ENVIRONMENTAL STUDIES
With a Concentration in: Fisheries and Wildlife Concentration

Eberly College of Science & Technology

Degree Benefits
The Environmental Studies Program prepares students for a career in environmental science, ecology related areas and graduate work. The emphasis of the program is to provide graduates with a broad core of courses in biology, supplemented with courses in chemistry, physics and mathematics. Each student has the opportunity to select from a wide range of science electives in order to fulfill needs for future work or to prepare for graduate school. Almost all courses include a laboratory portion where students study the practical application of scientific theories and learn about many scientific instruments and various organisms. The degree concentration in fisheries and wildlife sciences offers students the flexibility to focus on a specific content area leading to, if desired, certification by the American Fisheries Society or The Wildlife Society.

Job Options
A steady demand exists for wildlife and fishery biologists among private industry (e.g., consulting firms) and by state (e.g., the PA Game and Fish Commissions) and federal organizations like the US Fish and Wildlife Service. Some undergraduates further their education through work leading to Master's or Doctoral degrees.

According to the Bureau of Labor Statistics, growth in this field is expected to exceed 20% over the next decade. A 2008 article of Fortune magazine identified wildlife biology as a "hot career", noting the increased demand for qualified people to inventory and monitor rare and endangered species. Increased demand for clean drinking water, recreation, and fish for the table has also resulted in a steady increase in the need for qualified aquatic ecologists and fisheries scientists. As energy demands intensify, fisheries and wildlife biologists will be needed to better manage the nation's renewable natural resources.

Program Objectives
The objectives of the Fisheries and Wildlife Biology curriculum are to:

• Provide knowledge of biological processes and structures occurring in fisheries and wildlife sciences.
• Provide laboratory and field experiences which promote scientific inquiry and experimental methods in the environmental sciences and ecology.
• Create opportunities for student research projects.
• Assist students with course selection that will enhance their chosen career path.
• Provide the necessary foundation for continued professional growth in graduate school.
• Provide skills required for entry-level positions with industry and governmental organizations.

Curriculum
The fisheries and wildlife curriculum at CalU has been developed using the guidelines established by The Wildlife Society and American Fisheries Society. The curriculum offers not only the breadth afforded by the University's General Education requirements but the content knowledge specific to each area of specialization. Degree completion will permit a student to apply for certification by either The Wildlife Society and/or American Fisheries Society.

Note
The policies and procedures described here may be reviewed and revised at any time. This fact sheet should be used as an informational guide. For details on current policies and procedures, contact the chair of the department.

BACHELOR OF SCIENCE IN ENVIRONMENTAL STUDIES-120 CREDITS FISHERIES AND WILDLIFE BIOLOGY CONCENTRATION

The following eight-semester schedule of courses provides a recommended framework for completing this program of study in four years. To ensure that they are making satisfactory academic progress, students should consult with their faculty advisory, ensure that they complete necessary prerequisites and required courses in sequence, and complete between 14 and 17 credits each semester.
## Freshman Year

### First Semester
- BIO 120 General Zoology or 125 General Botany: 4 crs.
- CHE 101 General Chemistry I: 4 crs.
- ENG 101 English Composition I: 3 crs.
- UNI 100 First Year Seminar: 1 cr.
- General Education Course: 3 crs.

### Second Semester
- BIO 120 General Zoology or 125 General Botany: 4 crs.
- CHE 102 General Chemistry II: 4 crs.
- ENG 102 English Composition II or Equivalent: 3 crs.
- Physical Science Requirement: 3/4 crs.

## Sophomore Year

### Third Semester
- MAT 181 or 273 or 281: 3 crs.
- COM 101 Oral Communications: 3 crs.
- General Education Courses: 6 crs.

### Fourth Semester
- BIO 318 Genetics: 4 crs.
- MAT 215 Statistics: 3 crs.
- General Education Courses: 6 crs.

## Junior Year

### Fifth Semester
- ENS 423 Wildlife Techniques or 424 Fisheries Management: 4 crs.
- Fisheries or Wildlife Biology course: 4 crs.
- GIS 311 Geographic Info. Systems: 3 crs.
- General Education Courses: 6 crs.

### Sixth Semester
- ENS 420 Principles of Wild. Manage.: 3 crs.
- ENS 399 Conservation Biology or 425 Principles of Aquaculture: 3 crs.
- Unrestricted Free Electives: 3 crs.
- General Education Courses: 6 crs.

## Senior Year

### Seventh Semester
- BIO 336 Plant Taxonomy or 442 Forest Ecology & Dendrology: 4 crs.
- ENS 495 Design and Analysis: 3 crs.
- Law Policy and Planning Course: 3 crs.
- Fisheries or Wildlife Biology Course: 4 crs.

### Eighth Semester
- General Education Courses: 3 crs.
- Unrestricted Free Electives: 7-8 crs.

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### About Us

Founded in 1852 as an academy, California University of Pennsylvania is one of 14 universities that comprise the Pennsylvania State System of Higher Education. The main campus, located in California, PA, has 38 buildings on 92 acres on a bend in the Monongahela River. In addition to the main campus, there are a variety of sites and options for undergraduate and graduate education, including:

- **Cal U Southpointe Center**, a technologically advanced facility located in Canonsburg, Pa., offering graduate, undergraduate and continuing education programs of study. [www.calu.edu](http://www.calu.edu)
- **Cal U Global Online**, the virtual campus of the Pennsylvania State System of Higher Education, offering completely online degree programs of study for students worldwide. [www.calu.edu](http://www.calu.edu)

### Application Questions

Admissions Office
California University of Pennsylvania
250 University Avenue
California, PA 15419-1394
724-938-4404
Toll free: 1-888-412-0479
Fax: 724-938-4564
inquiry@calu.edu

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### Program Contact Information

Contact the Department of Biological and Environmental Sciences by Phone: 724-938-4200.

### Department Website

[http://www.calu.edu/academics/colleges/eberly/biology/index.htm](http://www.calu.edu/academics/colleges/eberly/biology/index.htm)

### Financial Aid

For information on student loans and undergraduate scholarships, visit [www.calu.edu](http://www.calu.edu) or call 1-888-412-0479.

### Apply Online

[www.calu.edu](http://www.calu.edu)

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California University of Pennsylvania is an academic community dedicated to the ideals of justice, fairness and equal opportunity for all. In compliance with federal and state laws, the University is committed to providing equal educational and employment opportunities for all persons without regard to race, color, sex, religion, national origin, age, disability, ancestry, sexual orientation or status as a disabled or Vietnam-era veteran. The University will not tolerate racial, ethnic or sexual discrimination. Sexual harassment is considered by law to be a form of sexual discrimination and is, therefore, unacceptable. Direct equal opportunity and affirmative action inquiries or complaints to the Special Assistant to the President for EEO/University Ombudsperson, Office of Social Equity, South Hall 112, 724-938-4014. Direct inquiries regarding services or facilities accessibility to the ADA/504, Dr. Timothy Sussex, Compliance Officer, Office of Student Development and Services, G 52 Carter Hall, 724-938-4056. Direct Title IX inquiries to the Senior Women's Administrator/Title IX Coordinator, Department of Athletics, Hamer Hall 248, 724-938-4351.

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**Policies and Procedures**: Note that the policies and procedures described above may be reviewed and revised at any time. This fact sheet should be used as an informational guide. For details on current policies and procedures, contact the Provost/Vice President of Academic Affairs at 724-938-4407.