Geology is the science that studies the structure, mechanics, interactions and evolution of the outer crust of the Earth. Students completing a degree in this discipline will have an introductory foundation for the field of Geology through the study of the scientific method, Earth materials, Earth processes, and Earth history. They will acquire skills, knowledge, and abilities that enable students to use a scientific approach incorporating basic chemistry and mathematics to the study of the Earth; identify common minerals, rocks, and geomorphic features of Earth; describe the materials and elucidate the processes that comprise the dynamic Earth system; describe the evidence for and occurrence of major events in Earth History.

Geography, Earth Science, and Meteorology courses are housed in the Geology department. Although no degrees are currently being offered in these subjects, these courses can be used to complete General Education or transfer requirements.

- Meteorology is the science that studies the atmosphere, its structure, interactions and anthropogenic modification.
- Earth Science studies the structure, mechanics, interactions and evolution of the earth's crust, atmosphere and oceans.
- Geography is the natural and social science that studies the distribution and relationships between physical, geological, political and cultural entities.

The most common career opportunities with a baccalaureate degree include entry-level field technician/geologist, industrial employment (mining, oil, environmental consulting), and governmental agencies (Department of Natural Resources, Geological Surveys, and National Parks).

Transfer requirements in Geology are available in the Counseling Department. In all cases, students should consult with a counselor for specific transfer requirements.

**Contact Information**

**Science Division Chair**

Thea Trimble | (559) 730-3941 | theat@cos.edu (theat@cos.edu)
John Muir: 137 | Visalia Campus
**GEOL 001 Physical Geology**  
Hours: 3 Lecture/Discussion  
3 Lab  
An introductory exploration of the structure, composition and dynamic processes that comprise the Earth system, with emphasis on plate tectonics and its consequences and the external processes that sculpt Earth's surface. Laboratory exercises include the identification of mineral and rock specimens and the examination of topographic and geologic maps. (C-ID GEOL101)

**GEOL 005 Earth History**  
Hours: 3 Lecture/Discussion  
3 Lab  
Equivalent Course: GEOL 105  
This course examines the geologic evidence for the major events in Earth's history, including: the formation of the crust, atmosphere, and oceans; the tectonic history of the continents; and mass extinctions and the record of life on Earth. Course topics are reinforced by the analysis of rock specimens, fossils, and geologic maps during laboratory sessions. (C-ID GEOL111)
GEOL 012 Environmental Geology
Hours: 3 Lecture/Discussion
Geologic hazards, natural resources, and pollution constitute the core themes of this study of man's interactions with earth systems. The consequences of human modification of natural systems and the geological underpinnings of modern society are emphasized. Topics include flooding, earthquakes, volcanic eruptions, plate tectonics, energy resources, water resources, mineral resources, climate change, the greenhouse effect, waste disposal, water pollution, and the carbon, nitrogen, and water cycles. Scientific and sociopolitical approaches to environmental issues are explored. (C-ID GEOL 130)

GEOL 150 Geology of Kings Canyon NP
Hours: 0.5 Lecture/Discussion
0.5 Lab
This field trip course explores the geology of Kings Canyon National Park. Major themes include: rivers and valley development, glaciers and climate change, the formation of the Sierra Nevada Mountains and the rocks therein, plate tectonics and the geologic history of California.

GEOL 151 Geology of the Mojave Desert
Hours: 1 Lecture/Discussion
0.5 Lab
This field trip course introduces the geology and natural resources of the Mojave Desert. Major themes include tectonics and structure, mineral resources and mining, and energy resources. Some geologic features will be discussed en route, while extended stops, that include some hiking, allow closer examination of phenomena such as faults, volcanoes, mines, and solar power plants.

GEOL 152 Geology of the Central Coast
Hours: 1 Lecture/Discussion
0.5 Lab
This field trip course introduces the geology of the Central Coast. Major themes include tectonics, geologic hazards, energy and water resources, pollution, and coastline and surficial processes. Some features will be discussed en route. Extended stops that include some hiking allow closer examination of phenomena (e.g., the San Andreas Fault and Morro Rock).

GEOL 153 Granite, Glaciers, and Gold
Hours: 1 Lecture/Discussion
0.5 Lab
This field trip course explores the geology of the central Sierra Nevada. Primary topics include: the formation and evolution of Yosemite Valley, the Mother Lode gold deposits, and the central Sierra foothills (the Western Metamorphic Belt).

GEOL 154 Volcanoes of Northern California
Hours: 1.5 Lecture/Discussion
1.5 Lab
This extended field trip explores northern California's sleeping volcanoes: Mt Shasta, Medicine Lake Volcano and Mt Lassen. Volcanic features, landforms, processes, and hazards constitute the major themes of this class.

MET 001 Elementary Meteorology
Hours: 3 Lecture/Discussion
An introductory course designed to provide insights into physical processes and laws that underlie the phenomena of weather and climate. An emphasis is placed on understanding the methodologies of scientific inquiry and understanding current meteorological-environmental problems. 

Advisory on Recommended Preparation: ENGL 251 or ENGL 261 equivalent college course with a minimum grade of C or eligibility for ENGL 001 as determined by COS Placement Procedures (https://catalog.cos.edu/placement-procedures) and MATH 200 or equivalent college course with a minimum grade of C or eligibility for MATH 230 determined by COS Placement Procedures. (C-ID GEOG130)