

**ERTH350 ENVIRONMENTAL GEOLOGY
POLICIES AND PROCEDURES**

Spring 2005 Term - Willamette University
3 CR TR 9:40 AM – 11:10 AM Collins Rm 208

INSTRUCTOR: Dr. S. Taylor
OFFICE HOURS: By Appointment

OFFICE: RM 215 Collins (Dr. LaFreniere's Office)
Phone: (w) 503-838-8398 (cell) 541-760-9216
e-mail: taylor@s.wou.edu
Web Site: www.wou.edu/taylor

COURSE DESCRIPTION:

This course serves as an upper division introduction to environmental geology. The emphasis is placed on the technical aspects of human interaction with near-surface environments of the Earth. The range of topics include an overview of environmental and land-use regulations, geomorphic hazards (soil erosion, flooding, mass wasting, landslide, debris flow, coastal erosion), tectonic hazards (earthquakes, tsunamis, ground disturbance, volcanic eruptions), water resource issues (source, supply and quality), mining impacts, and waste management.

THE PROFESSOR'S PHILOSOPHY ON UPPER DIVISION EARTH SCIENCE / GEOLOGY COURSES:

This upper division Geology course is designed for mature, serious students who are willing to work hard, play hard, have fun, and learn in-depth skills / concepts in a professional academic setting. The problem-solving and technical skills acquired via training in the Environmental Sciences are highly valuable (and marketable), regardless of career track. Students are expected to actively participate in the learning process and make a significant contribution to the academic integrity of the Environmental Science program at Willamette University. The ultimate goal of the program is to provide graduates with the academic skills that will enable them to be highly competitive in graduate school or the career marketplace. *GO TEAM!*

REQUIRED TEXTS:

Keller, E.A., 2000, Introduction to Environmental Geology, 3rd Ed., Prentice Hall

Freeman, 2004, Environmental Geoscience Laboratory, Wiley and Sons

ADDITIONAL READING:

Journal and assorted text readings to be provided by the instructor on an as-needed basis.

CLASS NOTES:

A comprehensive set of instructor class notes are available for download via the internet. The class web site is at URL <http://www.wou.edu/taylor> ... and follow the links to the "ERTH350 Environmental Geology" home page. The class notes, lab exercises, answer keys, and study guides are available as Adobe Acrobat Reader files (*.pdf file). Acrobat Reader is free and is installed on many campus PC's. For home installation, Acrobat Reader is also available for download at the class web site, but you will be responsible for properly installing the software (and will do so at your own risk!). Based on prior student suggestions, I have assembled my class notes and made them available. These notes may be freely printed at any campus internet station. The notes are in outline form and are very comprehensive. "Exam Study Guides" will also be posted on the web site as the term progresses.

FIELD TRIPS

Attendance on field trips is mandatory, however alternative assignments can be arranged on an as needed basis for students with irreconcilable time conflicts. Please be aware that additional class expenses may be required for field trips.

EVALUATIONS AND EXPECTATIONS:

Student performance will be evaluated on the basis of class exercises, presentations, quizzes, and exams. The following is a breakdown of evaluation points and letter grades:

Quizzes (2 x 25 pts)	50 pts	11%
Mid-Term Exam	100 pts	22%
Final Exam	125 pts	28%
Class Exercises/Field Trips	150 pts	33%
Student Presentations	25 pts	6%
<hr/>		
Total	450 pts	100%

Final Grading Scale

Percent Range of Total Points	Letter Grade	Percent Range of Total Points	Letter Grade
94-100%	A	77-79%	C+
90-94%	A-	73-76%	C
87-89%	B+	70-72%	C-
83-86%	B	67-69%	D+
80-82%	B-	63-66%	D
		60-62%	D-
		<60%	F

Exams: Exams and quizzes will be administered at evenly spaced increments throughout the semester; the final will be 20% comprehensive with test material drawn from throughout the term. Exams will largely consist of essay questions and homework-type problems. *Warning: the exams are very comprehensive and will likely require a full class-time+ to complete, please plan accordingly.*

Make-Up Exams: Under NO circumstances will make-up exams be administered without prior arrangement (at least five days) and good reason. Please show up on exam day!

Class and Lab Assignments: Class and lab assignments will be worked BOTH during class time and outside of class time each week. You will have lab, reading, and homework assignments that **may** take up to 3 or 4 hours to complete outside of class time, maybe more in some cases, depending on your skill levels and ability. Please plan your schedule accordingly. Due dates for class exercises will be prescribed by the instructor. Late work will be accepted up to 1 week after the due date, but will be automatically assessed a penalty of -20% off the point total.

