

## Geology 0060: History of the Earth, Spring 2013

Lectures: MWF 10:00 - 10:50 pm, Thaw 203

Labs: Mondays 2:00 - 3:50 pm, Thaw 203

Instructor: Charles E. Jones ([cejones@pitt.edu](mailto:cejones@pitt.edu))  
Office: SRCC 503  
Phone: 624-6347  
Office Hours: Drop in or make an appointment.  
TA: Damara Kautz ([djk75@pitt.edu](mailto:djk75@pitt.edu)).  
Textbook: **Evolution of the Earth** by Prothero and Dott, 6th, 7th, or 8th edition.  
Grading: Labs and Homeworks: 30%  
Lab Quizzes: 15%  
Exams: 45% (Ex 1, 15%; Ex 2, 20%; Ex 3, 25%; Ex 4, 40%)  
Written work: 10%  
Exam schedule: Exam 1: Wednesday, Jan. 30th.  
Exam 2: Wednesday, Feb. 27th.  
Exam 3: Wednesday, April 3rd.  
Final: Wednesday, April 24, 10:00-11:50 am, in the normal classroom.

**Lab and homework grades:** The grading of the labs/homeworks will be discussed in lab.

**Exams:** The exams will include both short answer questions and questions that require labeled diagrams and longer explanations of how things work. The final exam will be comprehensive, but I will give you guidelines as to exactly which topics the exam will cover.

**Written work:** The written work will consist of two short papers. The written work will be turned in, edited by me, and turned back for revision and an improved grade. The purpose of these papers is to give you practice in writing in a clear, professional style. This means a crystal-clear, logical organization, a clear expression of ideas, and perfect grammar. You will be graded separately on content and style. The purpose of my editing and your revising is to give you the guidance needed to improve your skills in writing and in editing your own work.

To encourage you to turn in the best possible papers the first time around, 40% of the final grade assigned to each paper will be based on your first version. To reward effort in improving the first version, 60% of the grade will be based on your revised paper. If you get A's on your first version, you are done!

**Field trip:** We will plan an overnight field trip with the general goal of crossing the Appalachian orogen. We will visit rocks from the Appalachian Plateau to the Gettysburg Basin. The date of this field trip is **April 6-7 (Saturday and Sunday)**. We have tents, but you'll want to get ahold of sleeping bags and pads. We will leave promptly at 8 am on Saturday morning.

**Honor Code:** I expect all students to fully abide by the University Honor Code. All in-class exams are to be taken without the assistance of books, notes, or other people. When it comes to studying for these exams, or preparing labs, I encourage people to study in groups and to discuss difficult topics. This is not only a good way to learn, but collaborative projects are the norm in academic and business settings. However, unless directed to work as a group when writing up a specific project, people should independently write up their own labs and homeworks. Finally, plagiarism is as evil as any other form of cheating, so be sure to avoid it.

## Class Plan for GEOL 0060: History of the Earth

Week	Day	Lecture Topics (Topics tentative; exam dates firm)	Related Readings:	Lab Topics (may also change)	Assignments
1	M	1. Origin of the Elements		Lab 1: Review of Common Minerals	HW 1: Excel Gradebook Exercise (homeworks are due in next week's lab)
	W	2. Formation of the Earth	Ch 6		
	F				
2	M	3. Search for the Oldest Rocks on Earth	Ch 4	Lab 2: Igneous Rocks Lab Quiz: Common Minerals	HW 2: Geologic Time
	W	4. The Archean World	Ch 6		
	F				
3	M	<b>Martin Luther King, Jr. Day: NO CLASS</b>		MLK, Jr. Day: NO LAB	HW 3: Radiometric Dating I
	W	5. How to Rift a Continent	Ch 7, 14		
	F	6. Geology of Rifted Margins	Ch 7		
4	M	7. Geology of Subduction	Ch 7	Lab 3: Sedimentary Rocks Lab Quiz: Igneous Rocks	HW 4: Rates of Tectonic Processes
	W	Exam 1			
	F	-			
5	M	8. Sedimentary Basins	Ch 7	Lab 4: Metamorphic Rocks Lab Quiz: Sedimentary Rocks	
	W	9. The Origin of the Continents			
	F		Ch 8		
6	M	10. Proterozoic Geology	Ch 8	Lab 5: Sedimentary Facies Lab Quiz: Metamorphic Rocks	HW 5 Radiometric Dating II
	W	11. Earth's Long-Term Habitability	Ch 8		
	F	-			
7	M	12. History of O <sub>2</sub> & the Length of the Day	Ch 6	Lab 6: Lithostratigraphy Lab Quiz: Concepts from Earlier Labs	
	W	13. Precambrian Paleoclimates	Ch 6		
	F	-			
8	M	14. Proterozoic Life	Ch 9	Lab 7: Fossil Record 1	
	W	Exam 2	Ch 7		
	F	15. Paleomagnetism			
9	M	16. Cambrian Geology	Ch 10	Lab 8: Fossil Record 2 Lab Quiz: Fossil Record I	
	W				
	F	17. Cambro-Ordovician Geology	Ch 10		
10	M	<b>Spring Break: NO CLASSES</b>		<b>Spring Break</b>	<b>Spring Break</b>
	W				
	F				
11	M	19. The Taconic Orogeny	Ch 11	Lab 9: Fossil Record 3 Lab Quiz: Fossil Record 2	
	W	20. Some Silurian Geology	Ch 12		
	F	-			
12	M	21. Devonian Geology	Ch 12	Lab 10: Biostratigraphy Lab Quiz: Fossil Record 3	
	W	22. Life in the Devonian			
	F		Ch 12		
13	M	23. Mississipp./Pennsylv. Geology	Ch 12	Lab 11: Geologic Maps 1 Maps related to the field trip	<b>WEEKEND FIELD TRIP: March 30 and 31</b>
	W	Exam 3	Ch 13		
	F	24. Alleghenian Geology	Ch 13, 14		
14	M	25. Western Orogenies I	Ch 14	No lab! (unless you missed field trip)	
	W	26. Western Orogenies II			
	F		Ch 14		
15	M	27. Western Orogenies III		Lab 12: Geologic Maps 2	
	W	28. Rise of the Amphibians	Ch 15		
	F		Ch 12, 13		
16	M	29. Rise of the Synapsids	Ch 13, 14	Lab 13: Geologic Maps 4	
	W	30. Mass Extinctions	Ch 13, 14		
	F	-			

**FINAL EXAM Wednesday April 24 from 10:00-11:50 p.m. in the regular class room.**