CFAES

Preparing the Next Generation of Scientists: *Expanded Opportunities for Undergraduate Research*

Impact Statement 2018

INVESTIGATORS
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SUMMARY
SENR's Honors and Undergraduate Research Programs provide support for undergraduates to conduct mentored research. Our focus on hands-on, student-centered learning has led to gains in students' understanding of the research process and ability to conduct research and work independently. Our students regularly present research at conferences, coauthor journal articles, and have been competitive for jobs, scholarship and fellowships, and graduate school applications in STEM disciplines.

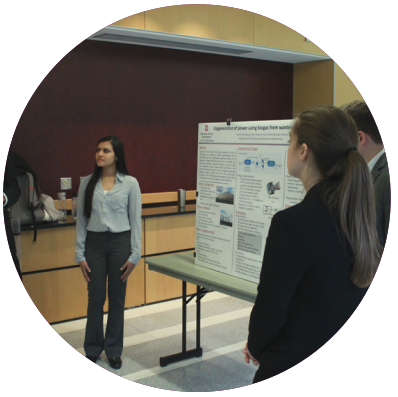
SITUATION
The 21st century economy demands higher levels of technical and scientific training and employers and graduate schools increasingly expect undergraduates to have hands-on experience designing, conducting, and synthesizing research. This is particularly true in environmental and natural resource management, where expertise from multiple disciplines is required to provide science-based solutions to complex problems. The applied and interdisciplinary research focus of SENR faculty and staff provide **unique opportunities to engage undergraduates in a wide range of applied research experiences** on topics including community development, ecosystem restoration, environmental policy, environmental law, environmental science, fisheries, forestry, natural resource management, parks and recreation, soil science, sustainable agriculture, sustainable business management, water science and wildlife.

THE OHIO STATE UNIVERSITY
COLLEGE OF FOOD, AGRICULTURAL, AND ENVIRONMENTAL SCIENCES

RESPONSE

To enhance the student experience at Ohio State and help prepare our students for future careers, SENR has aggressively developed and promoted research opportunities for undergraduates. Currently, there are **40 students engaging in undergraduate research though SENR's honors program, 10 students earning research distinction, and 27 students earning undergraduate research credit, and multiple STEP scholars.** These programs help our students develop practical research skills, encourage global awareness, enrich their academic experience, develop leadership skills and instill a commitment to community service. Students acquire training in a wide range of research methods, and learn to communicate their results orally and in writing by presenting papers or posters at scientific meetings and by serving as coauthors on the published papers. These efforts encourage our **students to gradually transition into independent scientists who are able to actively participate in research that is highly interdisciplinary in nature.**

Honors undergraduate students conducting research



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IMPACT

Our undergraduate student research programs have helped a large number of students achieve their goals of working as professional scientists. They have presented their work at scientific meetings, published in peer-reviewed journals, participated in summer fellowship and internship programs and won awards and scholarships for their work. 11 undergraduate students presented their research at the 2018 CFAES Undergraduate Research Forum. Three of these students won awards for their work. Six students presented at the 2018 Denman Forum and two of these students won awards for their work. Two students were awarded $3,300 from the OARDC Undergraduate Seeds Grant Program. One student was awarded $4,500 from Ohio State's Undergraduate Research Office, Summer Research Fellowship Program. One student received an honorable mention for the prestigious Udall Undergraduate Scholarship ($7000). Two students published research with their faculty mentors in peer-reviewed journals.

CONTACT

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