

Course Syllabus

Department : Physical Sciences
Course Title : GEOL 1404 Historical Geology w/lab
Section Name : GEOL_1404_4
Start Date : 08/23/2010
End Date : 12/10/2010
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:

Students study the chronological sequence of events in the physical history of the Earth and its life forms. Laboratory activities involve the students in acquiring and evaluating data related to fossils and their relationship to ancient environments. Students also organize and process data related to the classification of fossils and principles underlying the relationships between lithology, age, structure and geological map interpretation. Lab fee required.

Instructor's:

Historical Geology is the study of the earth's history including fossils, geologic time, extinction, stratigraphy, sedimentary environments, plate tectonics and the geologic time scale events in detail. This course will use current knowledge and techniques of the earth's geology through historical record; including radiometric dating methods and geologic map interpretation.

Prerequisites/Corequisites

GEOL 1403

[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 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 a student being dropped from a 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 System History (3e) Stanley

Text: (Lab) Laboratory Studies In Earth History (9e) Levin / Smith

Course Requirements (Lectures, 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 historical geology, the practices and methodologies used by modern geologists in constructing the geologic time scale, rise and fall in sea level, major mountain building events and fossil correlation.
2. To further develop critical thinking and problem solving skills in the area of historical geology and the natural science.

Laboratory learning objectives include:

1. To complete historical geology practices through laboratory studies of sedimentary rocks, sedimentary structures, stratigraphy exercises, fossils and geologic maps.

Topic/Overview: This week focuses on Stanley (textbook -lecture)

Summary of Assignments & Activities

| Item(Name) | Type | Description |
|------------------------------|-------------|-----------------------------------|
| Earth As A System | Lecture | Chapter 1 |
| Minerals & Rocks | Lecture | Chapter 2 |
| Sedimentary Environments | Lecture | Chapter 5 |
| Geologic Time & Correlation | Lecture | Chapter 6 |
| Life & Life Environments | Lecture | Chapter 3 & 4 |
| Plate Tectonics | Lecture | Chapter 8 |
| Tectonic Mountain Building | Lecture | Chapter 9 |
| Exam I | Exam | Exam covering Chapters 1 -6, 8 &9 |
| Archean & Proterozoic | Lecture | Chapter 11 & 12 |
| Early Paleozoic | Lecture | Chapter 13 |
| Middle Paleozoic | Lecture | Chapter 14 |
| Late Paleozoic | Lecture | Chapter 15 |
| Exam II | Exam | Exam covering Chapters 11 -15 |
| Early Mesozoic | Lecture | Chapter 16 |
| Late Mesozoic (Cretaceous) | Lecture | Chapter 17 |
| Cenozoic (Paleogene) | Lecture | Chapter 18 |
| Cenozoic (Neogene, Holocene) | Lecture | Chapter 19 & 20 |
| Final Exam | Exam | Cumulative Final Exam |

Topic/Overview: This week focuses on Lab

Summary of Assignments & Activities

| Item(Name) | Type | Description |
|---------------------------------|----------------|--|
| Sedimentary Rocks & Structures | Lab Assignment | Identify Sedimentary Rocks & Structures |
| Stratigraphy I | Lab Assignment | Stratigraphic Exercise I |
| Stratigraphy II | Lab Assignment | Stratigraphic Exercise II |
| Lab Test - Rocks & Stratigraphy | Lab Practical | Test over Sedimentary Rocks, Structures, & Stratigraphy |
| Fossilization and Fossils I | Lab Assignment | Identify Fossilization processes & Invertebrate Fossils |
| Fossils II | Lab Assignment | Identify Invertebrate Fossils |
| Fossils Review | Lab Assignment | Review Fossil Sets I & II |
| Lab Test - Fossils | Lab Practical | Test 50 Invertebrate Fossil Types from previous labs |
| Fossils III | Lab Assignment | Identify Invertebrate Fossils |
| Fossils IV | Lab Assignment | Identify Vertebrate Fossils & Plant Fossils |
| Lab Test - Fossils | Lab Practical | Test 50 Invertebrate, Vertebrate & Plant Fossil types from previous labs |
| Geologic Maps I | Lab Assignment | Geologic Map Exercise I |
| Geologic Maps II | Lab Assignment | Geologic Map Exercise II |
| Lab Test - Geologic Maps | Lab Practical | Test Knowledge of Geologic Maps from previous labs |

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 |

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 **Special Needs** Odessa College complies with Section 504 of the Vocational Rehabilitation Act of 1973 and the Americans with Disabilities Act. 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.

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](#).