

GEOL 305: EARTH SYSTEMS THROUGH TIME
(Spring 2012)

LECTURES: M/W/F, 11:15 AM - 12:05 PM Room: PSC 201

LABS: MON 4:00-6:00 (Sec 1) / TUE 1:00-3:00 (Sec 2), EWSC 208

Instructor: **Suman Chatterjee**, Office: EWSC 305
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Office Hours: (M/W/F) e-mail for appointment

Instructional Assistant **Ben Oliver**

TEXTBOOKS: *Earth System History* by Steven M. Stanley, 2009, W. H. Freeman and Company, Publishers. 3rd Ed.

Laboratory Studies in Earth History by H. Levin & M. Smith, McGraw-Hill Publishers, 9th Ed.

ATTENDANCE: **Mandatory** at all lectures and scheduled labs. Please notify the instructor when you have a legitimate reason for missing a lecture. Students are responsible for obtaining any material presented at missed lectures.

GRADING: **Three exams** = 75% of final grade.
Lab = 25% of final grade.
Exams: multiple choice, T/F, & short answer

THE USC CODE OF ACADEMIC RESPONSIBILITY WILL BE ENFORCED. EACH STUDENT IS REQUIRED TO READ THE SECTION ON THE STUDENT DISCIPLINE SYSTEM, WHICH DETAILS STUDENT AFFAIRS POLICY IN: CAROLINA COMMUNITY > STUDENT HANDBOOK & POLICY GUIDE, WHICH IS AVAILABLE @ (<http://www.sa.sc.edu/cc2002/judicial.htm#AcademicResponsibility>). PLEASE NOTE THAT ACADEMIC HONESTY IS EXPECTED OF ALL CLASS MEMBERS.

LEARNING OBJECTIVES:

By the end of the term, successful students should be able to do the following:

- Understand the complexity and **diversity of life forms that have occupied the Earth over time.**
- Be able to “read” the history contained in a set of rocks by **identifying the environments** in which they formed and **fossils** that occur in them.

- Explain how scientists can determine the **ages of rocks** and how these concepts have been used to construct the **Geologic Time Scale**.
- Understand the basic **principles of evolution** and evidence contained in the **fossil record** in support of these principles.
- Have a feeling for how the **physical features of the Earth** have changed over time (i.e., locations & geometries of ocean basins, continents, mountains etc.).
- Explain why this course is called “**Earth Systems**” **History**.

TENTATIVE* SCHEDULE OF LECTURES

DATES	APPROXIMATE TOPICS	BOOK CHAPTERS
Jan 9, 11 (M/W)	Introduction, Earth as a System	1
Jan 13 (F)	Earth as a System, Diversity of Life	1 & 3
Jan 16 (M)	M.L. King Day-- No Class	-
Jan 18 (W)	Earth as a System, Diversity of Life	3
Jan 20, 23, 25(F/M/W)	Environments & Life	4
Jan 27, 30 (F/M)	Sedimentary Environments	5
Feb 1, 3, 5, 8 (W/F/M/W)	Correlation and Dating of Rock Record	6
Feb 10 (F)	Exam 1	-
Feb 13, 15 (M/W)	Evolution and the Fossil Record	7
Feb 17, 20 (F/M)	Plate Tectonics	8
Feb 22, 24 (W/F)	Major Chemical Cycles	10
Feb 27 (M), Feb 29(W)	The Hadean & Archean Eons (Precambrian)	11
Mar 2 (F)	The Proterozoic Eon (Precambrian)	12
Mar 4-11	Spring Break – No Classes	-
Mar 12, 14 (M/W)	The Proterozoic Eon (Precambrian)	12
Mar 16, 19, 21 (F/M/W)	The Early Paleozoic	13
Mar 23 (F)	Exam 2	-
Mar 26, 28 (M/W)	The Middle Paleozoic	14
Mar 30, Apr 2 (F/M)	The Late Paleozoic	15
Ap 4, 6 (W/F)	The Early Mesozoic	16
Ap 9, 11 (M/W)	The Cretaceous	17
Ap 13, 16 (F/M)	The Paleogene	18
Ap 18, 20 (W/F)	The Neogene	19
Ap 23 (M)	The Holocene	20
April 28th – 9:00AM	EXAM 3 (Final Exam)**	-

***If necessary, the instructor reserves the right to change this syllabus**

****Final Exam is 9:00 AM on Saturday, April 28th and not 11:00 AM, PSC 201**