

Geology 101 Syllabus: Physical Geology

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Required Texts:

Physical Geology: Earth Revealed, Plummer, McGeary and Carlson, Sixth Edition, 2005, McGraw Hill, 580 p.

Telecourse Guide for Earth Revealed, Introductory Geology, Lebow, Ruth, Fifth Edition, 2004, Kendall Hunt, 447 p.

Note: Enrollment in Physical Geology Laboratory is recommended but not required. Consult your educational advisor.

Purpose and Scope:

This class is an introduction to the study of the Earth with emphasis on: the materials that make up the Earth, plate tectonics, and the external processes that form and reshape the landscapes. In the Earth Revealed series, these principles are documented with the assistance of on-location footage at major geological sites around the world. A background in simple chemistry, mathematics and physics is helpful, but not required. With respect to tests, questions will emphasize application, interpretation and analysis of data and content, rather than memorization of facts and vocabulary.

Learning Outcomes:

(By the end of the semester, you should understand the following “big picture” topics of geography and Earth Science.)

- *Students will understand the basic theory of plate tectonics and southern California’s place in the plate tectonic system of the dynamic Earth.
- *Students will understand that tectonic processes dynamically move the Earth’s crust, and that the Earth’s hydrosphere and atmosphere work together to constantly reshape the landforms on the surface of the Earth.
- *Students will have a basic understanding of the concept of scale (spatial and time), and how it pertains to geography and the Earth Sciences.
- *Students will understand the difference between an element, a mineral and a rock, and how each of these is related to one another.
- *Students will understand that ancient environments (eolian, fluvial, glacial) exposed in rock on the surface of the Earth were created by the same environmental forces seen in operation today.

Course Requirements (and credit hour rationale):

1) Attendance Policy: Attend five on-campus meetings (2 hours each). Absences will negatively affect your final grade. Only extreme, unusual circumstances will be accepted as an excuse for an absence. Call as far in advance as possible if you know you will have to be absent.

Total Time=10 hours

2) Reading and Study Requirements: Read the chapters in the text and study guide that correspond to the programs that are being shown. Review the text, study guide and movie notes before each exam.

Total Time=65 hours

3) Viewing Requirements: View 26 one-half hour video lessons on KVCR-TV (Channel 24) on Wednesday’s from 8:30-11:00am (Beginning 6/21/06, see last page).

Total Time=13 hours

Important Dates

June 27 : Last day to withdraw without a grade of “W”

July 21 : Last day to withdraw with a grade of “W”

Grades

Your grades will be posted after each exam and points will be accumulated as follows:

1) Four (4) tests at 100 points each	=400 Points
2) One Set of Typed Note Sheets for all of the Episodes of Earth Revealed.	=100 Points
Total	=500 Points

Your grade will be determined by the points you've accumulated throughout the semester. Your total points will be divided by 500 and converted to a percentage, which will be applied to the following scale:

A: 90-100% **B:** 80-89.9% **C:** 70-79.9% **D:** 60-69.9% **F:** 0-59.9%

The Tests

A test is given at each of the last four class meetings. The **test dates are etched in stone**, and the dates are included in the course outline. **If you know you are going to miss a test, let me know as soon as possible.** If you do not warn me in advance, you may not be able to make up the exam! The tests consist of two distinct parts, which are: 1) a multiple guess section, which also may include true-false, matching, etc. (**you will need a no. 882-E scantron for this section of the test**), and 2) a short answer essay section which may include an explanation of a diagram or graph and/or a short explanation of an Earth process. A study guide for each exam will be provided.

Note Sheets

Notes should be taken while watching each episode of Earth Revealed. Note sheet "skeletons" will be provided for each of the episodes being shown. You will need to hand write the notes directly onto these sheets. The note sheet "skeletons" for each episode covered will be turned in exam night. For example, your first test is June 28. By that time, Episodes 1-4 will have been run twice. So, you will need to bring in the notes for those episodes when you take your first test. A summary of the episodes covered for each exam follows:

	<u>Test Date</u>
Test #1: Episodes 1-4	(June 28, 2006)
Test #2: Episodes 5-9	(July 5, 2006)
Test #3: Episodes 10-18	(July 19, 2006)
Test #4: Episodes 19-26	(August 2, 2006)

How to Succeed in a Telecourse

In order to succeed in a telecourse, you will need to be self-motivated, a careful planner, and possess decent study habits. Following are several suggestions that may help you succeed:

- 1) Use the study guide. The telecourse guide gives a great overview and also provides corresponding readings from the text.
- 2) Examine the study topics guide hand out. Half of your exam comes from these topics, so take notes from the movies, text and study guide on these specific topics. I would recommend outlining the text and study guide BEFORE you actually see the movie.
- 3) Watch the Earth Revealed movies very critically. Do not allow yourself to slip into TV watching mode and let your brain separate from your body. These programs contain a huge amount of condensed information in each episode. You will have to be on your toes if you want to catch it all. If you have a VCR, tape the program so that you can review it at a later time.
- 4) If you miss a television broadcast, video cassettes of the lectures are made each week and are available in the CHC learning center (library 2nd floor) by calling 389-3312. The tapes are leased and the college does not have rights to loan them out. You must make an appointment to view them on campus. Call the learning center if you are unable to keep your appointment. The episodes are now available online (for free) at www.learner.org/resources/series78.html.
- 5) Review for examinations **all** of your materials (the movie notes, study guide and textbook). Spend extra time on the essay topics. If you do everything, you'll ace the class. Good luck with everything, and do not hesitate to contact me if you have questions.
- 6) Form a study group with your classmates.

GEOL-101

3 Units

Introduction to Geology



Earth Revealed

EARTH REVEALED is a comprehensive study of the Earth's physical processes and properties with the emphasis on understanding the scientific theories behind the geological principles. These principles are vividly documented with the assistance of on-location footage at major geological sites around the world. Presented are both the dramatic forces -- volcanic activity and earthquakes -- as well as the more subtle ever-present elements of the geological process. **EARTH REVEALED** also illuminates the often-unrealistic link between human activity and geological change.

It has **26** episodes, 1/2 hour each, broadcasted by KVCR-TV, on **Wednesdays**, from **8:30 - 11:00 a.m.** on the following dates:

Date	Series Nr.	Episodes Nr.
6/21/2006	1	Down to Earth
6/21/2006	2	Restless Planet
6/21/2006	3	Earth's Interior
6/21/2006	4	The Sea Floor
6/21/2006	5	The Birth of a Theory
6/28/2006	6	Plate Dynamics
6/28/2006	7	Mountain Building
6/28/2006	8	Earth's Structures
6/28/2006	9	Earthquakes
6/28/2006	10	Geologic Time
7/05/2006	11	Evolution through Time
7/05/2006	12	Minerals: The Materials of the Earth
7/05/2006	13	Volcanism
7/05/2006	14	Intrusive Igneous Rocks
7/05/2006	15	Weathering and Soils
7/12/2006	16	Mass Wasting
7/12/2006	17	Sedimentary Rocks: The Key to Past Environments
7/12/2006	18	Metamorphic Rocks
7/12/2006	19	Running Water 1: Rivers, Erosion and Deposition
7/12/2006	20	Running Water 2: Landform Evolution
7/19/2006	21	Ground Water
7/19/2006	22	Wind, Dust, and Deserts
7/19/2006	23	Glaciers
7/19/2006	24	Waves, Beaches, and Coasts
7/19/2006	25	Living with the Earth - Part 1
7/26/2006	26	Living with the Earth - Part 2

Crafton

