

The Ohio State University

## **EARTH SCIENCES 110--HISTORY OF LIFE ON EARTH: GLOBAL CHANGE IN THE BIOSPHERE (Spring 2009)**

Instructor: William I. Ausich      Office Hours: 10:30-11:30 MTWF or by appointment  
Office: 160D Orton Hall              Telephone: 292-3353  
E-mail: ausich.1@osu.edu

Lectures: MTRF, 9:30; 191 Mendenhall Laboratory

Laboratory/Discussion: 163 Mendenhall Laboratory

Each student must be enrolled in one of the following sections:

Wednesday 8:30-10:18

Wednesday: 10:30-12:18

Wednesday: 12:30-2:18

Wednesday: 2:30-4:18

Text: Ausich, W.I., and N. G. Lane. 1999. *Life of the Past* (Fourth Edition).

Prentice-Hall, New York, 321 p.

Laboratory Manual and Other Course Materials: Available at UNIPRINT at Tuttle Park Place and can be ordered on line at <uniprint.osu.edu>.

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### **Lecture Schedule (lecture number in parenthesis)**

March	30	Geological Time (1)	(Ch. 1)
	31	Fossils and Fossilization (2)	(Chs. 2 and 3)
April	2	Plate Tectonics (3)	(Ch. 6)
	3	<b>NO CLASS</b>	
	6	Evolution (4)	(Ch. 5)
	7	Evolution (5)	
	9	Plant and Animal Classification (6)	(Ch. 2)
	10	Abiotic Synthesis of Life (7)	(Ch. 4)
	13	Precambrian Life (8)	(Ch. 8)
	14	Metazoan Diversification (9)	(Ch. 9)
	16	Marine Paleoecology (10)	
	17	Life during the Cambrian (11)	
	20	Ordovician Radiations/Extinctions (12)	(Ch. 10, p. 133-152)
	21	<b>MIDTERM EXAMINATION I</b>	
	23	Middle Paleozoic Ocean Predators (13)	(Ch. 12, p. 179-190)
	24	Plankton of the Paleozoic (14)	(Ch. 11, p. 162-165, 170-178)

	27	Epifaunal Suspension Feeders and Terminal Paleozoic Extinctions/Recoveries (15)	
	28	Mesozoic & Cenozoic Ocean Predators (16)	(Ch. 12, p. 190-192)
	30	Mesozoic Ocean Life (17)	(Ch. 10, p. 152-160)
May	1	Early Themes in Plant Evolution (18&19)	
	4	Greening of the Globe (20)	(Ch. 14, p. 205-232)
	5	Evolution of Tetrapods onto Land (21)	(Ch. 13, p. 198-204)
	7	Paleozoic and Early Mesozoic Tetrapods (22)	(Ch. 15, p. 233-240)
	8	<b>MIDTERM EXAMINATION II</b>	
	11	Dinosaurs 1 (23)	(Ch. 15, p. 241-254)
	12	Dinosaurs 2 (24)	(Ch. 15, p. 241-254)
	14	Dinosaurs 3 (25)	
	15	Birds (26)	(Ch. 15, p. 255-258)
	18	Dinosaurs and End-Cretaceous Extinctions (27)	
	19	Radiation of Mammals--Mesozoic Mammals and Paleogene Fauna (28)	(Ch. 16, p. 259-267)
	21	Neogene Mammalian Fauna (29)	(Ch. 16, p. 267-270)
	22	Evolution of Horses (30)	(Ch. 16, p. 271-275)
	25	<b>MEMORIAL DAY -- NO CLASS</b>	
	26	Evolution of Aquatic Mammals (31)	
	28	<b>MIDTERM EXAMINATION III</b>	
	29	Great American Exchange (32)	(Ch. 16, p. 275-277)
June	1	Evolution of Man (33)	(Ch. 17)
	2	Evolution of Man (34)	(Ch. 17)
	4	Pleistocene Faunas and Pleistocene Glaciations (35)	
	5	End-Pleistocene Extinctions (36)	(Ch. 16, p. 277-280)

**FINAL EXAMINATION: Tuesday, June 9, 2009, 9:30-11:18 pm**

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## G.E.C. COURSE

ES 110 fulfills the Natural Science G.E.C. course requirement:

In ES 110, Students will understand the basic history of life on Earth and the geological, evolutionary, and paleoecological principles and theories that yielded the fossil record and life through deep time. Students will also learn about key historical discoveries and interpretations of ancient life, as well as learn how paleontologists study ancient life today. As applicable, the interplay between the advancement of scientific interpretations and technological developments are explored. Discussions in ES 110 will also include the social and philosophical implications of this topic to our understanding of the contemporary world.

## GRADING

During the 10<sup>th</sup> week of the quarter, students may chose one of two options for their grade determination for GS 110, see options below. In both cases, examinations will cover material from lectures, assigned readings, films, and laboratory/discussion. Examinations will include three one-hour Midterm examinations and a Final examination. You will also receive a grade for the laboratory portion of the course., based on your weekly work on exercises.

*NO MAKE-UP EXAMS WILL BE GIVEN !!* Midterm examinations will cover material since the previous exam, and the final examination will be comprehensive. Grades will be determined on a 90/80/70 scale, where 100 to 90 % is in the A range, 89-80% is in the B range, etc.

**Option 1:** If you are satisfied with your grade based only on three Midterm examinations and the Laboratory, you do *not* have to take the Final Examination. Your grade will be based solely on your three Midterms and Laboratory (you must do all of the Labs), as follows.

	<u>Percent of final grade</u>
Midterm examination	28.3
Midterm examination	28.3
Midterm examination	28.3
Laboratory/discussion exercises	<u>15</u>
	100

**Option 2:** If you have not taken all three one-hour midterms or if you are *not* satisfied with your grade based only on the three Midterms (Option 1), you need to take the comprehensive Final Examination. In Option 2, the final grade is based on your two highest Midterm examinations, Laboratory, and Final Examination, as follows:

	<u>Percent of final grade</u>
Midterm examination	25
Midterm examination	25
Laboratory/discussion exercises	15
Final examination	<u>35</u>
	100

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