



# Preparing Students through Experiential Learning in Five SENR Majors

(EEDS: Environment, Economy, Development and Sustainability;  
EPDM: Environmental Policy and Decision Making;  
ES: Environmental Science; FFW: Forestry, Fisheries and Wildlife;  
NRM: Natural Resource Management)

## Impact Statement 2019

### INVESTIGATORS

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### SUMMARY

One of the most dynamic ways SENR 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 2019. 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 situations is important to their learning process. Employers indicate that they want college graduates to have more practical experience in collaborative, multi-disciplinary teams addressing real-world problems as a way to transition students from their formal studies into successful careers, and research shows that the first job of over 50% of students after graduation is a direct result of an internship. 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 professional natural 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

Each of the five SENR majors includes experiential learning options designed to solidify ideas, concepts and tools learned in the classroom. In 2019 we led several capstone courses where student teams collaborated with community partners. EEDS majors worked with city and staff at Ohio State to evaluate sustainable transportation, energy, and waste campaigns. FFW and NRM students collaborated with Columbus and Franklin County Metro Parks, City of Columbus Recreation and Parks Department, and Ohio State Mansfield. ESS and EPDM students designed restoration proposals to align the Campus landscape with Ohio State's Sustainability Goals, and EPDM majors partnered with Columbus and Westerville to tackle water quality issues. We also offered a suite of field studies courses with hands-on application of concepts that enhanced experiential learning, including Taxonomy and Behavior of Fishes, Forest Ecosystems, Avian Wildlife Biology and Management, Wildlife Ecology Methods, and Ecosystem Restoration.



## IMPACT

Capstone student projects contributed directly to improved ecosystem management by empowering local residents and informing local decision-makers. Specifically, our EEDS capstone projects continued to help local people, businesses, and public officials navigate a range of complex sustainability challenges. Our FFW/NRM capstone projects facilitated bioblitz and water quality events at Whetstone Park of Roses for Earth Day; assessed avian and aquatic diversity, invasive species management, and forest restoration efforts at Scioto Grove Metro Park; assisted other Columbus park properties with habitat management and restoration plans; collected data on silvicultural demonstration areas; and partnered to implement a maple syrup forest stand at Ohio State Mansfield. Our EPDM capstone students designed lesson plans, outreach programs, and stakeholder engagement strategies to improve collaboration and environmental problem-solving, in partnership with the City of Columbus Department of Utilities and the City of Westerville. Additionally, our Practical Skills for Terrestrial Ecosystem Restoration course provided 50 students with Ohio Department of Agriculture pesticide licensing and Ohio Forestry Association chain-saw qualifications; they also contributed to restoration of 5+ acres of the Ohio State campus through removal of invasive species, woodland creation and prairie restoration. Our capstone courses, internships, and field-based studies facilitated student career success, as evidenced by an 88% job placement rate for recent SENR graduates.

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## CONTACT

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