

Physical Geology 1403

Course Information Sheet

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Required Course Materials:

Lecture: *EARTH, Portrait of a Planet, Fifth Edition / Stephen Marshak & a packet of notes for the course is available at the bookstore.*

Purpose Statement

This course is an introduction to the dynamic planet earth. Physical forces, both interior and exterior, will be examined and interpreted. Plate tectonic interaction will be examined at the planet level and at the level of human interaction with earthquakes, volcanoes, landslides, etc.

Geologic research also examines the chemistry of the rocks and minerals that make up the planet's crust. This knowledge assists in the discovery of economic resources such as minerals, fossil fuels, and ground water. We will examine the importance of these resources in modern human life.

Prerequisites

No previous college-level courses are required.

Course Description

Introductory course in geologic principles; the composition and structure of the earth, its landforms, and the agencies active in their production are presented. This course is intended for all students interested in the study of the earth. Global examples of all theories and processes will be presented for interpretation and understanding.

A calendar will be provided, as soon as student presentation topics are accepted.

1. The major areas which will be covered in lecture are:

- What is Geology?
- A Comparison & Contrast of Planets
- A Journey to the Center of the Earth
- The Delicate Composition of the Crust
 - Continental
 - Oceanic
- The Composition of the Entire Planet
- Continental Drift Theory
- Seafloor Spreading
- Paleomagnetism and Polar Wandering

- Plate Tectonics
- Minerals
- Rocks
- Igneous Rock Formation
- Metamorphic Rock Formation
- Sedimentary Rock Formation
- Volcanism
- Earthquakes

The major areas that will be covered in lab are:

- Safety
 - Creating Models of Earth Processes
 - Continental Drift
 - Seafloor Spreading
 - Paleomagnetism
 - Polar Wandering
 - Composition of the Planet
 - Identifying Minerals
 - Defining Characteristics
 - Mohs Scale of Hardness
2. Classes meet twice a week for both lecture and lab
 3. GEOL 1403 earns 4 credit hours
 4. Students will develop proficiency in the appropriate Intellectual Competencies as follows:
 - **Reading:** The ability to analyze and interpret a variety of printed materials, books, documents and articles – above the 12th grade level.
 - **Writing:** The ability to produce clear, correct and coherent prose adapted to purpose, occasion and audience – above the 12th grade level.
 - **Listening:** The ability to analyze and interpret various forms of spoken communication, possess sufficient literacy skills of writing, reading – above 12th grade level.
 - **Critical Thinking:** The ability to INDIVIDUALLY think and analyze at a critical level.
 - **Computer Literacy:** The ability to understand our technological society, use computer-based technology in communications, solving problems, acquiring information.

Course Objectives and Student Learning Outcomes

Upon completion of the course, the student will show competence in the course objectives listed below:

Lecture:

1. Read the assigned chapters in the textbook and laboratory manual.
2. Attend all lectures and laboratory classes.
3. Take notes in class.
4. Participate in class discussions.
5. Complete assigned outside reading material and homework.

6. View audiovisual materials on selected topics.
7. Use the computer software in the lab and/or classroom as it is assigned.
8. Complete the exams on the assigned dates; the exams may include essay questions.

Laboratory:

1. Demonstrate knowledge of laboratory safety.
2. Gather, organize, calculate, and interpret data.
3. Effectively communicate scientific ideas (hypothesis, theories, and laws) with supporting evidence.
4. Identify & categorize rocks and minerals by their characteristics.
5. Interpret and analyze topographic maps.

Course Requirements

1. The student should do each of the following:
 - Read the assigned chapters in the textbook
 - **Attend all lectures and laboratory classes.**
 - Take notes in class.
 - Review notes daily.
 - **Participate in class discussions.**
 - Complete assigned outside reading material and homework.
 - View audiovisual materials on selected topics.
 - Use the computer software in the lab and/or classroom as it is assigned.
 - Complete the exams on the assigned dates

Outcomes Inventory: A pre and post test may be used to determine the extent of improvement the class has gained during the semester; given at the discretion of the instructor.

Diversity Statement: In this class, the teacher will establish and support an environment that values and nurtures individual and group differences and encourages engagement and interaction. Understanding and respecting multiple experiences and perspectives will serve to challenge and stimulate all of us to learn about others, about the larger world and about ourselves. By promoting diversity and intellectual exchange, we will not only mirror society as it is, but also model society as it should and can be.

Disability Statement: Students with disabilities, including but not limited to physical, psychiatric, or learning disabilities, who wish to request accommodations in this class should notify the Special Services Office early in the semester so that the appropriate arrangements may be made. In accordance with federal law, a student requesting accommodation must provide acceptable documentation of his/her disability to the Special Services Coordinator. For more information, call or visit the Special Services Office in the Student Services building, 894-9611 ext. 2529.

Calendar

The instructor will ensure that the course content is covered in a manner that fulfills the course objectives. Due dates for assignments, quizzes and exams will be provided within a calendar format. All dates will be tentative and subject to change.

Attendance Policy

Grades for Class		Points Earned
Lab Quiz 1	10	_____
Lab Quiz 2	10	_____
Lab Quiz 3	10	_____
Test #1	10	_____
Test #2	10	_____
Test #3	10	_____
Presentation	10	_____
Lab Assignments	10	_____
FINAL	10	_____
FINAL	10	_____
Total Points Possible 100		_____

Attendance Policy

ATTENDANCE: School policy on attendance is covered in the current catalog. Roll is kept for **both lecture and lab**. If you are absent **four consecutive class-days**, you may be dropped or if you accumulate five absences you may be dropped. A drop in the above manner usually results in a grade of F.