



Preparing Students through Experiential Learning Impact Statement

Investigators

School of Environment and Natural Resources Faculty, Staff, graduate students and undergraduate students

SUMMARY

One of the most dynamic ways the School of Environment and Natural Resources prepares students for careers and graduate study is to engage them in experiential learning activities that help students integrate the concepts and skills they have gained in the classroom. Our main venues for experiential learning are capstone courses, internships, and field-based studies, all of which have seen notable success in 2016. These programs simultaneously fulfill the teaching, research, and outreach missions of the School.

SITUATION

A growing body of research demonstrates that hands-on experiences in which students apply theoretical ideas to real world puzzles is important to the learning process. At the same time, employers indicate that they want college graduates to have more practical experience in collaborative teams addressing real-world problems as a way to transition students from their formal studies into successful careers. Historically, environment and natural resources curricula have capitalized on opportunities to use outdoor settings to expose students to natural landscapes and systems, and to interact with real-world resource managers. The complexity of contemporary sustainability challenges also invites integrative, experiential study which benefits from the immersive, real-world experiences provided by capstone courses, internships, and field study courses.

RESPONSE

In response, each of the five SENR majors includes experiential learning options designed to solidify the ideas, concepts and tools learned in the classroom. These include:

Capstone courses that allow student teams to tackle real-world problems:

- Environment, Economy, Developments, and Sustainability (EEDS) students collaborated with Ohio State and City of Worthington leaders to analyze sustainability priorities and recommend best practices.
- Forestry, Fisheries, and Wildlife (FFW) and Natural Resource Management (NRM) students worked at the OSU-Mansfield campus on projects related to forest health, soil quality, pollinator habitat, trail preferences, and nocturnal wildlife.



THE OHIO STATE UNIVERSITY

COLLEGE OF FOOD, AGRICULTURAL,
AND ENVIRONMENTAL SCIENCES

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Field studies courses that emphasized experiential learning:

- Forest Ecosystems students performed ecological assessments as part of an iterative, intensive learning cycle.
- Avian Wildlife Biology and Management students did a field project with hands-on radio-tracking experience at the Olentangy Wetlands.

The **Agronomic Crop Research Experience (ACRE) summer internship program** provided hands-on training with county Extension educators and state specialists.

IMPACT

- EEDS capstone projects influenced Ohio State and Worthington decision-makers; a [video](#) documented student presentations at an Environmental Professionals Network event with the mayor of Columbus; the “[Campus as a Living Laboratory Archive](#)” generated 4,214 project report downloads in 2016. FFW and NRM capstone projects built upon a [natural resource management plan](#) for the OSU-Mansfield campus developed by previous students. Their projects, were [featured in an SENR article](#) documenting the value of this outstanding living laboratory and collaboration with a regional campus.
- [ACRE program](#) student interns worked from county Extension offices across the state to support on-farm research and extension activities. The program achieved goals of training the next generation of agronomists, empowering locally-directed on-farm research, and identifying solutions to critical agronomic issues in Ohio, as highlighted in a [summary program report](#).
- Forest Ecosystems students gained fundamental understanding and indispensable field skills; instructors [published an article in the *Journal of Forestry*](#) and presented papers at national and international meetings about their instructional approach.
- Avian Wildlife Biology students created usable data to help design [Dr. Chris Tonra’s bird monitoring project](#), and ranked the course at more than 4.9 out of a possible 5.0 score in student evaluation of instruction surveys.

Contact Information

School of Environment and Natural Resources

2021 Coffey Rd
Columbus, OH 43210

614-292-2265

senr.osu.edu