

# GEOLOGY

Geology is the study of Earth, including its dynamic processes and long history. This practical science is important for resource exploration, assessing natural hazards, remediation of environmental problems, and providing insight into climate change. A career as a geologist is varied and diverse, using a wide variety of methods to understand the Earth's structure and evolution. Geologists typically earn at minimum a Bachelors' degree with additional postgraduate education necessary for specific pathways. Employment is common with universities, state, and federal agencies, or in the private sector.

## GEOL V02 Physical Geology 3 Units

*Formerly:* GEOL 2

*In-Class Hours:* 52.5 lecture

*C-ID:* GEOL 100, GEOL 101

This introductory course is a study of the structure and materials of the earth and its dynamic forces. Including plate tectonics, rocks and minerals, weathering, mass-movements, surface and ground water, wind, waves and currents, glaciation, mountain building, volcanoes and other igneous activities, deformation and resulting structures, earthquakes, earth's interior, geologic time, and earth resources.

**Grade Modes:** Letter Graded, Credit by exam, license etc.

**Field Trips:** May be required

**Degree Applicability:** Applies to Associate Degree

**AA/AS GE:** A2

**Transfer Credit:** CSU, UC

**UC Credit Limitations:** None

**CSU GE-Breadth:** B1

**IGETC:** 5A

## GEOL V02L Physical Geology Laboratory 1 Unit

*In-Class Hours:* 52.5 laboratory

*Prerequisites:* GEOL V02 or concurrent enrollment

*C-ID:* GEOL 100L

This course introduces some of the fundamental methods and concepts of geology in a laboratory situation, including: rock and mineral identification, use and interpretation of topographic and geologic maps and aerial photographs, and study of earth structures and landform development.

**Grade Modes:** Letter Graded

**Field Trips:** May be required

**Degree Applicability:** Applies to Associate Degree

**AA/AS GE:** A2

**Transfer Credit:** CSU, UC

**UC Credit Limitations:** None

**CSU GE-Breadth:** B3

**IGETC:** 5C

## GEOL V03 Historical Geology 3 Units

*In-Class Hours:* 52.5 lecture

*C-ID:* GEOL 110

This earth history course studies the interaction and development of planet earth's four large-scale interrelated systems: the lithosphere, biosphere, hydrosphere and atmosphere. The four-and-one-half-billion-year historical development of these four larger systems (and their many subsystems) will be interpreted and analyzed by studying evidence from earth's rock layers and fossil record. Topics will include: the basic geologic, hydrologic, atmospheric, and biologic processes at work on earth (past and present), as well as selected details related to plants, animals, rock, erosion, deposition, and the development of ocean basins, continents, and planet earth.

**Grade Modes:** Letter Graded

**Field Trips:** May be required

**Degree Applicability:** Applies to Associate Degree

**AA/AS GE:** A2

**Transfer Credit:** CSU, UC

**UC Credit Limitations:** None

**CSU GE-Breadth:** B1

**IGETC:** 5A

## GEOL V03L Historical Geology Laboratory 1 Unit

*In-Class Hours:* 52.5 laboratory

*Prerequisites:* GEOL V03 or concurrent enrollment

*C-ID:* GEOL 110L

This course introduces Earth's history and the life it supports in a laboratory setting: rock, mineral, and fossil identification; modes of fossil preservation; constructing and interpreting cladograms; interpreting geologic maps, cross sections, and stratigraphic columns; relative dating and interpreting sequences of geologic events; absolute dating; and paleogeographic reconstruction.

**Grade Modes:** Letter Graded

**Field Trips:** May be required

**Degree Applicability:** Applies to Associate Degree

**AA/AS GE:** A2

**Transfer Credit:** CSU, UC

**UC Credit Limitations:** None

**CSU GE-Breadth:** B3

**IGETC:** 5C

## GEOL V07 Geology of National Parks 3 Units

*Formerly:* GEOL 7

*In-Class Hours:* 52.5 lecture

This course examines the geographic and geologic settings of selected National Parks of the United States and Canada. Park geomorphology and geologic time will be studied to clarify the history of each park.

Parks covered include: Grand Canyon, Zion, Bryce, Canyonlands, Petrified Forest, Yosemite, Yellowstone, Channel Islands and many others.

**Grade Modes:** Letter Graded, Student Option- Letter/Credit, Pass/No Pass Grading

**Field Trips:** May be required

**Degree Applicability:** Applies to Associate Degree

**AA/AS GE:** A2

**Transfer Credit:** CSU, UC

**UC Credit Limitations:** None

**CSU GE-Breadth:** B1

**IGETC:** 5A

**GEOL V09 Earth Science with Laboratory 4 Units***In-Class Hours:* 52.5 lecture, 52.5 laboratory*C-ID:* GEOL 121

An introduction to the essentials of Earth Science including the geosphere, atmosphere, hydrosphere, and solar system. This course focuses on the interactions between physical and chemical systems of the Earth such as the tectonic cycle, rock cycle, hydrologic cycle, weather and climate.

**Grade Modes:** Letter Graded**Field Trips:** May be required**Degree Applicability:** Applies to Associate Degree**AA/AS GE:** A2**Transfer Credit:** CSU, UC**UC Credit Limitations:** None**CSU GE-Breadth:** B1, B3**IGETC:** 5A, 5C**GEOL V11 Introduction to Oceanography 3 Units***Formerly:* GEOL 11*In-Class Hours:* 52.5 lecture

Oceanography is a broad interdisciplinary field focused on the common goal of understanding earth's oceans. It draws subject matter from geology, geography, geophysics, chemistry, meteorology, and biology. Its goals are knowledge about processes and interrelationships of the many subsystems which comprise the world's oceans. Specific topic areas include: a history of oceanographic research, the role of tectonic plates in oceans, features of the seafloor, the chemistry of seawater, movements of the ocean's water, coastal environments, life forms/conditions of oceans/seafloor as well as atmospheric/oceanic interactions.

**Grade Modes:** Letter Graded, Student Option- Letter/Credit, Pass/No Pass Grading**Field Trips:** May be required**Degree Applicability:** Applies to Associate Degree**AA/AS GE:** A2**Transfer Credit:** CSU, UC**UC Credit Limitations:** None**CSU GE-Breadth:** B1**IGETC:** 5A**GEOL V21 Natural Disasters 3 Units***In-Class Hours:* 52.5 lecture

This course deals with natural disasters that have occurred, possible mitigation of hazards and identification of potential future disasters related to geologic hazards (geohazards). Subjects covered will include natural events such as volcanoes, earthquakes, landslides, floods, fire, hurricanes, tornadoes, coastal erosion, short-term climate changes, mass extinctions, earth impacts, and their effects on humans. Fundamental geologic and atmospheric principles will be presented to support the understanding of each of these processes as well as numerous case histories of historic natural disasters.

**Grade Modes:** Letter Graded**Field Trips:** May be required**Degree Applicability:** Applies to Associate Degree**AA/AS GE:** A2**Transfer Credit:** CSU, UC**UC Credit Limitations:** None**CSU GE-Breadth:** B1**IGETC:** 5A

- Geology, Associate in Science for Transfer (<http://catalog.vcccd.edu/ventura/programs-courses/geology/geology-ast/>)