Degree Benefits
The bachelor’s degree program in biology is designed to provide the student with a broad curriculum in biology, supplemented with courses in chemistry, physics and mathematics. Students have the opportunity to select from a range of biology electives to fulfill their needs for future work or graduate school. Almost all courses include a laboratory portion where students gain experience using many scientific instruments, study the practical application of scientific theories, and apply course content.

Job Options
About 77 percent of Cal U’s biology graduates have reported using their degree. Students in the program have many career options, depending on how they design their curriculum. Graduates of the program are prepared for both graduate school and professional schools (medical, veterinary, dental and chiropractic), in addition to the workforce. Those students interested in professional schools are encouraged to consider our pre-professional program. Students may continue their education or find employment in various types of laboratories or with private industries, as well as local, regional, state or federal organizations. According to the latest Bureau of Labor Statistics (BLS) data, about 40 percent of all biological scientists are employed by federal, state and local governments. Federal biological scientists work mainly for the U.S. departments of Agriculture, Interior and Defense or for the National Institutes of Health. The remainder work in scientific research and testing laboratories, the pharmaceutical and medicine manufacturing industry, or educational institutions. Growth within the biological sciences is expected to approach 20 percent over the next 10 years (BLS), well above the average for all occupations.

Program Objectives
The objectives are to:

- Provide the student with knowledge of biological processes and structures occurring in microorganisms, plants, fungi and animals.
- Provide laboratory and field experiences that promote scientific inquiry and experimental methods.
- Provide the opportunity for student research projects.
- Allow students to explore career opportunities in biology and related areas and aid in the selection of career-oriented courses.
- Provide the necessary foundation for continued growth in graduate school or professional schools.

Curriculum
The University requires that students earn 120 credit hours for a bachelor’s degree. CalU believes that a liberal education is essential for all students, regardless of the profession they may pursue. The goals, objectives and courses that comprise our general education program are designed to provide students with the knowledge, understanding and skills they will need to succeed in life, while the major curriculum is designed to prepare the student for a career in his or her chosen field of interest. Graduates from this program earn a Bachelor’s Degree in Biology and a minor in chemistry.

University Resources
The Biological and Environmental Sciences Department maintains an electron microscope facility, animal room, greenhouse, herbarium and instructional computer lab. All lecture halls offer up-to-date computer technology and offer Wi-Fi access. Teaching labs are equipped for the study of anatomy, botany, cellular and molecular biology, ecology, genetics, microbiology, parasitology, physiology, and zoology. Students of high academic standing may choose to carry out a research project during their junior or senior year. This investigation is conducted by the student under the supervision of a faculty member. Results are reported later in a scientific paper or presentation.

Internships are available to students in their junior or senior year. A student could spend a period of time as an intern at a hospital, research lab or field station.

Many of the department's faculty have been recognized for excellence in teaching, research and service. In fact, faculty have generated over $2 million in extramural funding over the last five years, which has been used to improve facilities, enhance teaching and facilitate student/faculty research.

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.
**Freshman Year**  
**First Semester** .......................................................................................... 15 credits  
- BIO 120 General Zoology ............................................................................ 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 ...................................................................................... 3 crs.  

**Second Semester** .................................................................................. 17 credits  
- BIO 125 General Botany ............................................................................ 4 crs.  
- CHE 102 General Chemistry II .................................................................. 4 crs.  
- MAT 273 Basic Calculus OR ENG 102 English Composition II ............. 3 crs.  
- General Education ...................................................................................... 3 crs.  

**Sophomore Year**  
**Third Semester** .................................................................................. 14 credits  
- BIO 215 Cellular and Molecular Biology .................................................. 4 crs.  
- PHY 121 General Physics I ......................................................................... 4 crs.  
- Free Elective ................................................................................................. 3 crs.  
- General Education ...................................................................................... 3 crs.  

**Fourth Semester** .................................................................................. 15 credits  
- BIO 248 General Ecology .......................................................................... 4 crs.  
- CHE 331 Organic Chemistry I ................................................................... 4 crs.  
- PHY 122 General Physics II ........................................................................ 4 crs.  
- General Education ...................................................................................... 3 crs.  

**Junior Year**  
**Fifth Semester** .................................................................................. 15 credits  
- BIO 300/400 Level Anatomy OR Chemistry ........................................... 4 crs.  
- BIO 318 Genetics ......................................................................................... 4 crs.  
- CHE 341 Organic Chemistry II Lecture .................................................... 3 crs.  
- CHE 342 Organic Chemistry II Laboratory ............................................... 1 cr.  
- General Education ...................................................................................... 3 crs.  

**Sixth Semester** .................................................................................. 17 credits  
- BIO 300/400 Level Anatomy OR Chemistry ........................................... 4 crs.  
- MAT 215 Statistics ....................................................................................... 3 crs.  
- General Education ...................................................................................... 3 crs.  
- Related Elective ............................................................................................ 7 crs.  

**Senior Year**  
**Seventh Semester** ........................................................................ 13/14 credits  
- BIO 478 Evolution ...................................................................................... 3 crs.  
- ENS 495 Design and Analysis .................................................................... 3 crs.  
- CHE Upper Division Chemistry .................................................................. 3/4 crs.  
- Related Elective ............................................................................................ 4 crs.  

**Eighth Semester** .............................................................................. 12/13 credits  
- Free Elective ................................................................................................. 3/4 crs.  
- Related Elective ............................................................................................ 3 crs.  
- General Education ...................................................................................... 6 crs.  

**Note:** This is a suggested curriculum pathway, please be sure to consult with your advisor.

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**Program Contact Information**  
Contact the Department of Biological and Environmental Sciences by phone at 724-938-4200.

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**Department Website**  
www.calu.edu/academics/colleges/eberly/biology

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**QUESTIONS ABOUT ADMISSIONS?**  
Office of Admissions  
California University of Pennsylvania  
250 University Ave.  
California, PA 15419-1394  

**Phone:** 724-938-4404  
**Toll-free:** 888-412-0479  
**Fax:** 724-938-4564  
**E-mail:** inquiry@calu.edu

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**ABOUT US**  
California University of Pennsylvania is a proud member of the Pennsylvania State System of Higher Education. Located in the borough of California, just 35 miles from Pittsburgh, Cal U serves about 8,200 undergraduate and graduate students.  
- Cal U's main campus houses academic buildings, dining and recreation facilities, and six suite-style residence halls.  
- Cal U's upper campus includes the Vulcan Village apartments, athletic facilities at Roadman Park, and space for student meetings and outdoor recreation at SAI Farm.  
- Cal U Global Online is the University's virtual campus, offering degree and certificate programs 100% online.

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**FINANCIAL AID**  
For information on student loans and undergraduate scholarships, visit www.calu.edu or call 1-888-412-0479.

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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 Equal Employment and Educational Opportunity (EEO), Office of Social Equity, South Hall 112, 724-938-4056. Direct inquiries regarding services or facilities accessibility to the ADA/504 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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