GEOL A105L: GENERAL GEOLOGY LABORATORY

Item	Value
Curriculum Committee Approval Date	12/08/2021
Top Code	191400 - Geology
Units	1 Total Units
Hours	54 Total Hours (Lab Hours 54)
Total Outside of Class Hours	0
Course Credit Status	Credit: Degree Applicable (D)
Material Fee	No
Basic Skills	Not Basic Skills (N)
Repeatable	No
Open Entry/Open Exit	No
Grading Policy	Standard Letter (S), • Pass/No Pass (B)
Associate Arts Local General Education (GE)	• Area 5 Physical and Biological Sciences, Scientific Inquiry, Life Science (OB)
Associate Science Local General Education (GE)	• Area 5 Physical and Biological Sciences, Scientific Inquiry, Life (OSB)
California General Education Transfer Curriculum (Cal-GETC)	• Cal-GETC 5C Laboratory Activity (5C)
Intersegmental General Education Transfer Curriculum (IGETC)	• IGETC 5C Laboratory Activity (5C)
California State University General Education Breadth (CSU GE-Breadth)	• CSU B3 Laboratory Activity (B3)

Course Description

A laboratory study of materials and processes in the earth. A beginning laboratory course for the non-science major. Enrollment Limitation: GEOL A105M; students who complete GEOL A105L may not enroll in or receive credit for GEOL A105M. PREREQUISITE: GEOL A105 or GEOL A105H or concurrent enrollment. Transfer Credit: CSU; UC.

Course Level Student Learning Outcome(s)

1. Read, interpret, and create simple geologic and topographic maps.
2. Interpret stress fields from a variety of strained rocks.
3. Demonstrate use of a compass with topographic maps.
4. Identify, classify, and interpret rock-forming minerals and field specimens of rocks.
5. Interpret a general regional geologic history based on a vertical or lateral sequence of rocks.

Course Objectives

- 1. Identify and describe the common materials of the earth.
- 2. Develop basic geology laboratory skills.
- 3. Demonstrate skills in use of identification tables.
- 4. Develop skills in use of topographic maps.
- 5. Describe and define the application of geologic structures.

Lecture Content

This is a lab only course.

Lab Content

Minerals Rocks Igneous, metamorphic, and sedimentary processes Topographic maps Aerial photographs Geologic surface processes Surface Water Processes Ground water processes Coastal processes Desert processes Glacial processes Geologic structures Geological maps cross sections Relative and absolute dating Geologic time Plate Tectonics Earthquakes Volcanoes

Method(s) of Instruction

- Lab (04)
- DE Live Online Lab (04S)
- DE Online Lab (04X)

Instructional Techniques

Lab tests, lab exercises, field reports, problem solving, skills in identification, and map use.

Reading Assignments

Students will spend approximately two hours per week on readings assigned from textbook(s).

Writing Assignments

Students will spend approximately two hours per week on written assignments that analyze and critically evaluate geologic data. Examinations will include questions requiring written answers.

Out-of-class Assignments

Students will spend approximately one hour per week on homework including laboratory exercises and written report(s) based on field trips.

Demonstration of Critical Thinking

Lab tests, lab exercises, field reports, problem solving, skills in identification, and map use.

Required Writing, Problem Solving, Skills Demonstration

Examinations will include questions requiring written answers

Eligible Disciplines

Earth science: Master's degree in geology, geophysics, earth sciences, meteorology, oceanography, or paleontology OR bachelor's degree in geology AND master's degree in geography, physics, or geochemistry OR the equivalent. Master's degree required.

Textbooks Resources

1. Required Ludman, A. and Marshak, S.. Laboratory Manual for Introductory Geology, ed. New York: W.W. Norton and Company, 2015