MAJOR IN CHEMISTRY, ENVIRONMENTAL CHEMISTRY CONCENTRATION

Environmental chemistry is the application of chemical principles to the study of the natural environment, including air, water, land, and the biosphere. This concentration is recommended for students who wish to pursue a career in environmental management, or in the fundamental study of environmental systems. This concentration is also suitable for students planning to attend law or professional school or pursue graduate studies in environmental chemistry.

Chemistry majors in the environmental track are encouraged to participate in undergraduate research. Ample opportunities exist for undergraduate students to become involved in ground-breaking research in the laboratories of individual faculty members. Students have access to state-of-the-art equipment in faculty laboratories and the Analytical Resources Core facility, including NMR, FTIR, UV/Vis, fluorescence, mass spectrometers, vacuum lines, x-ray diffractometers, and many more. Undergraduate research is strongly encouraged for any student considering a career in chemistry, and many students complete supervised research for academic credit.

Learning Objectives

Upon successful completion, students will be able to:

1. Articulate the interconnected chemical processes, both naturally occurring and human caused, that shape the environment.
2. Develop and apply analytical skills to measure environmental chemical species and quantify their role in environmental chemistry.
3. Effectively communicate the results of the collection and analysis of data used in policy decisions for questions involving the air, food, soil, and water.
4. Apply interdisciplinary knowledge from biology, microbiology, statistics, and engineering to answer environmental questions.