

# Course Syllabus

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**Department** : Physical Sciences  
**Course Title** : GEOL 1403 Physical Geology  
**Section Name** : GEOL\_1403\_12,2,(724w/lab-Fall Only, 102w/lab Sum I)  
**Start Date** : 06/06/2011  
**End Date** : 07/07/2011  
**Modality** : FACE-TO-FACE  
**Credits** : 4

## Instructor Information

**Name** : Dennis Edwards  
**OC Email** : dedwards@odessa.edu  
**OC Phone #** : 432-335-6558

## Course Description

Catalog's:

This course is a study of the physical and chemical aspects of the Earth's interior and exterior crust. Students will study the origin, occurrence, and classification of minerals, rocks, structures and landforms. Laboratory activities involve the students in organizing and processing data related to the classification of minerals and rocks and principles underlying the relationships between topographic maps and geological processes. Lab fee required.

Instructor's:

Physical Geology is the study of the earth's physical components including minerals, rocks, deformation and structure, earthquakes, the ocean floor, plate tectonics, mountain belts, and erosion. This course will use current knowledge and techniques of the earth's geology according to physical observations and analysis.

## Prerequisites/Corequisite

None

**SCANS** 6, 9

## Course Objectives

The objective of the study of a natural sciences component of a core curriculum is to enable students to understand, construct, and evaluate relationships in the natural sciences, and to enable the student to understand the bases for building and testing theories.

General objectives for this course include:

1. To understand and apply methods and appropriate technology to the study of the natural sciences.
2. To recognize scientific and quantitative methods and the differences between these approaches and other methods of inquiry and to communicate findings, analyses, and interpretation both orally and in writing.
3. To identify and recognize the differences among competing scientific theories.
4. To demonstrate knowledge of the major issues and problems facing modern science, including issues related to ethics, values, and public policies.
5. To demonstrate knowledge of the interdependence of science and technology and their influence on, and contribution to, modern culture.

### **Course Attendance**

Course attendance is the responsibility of the student. Excessive absences will not result in the student being dropped from the course. Attendance will be taken in class.

### **Academic Honesty**

Odessa College expects its students to maintain complete honesty and integrity in their academic pursuits. Students are responsible for understanding the code of Student Conduct found in the student handbook. Cheating will not be tolerated in any form.

### **Late Work Policy**

Missing lab tests and exams will result in a make up test the very next day (8:00 am). If this make-up time is missed the result is a zero. **DO NOT MISS EXAM AND LAB TEST DATES.**

### **Cell Phone Use**

Cell phones, while an important communication tool in modern society, are a severe interruption to classroom instruction. Thus, cell phones are, as a rule, strictly prohibited from being seen or heard. If you must have a cell phone available to you in case of an emergency, your phone must be put up on your person (not in a desk, but in your pocket or on a belt) and set on vibrate or silent. You may at any time excuse yourself from the classroom to attend to your personal business. **There will be no cell phone use allowed in class. Strictly, no texting or internet surfing. During exams, in order to maintain integrity of the testing environment, all cell phones will be required to be off.**

### **Video /Audio Recording**

Video /audio recording of lectures or class activities is strictly prohibited unless special accommodations are warranted for students with disabilities. Violation of this policy will result in the student being removed from the class and receiving a grade of F.

## **Required Readings/Materials**

You must purchase the following *required* readings/materials:

Text: (Lecture) Earth An Introduction to Physical Geology (10e) Tarbuck / Lutgens / Tasa

Text: (Lab) Exercises In Physical Geology (12e) Hamblin & Howard

## **Course Requirements (Lectures, Labs, Assignments and Assessments)**

Specific objectives for this course include:

1. To obtain the intellectual ability to translate, interpret, and extrapolate the most important scientific models governing modern physical geology, the practices and methodologies used by modern geologists in constructing physical models of the earth, the materials it is made of and the events that make it dynamic.
2. To further develop critical thinking and problem solving skills in the area of physical geology and earth science.