Due to the volume of students assigned to the instructor each term, he will not be able to grade the lab exercise work in detail. The homework and lab assignments will be checked for completeness, with questions randomly chosen for content and accuracy. Grade points will be assigned on the basis of these two criteria. Exercise answer keys will be posted on the class web site by the instructor. **It is your responsibility to: (1)**

check your work against the lab / homework keys, (2) make sure you understand how to complete the exercises, (3) find help if you have trouble with lab exercises, and (4) study / learn the exercise skills and material for the exams.

A Note About Incompletes: No incomplete grades will be given during the last week of class. If you have a problem that warrants an incomplete, make arrangements prior to the last week (no exceptions!!).

Student Presentations: Students will give a 20-minute, powerpoint-style presentation, on a selected regional environmental geology problem in western Oregon. Student presentations are tentatively scheduled for week 13 of the semester.

OTHER REQUIRED MATERIALS:

Students will also need access to a scientific calculator, ruler, protractor, and access to a pentium-class desktop computer. You will be required to use these materials during lecture, lab, and exams. The GIS Lab will be available for student use during class time and at other times during the day. Weekend use of the computer lab is possible, with prior arrangement.

STUDENT HONOR POLICY:

Plagiarism and cheating will not be tolerated. Cheating includes copying others work and using cheat sheets on exams. However, students are encouraged to interact in small groups during class assignments, i.e. you can freely discuss concepts in all portions of the class, except exams.

A NOTE ABOUT LAB EXERCISES:

Lab exercises will require an additional time commitment outside of the scheduled weekly meeting (i.e. you will have "homework" and "projects" to work on outside of the scheduled class time).

STUDENTS WITH DISABILITIES:

Any student who has a disability that requires accommodation, please make an appointment to see me.

A NOTE ABOUT THE LAST WEEK OF CLASS:

Warning: the 15th week of class is as critical to content coverage as the 1st week. Students should anticipate a full slate of "normal" activities during the last week of class, including lectures, lab exercises, written reports, etc. The class is not over until after the final exam! **Plan your schedule accordingly!**

TENTATIVE CLASS SCHEDULE: This outline should be considered tentative at best. The following schedule may be modified as class ideas evolve throughout the semester.

<u>Week</u>	<u>Dates</u>	<u>Class Content</u>	<u>Text Reading</u>	<u>Class Assignments</u>
1	Jan 18, 20	Class Policies, Introduction	Chap 1	Intro:Geologic Problems Map Review
2	Jan 25, 27 Jan 28, Last Day to Add/Drop	Plate Tectonics / Earth Materials	Chap 2,3	Freeman Lab 1 (Tectonics) Freeman Lab 3 (Minerals)
3	Feb 1,3	Plate Tectonics / Earth Materials	Chap 2,3	Freeman Lab 4-5 (Rocks)
4	Feb 8, 10	Earthquakes / Seismic Hazards	Chap 4,5	Freeman Lab 17 (Quakes)
5	Feb 15,17 Quiz 1 – Tuesday Feb. 15	Volcanic Hazards	Chap 6	Freeman Lab 16 (Geo. Maps)
6	Feb 22,24	Rivers and Flooding	Chap 7	Freeman Lab 9 (Floods)
7	Mar 1,3	Mass Wasting	Chap 8	Freeman Lab 8 (Slopes)
8	Mar 8,10 Midterm Exam – Thursday March 10	Open Schedule; Assign Student Presentation Topics		
9	Mar 15,17 March 16 – Last Day to Withdraw	Water Resources / Pollution	Chap 11,12	Geologic Maps Part 2
10	Mar 22,24	Spring Break – No Class		
11	Mar 29,31 Expanded Outline of Student Presentation Topic Due Thursday March 31	Groundwater	Chap 11, Handouts	Freeman Lab 10-11 (Water)
12	Apr 5, 7 Alternative Class Meeting Week 12 – Taylor at AAG National Meeting, Denver	Coastal Processes	Chap 9	Freeman Lab 15 (Coastal)
Sunday April 10 – Tentative Field Trip to Oregon Coast with Dr. LaFreniere (9:00 AM-5:30 PM)				
13	Apr 12,14	Student Presentations Regional Environmental Issues	TBA	Presentations
14	Apr 19,21 Quiz 2 Tuesday April 19	Global Climate Change	Chap 18	Freeman Lab 14
15	Apr 26,28	Waste Management	Chap 16	Freeman Lab 11,13 (Waste)
Thursday April 28 – Tentative Afternoon Field Trip to Coffin Butte Landfill; No class in morning				
16	May 3	Last Day of Class – Open Schedule	TBA	Open
17	May 6-11	Final Exams – Check Schedule for Exam Day/Time		