

Physical Geology Lecture

Department : Physical Sciences
Course Title : GEOL 1403 Physical Geology
Section Name : GEOL_1403_12,2,(6245w/lab-Fall Only, 102w/lab Sum I)
Start Date : 08/26/2013
End Date : 12/12/2013
Modality : FACE-TO-FACE
Credits : 4(in conjunction with lab)

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

ICO's(1,4,5,6)

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 receive a grade of an F.

Required Readings/Materials

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

Required Text: (Lecture) Essentials of Geology (11e) Lutgens / Tarbuck / Tasa

Optional Text, highly recommended: (Lab) Exercises in Physical Geology (12e) Hamblin / Howard

Optional or supplement Text: (Lab) Simon & Schuster's Guide to Rocks & Minerals

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 Lutgens / Tarbuck / Tasa (textbook)

Summary of Assignments & Activities

Item(Name)	Type	Description
Introduction	Lecture	Chapter 1
Matter and Minerals	Lecture	Chapter 2
Matter and Minerals	Lecture	Chapter 2
Exam I	Exam	Exam covering chapters 1 & 2
Igneous Rocks and Intrusive Activity	Lecture	Chapter 3
Volcanoes and Volcanic Hazards	Lecture	Chapter 4
Weathering and Soils	Lecture	Chapter 5
Sedimentary Rocks	Lecture	Chapter 6
Metamorphism and Metamorphic Rocks	Lecture	Chapter 7
Exam II	Exam	Exam covering chapters 3 - 7
Mass Wasting / Running Water	Lecture	Chapter 8 & 9
Groundwater	Lecture	Chapter 10
Glaciers and Glaciation	Lecture	Chapter 11
Deserts and Winds / Shorelines	Lecture	Chapter 12 & 13
Exam III	Exam	Exam covering chapters 8 - 13
Earthquakes and Earth's Interior	Lecture	Chapter 14
Plate Tectonics / The Ocean Floor	Lecture	Chapter 15 & 16
Crustal Deformation and Mountain Building	Lecture	Chapter 17
Final Exam	Exam	Cumulative Final Exam

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 the 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

Expectations for Engagement – Face to Face Learning

To help make the learning experience fulfilling and rewarding, the following Expectations for Engagement provide the parameters for reasonable engagement between students and instructors for the learning environment. Students and instructors are welcome to exceed these requirements.

Reasonable Expectations of Engagement for Instructors

1. As an instructor, I understand the importance of clear, timely communication with my students. In order to maintain sufficient communication, I will
 - provided my contact information at the beginning of the syllabus;
 - respond to all messages in a timely manner through telephone, email, or next classroom contact; and,
 - notify students of any extended times that I will be unavailable and provide them with alternative contact information (for me or for my supervisor) in case of emergencies during the time I'm unavailable.
2. As an instructor, I understand that my students will work to the best of their abilities to fulfill the course requirements. In order to help them in this area, I will
 - provide clear information about grading policies and assignment requirements in the course syllabus, and
 - communicate any changes to assignments and/or to the course calendar to students as quickly as possible.
3. As an instructor, I understand that I need to provide regular, timely feedback to students about their performance in the course. To keep students informed about their progress, I will
 - return classroom activities and homework within one week of the due date and
 - provide grades for major assignments within 2 weeks of the due date or at least 3 days before the next major assignment is due, whichever comes first.

Reasonable Expectations of Engagement for Students

1. As a student, I understand that I am responsible for keeping up with the course. To help with this, I will
 - attend the course regularly and line up alternative transportation in case my primary means of transportation is unavailable;
 - recognize that the college provides free wi-fi, computer labs, and library resources during regular campus hours to help me with completing my assignments; and,
 - understand that my instructor does not have to accept my technical issues as a legitimate reason for late or missing work if my personal computer equipment or internet service is unreliable.
2. As a student, I understand that it is my responsibility to communicate quickly with the instructor any issue or emergency that will impact my involvement with or performance in the class. This includes, but is not limited to,
 - missing class when a major test is planned or a major assignment is due;
 - having trouble submitting assignments;
 - dealing with a traumatic personal event; and,
 - having my work or childcare schedule changed so that my classroom attendance is affected.
3. As a student, I understand that it is my responsibility to understand course material and requirements and to keep up with the course calendar. While my instructor is available for help and clarification, I will
 - seek out help from my instructor and/or from tutors;
 - ask questions if I don't understand; and,
 - attend class regularly to keep up with assignments and announcements.

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 (abd) student email account contact the Student Success Center at 432-335-6878 or online at

https://www.odessa.edu/dept/ssc/helpdesk_form.htm. The Odessa College Student Success Coaches will help you stay focused and on track to complete your educational goals. If an instructor sees that you might need additional help or success coaching, he or she may submit a Retention Alert or a Starfish Alert. A Student Success Coach will contact you to work toward a solution.

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](#).