GEOL A105M: GENERAL GEOLOGY LABORATORY HONORS

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 A105L; students who complete GEOL A105M may not enroll in or receive credit for GEOL A105L. 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 past stress fields from a variety of strained rocks.
3. Use a compass in conjunction with a topographic map for plotting data and locating themselves on a map.
4. Demonstrate an understanding of scale, orientation, and the UTM coordinate system
5. Classify, identify and interpret field specimens of rocks and common rock forming minerals.
6. Interpret a general regional geologic history based upon 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 Surface Geologic processes Surface Water Processes Groundwater processes Coastal processes Desert processes Glacial processes Geologic structures Geological maps Cross-sections Geologic time, Relative Dating Absolute dating 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

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Writing Assignments

Examinations will include questions requiring written answers

Out-of-class Assignments

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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.