

ENVIRONMENTAL SYSTEMS SCIENCE, B.S.

UNIVERSITY OF CALIFORNIA
MERCED

SCHOOL OF
NATURAL SCIENCES



WHY APPLY TO ENVIRONMENTAL SYSTEMS SCIENCE, B.S.?

The Environmental Systems Science (ESS) program prepares students to understand and solve critical challenges facing our environment—including climate change, water and soil pollution, conservation of biological diversity, and management of natural resources. Addressing these challenges requires understanding the complex interactions between the physical, chemical, and biological components of our home Earth's finely tuned environmental system. As a result, the ESS curriculum is designed with courses that blend fundamental concepts and practical applications to real-world problems. Our classes emphasize an integrated approach to the discipline, incorporating field studies, laboratory experiments, and computation.

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Colleges Rankings, 2020)*

ENVIRONMENTAL SYSTEMS SCIENCE, B.S.



Program Highlights

- ▶ Taught by professors who are **world-class researchers** in their disciplines.
- ▶ **Small-class sizes** at the upper-division level allow students to develop personal relationships with their professors.
- ▶ **A flexible curriculum** enables students to tailor their electives to match their individual interests, including ecological sciences, atmospheric sciences, environmental quality.
- ▶ **Research and internship opportunities** that enriches their formal training.
- ▶ Opportunity to **minor in Natural Science Education** and prepare for a future career in K-12 education.

Internship Opportunities

- ▶ California Ecology and Conservation Program (counts as 15 ESS units)
- ▶ Merced Vernal Pools and Grassland Reserve
- ▶ Yosemite Leadership Program
- ▶ Environmental Science Summer Internship, Lawrence Berkeley National Lab
- ▶ California Naturalist Certification Training at UC Merced Vernal Pools
- ▶ USDA Natural Resources Conservation Service
- ▶ Public and private environmental agencies and groups

Research Opportunities

- ▶ Agroecology
- ▶ Air Quality
- ▶ Atmospheric Sciences
- ▶ Geochemistry
- ▶ Geomorphology
- ▶ Marine Ecology
- ▶ Microbial Ecology
- ▶ Soil Science

Job/Career Prospects

- ▶ Agroecologist or Ecologist
- ▶ Air quality and assessment expert
- ▶ Clean technology expert
- ▶ Conservation consultant
- ▶ Endangered species researcher
- ▶ Environmental analyst
- ▶ Environmental health and safety
- ▶ K-12 Teaching
- ▶ Meteorologist
- ▶ Natural resource manager
- ▶ Urban ecology researcher
- ▶ Wildlife manager

ALUMNI SPOTLIGHT

Alyssa Valdez, '19

Alyssa Valdez is fascinated by the interconnectedness in the Earth System, sustainability, and equity in science. She conducted research that uses stable isotopes to probe ecological questions. She is now pursuing a graduate degree at UC Riverside.

Luis Davila, '18

Luis Davila was enrolled in the Natural Science Education Minor program while pursuing their ESS BS degree. A year after they graduated, Luis obtained a teaching credential. Luis now teaches middle-school science.

Angela Yu, '16

Angela Yu was interested in laboratory techniques. She joined a research group collecting hundreds of samples from the coast of Mexico and alpine lakes in Yosemite. She excelled in DNA extraction and now works as a laboratory technician at a private company in San Francisco Bay Area.

Matthew McClintock, '12

Matthew McClintock (2012) enriched his ESS study by joining a soil science research lab and conducting organic soil amendment experiments. After receiving an M.S. degree in Soil Science from Oregon State University, Matthew joined the U.S. Department of Agriculture as a professional soil scientist.

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