

SYLLABUS
Earth & Planetary Science 101 GEOLOGY
Fall 2017

Instructor: Chuck Schick, PG, CPG
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Office Hours: after class or by appointment. Not here during the day.
Class Times: MW 4:30PM – 5:45PM

SCHEDULE

WEEK	Week of	TOPICS
1	Aug 21	Introduction to the class. Scientific Method Laws, Theory's and models. Know the difference. What is Geology? Why Study it? Importance?
2	Aug 28	Earthquakes and tectonic forces
3	Sept 4	Earth's Basic Composition. What is a mineral? x-stals? And silicate structures Igneous Rocks (I usually skip volcanoes Ha ha) Magma Differentiation and the Reaction Series.
4	Sept 11	Basic Rx types Rocks and the Geologic Records
5	Sept 18	Igneous Rocks (most are not from volcanoes)
6	Sept 25	Weathering Processes and Erosion Sediments and Sedimentary Processes
7	Oct 2	Sedimentary Rocks Test Review (Be there!!)
8	Oct 9	TEST #1 (first class of week), FALL BREAK WEEK
9	Oct 16	Metamorphic Rocks and Deformation, Pressure and Temperature. Sillimanite, Staurolite, kyanite garnet (heat and pressure tell-tails)
10	Oct 23	Metamorphic Rocks (continued), Rock Cycle (or recycle).
11	Oct 30	Significant events in Geologic Time and Geologic Time Test #2 REVIEW (be there)
12	Nov 6	Mass Wasting, Hydrology and Groundwater, Erosion processes TEST #2 (2nd class of week)
13	Nov 13	Hydrogeology and Groundwater
14	Nov 20	Glacial Geology and Landscape Formation (Geomorphology)
15	Nov 27	Geologic Disasters, Earthquakes, seismology
16	Dec 4	TEST #3 (first class of week), (first class of week), Wrap up class Catch up if needed on last Wednesday
		FINAL EXAM !!! (we follow the posted UNM Valencia schedule for the exam).

Course Textbook: Earth: Portrait of a Planet 4th Ed. S. Marshak W.W. Norton & CO.

I will have a definite reading list to you when the University provides me a copy of the textbook (hopefully by next class).

Course Goals:

- 1) *To introduce the principles and process of science using the study of earth science as an aide*

It behooves us to learn how to use the scientific method in our everyday thinking, and to learn how scientists use this method to assign levels of confidence to their findings.

- 2) *To give each student a better appreciation of the world around them, and how it affects their lives and the lives of others*

If nothing else I hope that you come away from this course with a closer connection to your home – the Earth: have a better understanding of the hazards to human life and property due to earth processes; know how rocks are formed, how they are different, and how this gives them properties that make them useful for different human activities; and how earth processes have acted slowly, or quickly, to construct the landscape around us.

Student Learning Objectives (SLOs):

1. By evaluating a set of data, the student will define a problem, pose a hypothesis, and describe how the hypothesis can be tested.
(Relates to UNM/HED Area 3, Competencies 1, 2, 4)
2. Students will be able to state the age of the Earth and describe how geologists measure absolute rock ages by radioactive decay.
(Relates to UNM/HED Area 3, Competencies 1, 3)
3. Students will be able to determine the relative order in which a series of geologic events occurred by applying the concepts of relative dating.
(Relates to UNM/HED Area 3, Competencies 1, 3)
4. Students will be able to describe the compositional (crust, mantle, core) and mechanical (lithosphere, asthenosphere, outer core, inner core) layers that exist in the Earth.
(Relates to UNM/HED Area 3, Competency 3)
5. Students will be able to name and describe fluvial, karst, glacial, coastal and Aeolian landforms (e.g. meanders, moraines, dunes, etc.) and be able to explain the specific geologic processes involved in their formation.
(Relates to UNM/HED Area 3, Competencies 3, 5)
6. Students will be able to describe the three main rock types (igneous, sedimentary, and metamorphic)
and how they form in the context of the
rock cycle. (Relates to UNM/HED Area
3, Competency 3)
7. Students will be able to explain the evidence for the plate tectonic processes that occur at each of the three types of plate boundaries.
(Relates to UNM/HED Area 3, Competencies 2, 3)
8. Students will be able to describe the geologic processes involved in formation and concentration of a significant geologic resource (examples include fossil fuels and metals).
(Relates to UNM/HED Area 3, Competencies 3, 5)
9. Students will describe the processes that are responsible for specific geologic hazards (e.g., earthquakes, volcanic eruptions, mass movement, flooding, etc.).
(Relates to UNM/HED Area 3, Competencies 3, 5)

Plagiarism/Cheating:

I encourage you to talk with one another about assignments before, and while, you do them, but all submitted work must be your own. In addition, if you copy information from textbooks, newspapers, the internet or other media sources you must cite them as your source of information. Blatant copying (plagiarism) will result in a score of zero for all students involved. A second offense will result in you receiving an F for this course. I would like to draw your attention to: The University of New Mexico's policy on "Dishonesty in Academic Matters": *"Each student is expected to maintain the highest standards of honesty and integrity in academic and professional matters. The University reserves the right to take disciplinary action, including dismissal, against any student who is found responsible for academic dishonesty. Academic responsibility includes, but is not limited to, dishonesty in quizzes, tests or assignments; claiming credit for work not done or done by others; hindering the academic work of other students; and misrepresenting academic or professional qualifications within or outside the University"*.

Access:

If you have a documented learning disability, please provide a copy of your letter from **Equal Access Services** as soon as possible to ensure that your accommodations are provided for in a timely manner.

Electronic Devices:

To the benefit of you, your classmates and the learning environment **please turn off** electronic devices such as cell phones before class begins. If you wish to use a **laptop or tablet** for note-taking **please press mute** to eliminate distracting noises. Your cooperation in these matters is appreciated by all.

Make-up Tests: No Make-up Exams. See Grading Policy below.

Grading Policy:

There are Three (3) Tests and a FINAL Examination for a grand total of four (4). These tests count for 90% of your grade. Reading quizzes will constitute the remaining 10%. Quizzes are unscheduled and I will most likely increase their frequency if I sense the class is not reading ahead of class. You may drop the lowest test score (Best 3 out of 4 Exams). Poor attendance could RESULT IN YOU BEING DROPPED from the class.

Special Needs:

If you have a disability, please inform let me know I will be receiving a notice from the advisor's office as to what accommodation is necessary for you in the class.

Title IX: See <http://www2.ed.gov/about/offices/list/ocr/docs/> for information regarding these rules for a safe classroom for both students and teachers. Also, the Office of Equal Opportunity (oce.unm.edu) provides more information regarding these matters.