GEO 1015

Division: Natural Science and Mathematics
Department: Geology
Course: GEO 1015
Title: Survey of Geology Lab
Catalog Description:

In this course students will learn how to identify common minerals, rocks and fossils. In addition, students will learn to read and interpret topographic and geologic maps.

General Education Requirements: Physical Science
Semesters Offered: Fall, Spring
Credit/Time Requirement: Credit: 1; Lecture: 0; Lab: 2
Clock/Hour Requirements: 0
Offered for Non-Credit: No
Prerequisites: MATH 1010 or equivalent

Corequisites: GEO 1010

Justification:

This lab is an integral part of an introductory geology experience. It is offered to introduce introductory geology students to the basic skills of a geologist: mineral and rock identification, fossil identification, map reading skills, interpreting landforms and geologic history. Together with GEO 1010 this class meets the Physical Science requirement for G.E. at Snow College and is a common course number for other public colleges in Utah. This course will help students learn the basic concepts of a general geology course. The lab experience is an integral part of any introductory geology course. Snow College is unique in that a lab is required of students, not optional. The lab and lecture are integrated completely. The lab focuses on skills and applications of concepts covered in lecture.

Student Learning Outcomes:

Upon successful completion of this course a student will:

- know how to identify common minerals and rocks
- demonstrate the ability to interpret topographic and geologic maps and identify landforms and geologic structures on such maps
- demonstrate the ability to interpret earth history from geologic maps
- dentify common fossils

Content:

- Mineral Identification
- Igneous Rock

Identification
- Sedimentary Rock
- Metamorphic Rock Identification
- Topographic Map

Interpretation
- Fluvial Landforms
- Glacial Landforms
- Geologic Map

Interpretation
- Fossil Identification
- Earth History
- Groundwater Modeling

General Education Outcomes:

6) Apply computational skills to a variety of contexts.
Students are required to make simple calculations such as scale conversions, distance calculations, etc. Feedback is provided in graded labs and exams.

7) Apply scientific reasoning to a variety of contexts.
Students are taught the methods of rock and mineral identification and fossil classification. They are expected to identify unknown samples using these skills. They are asked to interpret landforms, potential geologic hazards and earth history from geologic and topographic maps. Feedback is provided in graded labs and exams.

Key Performance Indicators:
- Lab exercises: 30%
- Fossil exam: 15%
- Rock and Mineral Exam: 30%
- Map Exam: 25%

Representative Text and/or Supplies:
Hamblin and Howard, Exercises in Physical Gelology, current edition and the lab manual produced by the instructor.

Optimum Class Size: 24
Maximum Class Size: 30

Signatures:

I hereby submit this course syllabus:

Renee Faatz, , Associate Professor

I hereby find this course consistent with the goals and resources of the Geology Department:

Renee Faatz, , Associate Professor, Chair

I hereby find this course consistent with the goals and resources of the Natural Science and Mathematics Division:

Dan Black, EdD, Associate Professor, Dean

I have discussed the need for library resources related to this class with the person submitting the syllabus:

Lynn Anderson, MLIS, Technical Services Librarian (Main Campus)

Michelle Olsen, MLS, Campus Librarian (Richfield Campus)