Laboratory learning objectives include:

1. To complete physical geology practices through laboratory studies of minerals, rocks (igneous, sedimentary, and metamorphic) and topographic maps.(see lab syllabus for GEOL 1403 Labs A, B, C)

**Topic/Overview:** This week focuses on Tarbuck / Lutgens / Tasa (textbook)

**Summary of Assignments & Activities**

| Item(Name)                                   | Type        | Description                                  |
|--|-------------|--|
| Introduction                                 | Lecture     | Chapter 1                                    |
| Minerals                                     | Lecture     | Chapter 3                                    |
| Minerals                                     | Lecture     | Chapter 3                                    |
| <b>Exam I</b>                                | <b>Exam</b> | <b>Exam covering chapters 1, 3</b>           |
| Igneous Rocks                                | Lecture     | Chapter 4                                    |
| Igneous Activity                             | Lecture     | Chapter 5                                    |
| Weathering                                   | Lecture     | Chapter 6                                    |
| Sedimentary Rocks                            | Lecture     | Chapter 7                                    |
| Metamorphic Rocks                            | Lecture     | Chapter 8                                    |
| <b>Exam II</b>                               | <b>Exam</b> | <b>Exam covering chapters 4 - 8</b>          |
| Deformation, Earthquakes, & Earth's Interior | Lecture     | Chapter 10, 11, & 12                         |
| Plate Tectonics                              | Lecture     | Chapter 2                                    |
| Plate Tectonics                              | Lecture     | Chapter 13 & 14                              |
| <b>Exam III</b>                              | <b>Exam</b> | <b>Exam covering chapters 2, &amp; 10-14</b> |
| Mass Wasting                                 | Lecture     | Chapter 15                                   |
| Running Water and Groundwater                | Lecture     | Chapter 16 & 17                              |
| Glaciers                                     | Lecture     | Chapter 18                                   |
| Wind & Shoreline                             | Lecture     | Chapter 19 & 20                              |
| <b>Final Exam</b>                            | <b>Exam</b> | <b>Cumulative Final Exam</b>                 |

**Grading Policy** Course grades are a culmination weekly labs, lab tests, chapter tests, and final exam grades. The percent breakdown for each of these is as follows: 25% Lab Tests, 50% Chapter Tests, and 25% Final Exam. While the laboratory constitutes only 25% of the course grade, it is important to understand that geology is fundamentally a laboratory-based science. **Therefore, a failing grade in the lab will result in a failing grade in the course.** While you will never receive a score lower than that numerically earned, I do reserve the right to rescale grades as I see fit at any time during the semester. Final grades will be assigned as follows:

| Percentage % | Grade |
|--------------|-------|
| 90 - 100     | A     |
| 80 - 89      | B     |
| 70 - 79      | C     |
| 60-69        | D     |
| 00-59        | F     |

**Special Needs** Odessa College complies with Section 504 of the Vocational Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990. If you have any special needs or issues pertaining to your access to and participation in this or any other class at Odessa College, please feel free to contact me to discuss your concerns. You may also call the Office of Disability services at 432-335-6861 to request assistance and accommodations.

**Learning Resource Center (Library)** The Library, known as the [Learning Resources Center](#), provides research assistance via the [LRC's catalog \(print books, videos, e-books\)](#) and [databases \(journal and magazine articles\)](#). [Research guides](#) covering specific subject areas, [tutorials](#), and the "[Ask a Librarian](#)" service provide additional help.

**Student E-mail** Please access your [Odessa College Student E-mail](#), by following the link to either set up or update your account: <http://www.odessa.edu/gmail/>. **All assignments or correspondence will be submitted using your Odessa College email.**

**Student Portal** Please access your [Odessa College Student E-mail](#), by following the link to either set up or update your account: <http://www.odessa.edu/gmail/>. **All assignments or correspondence will be submitted using your Odessa College email.**

**Technical Support** For Blackboard username and password help and for help accessing your online course availability and student email account contact the Student Success Center at 432-335-6878 or online at [https://www.odessa.edu/dept/ssc/helpdesk\\_form.htm](https://www.odessa.edu/dept/ssc/helpdesk_form.htm).

**Important School Policies** For information regarding student support services, academic dishonesty, disciplinary actions, special accommodations, or student's and instructors' right to academic freedom can be found in the [Odessa College Student Handbook](#).