

GEOLOGY

The Department of Physical Science offers an Associate in Science in Geology for Transfer Degree. The Transfer degree assures enrollment and transfer opportunities at California State Universities. The geology major provides students with authentic laboratory and field experiences that serve as the foundation for geologic understanding and reasoning. The Geology program offers several courses that prepare geology students for upper-division geology courses offered at 4-year institutions.

Associate in Science Transfer Degrees

- Geology - Associate in Science Transfer Degree (<https://lbcc-public.courseleaf.com/degrees-certificates/geology/geology-ast/>)

GEOL 1 (C-ID GEOL 101) 4.5 units

General Physical Geology

63 hours lecture, 54 hours laboratory

Grading: letter grade or pass/no pass.

This is a class that covers the materials and structure of the Earth and the physical processes by which it has been and is being changed. It is a general physical science course for liberal arts students and a beginning course for geology majors. Included with the class is a required one-day, Saturday or Sunday, field trip to acquaint students with the local geology. Transferable to both UC and CSU; see counselor for limitations

GEOL 1H (C-ID GEOL 101) 4.5 units

Honors General Physical Geology

63 hours lecture, 54 hours laboratory

Prerequisite: Qualification for the Honors Program.

Grading: letter grade or pass/no pass.

This is a class that covers the materials and structure of the Earth and the physical processes by which it has been and is being changed. It is a general physical science course for liberal arts students and a beginning course for geology majors. Included with the class is a required one-day, Saturday or Sunday, field trip to acquaint students with the local geology. Transferable to both UC and CSU; see counselor for limitations

GEOL 2 (C-ID GEOL 100) 3 units

General Geology, Physical

54 hours lecture

Grading: letter grade or pass/no pass.

This is a class that covers the materials and structure of the Earth and the physical processes by which it has been and is being changed. It is a general physical science course for liberal arts students combined with GEOL 2L and a beginning course for geology majors.

Transferable to both UC and CSU; see counselor for limitations

GEOL 2F 1 units

Geology Field Trips

23 hours lecture

Corequisite: GEOL 1 or GEOL 2.

Grading: letter grade or pass/no pass.

This is a field trip class offering three single-day field trips, including the San Andreas Fault, Palos Verdes Hills and the Santa Ana Mountains-Dana Point. The purpose of these trips is to acquaint students with the local geology, support student study of GEOL 1 or 2, and associated environmental problems. This class does not fulfill the requirement for a laboratory science.

Transferable to both UC and CSU; see counselor for limitations

GEOL 2L (C-ID GEOL 100L) 1.5 units

General Geology, Physical Geology Lab

18 hours lecture, 36 hours laboratory

Corequisite: GEOL 2.

Grading: letter grade or pass/no pass.

This class provides laboratory exercises in identification of rocks and minerals, an introduction to geologic time and dating techniques, reading and interpretation of topographic maps and aerial photographs, study of geologic structures, faults and geomorphology.

Transferable to both UC and CSU; see counselor for limitations

GEOL 3 (C-ID GEOL 111) 4.5 units

Historical Geology

72 hours lecture, 45 hours laboratory

Grading: letter grade or pass/no pass.

This course is a study of earth history through an analysis of the fossil and rock record. Subjects include geologic dating, global tectonics, stratigraphy, fossils, biological evolution, and the planet's origin.

Particular emphasis is placed on the paleogeographic reconstruction of Earth beginning in the Precambrian and ending with current conditions.

This is a general course for liberal arts students and a beginning course for geology majors. One single-day weekend field trip is required.

Transferable to both UC and CSU; see counselor for limitations

GEOL 3H (C-ID GEOL 111) 4.5 units

Honors Historical Geology

72 hours lecture, 45 hours laboratory

Prerequisite: Qualification for the Honors Program.

Grading: letter grade or pass/no pass.

This course is a study of earth history through an analysis of the fossil and rock record. Subjects include geologic dating, global tectonics, stratigraphy, fossils, biological evolution, and the planet's origin.

Particular emphasis is placed on the paleogeographic reconstruction of Earth beginning in the Precambrian and ending with current conditions.

