

# GEOLOGY 102 - HISTORICAL GEOLOGY

## SPRING 2008

*This Class and Lab are Cell-Free, Pager-Free Zones.*

Class Meets 10:50-12:05 TTh in Science 212. Lab meets T 8:00-10:40, Sci 216

Dr. Allen Dennis Office Hours: W 9:00-11:30

224 Science/641-3396/ allend@usca.edu Other times by appointment

Texts: *Earth through Time*, Levin; *Cradle of Life*, Schopf; *At the Water's Edge*, Zimmer; Reserve readings as assigned.

January	15	Introduction	Ch 1, 2	
	17	The Rock Cycle and Plate Tectonics	Ch 4	Z1-34
	22	Modern plate settings	Ch 7	
	24	Radiometric age dating	Ch 3	Z35-85
	25	Grad Apps due for May grads/ RJWPP due for Spring 08		
	29	<b>(DISC 1)</b> Quaternary Ice Ages and Climate Change Ch 15		
	31	La Grand Coupure – Floral & Faunal Changes	Ch 16	Z86-134
February	5	Mammals	Ch 16	
	7	K-T boundary extinction	p 44ff	Z 135-178
	12	<b>(DISC 2)</b> Dinosaurs	Ch 14	
	14	Rift Basins and Opening the Atlantic	p 373ff	Z179-196
	19	Cordillera	p 378ff	
	21	<b>Test 2</b>		Z197-237
	26	<b>(DISC 3)</b> Paleozoic Life	Ch 12	
	28	Permian Extinction		
March	4	Early Paleozoic, Sauk-Tippecanoe	Ch 10, 11	
	6	Late Paleozoic, Absaroka		
	7	WF date for Spring 08		S1-100
	<b>March 10-14 Spring Break</b>			
	18	Appalachians		
	20	<b>(DISC 4)</b> TBA		S236-263
	25	Snowball Earth		
	27	<b>Test 4</b>		S139-163
April	1	Eukaryotes and Ediacara	Ch 9	
	3	<b>(DISC 5)</b> Proterozoic		S164-182,183-208
	8	Archean and Archean Life	Ch 8	
	10	<b>Test 5</b>		S209-235,264-277
	15	Archean		
	17	Moon and Meteorites		S281-325
	22	Appalachian Trip		
	24	<b>(DISC 6)</b>		

If you have a learning or physical disability that might affect your performance in this class, please inform me and Coordinator of Disabled Student Services, x3609, to verify your status and provide you with appropriate assistance.

**The Final is scheduled for Tuesday 11am 6 May.**

My objective for this class is that you begin to understand the reasoning behind how we know what we know about earth history and the history of life through time. Uniformitarianism is central to this understanding. We will be very interested in how different lines of evidence are assembled to construct models of the earth in the past, and what are the assumptions of these models. You will express your understanding of lecture and lab material (i.e., lines of evidence) and assigned readings through tests and discussions biweekly. Additionally, students will post questions and respond to their classmates via a threaded discussion hosted on Blackboard.

Grading: There will be five tests; the tests will be administered in the first half hour of class or lab on the given day. The instructor reserves the right to substitute a 5-7 page typed paper for a test with at least one week's notice. If a paper is substituted for a test, each student will have an opportunity to choose among several assigned topics. During class or lab, discussions will be held on Schopf, Zimmer assigned readings. Students will be given responsibility for leading discussion, and are expected to participate. **Absence from more than one discussion will result in an F for the class.**

A threaded discussion will be hosted on the Blackboard website for this class. Each student will be responsible for initiating at least two new threads on a content area and making at least three **meaningful** responses to posts.

Laboratory: 10 pts a week may be scored in the Laboratory. Scores will be based on written lab exercises. A single 20 point quiz is scheduled. **Absence from more than two labs will result in an F for the class.**

180	Five biweekly tests/ papers @ 30 pts; Double the highest test.
30	Introductory essay on your understanding of science (due at DISC 1)
50	Final (11 am, 6 May)
60	Discussion partic. (15 pts. for leading, 5 for each other discussion, 25 BB)
<u>140</u>	Lab Grade (10 pts/wk, 20 pt lab quiz)
460	Total Possible Points

Your grade will be assigned accdg to your total points: A $\geq$ 414pts, B $\geq$ 368, C $\geq$ 322, D $\geq$ 276, F $\leq$ 276.

### LABORATORY OUTLINE

Laboratory meets Tuesday, 8:00-10:40 in Sci 216. **Attendance is mandatory. Bring a pencil and an eraser.**

Jan	15	<b>Rock Types/Overprinting/Unconformities</b>	
	22	<b>Rock Identification and Contours</b>	Ch 4
	29	<b>*Unconformity Field Trip*</b>	
Feb	5	<b>Facies and Geologic Maps (Test 1)</b>	Ch 5
	12	<b>Fossils</b>	Ch 6
	19	<b>Fossils and Time - dating</b>	
	26	<b>*Fossil Field Trip*</b>	
Mar	4	<b>Correlation (Test 3)</b>	
	18	<b>*Clarks Hill Trip*</b>	
	25	<b>Unconformities</b>	
Apr	1	<b>Folds and Faults</b>	
	8	<b>Igneous and Meta Rocks</b>	
	15	<b>Lab Quiz</b>	
	22	<b>*Lake Murray trip*</b>	

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There will be no makeup labs. **Absence from more than 2 labs will be considered grounds for dropping any student from the roll.**

\* Field trip in USCA vehicles. Come in comfortable walking shoes and play clothes.