

CATALOG INFORMATION

Dept and Nbr: GEOL 1L

Title: GEOLOGY LAB

Full Title: Geology Lab

Last Reviewed: 9/9/2024

Units		Course Hours per Week		Nbr of Weeks	Course Hours Total	
Maximum	1.00	Lecture Scheduled	0	17.5	Lecture Scheduled	0
Minimum	1.00	Lab Scheduled	3.00	6	Lab Scheduled	52.50
		Contact DHR	0		Contact DHR	0
		Contact Total	3.00		Contact Total	52.50
		Non-contact DHR	0		Non-contact DHR	0

Total Out of Class Hours: 0.00

Total Student Learning Hours: 52.50

Title 5 Category: AA Degree Applicable

Grading: Grade or P/NP

Repeatability: 00 - Two Repeats if Grade was D, F, NC, or NP

Also Listed As:

Formerly:

Catalog Description:
Not open to students who have completed Geology 4. Laboratory course designed as a basic introduction to the identification of minerals and rocks, identification of landforms on topographic maps and the interpretation of geologic maps.

Prerequisites/Corequisites:
Course Completion or Current Enrollment in GEOL 1

Recommended Preparation:
Eligibility for ENGL 100 or ESL 100.

Limits on Enrollment:

Schedule of Classes Information:
Description: Identification of minerals & rocks, landforms on topography maps & the interpretation of geologic maps. (Grade or P/NP)
Prerequisites/Corequisites: Course Completion or Current Enrollment in GEOL 1
Recommended: Eligibility for ENGL 100 or ESL 100.
Limits on Enrollment:
Transfer Credit: CSU;UC.

Repeatability: Two Repeats if Grade was D, F, NC, or NP

ARTICULATION, MAJOR, and CERTIFICATION INFORMATION:

AS Degree:	Area		Effective:	Inactive:
CSU GE:	Transfer Area		Effective:	Inactive:
	B3	Laboratory Activity	Fall 1984	

IGETC:	Transfer Area		Effective:	Inactive:
	5C	Fulfills Lab Requirement	Fall 1981	

CSU Transfer:	Transferable	Effective:	Fall 1984	Inactive:
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UC Transfer:	Transferable	Effective:	Fall 1984	Inactive:
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CID:

CID Descriptor:GEOL 100L	Physical Geology Laboratory
SRJC Equivalent Course(s):	GEOL1L

Certificate/Major Applicable:

Major Applicable Course

COURSE CONTENT

Outcomes and Objectives:

Provides the student with the theoretical, descriptive, and methodological experiences required to successfully understand general geology and its related concepts. Students participating in this course will have the opportunity to analyze the natural processes that govern and shape the earth and be able to answer questions specifically related to the major geologic concepts. Students completing this course should be able to comprehend and demonstrate some knowledge-ability of geology through lecture discussions, reading assignments, written assignments, and examination.

Topics and Scope:

Course content will include but not be limited to the following areas stated on the course outline.

An introduction to Mineralogy including crystallography, physical and chemical properties, mineral classification and hand specimen identification of 30 selected minerals.

Use of the rock cycle to define the basic rock types and processes with the emphasis on the interrelationship between various rock types.

Igneous rocks and origin of magmas, intrusive processes and subsequent crystallization into plutonic, hypabyssal or volcanic rocks. Classification of plutonic bodies and volcanic landforms.

Igneous rock classification and identification: Mineralogical classification of igneous rocks. Emphasis on identification of feldspars, quartz and accessory minerals for hand specimen identification.

Sedimentary rocks: Classification of sediments of sedimentary rock

as products of physical and chemical weathering. Clastic vs. chemical precipitates; classification and identification with an eye towards environments of deposition. Use of sedimentary structures as deformation tools.

Metamorphic rocks: Use of P-T phase diagram as a classification tool delineating contact, dynamic and regional metamorphism. Identification of metamorphic rocks based on texture and mineralogy.

Aerial photographs and topographic maps: use of photographs to help visualize topographic maps. Exercises including contour lines, elevation determinations, construction of contour maps and topographic profile.

Geologic structures: Faults, folds, and sedimentary facies as depicted in geologic block diagrams and on geologic maps. Stressing the importance of relative time for interpretation.

Topographic and geologic map studies on:

- a. stream erosion
- b. arid regions
- c. continental and alpine glaciation
- d. ground water
- e. volcanic land forms
- f. shorelines

Geologic Interpretation: Identification of rock types, generation of topographic map, superposition of rock types on topo map, construction of cross section with historical interpretation.

Assignment:

Evaluation of student performance will be determined through examination (written and/or objective) and through at least one of the following written assignments: Comprehensive research paper, analytic essay, report and book reviews, extra credit reports, or field assessment. Students will be required to master textbook and research material independently outside of class.

Methods of Evaluation/Basis of Grade:

Writing: Assessment tools that demonstrate writing skills and/or require students to select, organize and explain ideas in writing.

Written homework, Lab reports

Writing 10 - 50%

Problem Solving: Assessment tools, other than exams, that demonstrate competence in computational or non-computational problem solving skills.

Lab reports, Quizzes, Exams

Problem solving 10 - 50%

Skill Demonstrations: All skill-based and physical demonstrations used for assessment purposes including skill performance exams.

None

Skill Demonstrations
0 - 0%

Exams: All forms of formal testing, other than skill performance exams.

Multiple choice, True/false, Matching items, Completion

Exams
25 - 50%

Other: Includes any assessment tools that do not logically fit into the above categories.

None

Other Category
0 - 0%

Representative Textbooks and Materials:

Hamblin: EXERCISES IN PHYSICAL GEOLOGY

Zumerge: LABORATORY MANUAL FOR PHYSICAL GEOLOGY