Degree Benefits
The GIS and Emergency Management Concentration option provides a basic grounding in emergency management concepts and techniques, and is supplemented by courses combining geographic knowledge with advanced technological information in remote sensing, hazards research, and advanced geographic information systems. This academic program provides the freedom to develop geographical skills through the traditional lecture/discussion format and through hands-on experience. This concentration will prepare students for continued studies in graduate school or employment in governmental and private planning, emergency management positions, with disaster relief organizations, or with the Department of Homeland Security. The required and recommended courses follow the guidelines suggested by the International Association of Emergency Managers, the premier professional organization for this field.

Job Options
Applying geographic information sciences to topics in emergency management is an approach that will enable students to develop applied skills in both of these increasingly interrelated career paths. Not only are these skills vital (if not necessary) for employment in GIS or emergency management positions, but they also provide the skills necessary for marketability and potential employment in land use and urban planning, demographics, business and industrial location analysis, homeland security, environmental studies, crime mapping, earth sciences, transportation studies, marketing and retailing, recreational planning, and military and governmental service. GIS is one of the fastest growing fields of employment.

Program Objectives
This program provides:
- Hands-on field experience in the laboratory and other appropriate settings.
- A basic knowledge of the equipment and tools necessary in this field.
- A basic grounding in GIS and emergency management concepts and techniques.

Service Learning
The GIS and emergency management program is committed to service learning. In most of the upper level courses, students complete real-world projects for institutions in the community. This commitment will assist students as they begin to enter the workforce. Recently the program has completed service learning projects for these organizations:
- Pennsylvania Department of Conservation and Natural Resources
- Bethel Park Police Department
- Washington County Department of Public Safety
- Springdale Volunteer Fire Department

University Resources
Courses are taught in a new computer lab/classroom developed by the Earth Sciences Department for tourism and geographic information sciences called The Tourism and Geography Information Facility. The department has recently developed the Cal U Crime Mapping Center, a state-of-the-art facility that includes high-end computers with cutting-edge GIS, sub-meter accuracy GPS units, and remote sensing software, providing students with technological skills that are currently in high demand. Students will participate in research projects and through laboratory work, thus gaining experience not available in the standard lecture/discussion instruction.

BACHELOR OF ARTS
GEOGRAPHY WITH A GEOGRAPHIC INFORMATION SCIENCES AND EMERGENCY MANAGEMENT CONCENTRATION — 120 CREDITS
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 adviser, ensure that they complete necessary prerequisites and required courses in sequence, and complete a minimum of 15 credits each semester.
## Freshman Year
### First Semester ................................................................. 16 credits
- ENG 101 English Composition I .................................................. 3 crs.
- UNI 100 First Year Seminar .......................................................... 1 cr.
- GEO 100: Intro to Geography ......................................................... 3 crs.
- General Education Courses .......................................................... 9 crs.

### Second Semester ............................................................... 15 credits
- ENG 102 English Comp II .............................................................. 3 crs.
- General Education Courses .......................................................... 12 crs.

## Sophomore Year
### Third Semester ................................................................. 15 credits
- GEO 217: Demographic Analysis .................................................. 3 crs.
- GIS 311: Geographic Information Systems ...................................... 3 crs.
- Elective ....................................................................................... 3 crs.
- General Education Courses .......................................................... 6 crs.

### Fourth Semester ................................................................. 15 credits
- REC 362: Site Design and Management ........................................... 3 crs.
- General Education ....................................................................... 6 crs.
- Electives ....................................................................................... 6 crs.

## Junior Year
### Fifth Semester ....................................................................... 15 credits
- EAS 300 Natural Hazards ............................................................. 3 crs.
- GEO 360 Emergency Management ............................................... 3 crs.
- GIS and Emergency Management Course ..................................... 3 crs.
- General Education Course ........................................................... 6 crs.

### Sixth Semester ....................................................................... 15 credits
- GIS 303: Crime Mapping ............................................................... 3 crs.
- Electives ....................................................................................... 6 crs.
- General Education Courses .......................................................... 3 crs.

## Senior Year
### Seventh Semester .................................................................... 15 credits
- GEO 474 Developing the Master Plan ............................................. 3 crs.
- GIS and Emergency Management Course ..................................... 3 crs.
- GIS 314 Spatial Land Data ............................................................. 3 crs.
- Electives ....................................................................................... 6 crs.

### Eighth Semester ..................................................................... 15 credits
- GEO 479 Internship ..................................................................... 3 crs.
- GEO 426 Impacts & Sustainability of Tourism ................................. 3 crs.
- Electives ....................................................................................... 9 crs.

## Program Contact Information
Contact the Department of Earth Sciences by phone at 724-938-4180.

## Department Website
www.calu.edu/academics/programs/geography/curriculum/

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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

### 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 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.

### Financial Aid
For information on student loans and undergraduate scholarships, visit www.calu.edu or call 1-888-412-0479.

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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.

Rev 5/14