DINOSAUR EXTINCTION & OTHER CONTROVERSIES
Geology 150 Fall 2006
T/Th 4:00 pm-5:30pm, 1532 Ruthven Museum

Instructor: Jeffrey A. Wilson

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Office Hours: Monday 2-4pm, or by appointment

Required Texts:*The Meaning of Fossils*, M. J. S. Rudwick (1985), *The Origin of Species*, C. Darwin (1859), *Extinction: Bad Genes or Bad Luck*, D. M. Raup (1992)

Overview: This course has the general goal of providing an introduction to scientific reasoning – how our hypotheses about the natural world are formed, accepted, modified, and rejected – using examples from the history of geology and paleontology: the Nature of fossils, Deep time, Age of the Earth, Continental Drift, History of Life, Evolution, and Extinction.

Participation. This is an LSA first-year seminar (FYS) course, which is designed to engage you in intellectual inquiry and to help develop your communication skills. Enrollment is capped at 20 in order to facilitate discussion and interaction. The success of FYS courses relies on active participation by everyone. Your grade will be based in part on your participation, which will reflect your ability to contribute and articulate your viewpoints during class.

Readings: For each lecture topic, there is assigned reading from the "Required Texts" above, and from additional sources that you will find on the C-Tools website. Be prepared to discuss the weekly readings in class.

Assignments: You will be responsible for turning two short papers and a term paper for this class. There will also be 3 or more short, unannounced quizzes that will cover lecture, reading, or discussion topics. The number of quizzes will depend on how well the class engages with the subject matter.

Short Papers/ Discussions: I will divide the class into five groups (Groups 1-5). On weeks when I have scheduled student-led discussion, one group will be responsible for leading the discussion. I strongly encourage you to meet as a group outside class to prepare for each discussion. In addition, each group member will turn in a three-page paper related to the discussion topic. The paper should be formatted like this one (10-pt, Arial or Helvetica font, double-spaced, 1" margins) and must represent independent work. A list of additional sources for each topic can be found on the CTools website.

Term Paper: There is no midterm exam nor final exam for this class. Instead, you will turn in a term paper on the last day of class (Dec. 12th). The paper topic will be chosen by the student, but it must related to course material and be approved by me. To get you thinking about the term paper early, you will turn in a short 1-page abstract describing the topic on Oct. 31. The term paper constitutes a significant portion of your final grade, and I recommend you think about it and work on it early and often. The paper should be ~15 pages long and should include references from the primary and secondary literature, which will be referenced at the end of your paper. Please see the LSA policy on academic integrity at www.lsa.umich.edu/academicintegrity/.

Grades:		
	Participation	20%
	Quizzes	10%
	Short papers (2 x 15%)	30%
	Term paper abstract	10%
	Term paper	30%

week 1: Introduction
no reading
Sep 05 Introduction
Sep 07 Ruthven Museum tour

week 2: Nature of Fossils
reading: Rudwick 1
Sep 12 lecture
Sep 14 introduction to Electronic Resources

week 3: Deep Time
reading: Rudwick 2
Sep 19 lecture
Sep 21 discussion & paper – Group 1

week 4: Catastrophism
reading: Rudwick 3
Sep 26 lecture
Sep 28 discussion & paper – Group 2

week 5: Uniformitarianism
reading: Rudwick 4
Oct 03 lecture
Oct 05 discussion & paper – Group 3

week 6: Life in the Paleozoic
reading: CTools handout
Oct 10 guest lecture - JAW @ DFG
Oct 12 discussion & paper – Group 4

week 7: break - work on term paper topic
no reading
Oct 17 no lecture - Fall Study Break
Oct 19 no discussion - JAW @ SVP

week 8: Evolution pt. 1
reading: Origin 1-3
Oct 24 lecture
Oct 26 discussion & paper – Group 5

week 9: Evolution pt. 2
reading: Origin 6, 9, 10, 14
Oct 31 lecture; term paper abstract due
Nov 02 Discussion & paper – Group 1

week 10: Evolution pt. 3
reading: CTools handout
Nov 07 lecture
Nov 09 Discussion & paper – Group 2

week 11: Age of the Earth
reading: CTools handout
Nov 14 lecture
Nov 16 Discussion & paper – Group 3

week 12: Plate Tectonics
reading: CTools handout
Nov 23 lecture
Nov 23 no Discussion - Thanksgiving

week 13: Life in the Mesozoic
reading: CTools handout
Nov 28 lecture
Nov 30 Discussion & paper – Group 4

week 14: Extinction pt. 1
reading: Raup 1-4
Dec 05 lecture
Dec 07 Discussion & paper – Group 5

week 15: Extinction pt. 2
reading: Raup 5-10
Dec 12 lecture
TERM PAPER DUE