This is a general course for liberal arts students and a beginning course for geology majors. One single-day weekend field trip is required.

Transferable to both UC and CSU; see counselor for limitations

GEOL 4 2 units

Field Geology

27 hours lecture, 27 hours laboratory

Corequisite: GEOL 1, 2, 2L, 3, 3H or 5.

Grading: letter grade or pass/no pass.

This is a field course to selected locations in the Owens Valley and Death Valley. This course is an excellent opportunity to travel through California and experience many different examples of geology firsthand.

Transferable to both UC and CSU; see counselor for limitations

GEOL 5 3 units

Environmental Geology

54 hours lecture

Grading: letter grade or pass/no pass.

Students enrolled in this course will learn about natural hazards affecting the greater Los Angeles area, how to assess danger from these hazards and what they can do to minimize personal damage. Students will explore environmental issues of the Los Angeles basin that are directly related to the earth, such as water supply, pollution and land use. One Saturday field trip is required.

Transferable to both UC and CSU; see counselor for limitations

GEOL 7 2 units**Field Studies: Western Environments****27 hours lecture, 27 hours laboratory**

Recommended Preparation: GEOL 1, 2, 3 or 18 or concurrent enrollment.

Grading: letter grade or pass/no pass.

This course is a field studies course to geologically interesting areas of the west. The emphasis of the course will be to identify clues in the rock and fossil record which indicate past environmental and geologic conditions in the Western United States.

Transferable to CSU Only

GEOL 10 (C-ID GEOL 121) 4 units**Earth Science for Educators****54 hours lecture, 54 hours laboratory**

Grading: letter grade.

This is an inquiry-based Earth Science course that fulfills general education requirements for students aspiring to become elementary school teachers. Students will develop a meaningful understanding of geology, oceanography, meteorology and solar system astronomy through lecture and laboratory activities. An earth-systems approach will be emphasized to explain natural phenomena that impact human societies. The course will cover the breadth and depth of Earth Science topics covered in the Next Generation Science Standards (NGSS). Included with the class is a required field trip to acquaint the student with field examples of topics covered in the class. Note: Geology 10 is not designed to meet the requirements for Geology or Earth Science majors.

Transferable to both UC and CSU; see counselor for limitations

GEOL 16 3 units**Field Techniques/Geol: So Calif Deserts****36 hours lecture, 54 hours laboratory**

Corequisite: GEOL 1, 2 or 5.

Grading: letter grade or pass/no pass.

This is a class designed to expose geology majors and others to the techniques employed by geologists in the field and laboratory. The class includes: geologic map reading and preparation, identification of geologic features in the field, and microscope laboratory techniques. Attendance at two week-end field trips is required.

Transferable to CSU Only

GEOL 17 2 units**Geology of Southern California Deserts****27 hours lecture, 27 hours laboratory**

Corequisite: GEOL 1, 1H, 2 or 5.

Grading: letter grade or pass/no pass.

This is a field trip class offering two weekend 3-day field trips. The purpose of these trips is to acquaint students with the interesting and diverse geologic features of the California Deserts. Not open to students with credit in GEOL 16.

Transferable to both UC and CSU; see counselor for limitations

GEOL 18 3 units**Geology of California****54 hours lecture**

Grading: letter grade or pass/no pass.

This course presents the basic principles of geology through the examination of the rocks, minerals, fossils, and tectonic events unique to California. The class further places California's unique geology in context of Earth's plate tectonic processes and geologic history.

Transferable to both UC and CSU; see counselor for limitations

GEOL 20 3 units**Physical Oceanography****54 hours lecture**

Grading: letter grade.

This introductory course explores the major physical features of the world's oceans. Course topics include the formation and history of the ocean basins, ocean-atmosphere interactions, ocean circulation, and the dynamics of waves, tides, and coastlines. This course also reviews ocean chemical and sedimentation cycles as well as the general distribution of marine life. The ocean as a resource for people and human impact on the marine environment will also be considered. Class will include an instructional field trip.

Transferable to CSU Only