

**PALEONTOLOGY (GEOLOGY 309), 4 CREDITS, Fall 2011.
LECTURE AND LAB SYLLABUS**

Instructors: Joseph E. Peterson 920-424-4463 petersoj@uwosh.edu www.jptaphonomy.com

Office: Harrington Hall 211, Office Hours: 3:00-4:00 MWF

Text: *Bringing Fossils to Life*, by D. R. Prothero (required), assigned readings.

Class Time: 9:10-10:10 MW (lecture)
10:20-12:30 R (lab)

Exams (60%): A total of three exams will be administered throughout the semester. Tests will be a combination of short-answer/essay format with multiple choice, true/false, and critical thinking questions.

Term paper & class seminar (20%): Research a topic in theoretical or applied invertebrate paleontology (could be library research or a field or laboratory research project). Write a manuscript formatted for publication in the peer-reviewed journal *PALAIOS**. Library research may be a general summary of a well-established topic, but I would prefer an analysis of an ongoing debate or other “hot topic” (details to be discussed in class). *(Guidelines posted on D2L).

Lecture schedule: (subject to modification)

Sept.	Wed	7	Intro: A discussion about fossils	Chap. 1
	Mon	12	Taphonomy: the making of a fossil.	
	Wed	14	Ontogeny, ecophenotypic variation, dimorphism	Chap. 2
	Mon	19	Taxonomy , Systematics and Phylogenies	Chap. 3, 4
	Wed	21	Evolution: Macroevolution and Microevolution	Chap. 5
	Mon	26	<i>Assigned Readings & Discussion</i>	
	Wed	28	Taxonomic overturn and Mass Extinction	Chap. 6
Oct.	Mon	3	Functional Morphology	Chap. 7
	Wed	5	Paleoecology	Chap. 8
	Mon	10	Biogeography	Chap. 9
	Wed	12	Biostratigraphy	Chap. 10
	Mon	17	Exam 1 Deadline for INITIAL submission of papers –individual consultation	
	Wed	19	Micropaleontology and the origin of life	Chap. 11
	Mon	24	Archeocyatha, Porifera, Cnidaria	Chap. 12
	Wed	25	Brachiopoda & Bryozoa	Chap. 13
	Mon	31	Vendian animals, Edacara and the Cambrian Explosion	Chap. 14
Nov.	Wed	2	<i>Assigned Readings & Discussion</i>	

	Mon	7	Trilobites	
	Wed	9	Crustaceans and other arthropods	
	Mon	14	Mollusca: Gastropods & Bivalves	Chap. 15
	Wed	16	Mollusca: Cephalopoda	
	Mon	21	Exam 2 Submission deadline for revised papers	
	Wed	23	<i>Thanksgiving Break</i>	
	Mon	28	Echinodermata	Chap. 16
	Wed	30	Chordata: Graptolites, conodonts, & other weirdoes	Chap. 17
Dec.	Mon	5	Ichnofossils & Plantae	Chap. 18
	Wed	7	Student presentations and discussion	
	Mon	12	Student presentations and discussion	
	Wed	14	Exam 3	

Laboratory (20%): A weekly 2-hr lab will meet on Thursdays. In lab, we will examine fossils and identify key structures. A total of 3 lab projects (20 points), 8 fossil descriptions (10 points) and 3 scheduled lab quizzes (20 pts each) will be worth a total of 200 points.

Lab schedule: (subject to modification)

Sept.	8	<i>No Lab</i>
	15	Cladistics, Evolution (Project 1)
	22	Biostratigraphy (Project 2)
	29	Paleontological methods: Digital techniques, physical reconstructions (Project 3)
Oct.	6	Lab Quiz 1
	13	Micropaleontology (Fossil Description 1)
	20	Archeocyatha, Porifera, Cnidaria (Fossil Description 2)
	27	Brachiopoda & Bryozoa (Fossil Descriptions 3, 4)
Nov.	3	Arthropoda (Fossil Description 5)
	10	Lab Quiz 2
	17	Mollusca (Fossil Description 6)
	24	<i>No Lab; Thanksgiving Break</i>
Dec.	1	Echinodermata (Fossil Description 7)
	8	Chordates, microvertebrates, plants, & ichnofossils (Fossil Description 8)
	15	Lab Quiz 3