

Environmental Geology - 460:202: 02 (06790); 460:202:03 (19591)
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 Website: <http://onlinelearning.rutgers.edu/ecollege>

Learning Goals: Students taking this course should develop an appreciation of critical thinking and the scientific method, including hypothesis testing. Students should recognize the importance of Earth Sciences in understanding of the physical, social, and economic resources and history of our planet. One example: we would expect that any student successfully completing our courses should be able to critically evaluate scientific issues in earth systems discussed in the popular press.

This course satisfies SAS Core Curriculum Goals:

II A: Areas of Inquiry - Natural Sciences – *STUDENTS WILL BE ABLE TO:*

- e. Understand and apply basic principles and concepts in the physical or biological sciences.
- f. Explain and be able to assess the relationship among assumptions, method, evidence, arguments, and theory in scientific analysis.
- g. Identify and critically assess ethical and societal issues in science.

<u>WEEK - DATE</u>	<u>TOPIC</u>	<u>CHAPTER</u>
1 – January 19	Geology and Environment; Discussion	1
2 – January 25	Earth Systems	2
	Geosphere Materials	4
3 – February 1	Plate Tectonics; Discussion	3
	Earthquakes	5
4 – February 8	More Earthquakes and Tsunamis; Assignment	5
5 – February 15	Volcanoes; Assignment	6
6 – February 22	Mineral Resources	12
7 – March 1, 2	Exam 1	
8 – March 7	Rivers and Flooding; Assignment	7
	Unstable Land	8
9 – March 21	Water Resources	10
	Water Quality; Assignment	10
10 – March 28	Climate and Greenhouse Effect; Assignment	14
	Climate Change; Discussion	
11 – April 4	Coasts	9
12 – April 11	Impacts of sea-level rise on New Jersey coastlines	
	Hurricanes	
13 – April 18	Energy Resources – Part 1; Discussion	13
14 – April 25	Energy Resources – Part 2	13

Exam 2 – will be available during finals period on May 5-6

Book: Living With Earth: An Introduction to Environmental Geology (Travis Hudson)

Grades will be based on 2 exams, 5 assignments, and 4 discussions. Exams are not cumulative.
 Final Grade: 37.5% Exam 1; 37.5% Exam 2; Discussions 10%; Assignments 15%

Grades will be assigned using the following:

A = 90-100%; B+ = 85-89.99; B = 80-84.99; C+ = 75-79.99; C = 65-74.99; D = 60-64.99.4; F = <60

Discussion and Assignment Due Dates:

- 1) Geology and Environment Discussion: January 25
- 2) Plate Tectonics Discussion: February 8
- 3) Earthquake Exercise: February 15
- 4) Volcano Exercise: February 22
- 5) Rivers and Flooding Exercise: March 14
- 6) Water Quality Exercise: April 4
- 7) Climate and Greenhouse Effect (Carbon Budget) Exercise: April 11
- 8) Climate Change Discussion: April 11
- 9) U.S. Energy Discussion: May 1