

Geology 1402
Earth Science II

Western Texas College

The policies, assignments and other information contained herein may be changed at the discretion of the instructor in the event of extenuating circumstances.

- I. Basic Course Information
 - A. Course title and number - Geology 1402
 - B. Prerequisites - Basically, the only prerequisite is that the student be able to read and comprehend college level material. There is very little math and chemistry in this introductory course of physical geology. It is essentially a class for non-science majors who need a laboratory science although; it is open to anyone interested in geology.
 - C. Credit hours —4 credit hours
 - D. Requirements for major areas of study -This course will fulfill the requirements for an introductory course in Earth science. Topics to be covered include historical geology and fossils, especially of the surrounding area. In the laboratory portion map reading will continue to be emphasized along with stratigraphic techniques and interpretation, and fossil identification. Additional topics include oceanography, meteorology and astronomy.
 - E. Textbook information – GEOS package containing both text and lab manual. This is available at the WTC bookstore.
- II. **Student Learning Outcomes** - These are somewhat different from learning objectives in that they vary from discipline to discipline and even from course to course within a particular discipline. Outcomes not only state the desired learning outcome but, also the method of assessing the learning be it a test or other instrument. Basically these are some the things you will do while in this course.
 - A. Identify the influence of geologic and hydrologic processes on Earth's surface.
 - B. Describe the causes and effects of tectonic, meteorological, oceanographic, and astronomical hazards.
 - C. Relate climate change to changes in tectonic configurations, astronomical relationships and atmospheric composition.
 - D. Discuss potential effects of climate variability on Earth systems, including biological systems.
 - E. Recognize how scientific models represent an abstraction of complex systems, such as ocean circulation and climate variability.
 - F. Describe natural resources used by humans and their occurrence and extraction.
 - G. Discuss the effects of renewable and nonrenewable resource development and sustainability.
 - H. Locate on maps and/or photographs localities susceptible to tectonic, meteorological, and oceanographic hazards.

- I. Discuss methods of hazard prevention and mitigation such as early warning techniques, construction methods, and civil planning.
 - J. Describe contributing factors to past and current climate change.
 - K. Analyze effects of climate variability on geological and biological systems.
 - L. Analyze diverse sources of data that document climate variability such as ice cores, dendrochronology, fossils, and pollen.
 - M. Relate the distribution of fossil fuel, metal and nonmetal resources to geologic processes.
 - N. Describe the methods of extraction of natural resources and their effect on the environment.
 - O. Describe renewable resources and methods of sustainability.
- III. Course Requirements and Grading Standards
- A. Attendance and punctuality are assumed. Do not get in the habit of being late for class. After 3 hours of absence your name will be turned into the counseling office. If you are not present when role is checked, you will be counted absent. After 6 hours of absence, an administrative drop may be issued. Field trips **are required** except in extenuating circumstances and the teacher must approve these ahead of time.
 - B. Lecture grades will consist of three different types of quizzes – major or hour exams, quizzes and the final exam. The major exams will be given approximately every 2-4 weeks and will be announced at least a week in advance. These grades will count 35% of your final grade. This should give you about 4-6 major grades by the end of the semester. You must be in your seat and ready to take the test by 11:05 or you will not be allowed to take the test. Coming in late disturbs those who arrived on time and are taking the test. Except in the case of school related absences, missed exams may not be made up. A comprehensive final will be given for those desiring to substitute it for their lowest exam grade. The final exam will count 20% of the final grade.

Quizzes will be given at the discretion of the instructor and may or may not be announced. These quizzes will be mainly non-comprehensive although they may contain some material from previous quizzes. These will count 20% of your final grade. If you miss any quiz for any reason, you may not make it up.

Lab grades will be based on lab activities, exercises and quizzes and will count 25% of the final course grade. Each grade will count equally and will be given over recent lab material and related lecture material. **Labs and lab grades may not be made up.** There will be sufficient grades to give a good indication of the student's knowledge and proficiency in the material covered in the course.

Final grades will be distributed according to the scale below:

90 and above = A

80-89 = B

70-79 = C

60-69 = D

Below 60 = F

Cheating on any quiz or other grade may result in being dropped from the course.

All electronic devices should be turned OFF when entering class or lab. If any device rings or, in any way, makes a noise during a test, the test will be handed in at that time. Any use of an electronic device during a test will be considered cheating.

*NOTE – Finals may be given early only with written permission from the Dean of Students.

Last Modified: January 20, 2015