

# Environmental Studies

“Solving an environmental problem requires being able to see it from all sides: scientific, sociological, political, and economic. Cornell’s Environmental Studies majors get that training and also have the freedom to focus a large amount of their coursework on their particular interests.”

*Geology Professor Rhawn Denniston, Environmental Studies Program chair*

Established in 1975, Cornell’s environmental studies major was one of the first in the country. The curriculum continues to evolve, integrating perspectives from an expanding range of disciplines and giving students flexibility to tailor their own courses of study. As the world grapples with environmental issues of increasing complexity, the program recognizes that collaboration across disciplines is crucial.

The program’s primary introductory course, Environmental Perspectives, is team-taught by a geologist and an economist. This course features a wide range of readings, guest speakers, and field trips, designed to open students’ eyes to the breadth of environmental issues from multiple perspectives.

Students then take an additional set of six core courses: three in the sciences, one in economics, and two in either the humanities or social sciences. Each core course approaches fundamental concepts in its discipline through the lens of environmental studies, making the lessons highly relevant and integrated across the curriculum.

The remaining six courses in the major are very flexible. In consultation with program faculty, each student creates a customized concentration to meet individual interests and goals, choosing from a wide range of courses or developing independent projects. All majors complete their coursework with a capstone project that allows them to put into practice the knowledge and skills they gain in the classroom.

## BENEFITS OF ONE COURSE AT A TIME

One Course At A Time enables frequent off-campus trips that incorporate real-world lessons. For example, students in Environmental Chemistry take water samples at a variety of sites along a local stream for later analysis in the lab. These samples contribute to an ongoing water quality study. They also travel to the State Hygienic Lab to learn from scientists involved in environmental testing and monitoring; to sites affected by severe flooding episodes; and to a Mississippi River museum where they learn about the history of natural resource issues in the area.

Students can also choose from many block-long, off-campus courses led by Cornell faculty. During Block 1 each year, a variety of courses are taught at the Wilderness Field Station in northern Minnesota, including Ecology and American Nature Writers. Other off-campus courses are held in the Bahamas, Mexico, Costa Rica, Ecuador, Myanmar, New Zealand, and other locations. These courses address issues as diverse as coral reef genetics and wildlife conservation.

## CURRICULUM HIGHLIGHTS

### CAPSTONE

Majors complete the program with a capstone project that addresses real-world issues related to their chosen concentration. Capstone projects can include student-faculty research or internships. Recent examples include investigating nitrogen levels in local streams, measuring food waste in the Hilltop Café, studying land-use practices in Madagascar, reconstructing past changes in Australian monsoon rainfall, and examining women’s roles in farming across rural India.

## Faculty Bios & Courses

### PROGRAM ADVISOR:

#### RHAWN DENNISTON

*Professor of Geology*

Teaches the core courses Environmental Perspectives and Hydrogeology, as well as Climate Change and Climates of the Ice Age. Conducts research with students on stalagmites and corals to understand prehistoric climates in the Australian tropics, Portugal, Caribbean, and the American West. Ph.D., University of Iowa; M.Sc., University of New Mexico; B.A., Hamilton College.

### AFFILIATED FACULTY:

#### MARTY CONDON

*Professor of Biology*

Teaches courses in evolutionary and plant biology. Studies the evolution and ecology of plant-animal relationships in the tropics. Ph.D., University of Texas; B.S. University of Michigan.

#### AAMER FAROOQI

*Professor of*

*Economics and Business*

Teaches the core courses Environmental Perspectives and Global Environmental Economics. Interested in environmental issues related to developing countries. Ph.D. and M.A., University of Pittsburgh; M.A., Ohio State University; B.A., Denison University.

#### GLENN FREEMAN

*Associate Professor of English*

Teaches the core course American Nature Writers on campus and in northern Minnesota. Ph.D., University of Florida, Gainesville; M.F.A., Vermont College; B.A., Goddard College.

#### ALICE GANZEL

*Associate Professor of Psychology*

Teaches Psychological Insights into Environmental Problems. Ph.D. and M.A., University of Nebraska, Lincoln; B.A., University of Nebraska, Lincoln.

#### LESLIE KATHLEEN HANKINS

*Professor of English*

Teaches the core course Literature and Arts of the Wilderness in northern Minnesota. Ph.D. and M.A., University of North Carolina at Chapel Hill; B.A., Duke University.



## RESEARCH

Faculty in a range of disciplines work with students on summer research projects related to the environment. Example research topics include species diversity in tropical rain forests, monarch butterfly and ornate box turtle conservation in eastern Iowa, prehistoric climate analysis based on stalagmites, carbon capture using ionic liquids, and bacteria that may protect plants from disease.

Support for student capstone research is available from a number of sources, including an endowed fund overseen by the environmental studies program, and through external grants from the Mellon Foundation and the National Science Foundation.

