhD, University of California, Santa Cruz, 1998
Research interests: The geologic and modern evolution of coastal environments; barrier island response to sea-level rise; impacts of climate change and anthropogenic activities on coastal processes; reconstruction of hurricane and tsunami records for the Holocene from coastal sediments.

THOMAS NEWLIN

Associate Professor of Russian
B.A., Swarthmore College, 1982
M.A., Columbia University, 1986
Ph.D., Columbia University, 1994
Research interests: Currently working on a book project titled "The Ecology of Perception in Nineteenth-Century Russia" that will explore the ways in which Russian artists, scientists, writers, and religious/ philosophical thinkers looked at, interpreted, and represented the natural world from the early 1820s to the late 1860s.

DAVID W. ORR

Professor of Environmental Studies
B.A., Westminster College, 1965
M.A., University of Michigan, 1966
Ph.D., University of Pennsylvania, 1973
Research interests: environmental policy, environmental education.

KARLA PARSONS-HUBBARD

Associate Professor of Geology

B.A., Beloit College, 1983

M.S., University of Rochester, 1987

Ph.D., University of Rochester, 1993

Research interests: the reconstruction of ancient environments from fossil assemblages; actualistic experimentation on the processes of death, decay, and fossilization in invertebrates; the ecology and geologic history of communities associated with hydrocarbon seeps and vents.

HARLAN WILSON

Professor of Politics

B.A., Willamette University, 1964

M.A., Ph.D., Univ. of California, Berkeley, 1965, 1978

Research interests: Environmental political theory, especially in relation to problems of democracy.

BEN WISNER

Visiting Professor of Environmental Studies (2004)

BA, University of California, Davis, 1965

MA, University of Chicago, 1966

PhD, Clark University, 1978

Research interests: Adaptation to climate change in urban and rural eastern and southern Africa, the success of smaller cities in mitigating natural hazards, contrasting them with mega cities, measurements and methods of assessment for vulnerability to natural hazards, especially in the context of recovery.

CHERYL WOLFE-CRAGIN

Lecturer; A.J. Lewis Center Facilities Manager; Watershed Education Coordinator

B.A., Oberlin College, 1989

Other faculty members who offer courses through the ESP are Sarah Schuster and Nanette Yannuzzi-Macias, Arts; Beth Blissman, Center for Service and Learning; Steve Wojtal, Geology; Michael Fisher and Carl Zimring, History; Robert Bosch, Math; Timothy Hall, Philosophy; Stephan Mayer, Psychology; John Scofield, Physics

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