

Geology (GEOL)

Geology is the scientific study of the origin, history, and structure of the Earth. At College of Alameda, students will learn about the evolution of the Earth and develop an appreciation and understanding of the processes that created and changed the Earth over time.

Career options for a professional geologist include; energy resources technicians, laboratory research, professor, hydrologist, flood control specialist, volcanologist, environmental clean-up resource specialist, pollution control manager, seismologist, many other opportunities in geological resource exploration and management.

GEOL 1

Introduction to Physical Geology

- 4 units, 3 hours lecture, 3 hours laboratory (GR)
- Acceptable for credit: CSU, UC

Survey of materials and structures comprising the outer portion of the earth, and geologic processes responsible for sculpturing the earth: Plate tectonics and mountain building; formation of minerals and igneous, sedimentary and metamorphic rocks; deformation of rocks by folding and faulting; and erosion of the land surface. Two one-day field trips required. 1914.00
AA/AS area 1; CSU area B1, B3; IGETC area 5A & 5C

GEOL 2

Introduction to Mineralogy

- 4 units, 3 hours lecture, 3 hours laboratory (GR)
- Prerequisites: CHEM 1A or CHEM 30A
- Recommended Preparation: GEOL 10 or ENGL 1A
- Acceptable for credit: CSU, UC

Introduction to and classification of the origin of minerals through chemical and physical tests: Spectroscopic, optical plus electron microscopic and x-ray diffraction analyses; study of crystal structures with models, natural crystals, computer visualization, and stereographic projections. Course will include one or more field trips. 1914.00
AA/AS area 1; CSU area B1, B3; IGETC area 5A, 5C

GEOL 10

Introduction to Geology

- 3 units, 3 hours lecture (GR or P/NP)
- Not open for credit to students who have completed or are currently enrolled in GEOL 1.
- Eligible for credit by examination
- Acceptable for credit: CSU, UC

Survey of structure and materials that compose the earth's surface and geologic processes responsible for shaping the earth: Nature and role of rocks and minerals; environmental processes and problems; dynamics of volcanism, earthquakes, plate tectonics, metamorphism, running water, ground water, glaciation, weathering and erosion. 1914.00
AA/AS area 1; CSU area B1; IGETC area 5A

GEOL 18

Geology of California

- 3 units, 3 hours lecture (GR)
- Recommended Preparation: GEOL 10 and ENGL 1A
- Acceptable for credit: CSU, UC

Introduction to the geology of California and the North American - Pacific plate boundary: Geologic history and present day geology of California in the context of modern plate tectonic theory; tectonic processes, geologic structures, physiographic provinces, local rocks and minerals, landforms, natural resources, geologic history, and natural hazards in the state. 1914.00
AA/AS area 1; CSU area B1; IGETC area 5A

GEOL 22

California Coast Range Studies

- 3 units, 3 hours lecture (GR)
- Recommended Preparation: ENGL 1A
- Acceptable for credit: CSU, UC

Introduction to and field survey of Coast Range geology: Exploration of the San Andreas transform plate boundary and extinct subduction zone, observation of accessible blueschist metamorphic rocks, ophiolites, ophiolitic melange and volcanic rocks; hands on field geology observation experience.
AA/AS area 1; CSU area B1; IGETC area 5A

GEOL 49

Independent Study in Geology

- .5-5 units, .5-5 hours lecture (GR)
- Acceptable for credit: CSU

See section on Independent Study. 1914.00