

## GEOLOGY

### Natural and Applied Sciences Division

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[www.cabrillo.edu/programs](http://www.cabrillo.edu/programs)

### Information for Geology Majors

Geology is the study of Earth materials and processes. A masters or Ph.D. in this field will enable the graduate to have a career in a wide variety of fields such as research, academia, engineering/consulting, geohydrology, seismology, volcanology, geophysics, glaciology, and economic geology (ore and hydrocarbon deposits), to name a few. Geology and Earth Sciences are offered as majors at UC and CSU.

#### MODEL PROGRAM FOR GEOLOGY

The following model program fulfills requirements for the A.S. Degree in Geology at Cabrillo College. Specific lower division major preparation at four-year public institutions in California can be found at [www.assist.org](http://www.assist.org). Please see a counselor for advisement for transfer to any four-year institution.

Core Courses	Units
GEOL 10	Introduction to Earth Science. . . . . 4
CHEM 1AB	General Chemistry . . . . . 10
MATH 5ABC	Analytic Geometry & Calculus I, II, III . . . . . 12
PHYS 4ABC	Physics for Scientists and Engineers . . . . . 15
OR	
PHYS 2AB	General Physics . . . . . 8

#### Approved Electives

ENGR 1A	Surveying. . . . . 4
ES 10	Introduction to Environmental Science . . . . . 3
GEOL 15	Environmental Geology . . . . . 3
GEOL 20	California Geology . . . . . 4
GEOL 25	Geology of National Parks . . . . . 3
MATH 6	Introduction to Linear Algebra. . . . . 3
OCEAN 10	Introduction to Oceanography . . . . . 4

#### Associate in Science Degree in Geology

General Education . . . . .	21
Core plus Approved Electives. . . . .	39
Total for A.S. Degree in Geology	60

## Geology Courses

### GEOL 10

#### Introduction to Earth Science

4 units; 3 hours Lecture, 3 hours Laboratory

Recommended Preparation: Eligibility for ENGL 100 and READ 100.

Introduces the phenomena and basic principles of physical geology with laboratory exercises illustrating the nature of minerals, rocks, geological processes, and the use and interpretation of topographic and geologic maps.

*Transfer Credit:* Transfers to CSU. Transfers to UC. CAN GEOL2.

### GEOL 15

#### Environmental Geology

3 units; 3 hours Lecture

Recommended Preparation: Eligibility for ENGL 100 and READ 100.

A physical science survey course dealing with the interactions among Earth systems, humans and the environment. Topics include understanding Earth systems and the physical interactions among different systems, natural disasters (earthquakes, volcanoes, floods, landslides, etc), groundwater, waste disposal, pollution, resources and population, engineering geology and land-use planning. Students will turn in several projects including construction of a land-use map of a local area as a means of learning how multiple geologic factors influence our local land-use.

*Transfer Credit:* Transfers to CSU. Transfers to UC.

### GEOL 20

#### California Geology

4 units; 3 hours Lecture, 3 hours Laboratory

Recommended Preparation: Eligibility for ENGL 100 and READ 100.

A study of the geology of California. Includes an introduction to the phenomena and basic principles of geology and a survey of the topography, structure, geologic history, climate and resources of each geomorphic province of California. Field trips required.

*Transfer Credit:* Transfers to CSU. Transfers to UC.

### GEOL 25

#### Geology of National Parks

3 units; 3 hours Lecture

Recommended Preparation: Eligibility for ENGL 100 and READ 100.

Introduces the geologic history, structure and materials of National Parks in North America. Includes a survey of associated internal and external Earth processes responsible for shaping our National Parks such as plate tectonics and mountain building, earthquakes, volcanoes, mass wasting, weathering, erosion, rivers and glaciers.

*Transfer Credit:* Transfers to CSU. Transfers to UC.

## **GEOL 27**

### **Geology of the Pinnacles National Monument**

1 unit; .82 hours Lecture, ½ hour Laboratory

Corequisite: ASTRO 27.

Recommended Preparation: Eligibility for ENGL 100 and READ 100.

A weekend field lecture course that allows the student to study, through direct observation, the geologic history and processes that have formed and shaped the Pinnacles. Camping and hiking required.

*Transfer Credit:* Transfers to CSU.

## **GEOL 30A-Z**

### **Field Geology**

1 - 2 units; .7 hour Lecture, .8 hour Laboratory

Recommended Preparation: Eligibility for ENGL 100 and READ 100.

Repeatability: May be taken 4 times.

Studies the rocks, minerals and geologic history of the designated field area through direct observation. Various field areas include Point Lobos and the Big Sur Region, Yosemite National Park, Grand Canyon, Zion and Bryce National Parks. Camping may be required. Each A-Z course may be taken only once. Some offerings may be in conjunction with ENGL 17 and HIST 26.

*Transfer Credit:* Transfers to CSU.