Undergraduate Program Assessment

Department of Environmental Conservation

Student Learning Goals and Objectives

Building and Construction Technology

Graduates will provide the required leadership and vision for the building construction industry through their understanding of science, technology, business, and design.

- Specify materials, methods, and building/structural systems common to residential and commercial construction projects.
- Evaluate and specify building energy systems and materials with respect to their ecological impact and their contribution to sustainable design.
- Understand physical, mechanical and environmental attributes of wood construction.
- Analyze, estimate and communicate building project requirements using a thorough knowledge of blueprint specifications, contractual documents, CAD (Computer-Aided Design) and BIM (Building Information Modeling).
- Apply a breadth of management skills and an understanding of key business aspects of design, construction and materials supply industries.
- Contribute responsibly to a sustainable built environment.

Environmental Sciences

Graduates will understand the basic theories and techniques needed to monitor environmental quality, interpret the impact of human actions on terrestrial and aquatic ecosystems, develop strategies for ecosystem restoration, and apply scientific data to develop policies and regulations for protecting the environment.

- Understand the complex interactions that define ecosystems and how they may be affected by human activities.
- Measure, analyze, and monitor environmental contaminants introduced into air, soil, and water.
- Prevent or decrease the negative effects of adverse human activities on ecosystems and human health.
- Develop comprehensive methods to restore or remediate contaminated ecosystems.
- Apply an interdisciplinary approach to the technical assessment and analysis of global environmental challenges, and develop effective policy options to meet those challenges.
Natural Resources Conservation

Graduates will have the tools and knowledge to serve as conservation professionals for state, federal, and non-profit conservation organizations, as well as environmental consulting firms and the green industry, and to live a more sustainable life and to be a strong advocate for sound environmental stewardship.

- Acquire and analyze data describing the biological and social aspects of the environment.
- Make management decisions about land and water that integrate relevant ecological, physical, and social information.
- Appreciate the natural complexity of ecosystems, and the interdisciplinary nature of their conservation.
- Understand the multiple values of ecosystems and the environment across the spectrum of circumstances, from urban to rural and from developed to wild.
- Communicate to the public that natural resource conservation is essential to long-term sustainability.
- Behave professionally and ethically in the management of the environment for the benefit of society.

Assessment tools

Direct
- Research papers
- Field experience assessments
- Lab group presentations
- Career opportunity assessments
- Final synthesis analyses

Indirect
- Student review of learning objectives in light of their own experiences in the major.
- Surveys of job placement post-graduation

Highlighted recent activities
- Encourage review and self-assessment of achievement of Learning Objectives by seniors in a large written reflection paper associated with the new Senior Integrative Experience class.
- New required Career & Curriculum Planning Seminar (ENVSCI 294A)
- New PRAXIS requirement in ENVIRSCI that ensure that students have at least two hands-on experiences via internships and/or significant laboratory/field classes to build skills and increase their marketability.