Technology drives just about everything today—including our natural resources. In recent decades, environmental research, impact assessment, sustainability planning, and resource management have seen tremendous advances due to computer-based approaches such as geographic information systems (GIS), remote sensing, and dynamic-simulation modeling. These leading-edge technologies are fast-tracking sustainability efforts from forestry to landscape mapping, watershed ecology to archaeology, pollution detection to geology, and everything in between.

The need for professionals trained in technical and applied aspects of these approaches has grown dramatically. SNRE’s interdisciplinary Environmental Informatics field of study prepares industry leaders to develop and use analytical and computer-based methods to effectively assess and protect the Earth’s natural resources, across fields as diverse as social sciences, policy analysis, business, sustainable systems, and terrestrial and aquatic ecosystem management.

“Environmental Informatics, and GIS in particular, helps us better visualize and understand our world. I chose SNRE because of it embraces both the beauty of nature and the beauty of logic, where students from different backgrounds find a welcoming place and work together.”

— Jade Huang, Environmental Informatics student track leader
CURRICULUM

As an Environmental Informatics student, you will learn to use computational and analytical techniques to solve environmental problems, as well as the science and societal issues behind those problems. SNRE's program is distinctive because it combines GIS with quantitative methods and modeling for natural resource applications.

Coursework covers sampling, statistics, and probability, as well as important functions encountered in biology, matrices, and spatial and temporal processes. Combined lecture and laboratory venues acquaint you with remote-sensing physical principles, types of sensors, image-analysis methods, and applications of remote sensing for the identification and solution of environmental problems. You will also learn how to plan, design, and execute a GIS project for natural resource management and become proficient in the use of mapping software.

Course sampling:

- Remote Sensing
- Applied Ecosystem Modeling
- Environmental Spatial Data Analysis
- GIS and Natural Resource Applications
- Computer Modeling of Complex Systems
- Environmental Footprinting

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CAREERS

Through SNRE’s Environmental Informatics field of study, you can prepare for a wide range of careers in academic research or professional environmental management. Recently, a U.S. Department of Labor study cited geotechnologies as one of three major areas where future job growth will outstrip demand.

Environmental Informatics graduates become remote sensing specialists, area foresters, refuge managers, environmental consultants, conservation and wildlife information specialists, restoration planners, and more.

TOP 10 EMPLOYERS

- Ducks Unlimited
- Esri
- ENVIRON
- Michigan Tech Research Institute
- The Nature Conservancy
- National Oceanic and Atmospheric Administration
- Quantum Spatial
- U.S. Bureau of Land Management
- U.S. Forest Service
- World Resources Institute

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