

ESCI 0055C - WEEKEND FIELD GEOLOGY - POINT REYES

Catalog Description

Hours: 18 lecture

Description: Exploration of the natural history of the Point Reyes area, emphasizing its geologic history and geomorphology. Camping, entrance and transportation fees may be required. (CSU)

Course Student Learning Outcomes

- CSLO #1: Compare and contrast geologic features of the Point Reyes area.
- CSLO #2: Analyze and evaluate geologic processes responsible for producing specific landforms of the coastal environment.
- CSLO #3: Interpret the tectonic features of the Point Reyes area.

Effective Term

Fall 2017

Course Type

Credit - Degree-applicable

Contact Hours

18

Outside of Class Hours

36

Total Student Learning Hours

54

Course Objectives

1. Relate rock types to the different formations in the Point Reyes area;
2. compare and contrast tectonic features (ridges, troughs, faults, etc.);
3. interpret the geologic history, including relevant events such as earthquakes;
4. analyze the geomorphologic processes that sculpted the area, emphasizing the coastal environment;
5. relate the physical and biological environments; and
6. discuss the history of the Point Reyes area.

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

- Classroom Discussions
 - Example: Students will discuss information relevant to each particular stop, for example, assessing the growth of Limantour Spit over time.
- Reports
 - Example: Students will create a report on their field experience including a road-log, notes on the lectures given, photographs showing relevant features, a map showing the itinerary, and their own comments on each stop.

Repeatable

No

Methods of Instruction

- Lecture/Discussion

Lecture:

1. Instructor will lecture on features of marine erosion and students will record their observations along the trail to Chimney Rock, discussing the characteristic aspects of: wave-cut cliffs and platforms, sea stacks, and sea arches.
2. Instructor will lecture on the events of the 1906 earthquake and discuss the significance of its role in Reid's mechanism of earthquake generation, after which students will follow the earthquake trail to the east of the Visitor Center and evaluate the evidence of the event such as the offset fence.

Typical Out of Class Assignments Reading Assignments

1. Read handouts on basic geological information such as geologic time periods and rock categories and characteristics.
2. Read handout on coastal environments (estuaries, mud flats, beaches).

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, such as monitoring habitat health.

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

Required Materials

- Geology of the Point Reyes Peninsula, Marin County, California
 - Author: Galloway, A.
 - Publisher: Nabu Press
 - Publication Date: 2011
 - Text Edition: 1st
 - Classic Textbook?:
 - OER Link:
 - OER:
- Geology of Northern Marin and Sonoma Counties, California
 - Author: Erickson, R.
 - Publisher: NAGT

- Publication Date: 1992
- Text Edition: 1st
- Classic Textbook?:
- OER Link:
- OER:
- Point Reyes
 - Author: Whitnah, D
 - Publisher: Wilderness Press, Berkeley
 - Publication Date: 1997
 - Text Edition: 3rd
 - Classic Textbook?:
 - OER Link:
 - OER:
- Geology and Mineral Deposits of an Area North of San Francisco Bay, California
 - Author: Weaver, C.
 - Publisher: Facsimile Publisher
 - Publication Date: 2015
 - Text Edition: 1st
 - Classic Textbook?:
 - OER Link:
 - OER:

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