Geology 141 - Physical Geology
Spring 2007

Instructor: Christian Schrader
Office: Pierce Hall
Office Hours: Wednesday, 10-12
Lecture sections: T, Th: 10-11:15 or 11:30-12:45
Lab sections: T: 2:30-5:30, or Th: 2:30-5:30
Text: Earth: An Introduction to Physical Geology, 8th edition, by Tarbuck and Largens
Lab Text: Laboratory Manual In Physical Geology, 7th edition, ed. by Busch

Geology is a science that pervades all parts of our lives. Accordingly, we will cover a broad range of material in this class: internal and surficial processes that result in our planet's landforms; geologic hazards; mineral, hydrocarbon, and water resources; and the larger physical and chemical processes that govern our solar system. Geology 141 is designed for the Geology/Environmental Science major but is an appropriate science course for anyone pursuing a liberal arts education. Though there are no prerequisites, this is a rigorous science course, and you will find some of the concepts challenging. You will be expected to keep up with your reading, to pay attention in class and lab, and to ask questions.

Reading assignments
There is not enough time for us to cover the necessary material entirely in class. You must read the text assignments before coming to class, and you must at least peruse the lab assignments before attempting the exercises. I expect you to use the lectures to reinforce your reading and thoughts and to have questions prepared. You will be responsible for the text readings on the exams. I reserve the right to give short quizzes on the reading at the beginning of lecture.

Attendance and participation
Attending class, preparing for class, answering questions, and participating in discussions will make up 5% of your grade. There are no excused absences for lab, and students will lose one point off their final grade for every lecture absence starting with the fourth.

Week	**Lecture Topic**	**Reading Assignment**	**Lab**
Th 1/18	Introduction and Overview of Course; Nature of Science, History of Geology	Ch. 1	
Tu 1/23 Th 1/25	Geologic Time Plate Tectonics	Ch. 9 Ch. 2	1: Observing and Measuring
Tu 1/30 Th 2/1	Plate Tectonics		2: Plate Tectonics
Tu 2/6	**Exam 1**		3: Mineral

Week	Lecture Topic	Reading Assignment	Lab
Th 2/8	Minerals	Ch. 3	Identification
Tu 2/13 Th 2/15	Igneous Rocks Volcanoes	Ch. 4 Ch. 5	5: Igneous Rocks and Volcanoes
Tu 2/20 Th 2/22	Volcanoes Weathering and Soil	 Ch. 6	6 & 7: Sed. and Met. Rocks
Tu 2/27 Th 3/1	Sedimentary Rocks Metamorphic Rocks	Ch. 7 Ch. 8	6 & 7: Sed. and Met. Rocks
Tu 3/6 Th 3/8	**Exam 2**		9: Topo Maps
Tu 3/20 Th 3/22	Crustal Deformation	Ch. 10	**Lab Quiz: Minerals and Rocks**
Tu 3/27 Th 3/29	Earthquakes Mountain Building	Ch. 11 Ch. 14	10: Structural Geology
Tu 4/3 Th 4/5	**Exam 3**	Ch. 18	13: Glaciers and Climate
Tu 4/10 Th 4/12	Running Water	Ch. 16	11: Stream Processes
Tu 4/17 Th 4/19	Groundwater Mass Wasting	Ch. 17 Ch. 15	12: Groundwater
Tu 4/24 Th 4/26	Coastal Processes Energy and Mineral Resources	Ch. 20 Ch. 21	15: Coastal Processes
Tu 5/1	Planetary Geology	Ch. 22	

Honor Code

In general, you may work with others on lab exercises. Exams and quizzes are to be completed alone and without outside material. Please familiarize yourself with Oxford's honor code, and please ask me if you have any questions.

Grading

3 lecture exams will be worth 15% each	30%
Final exam	15%
Lecture quizzes, projects, etc.	20%

Average of lab exercises and exam	30%
Class participation	5%

This class will use the +/- system:

A	4.0	93-100	C+	2.3	77-79
A-	3.7	90-92	C	2.0	73-76
B+	3.3	87-89	C-	1.7	70-72
B	3.0	83-86	D+	1.3	67-69
B-	2.7	80-82	D	1.0	60-66
			F		0-59