

# GEOLOGY

## (GEOL)

### 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

### 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

### 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

### GEOL 22

#### California Coast Range Studies

3 units, 3 hours lecture (GR)

Recommended Preparation: Engl 1A

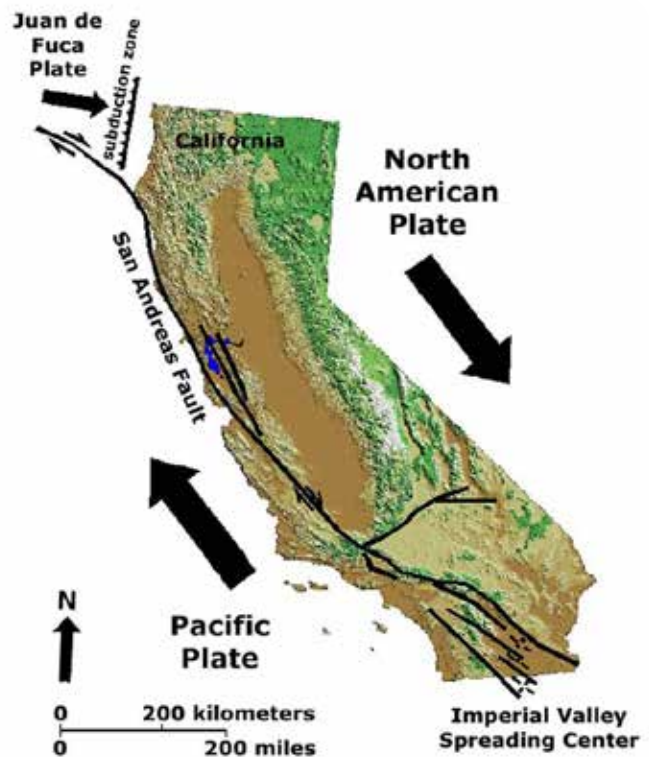
Acceptable for credit: CSU, UC Introduction to and field survey of Coast Range geology: Exploration of the San Andreas transform plate boundary and extinct subduction zone, observation of accessible blueschist metamorphic rocks, ophiolites, ophiolitic melange and volcanic rocks; hands on field geology observation experience.

### GEOL 49

#### Independent Study in Geology

.5-5 units, .5-5 hours lecture (GR)

See section on Independent Study. 1914.00



Shaded relief map of California showing the San Andreas Fault system and plate motions.

USGS Bulletin 2195

*Rocks and Geology in the San Francisco Bay Region*

By Philip Stoffer 2002

<http://pubs.usgs.gov/bul/2195/b2195.pdf>