Environmental Geology - 460:202: 90, 91, 92

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Website: *https://tlt.rutgers.edu/canvas*

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.

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| 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. |

### WEEK - DATE TOPIC CHAPTER

1 – September 3 Geology and Environment 1 Earth Systems 2

2 – September 9 Plate Tectonics; Discussion 3 Geosphere Materials 4

3 – September 16 Earthquakes; Assignment 5

4 – September 23 More Earthquakes and Tsunamis 5

5 – September 30 Exam 1 – available October 2-3

6 – October 7 Volcanoes; Assignment 6

7 – October 14 Mineral Resources 12

Unstable Land 8

8 – October 21 Rivers and Flooding; Assignment 7

9 – October 28 Water Resources 10

 Water Quality; Assignment 10

10 – November 4 Exam 2 – available November 6-7

11 – November 11 Climate and Greenhouse Effect; Assignment 14

 Climate Change 14

12 – November 18 Coasts and Hurricanes; Assignment 9

 Impacts of Sea-level Rise on NJ Coastlines

13 – December 2 Energy Resources 1 13

14 – December 9 Energy Resources 2; Discussion 13

Exam 3 – will be available during finals period on December 16-18

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

Grades will be based on 3 exams, 6 assignments, and 2 discussions. Exams are not cumulative.

Final Grade: 26% Exam 1; 26% Exam 2; 26% Exam 3; 18% Assignments; 4% Discussion

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

In order to remain compliant with the federal requirement of student authentication in online courses, you will take your quizzes/exams in this course using Proctortrack software, a remote proctoring service.

There are no extra fees associated with use of Proctortrack. Technical requirements: You will need a web camera and a desktop or laptop computer for the course.  Mobile devices cannot be used.

Assignment Due Dates:

1) Plate Tectonics Discussion: September 15

2) Earthquake Assignment: September 22

3) Volcano Assignment: October 13

4) Rivers and Flooding Assignment: October 27

5) Water Quality Assignment:

 a) Water-Table Map: November 4

 b) Water Quality Exam: November 8

6) Climate and Greenhouse Effect (Carbon Budget) Assignment: November 17

7) Coasts Assignment: December 1

8) Climate Change/U.S. Energy Discussion: December 13