

# GEOLOGY

Geology is an exciting and challenging major for students with broad scientific interests and a love for natural systems, our environment, and our planet's history. Geology is a multidisciplinary science that applies chemistry, biology, physics, oceanography, mathematics, and engineering to the natural world around us. The rich variety of its fields of study includes oceanography, paleontology, geophysics, hydrogeology, geochemistry, engineering geology, environmental geology and more. Geology majors apply their skills and knowledge to solve complex problems related to human interaction with natural systems, hazards and resources, and to communicate these solutions and options to the public.

## GEOL R101 Physical Geology 3 Units

*In-Class Hours:* 52.5 lecture

*C-ID:* GEOL 100

This course is a survey of the Earth and the processes that shape it. The course offers an overview of earthquakes, volcanism, plate tectonics, mountain building, weathering, erosion, soil, origin of minerals and rocks, and water and energy resources.

**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 R101L Physical Geology Laboratory 1 Unit

*In-Class Hours:* 52.5 laboratory

*Prerequisites:* GEOL R101 or concurrent

*C-ID:* GEOL 100L

This course is the laboratory to accompany GEOL R101. Topics include identification and interpretation of geologic features, interpretation of topographic maps and aerial photographs, identification of rocks and minerals.

**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 R103 Introduction to Oceanography 3 Units

*Same-As:* MST R103

*In-Class Hours:* 52.5 lecture

This course is a broad survey of the field of oceanography. Topics include geology and geography of the ocean basins and coastlines, plate tectonics, waves, currents, tides, properties of seawater, methods of oceanographic exploration, and an introduction to Marine Biology.

**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 R103L Introduction to Oceanography Laboratory 1 Unit

*Same-As:* MST R103L

*In-Class Hours:* 52.5 laboratory

*Prerequisites:* GEOL R103 or MST R103 or concurrent enrollment

This course is the laboratory to accompany GEOL R103. Topics include introduction to ocean/atmosphere relationships, interpretation of bathymetric maps, applied methods of measurement, and descriptive analysis of the physical ocean, including beaches, ocean currents, waves, and water properties.

**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 R114 Historical Geology 3 Units

*In-Class Hours:* 52.5 lecture

*C-ID:* GEOL 110

This course is an introduction to the history of the earth and its evolution including the surface environments, atmosphere, oceans, and life.

Relationships among rocks and fossils are studied to reconstruct the geological and biological evolution of the earth for the last four-and-one-half-billion years.

**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 R114L Historical Geology Laboratory 1 Unit

*In-Class Hours:* 52.5 laboratory

*Prerequisites:* GEOL R114 or concurrent enrollment

*C-ID:* GEOL 110 L, GEOL 111

This course provides hands-on experience identifying fossils, minerals, and rocks. The course introduces geologic time, relative age relations in rocks, construction of paleogeographic maps, interpretation of geologic maps and cross sections, and fossil evidence of evolutionary trends throughout geologic time.

**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 R121 Earth Science with Laboratory 4 Units***In-Class Hours:* 52.5 lecture, 52.5 laboratory*C-ID:* GEOL 121

This course is a broad introduction to the essentials of Earth Science designed for future educators including teaching techniques to engage students in science. Topics covered in this course include 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.

The laboratory component includes study of rocks, maps, scientific instruments, earthquakes, and local geologic features.

**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 R130 Environmental Geology 3 Units***In-Class Hours:* 52.5 lecture*C-ID:* GEOL 130

Environmental Geology is a study of the interaction of humans and the Earth, with emphasis on geologic hazards such as earthquakes, volcanic activity, landslides, and flooding; resources such as energy, water, and minerals; disposal of wastes, pollution, and global warming. This course emphasizes the Earth systems and connections between the geosphere, biosphere, atmosphere, and hydrosphere.

**Grade Modes:** Letter Graded**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 R178 Geological Marine Resources 1 Unit***Same-As:* MST R178*In-Class Hours:* 52.5 laboratory*Corequisites:* MST R170 or BIOL R170

This field course is an introduction to topics in marine geology related to current resource management issues in this region. Trips to areas where geological, biological, and oceanographic resources can be observed will be combined with related information about resource management and the requirements and applications of federal, state, and local laws and regulations related to marine resource management.

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

**Field Trips:** Will be required**Degree Applicability:** Applies to Associate Degree**AA/AS GE:** None**Transfer Credit:** CSU**UC Credit Limitations:** None**CSU GE-Breadth:** None**IGETC:** None

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

*For more information, contact:*

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