

Biology, Geology and Environmental Sciences

B.S. in Geology

Program Description

The Bachelor of Science in Geology degree prepares students to use common geological tools and lab and field techniques; analyze data; and develop as scientists. Students in this program have opportunities to study in the field as they explore geological concepts relevant to environmental protection, energy resource exploration and development, and land infrastructure engineering.

Delivery Mode

Traditional (on campus)

Curriculum

The following eight-semester schedule of courses provides a recommended framework for completing this program of study in four years.

Course	Credits
Freshman Year	
First Semester	14
EAS 150 Introduction to Geology	4
ENG 101 English Composition I	3
UNI 100 First-Year Seminar	1
General Education Courses	6
Second Semester	16
EAS 200 Historical Geology	4
EAS Elective	3
ENG 102 English Composition II	3
General Education Courses	6
Sophomore Year	
Third Semester	16
CHE 101 Chemistry I	4
EAS 230 Earth Resources	3
GIS 311 Geographic Information Systems	3
MAT 281 Calculus I	3
General Education Course	3
Fourth Semester	16

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Course	Credits
CHE 102 Chemistry II	4
EAS 303 Hydrology	3
EAS 343 Geomorphology	3
MAT 282 Calculus II	3
General Education Course	3
Junior Year	
Fifth Semester	15
EAS 301 Professional Development for Geologists	1
EAS 331 Mineralogy	4
EAS Elective	3
MAT 215 Statistics	3
PHY 121 General Physics I OR PHY 101 College Physics I	4
Sixth Semester	14
EAS 332 Petrology	4
EAS Related Elective	3
PHY 122 General Physics II OR PHY 102 College Physics II	4
General Education Course	3
Senior Year	
Seventh Semester	16
EAS 423 Sedimentology/Stratigraphy	4
EAS 437 Field Methods in Geology	3
EAS Elective	3
General Education Course	6
Eighth Semester	13
EAS 425 Structural Geology	4

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Course	Credits
EAS Electives	6
General Education Course	3
Total	120

Recommended Free Electives (24 to 25 credits)

- **EAS 210** Intro to Soils (3 credits)
- **EAS 250** Volcanology (3 credits)
- **EAS 290** Planetary Geology (3 credits)
- **EAS 333** Geochemistry (3 credits)
- **EAS 355** Geophysics (3 credits)
- **EAS 402** Groundwater Hydrology (3 credits)
- **EAS 427** Tectonics (3 credits)
- **EAS 429** Petroleum Geology (3 credits)
- **EAS 438** Computer Apps. in EAS (3 credits)
- **EAS 441** Advanced Env Geology (3 credits)
- **EAS 448** Watershed Evaluation (3 credits)
- **GIS 350** Remote Sensing of Env (3 credits)
- **GIS 413** Env Applications in GIS (3 credits)
- **GEO 479** Internship (variable)
- Other Adviser-approved courses

Additional Requirements

(Not counted toward the General Education requirements.)

- **Special Experience Course (select one):** EAS 391, EAS 392, EAS 393, EAS 492 or GEO 479
- **Upper-Division Writing Component Course (select two):** EAS 427, EAS 438, EAS 441 or EAS 448
- **Laboratory Course (select one):** EAS 150

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/geology/index.aspx>