

## HISTORICAL GEOLOGY – GEOL 2C Spring 2004



LECTURE: T,Th 11:10-12:05  
 LAB: T 12:30-2:20  
 Instructor: Dr. J Bret Bennington  
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Texts: Prothero and Dott, Jr., *Evolution of the Earth*, 7<sup>th</sup> ed.  
 Weiner, J. *The Beak of the Finch*  
*New York State Geologic Highway Map*

	<u>Week</u>	<u>Topic</u>	<u>Chapter</u>	
Feb	3	Introduction and Deep Time	1	
	5	A Brief History of Historical Geology	2	
	10	Charles Darwin and <i>On the Origin of Species</i>	3	
	12	Evolution and Extinction	3	
	17	<b>No Class</b>		
	19	Radiometric Dating of the Rock Record	5	
March	24	Origins of Plate Tectonics	7	
	26	Plate Tectonics and the Rock Record	7	
		<b>Essay 1 due</b>		
	2	Paleomagnetism and Paleogeography	7	
	4	<b>Exam 1</b>		
	9	The Hadean Eon	6	
	11	The Origin of Life	8,9	
	16	The Archean Eon	8,9	
	18	The Proterozoic Eon	8,9	
	23	The Dawn of Animal Life	9,10	
25	Geologic History of NY – Grenville Orogeny	10,11		
		<b>Essay 2 due</b>		
April	30	Geologic History of NY – Taconic Orogeny	11	
	1	Geologic History of NY – Acadian Orogeny	12	
	6	<b>Spring Break</b>		
	8	<b>Spring Break</b>		
	13	The Rise of Life on Land	12,13	
	15	<b>Exam 2</b>		
	20	The Late Paleozoic		
	22	Geologic History of NY – Mesozoic Era	14	
			<b>Essay 3 due</b>	
	27	When Dinosaurs Ruled the Earth	14	
29	Dinosaur Extinction and Dinosaur Legacy	14		
May	4	The Radiation of the Mammals	15	
	6	Ice Ages and Human Evolution	16	
	11	Geologic History of NY – Pleistocene Epoch	16	

### Final Exam

Scheduled by the Registrar during Final Exam Week

## Geol. 2C Laboratory Schedule

**Labs:** Supplementing the lecture is a weekly session of laboratory. Lab attendance is mandatory. Unfortunately, due to lack of time missed labs cannot be made up. Graded assignments in lab will include five lab reports (mostly done in lab) and two lab quizzes.

<u>Lab</u>	<u>Topic</u>
1	Geologic Time Scale
2	Clastic Sedimentary Rocks and Depositional Environments
	<b>No Class</b>
3	Carbonate Sedimentary Rocks and Depositional Environments
4	<b>Geologic Time Scale Quiz</b> , Igneous and Metamorphic Rocks
5	Paleontology I - Diversity of Life ( <b>all rock labs due</b> )
6	Paleontology II
7	Interpreting Geologic History from Cross Sections ( <b>paleontology labs due</b> )
8	Rock and Time Correlations ( <b>interpreting geologic history lab due</b> )
	<b>Spring Break</b>
8	Finish Rock and Time Correlations
9	Regional Geology of New York ( <b>correlation labs due</b> )
10	Geologic Structures
11	Interpreting Geologic Maps
	<b>Regional Geology of New York Quiz (structures and map labs due)</b>

**Study Materials:** A “Knowledge Base” review outline and all PowerPoint presentations used in class are available for you to download on the internet. There are also practice questions for each lecture exam. Access these materials through Hofstra Blackboard or [http://people.hofstra.edu/faculty/J\\_B\\_Bennington/2cnotes/2cmenu.html](http://people.hofstra.edu/faculty/J_B_Bennington/2cnotes/2cmenu.html)  
To access the PowerPoints you will need the userid (jbb001) and password (geology).

**Written Reports:** Three short essay papers will be assigned throughout the semester. These papers will be based on readings assigned in lecture from *The Beak of the Finch*. Papers should be typed, double spaced, 12 pt Times font, with 1 inch margins. I expect complete sentences, correct grammar and **no** spelling errors or typos. Late papers will be penalized one grade for each week they are late. Papers handed in after they are returned to the rest of the class will receive half credit.

**Course Grade:** Your grade for the semester will be based **40%** on your lab work, **30%** on the three written reports and **30%** on the lecture exams.

**Field Trips:** Two optional field trips will be offered. The first will be to the American Museum of Natural History to view the incredible rock and fossil collections on display. We will arrange to meet at the museum later in the semester. Near the end of the semester (when the weather begins to warm) we will have a field trip by bus to examine sedimentary strata and structures in the field. Details regarding both trips will be discussed in class.

**Extra credit:** Attendance on the museum trip will earn ten extra points applied toward any lecture exam or credit toward one missed lab assignment. For the same credit you may visit the museum on your own and hand in a photo essay of your visit. You will also have the option of preparing a photo essay based on the late semester field trip that can be handed in to replace your lowest exam grade.