## AFTER CORNELL

Majors graduate from Cornell with strong preparation for advanced study and for careers in the environmental field. Employment of environmental scientists and specialists is projected to grow 11 percent to 2024, faster than the average for all occupations. Heightened public interest in the hazards facing the environment, as well as the increasing demands placed on the environment by population growth, is expected to spur demand for environmental scientists and specialists. Typical starting salary is \$58,404 (source: National Association of Colleges and Employers).

## ALUMNI CAREERS

Volunteer coordinator, Crane Trust, Wood River, Nebraska (Class of 2015)

Shorebird beach warden, National Audubon Society, Charleston, South Carolina (Class of 2015)

Advanced naturalist intern, Audubon Center of the North Woods, Sandstone, Minnesota (Class of 2014)

Assistant director of telephone outreach project, Fund for the Public Interest, Portland, Oregon (Class of 2014)

Associate scientist, Environmental Works, Inc., Kansas City, Missouri (Class of 2013)

Education specialist, Hawks Aloft, Inc., Albuquerque, New Mexico (Class of 2013)

Green building specialist, The Element Group, Cedar Rapids, Iowa (Class of 2013)

Community planner, U.S. Department of Transportation, Cambridge, Massachusetts (Class of 2012)

Environmental technician and drilling assistant, Braun Intertec Corp., Cedar Rapids, Iowa (Class of 2012)

Safety and training manager, Columbine Logging, Inc., Denver, Colorado (Class of 2011)

Communications and program development officer, Health Care Foundation Nepal, Kathmandu, Nepal (Class of 2011)

Environmental scientist, BGES, Inc., Anchorage, Alaska (Class of 2011)

Lab manager and field technician, Clear Air Engineering, Spring, Texas (Class of 2011)

Staff environmental scientist, LT Environmental, Arvada, Colorado (Class of 2008)

Grant research consultant, Lahaina Restoration Foundation, Lahaina, Hawaii (Class of 2006)

Senior environmental coordinator, MidAmerican Energy Company, Urbandale, Iowa (Class of 2005)

Environmental consultant, Alliant Energy, Muscatine, Iowa (Class of 2000)

Deputy associate director for energy and climate change, Council on Environmental Quality, Washington, D.C. (Class of 2000)

Integrated waste management specialist, California Environmental Protection Agency, Sacramento, California (Class of 1980)

## GRADUATE SCHOOLS ATTENDED

M.S., sustainable engineering, Villanova University, Villanova, Pennsylvania (Class of 2013)

M.S., environmental sciences, Louisiana State University, Baton Rouge, Louisiana (Class of 2012)

Ph.D., geological and earth sciences, and geosciences, University of California, Santa Barbara, California (Class of 2011)

Ph.D., paleontology, Cornell University, Ithaca, New York (Class of 2009)

Ph.D., ecology, University of Connecticut, Mansfield, Connecticut (Class of 2007)

M.A., communication, culture, and technology, Georgetown University, Washington, D.C. (Class of 2006)

M.S., environmental science, Florida Gulf Coast University, Fort Myers, Florida (Class of 2006)

Ph.D., paleontology, Yale University, New Haven, Connecticut (Class of 2006)

## CHRISTI JOHNSON *Assistant Professor of Kinesiology*

Teaches Kinesiology in the Wild. Ph.D. in the psychology of sport and physical activity, University of Iowa; M.A. in cultural studies of sport and leisure: emphasis sport psychology, University of Iowa; B.S. in psychology and B.A. in Spanish, University of Iowa.

## ANDY MCCOLLUM *Professor of Biology*

Teaches courses in ecology and animal biology. Studies endangered turtle species in Iowa and the tropics. Ph.D., Duke University; B.S., North Carolina State University.

## TAMMY MILDENSTEIN *Assistant Professor of Biology*

Teaches courses in ecology and conservation biology, including the core course Environmental Biology. Studies monarch butterfly conservation locally and endangered flying foxes in S.E. Asia and the Pacific. Ph.D., University of Montana, Missoula; B.S. Iowa State University.

## BRIAN NOWAK-THOMPSON *Associate Professor of Biology and Chemistry*

Teaches Chemical Ecology and the core course Environmental Chemistry. Studies bacterial metabolites that inhibit plant pathogens. Ph.D. and M.S., Oregon State University; B.S., Northland College.

## CRAIG TEAGUE *Associate Professor of Chemistry*

Teaches the core course Environmental Chemistry. Studies room temperature ionic liquids as a means for separating and capturing carbon dioxide. Ph.D., University of Illinois at Urbana-Champaign; B.S., Missouri State University.

## JIM WHITE *Professor of Philosophy*

Teaches Environmental Ethics, Evolution and Philosophy, and the first-year seminar Ethics and Climate Change. Ph.D. and B.A., University of Virginia.