

BA IN EARTH SCIENCE


Units required for Major: 62-64


Total units required for BA: 120

Program Description

The BA degree program is designed as a shorter, more flexible preparation for some geology jobs, earth science teaching in high school (see Subject Matter Program (<http://catalog.csus.edu/colleges/natural-sciences-mathematics/science-subject-matter/>)), and jobs such as park naturalist, environmentalist, geologic planning specialist, or in geology-related businesses. The BA degree can be used in dual-track majors combining geology with biological sciences, chemistry, physics, or engineering.

Program Requirements

Code	Title	Units
Required Lower Division Courses (37-38 Units)		
Select one of the following introductory Geology lecture-lab combinations:		4
GEOL 5	Geology Of Mexico ¹	
GEOL 7 & GEOL 8L	Natural Disasters & Earth Science Lab ¹	
GEOL 8 & 8L	Earth Science & Earth Science Lab ¹	
GEOL 10 & 10L	Physical Geology & Physical Geology Lab ¹	
<i>Each of the remaining courses as follows:</i>		
ASTR 4B	Introduction to Stars, Galaxies, and Cosmology	3
ASTR 6	Astronomical Observation Laboratory	1
BIO 1 & BIO 2 or BIO 7	Biodiversity, Evolution and Ecology Cells, Molecules and Genes ¹ Introduction to the Science of Biology	9-10
CHEM 1A or CHEM 6A	General Chemistry I Introduction to General Chemistry	5
GEOL 12	Historical Geology	3
GEOL 12L	Historical Geology Lab	1
MATH 26A	Calculus I for the Social and Life Sciences ¹	3
PHYS 5A & PHYS 5B	General Physics: Mechanics, Heat, Sound General Physics: Light, Electricity and Magnetism, Modern Physics	8
Required Upper Division Courses (26 Units)		
GEOG 111	Elements Of Meteorology	3
GEOL 103	Sedimentology/Stratigraphy	4
GEOL 111A	Field Geology	2
GEOL 111B	Field Techniques	2
GEOL 130	Oceanography ¹	3
Select 6 units from the following:		6
GEOL 105	Paleontology	
GEOL 110A	Structural Geology and Tectonics	
GEOL 114	Volcanology	
GEOL 120	Surficial Processes	
GEOL 121	Geology of California	
GEOL 140	Geology and the Environment 	

GEOL 184	Geological Field Trip	
Select 6 units not taken previously from the following:		6
ANTH 124	Environmental Archaeology	
ANTH 151	Human Paleontology	
ENGL 120P	Professional Writing 	
GEOG 113	Climate ²	
GEOG 116	Global Climate Change	
GEOG 117	Landforms	
GEOG 161	California's Water Resources	
JOUR 131	Data Journalism	
PHIL 125	Philosophy Of Science	
RPTA 153	Environmental Interpretation	
Select 3-5 other upper-division geology courses with permission of instructor		

Total Units **63-64**

- Course also satisfies General Education (GE)/Graduation Requirement.
- Indicates courses recommended for students wishing to prepare for CSET Exam for teaching high school science.

General Education Requirements ¹

Code	Title	Units
Area A: Basic Subjects (9 Units)		
A1	Oral Communication	3
A2	Written Communication	3
A3	Critical Thinking	3
Area B: Physical Universe and Its Life Forms		
B1	Physical Science ²	0
B2	Life Forms ²	0
B3	Lab (Note: Lab experience to be taken with one of the following: B1, B2 or B5) ²	0
B4	Math Concepts ²	0
B5	Additional Course (Any B to reach 12 units) - Take upper-division course to complete Area & upper division requirements. ²	0
Area C: Arts and Humanities (12 Units)		
C1	Arts	3
C2	Humanities	3
C1/C2	Area C Course	3
C1/C2	Area C Course - Take upper-division course to complete Area & upper division requirements.	3
Area D: The Individual and Society (12 Units)		
Area D Course		3
Area D Course		3
Area D Course		3
Area D Course - Take upper-division course to complete Area & upper division requirements.		3
Area E: Understanding Personal Development (3 Units)		
Area E Course		3
Total Units		36

- ¹ To help you complete your degree in a timely manner and not take more units than absolutely necessary, there are ways to use single courses to meet more than one requirement (overlap). For further information, please visit the General Education page (<http://catalog.csus.edu/colleges/academic-affairs/general-education/>).
Note: There is no way to list all possible overlaps so please consult with a professional advisor. The Academic Advising Center can be visited online (<http://www.csus.edu/acad/>), by phone (916) 278-1000, or email (advising@csus.edu).
- ² Required in Major; also satisfies GE.

Graduation Requirements ¹

Code	Title	Units
Graduation Requirements (required by CSU) (9 Units)		
	American Institutions: U.S. History	3
	American Institutions: U.S. Constitution & CA Government	3
	Writing Intensive (WI)	3
Graduation Requirements (required by Sacramento State) (12 Units)		
	English Composition II	3
	Race and Ethnicity in American Society (RE)	3
	Foreign Language Proficiency Requirement ²	6

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- ² If not satisfied before entering Sacramento State, it may be satisfied in General Education Area C2 (Humanities). "C- or better required." The alternative methods for satisfying the Foreign Language Proficiency Requirement are described here: <https://www.csus.edu/wll/flgr/>