

Environmental Life Sciences, PhD

LAELSPHD

If you are a critical thinker, this transdisciplinary program can prepare you to address global change and its consequences, from urban to remote ecosystems, using new and integrative approaches.

Program description

Degree awarded: PHD Environmental Life Sciences

The PhD in environmental life sciences is an integrative graduate degree program that provides doctorate-level training in several fields focused on the interactions between organisms (e.g., plant, microbe, humans and other animals) and the environment (locally and globally).

This distinct program integrates training across many fields of study. Dissertations may include any of the following, plus related fields:

- biochemistry and chemistry
- biology (ecology, physiology, evolution)
- conservation science
- environmental engineering
- geosciences
- mathematics and statistics
- social sciences
- spatial sciences
- sustainability

Graduate students are trained by means of a core class taught by environmental life science faculty members, through hands-on experiences in the lab and field, with guidance from committee members across multiple disciplines, and in research seminars.

The program focus is on collaborative, interdisciplinary and integrative study of the causes and consequences of environmental variation across scales ranging from the organism to the globe. The overall goal is to provide a valuable interdisciplinary doctoral program that encourages students to explore and solve complex problems in the context of natural and anthropogenic environmental change.

Administered by ASU's School of Life Sciences, eight additional schools participate in this interdisciplinary program to promote broad, collaborative training.

At a glance

- **College/School:** [The College of Liberal Arts and Sciences](#)
- **Location:** [Tempe](#)

Degree requirements

84 credit hours, a written comprehensive exam, an oral comprehensive exam, a prospectus and a dissertation

Required Core (3 credit hours)

ELS 501 Environmental Life Sciences: Grand Challenge: Global Climate Change (3)

Electives (69 credit hours)

Culminating Experience (12 credit hours)

ELS 799 Dissertation (12)

Additional Curriculum Information

ELS 501 is required for students to take during their first semester at ASU.

For electives, students should see the academic unit for approved coursework. Students also may take ELS omnibus courses to fulfill some of the elective requirements.

When approved by the student's supervisory committee and the Graduate College, this program allows 30 credit hours from a previously awarded master's degree to be used for this degree. If students do not have a previously awarded master's degree, the 30 hours of coursework are made up of electives and research.

Admission requirements

Applicants must fulfill the requirements of both the Graduate College and The College of Liberal Arts and Sciences.

Applicants are eligible to apply to the program if they have earned a bachelor's or master's degree in a related discipline from a regionally accredited institution.

Applicants must have a minimum cumulative GPA of 3.00 (scale is 4.00 = "A") in the last 60 hours of their first bachelor's degree program, or a minimum cumulative GPA of 3.00 (scale is 4.00 = "A") in an applicable master's degree program.

Applicants must submit the following:

1. graduate admission application and application fee
2. official transcripts
3. academic record form
4. personal statement
5. curriculum vitae or resume
6. three letters of recommendation
7. proof of English proficiency

Additional Application Information

An applicant whose native language is not English must provide [proof of English proficiency](#) regardless of their current residency.

Tuition information

When it comes to paying for higher education, everyone's situation is different. Students can learn about [ASU tuition and financial aid](#) options to find out which will work best for them.

Program learning outcomes

Program learning outcomes identify what a student will learn or be able to do upon completion of their program. This program has the following program outcomes:

- Able to execute a research plan of their own design that addresses a significant scientific question about environmental life sciences.
- Able to effectively communicate environmental biology concepts in oral and written formats.

Career opportunities

Environmental life scientists address ecological and environmental questions in social-ecological-technological systems, thus students often have a social science or related component in their dissertation. Graduates are prepared for a range of careers related to global environmental change, conservation and resource management, and sustainable industries among others.

Career examples include:

- climate change analyst
- consultant
- environmental compliance inspector
- environmental engineer

- environmental safety and health coordinator
- insect ecologist and exhibits specialist
- oceans and climate manager
- professor
- public health scientist
- research director
- scientist

Scientist, professor, consultant and research director roles may involve specialization areas, including:

- atmosphere and space
- ecology (community, ecosystem, microbe, population, wildlife)
- ecosystem restoration
- forestry and conservation

Contact information

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