

Mathematics and Physical Sciences

B.S. in Earth Science: Environmental Geosciences Concentration

Program Description

The Environmental Geosciences concentration of the Bachelor of Science in Earth Science degree explores resource management, environmental stewardship and sustainable development.

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 | 18 |
| EAS 150 Intro to Geology | 4 |
| ENG 101 English Composition I | 3 |
| PHY 121 General Physics I | 4 |
| UNI 100 First-Year Seminar | 1 |
| Any Humanities Course | 3 |
| General Education Course | 3 |
| | |
| Second Semester | 17 |
| EAS 200 Historical Geology | 4 |
| PHY 122 General Physics II | 4 |
| Any Health and Wellness Course | 3 |
| Any Public Speaking Course | 3 |
| Any Social Sciences Course | 3 |
| | |
| Sophomore Year | |
| Third Semester | 15 |
| CHE 101 Chemistry | 4 |
| EAS 104 Meteorology | 4 |
| EAS 230 Earth Resources | 3 |
| EAS 301 Prof. Dev. for Geologists | 1 |
| MAT 281 Calculus I | 3 |
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Mathematics and Physical Sciences

| Course | Credits |
|---|-----------|
| Fourth Semester | 16 |
| CHE 102 Chemistry II | 4 |
| EAS 142 Climatology | 3 |
| EAS 343 Geomorphology | 3 |
| ENG XXX Second Writing Gen Ed | 3 |
| MAT 282 Calculus II | 3 |
| | |
| Junior Year | |
| Fifth Semester | 15 |
| EAS 303 Hydrology | 3 |
| GIS 311 Geographic Information Systems | 3 |
| MAT XXX Math Related Elective | 3 |
| Any Fine Arts Course | 3 |
| General Education Course | 3 |
| | |
| Sixth Semester | 15 |
| EAS 210 Intro to Soils | 3 |
| EAS XXX Recommended Free Electives | 6 |
| GIS 413 Env Applications in GIS | 3 |
| Free Elective | 3 |
| | |
| Senior Year | |
| Seventh Semester | 15 |
| EAS 333 Geochemistry | 3 |
| EAS 441 Advanced Env Geology | 3 |
| EAS XXX Recommended Free Elective | 3 |
| Any Special Experience Course | 3 |
| Free Elective | 3 |
| | |
| Eighth Semester | 15 |

Mathematics and Physical Sciences

| Course | Credits |
|---|------------|
| EAS 402 Groundwater Hydrology | 3 |
| EAS 469 Global Climate Change | 3 |
| EAS XXX EAS Writing Intensive Course | 3 |
| Ethics and Multicultural Awareness | 3 |
| Free Elective | 3 |
| Total | 120 |

Recommended Free Electives (25-26 credits)

- **EAS 245** Weather Analysis and Forecasting (3 credits)
- **EAS 300** Natural Hazards (3 credits)
- **EAS 331** Mineralogy (4 credits)
- **EAS 332** Petrology (4 credits)
- **EAS 342** Dynamic Meteorology (3 credits)
- **EAS 355** Geophysics (3 credits)
- **EAS 369** Climate Dynamics and Modeling (3 credits)
- **EAS 423** Sed/Strat (4 credits)
- **EAS 425** Structural Geology (4 credits)
- **EAS 429** Petroleum Geology (3 credits)
- **EAS 438** Computer Applications in EAS (3 credits)
- **EAS 448** Watershed Evaluation (3 credits)
- **EAS 542** Applied Climatology (3 credits)
- **GIS 350** Remote Sensing of the Environment (3 credits)
- **CHE 381** Environmental Chemistry (4 credits)
- Other Adviser-approved courses

Program Webpage

<https://www.calu.edu/academics/undergraduate/bachelors/environmental-geoscience/index.aspx>