

ESCI 0054A - SIERRA NEVADA AND WESTERN BASIN AND RANGE PROVINCES

Catalog Description

Formerly known as GEOL 51A

Hours: 9 lecture

Description: Field lecture course designed to teach students the geology of portions of the Sierra Nevada and Western Basin and Range Provinces.

Sites along I-80 and old highway 40 are examined. (CSU)

Course Student Learning Outcomes

- CSLO #1: Compare and contrast geologic features of specific field localities.
- CSLO #2: Analyze and evaluate geologic processes responsible for producing specific landforms of the area covered.
- CSLO #3: Interpret the tectonic setting of area covered.

Effective Term

Fall 2018

Course Type

Credit - Degree-applicable

Contact Hours

9

Outside of Class Hours

18

Total Student Learning Hours

27

Course Objectives

Through hands-on field experiences, discussion and assignments:

1. Compare, contrast, and describe geologic features of the Central Sierra and Western Basin and Range Provinces.
2. Evaluate the geologic history of the Central Sierra and Western Basin and Range Provinces.
3. Analyze and evaluate geologic processes and deduce valid conclusions as to the tectonic and erosional activity of the Central Sierra and Western Basin and Range Provinces.
4. Create accurate written field notes.

General Education Information

- Approved College Associate Degree GE Applicability
- CSU GE Applicability (Recommended-requires CSU approval)
- Cal-GETC Applicability (Recommended - Requires External Approval)
- IGETC Applicability (Recommended-requires CSU/UC approval)

Articulation Information

- CSU Transferable

Methods of Evaluation

- Projects
 - Example: Students will create field notes including a clear description of the experience. Strong notes will be carefully written and present information in a road-log that includes mileage, turns, geology, photographs and/or drawings.
- Reports
 - Example: Students will write a research paper on a student-identified topic based on the trip.

Repeatable

No

Methods of Instruction

- Lecture/Discussion

Lecture:

1. Instructor will stop at a site that illustrates a particular geologic structure and through discussion and perhaps diagram explain the geological process that created it.
2. Instructor will demonstrate relationships between geologic structures and the evolution of the landscape.

Typical Out of Class Assignments Reading Assignments

1. Instructor will require each student to read the handout on required field equipment and bring that field equipment with them on the field class.
2. Instructor will assign each student to read the section on proper field techniques.

Writing, Problem Solving or Performance

1. Using oral and written guidelines, create accurate field notes.
2. Complete a 2-4 page research paper based upon a topic identified by the student and approved by the instructor.

Other (Term projects, research papers, portfolios, etc.) Required Materials

- Roadside Geology of Northern and Central California
 - Author: Alt and Hynman
 - Publisher: Mountain Press
 - Publication Date: 2016
 - Text Edition: 2nd
 - Classic Textbook?:
 - OER Link:
 - OER:
- Geology of the Sierra Nevada
 - Author: Mary Hill
 - Publisher: UC Press
 - Publication Date: 2006

- Text Edition: Revised
- Classic Textbook?:
- OER Link:
- OER:

Other materials and-or supplies required of students that contribute to the cost of the course.

Map of area Supplemental library of area of field trip Faculty prepared handouts Supplemental readings