

Instructor: Dr. Sean Regan, HUD 127, sean.regan@plattsburgh.edu

Class Time: TTh 09:30 – 10:45 HUDSON 0128 **Lab Time:** T 1:00 – 3:50 HUDSON 0130

Office Hours: Wednesdays from 9 AM – 11 AM; Thursdays from 1:00 PM – 3:50 PM; open door policy

Website: regangeology.com

Textbooks:

- Wicander, R., and Monroe, J., 2016, **Historical Geology: Evolution of Earth and Life Through Time – 8th edition:** Cengage Learning Publishing

General:

Historical geology is a discipline that applies geological principles and methods to reconstruct the origin and evolution of the Earth. The study of Earth history draws from nearly every geological subdiscipline but perhaps most importantly from: Stratigraphy, the subject of understanding the chronological order and geometric relationships of rocks; Paleontology, the study of fossil plants and animals; and Structural Geology and Tectonics.

By the end of this semester, you should be able to:

- Identify the major techniques used by geologists to assess the paleoenvironments and sequence of events found in the rock record
- Recognize the sequence of and interrelationships between major events in the history of the Earth, its surface, and its life forms
- Properly classify different types of sedimentary rocks & structures and major groups of fossilizing organisms from hand samples
- Correctly interpret geological cross-sections, fence-diagrams and geologic maps

Lectures and Labs:



Knowledge comes from understanding, not rote memorization of facts, and understanding requires curiosity and honest effort. You may expect me to treat every student respectfully and fairly and to arrive well prepared for each class. I will do my best to stimulate your curiosity through my enthusiasm and passion for geology and to present each subject in the most interesting and relevant way I can. I, in turn, expect from you an honest effort to understand the information I present. I expect you to read the assigned chapters before class and come to every class

prepared to ask questions and engage in group discussions. This level of preparation requires that you dedicate time on a regular basis to read and study outside of class. If you have trouble understanding the material presented in class, I expect you to seek additional help from your classmates, a geology tutor (if one is available) or me. I am available for walk-in consultations during my office hours; however, I am generally accessible when not conducting field research. I encourage you to seek me out at any time if you have a course-related question or concern.

Academic Honor Code—I expect that all students enrolled in this class support the letter and spirit of the SUNY Plattsburgh student Code of Conduct and the Honor Code Pledge; ***“I commit myself to academic integrity in and out of the classroom. I will be honest, responsible, and give support to others as they abide by this pledge.”***

The academic Honor Code applies all aspects of your academic life but especially to cheating and plagiarism. Students found guilty of cheating or plagiarism may receive a reduction of grade for that assignment, a failing grade for the course, or may be suspended or dismissed from the College.

Attendance—Attendance is required. I allow three unexcused absences without penalty during the semester. Each additional unexcused absence may result in a penalty of 1% of the final grade. It is the student’s responsibility to obtain any course material (e.g. class notes, handouts, assignments and etc.) missed due to an absence.

Electronic Devices—I expect all electronic devices such as cell phones, pagers, I-pods, CD-players and etc., to be deactivated and stowed away prior to class.

Project: You will choose a topic related to any concept in the Geologic history that suites your liking. The project will include a proposal and a 7 minute powerpoint presentation. Good topics may include: Snowball Earth, the oldest minerals and/or rocks on the Earth, Mass extinctions, the Chixulub impact, global climate change, tectonics on other planets, etc.



Grades: •labs (25%) •Quizzes (25%) •non-cumulative tests (25%) •final exam (25%)
 •projects/assignments/participation (25%)

*You will notice that this adds up to over 100 points (125). As the semester progresses you can choose to keep two of the three: 1) quizzes, 2) non-cumulative tests, and 3) the final exam.

Percentage	Grade	Percentage	Grade	Percentage	Grade
>90.0	4.0				
87.5	3.75	77.5	2.75	67.5	1.75
85.0	3.5	75.0	2.5	65.0	1.5
82.5	3.25	72.5	2.25	62.5	1.25
80.0	3.0	70.0	2.0	60.0	1.0
				<60.0	0.0

Academic Dishonesty/Accommodations Policy

- Please review the University's academic dishonesty policy. Cheating, fraud, and plagiarism are not allowed and will result in academic censure through appropriate University procedures.
- I will do anything within my power, that is legal, to help you succeed and thrive. If you have any type of learning disadvantage, consider meeting with Student Support Services staff to figure out the best actions to take.

Cross cutting relationships are one of the fundamental principles to establish relative timing, but can often be complicated. This photo was taken on the northwestern slope of Lower Wolfjaw Mountain, Adirondack Mountains, NY. Note the gabbroic lens is offset across a shear zone developed in a granite dike, but also appears to cross cut it. What is going on here?



Tuesday	Tuesday (Lab)	Thursday
01/30 Solar System and Planet Earth <i>(Ch. 1: 1-16)</i>	01/30 Deep Time	02/01 Plate Tectonics <i>(Ch. 3: p. 38-62)</i>
02/06 Q.1; Biological Evolution <i>(Ch. 7: p. 130-149)</i>	02/06 Subduction Zones	02/08 Geologic Principles <i>(Ch. 5: p. 84-105)</i>
02/13 Q.2; Geological Time Scale/Geochronology <i>(Ch. 4: p. 65-81)</i>	02/13 Temperature-time paths	02/15 No Class – Texas Tech Lecture
02/20 Q.3; Sedimentary Environments <i>(Ch. 6: p. 107-127)</i>	02/20 Geo Maps I: Angikuni Lake	02/22 Hadean/Archean <i>(Ch. 8: p. 151-168)</i>
02/27 Q. 4; Proterozoic (Laurentia) <i>(Ch. 9: p. 171-189)</i>	02/27 Geo Maps II: Adirondacks	03/01 No class – Univ of Maine invited Lecture
03/06 Q. 5; Paleozoic I <i>(Ch. 10: p. 192-210)</i>	03/06 Geo Maps III: Paleozoic stratigraphy	03/08 Paleozoic II <i>(Ch. 11: p. 213-235)</i>
Spring Break – Take it easy		
03/20 Q. 6; Permian Extinction <i>(Ch. 12-13: p. 238-275)</i>	03/20 Fossils	03/22 TEST I
03/27 Mesozoic I <i>(Ch. 14: p. 278-297)</i>	03/27 Jurassic Park	03/29 Mesozoic II <i>(Ch. 15: p. 300-320)</i>
04/03 Q. 7; The K-T boundary <i>(handout)</i>	04/03 Bahamas – Carbonates and climate	04/05 Q. 8; Cenezoic I <i>(Ch. 16-17: p. 322-361)</i>
04/10 Q. 8 ; Cenezoic II <i>(Ch. 18: p. 363-384)</i>	04/10 Geo Maps IV: Isopach maps	04/12 The Rise of Humans <i>(Ch. 19: 386-400)</i>
04/17 Q. 10; The Goldiloch zone: are we alone? <i>(handout) – catch up</i>	04/17 Milankovitch – Fischer Plots	04/19 Ocean Chemistry and Tectonics <i>Stanley and Hardie, 1999)</i>
04/24 Q. 11; The Glacial Cycle <i>(handout)</i>	04/24 Field Trip I	04/26 Landscape Evolution <i>(handout)</i>

Tuesday	Tuesday (Lab)	Thursday
05/01 Q. 12; A non-uniformitarian perspective	05/01 Field Trip II	05/03 The Earth's Future
05/08 TEST 3	05/08 Project Presentations	05/10 Jeopardy