

## GEOL 2050 – Principles of Paleontology - Spring 2008

Date		Topics	Readings
Wk 1	M: Jan. 14	Introduction to the Course and Paleontology	Ch. 01: pp. 1-4
	W: Jan. 16	Systematics and Taxonomy	Ch. 04: pp. 46-63
	R: Jan. 17	No Lab	
Wk 2	M: Jan. 21	<b>MLK Holiday</b>	
	W: Jan. 23	Taphonomy: How do you make a fossil?	Ch. 01: pp. 5-15
	R: Jan. 24	Lab 1: Fossilization and Taphonomy	Ch. 01: pp. 5-15 Ch. 18: pp. 418-433
Wk 3	M: Jan. 28	Variation in the Fossil Record	Ch. 2: pp. 21-37
	W: Jan. 30	Microfossils	Ch. 11: pp. 188-213
	R: Jan. 31	Lab 3: Microfossils	Ch. 11: pp. 188-213
Wk 4	M: Feb. 04	The Metazoans	Science 310, 2005
	W: Feb. 06	Reef Building Organisms	Ch. 12: pp. 214-229
	R: Feb. 07	Lab 4: Reef Builders	Ch. 12: pp. 214-229
Wk 5	M: Feb. 11	Species and Speciation	Ch. 3: pp. 38-45
	W: Feb. 13	Lophophorates	Ch. 13: pp. 230-251
	R: Feb. 14	Lab 5: Lophophorates	Ch. 13: pp. 230-251
Wk 6	M: Feb. 18	Evolution in the Fossil Record	Ch. 05: pp. 64-79
	W: Feb. 20	<b>Midterm Exam I</b>	
	R: Feb. 21	<b>Lab Midterm Exam I</b>	
Wk 7	M: Feb. 25	Functional Morphology	Ch. 7: pp. 96-117
	W: Feb. 27	The Molluscs: Bivalves, Scaphopods	Ch. 15: pp. 280-317
	R: Feb. 28	Lab 6: Molluscs I	Ch. 15: pp. 280-317
Wk 8	M: Mar. 03	Paleoecology	Ch. 8: pp. 118-147
	W: Mar. 05	The Molluscs: Gastropods, Cephalopods	Ch. 15: pp. 280-317
	R: Mar. 06	Lab 7: Molluscs II	Ch. 15: pp. 280-317
Wk 9	M: Mar. 10	Paleoecology	Ch. 8: pp. 118-147
	W: Mar. 13	Arthropods	Ch. 14: pp. 252-279
	R: Mar. 14	Lab 8: Arthropods	Ch. 14: pp. 252-279
<b>SPRING BREAK: March 17-21</b>			
Wk 10	M: Mar. 24	Phanerozoic Marine Ecosystems	TBA
	W: Mar. 26	Echinoderms	Ch. 16: pp. 318-341
	R: Mar. 27	Lab 9: Echinoderms	Ch. 16: pp. 318-341
Wk 11	M: Mar. 31	Terrestrial Ecosystems: Paleozoic	Ch. 17: 373-384
	W: Apr. 02	<b>Midterm Exam II</b>	
	R: Apr. 03	<b>Lab Midterm Exam II</b>	
Wk 12	M: Apr. 07	Terrestrial Ecosystems: Mesozoic	Ch. 17: 384-393
	W: Apr. 09	Plants	Ch. 19: 434-462
	R: Apr. 10	Lab 10: Plants	Ch. 19: 434-462
Wk 13	M: Apr. 14	Terrestrial Ecosystems: Mesozoic & Cenozoic	Ch. 17: 384-417
	W: Apr. 16	Vertebrates I: How to Build a Backbone	Ch. 17: 342-417
	R: Apr. 17	Lab 11: Vertebrates I	Ch. 17: 342-417
Wk 14	M: Apr. 21	Terrestrial Ecosystems: Cenozoic	Ch. 17: 393-417
	W: Apr. 23	Vertebrates II & Biogeography	Ch. 17: 342-417 Ch. 09: 148-167
	R: Apr. 24	Lab 12: Vertebrates II	Ch. 17: 342-417
Wk 15	M: Apr. 28	Extinction	Ch. 6: pp. 80-95
	W: Apr. 30	Extinction and Review	Ch. 6: pp. 80-95
	R: May 01	<b>Lab Final</b>	
<b>FINALS WEEK (May 5-9)</b>			

## GEOL 2050 – Principles of Paleontology - Spring 2008

**Instructor:** Mark T. Clementz, Assistant Professor in Geology & Geophysics

**Contact Information:** Phone: 766-6048; email: mclemen1@uwyo.edu

**Office hours:** Room GEOL 1014, Monday 9 a.m. to 10:30 a.m. and Thursday: 4 p.m. to 5:30 p.m.

**Text:** *Bringing Fossils to Life* by Donald Prothero, 3rd edition

**Course Objectives:** Paleontology is the study of fossils, which are the preserved remains of ancient organisms. I have designed this course, following the outline from Dr. Prothero's text, as an introduction to the fossil record and how it can be used to interpret the evolution of life on Earth. The primary objectives for this course include:

- Understanding the processes through which the remains and traces of organisms are preserved in the fossil record;
- Becoming familiar with the morphology, ecology and evolutionary history of the major groups of fossil-forming organisms;
- Appreciating the methods used by paleontologists when interpreting the fossil record;
- Learning the major events that have shaped the diversity and history of life on Earth.

**Readings:** Reading assignments for the lecture will come from the text by Prothero. In addition, since some of the material for the course will not be covered in the text, I will provide photocopies of other sources from time to time. A word of warning: all material discussed in the readings is fair game for exams, whether it is covered in lecture or not.

**Writing Assignment:** Each student is expected to write a short research paper (minimum 10 pages in length) on his or her choice of paleobiology topics. Papers must be handed in at the last lecture period for the semester. More information on possible topics and formatting will be presented later in the semester.

**Lab Section:** All students must attend and participate in lab. Lab will meet once a week in GE209 where students will be given a chance to inspect and study actual fossil specimens from the UW collections. In lab, students will answer questions on a worksheet regarding the specimens displayed at various stations in the room. Each worksheet is to be completed in the time allotted for the class. Student evaluations will be based on performances on weekly worksheets and three in class exams.

### Evaluation Criteria:

- 15% Exam I
- 20% Exam II
- 25% Final Exam
- 15% 10 page paper
- 25% Lab Grade\* and Class Participation/Attendance

\*Lab Grade will be based on participation and completion of in-class assignments (50%) and three lab exams (50%).

The final is scheduled for Friday May 4, from 1:15 p.m. to 3:15 p.m. It will be cumulative, but strongly weighted towards material from the last 1/3 of the course.

**Attendance Policy:** Attendance of lectures and labs is mandatory. If you plan to be gone at any time during the semester and your absence will be officially authorized by UW, please contact me beforehand so that we can work out some way for you to make up any assignments. Any absences from class as a result of illness will require proper documentation from your physician. Due to the time involved with setting up lab exercises, students are strongly discouraged from missing labs.

**Late Assignments:** Most assignments for this class, other than exams and papers, will involve in-class work during lab periods, so students should not have a problem turning in assignments on time. However, for those rare circumstances when an assignment is returned late, ½ a letter grade will be deducted from the assignment's final grade for each day it is not turned in on time.

**Academic Dishonesty:** University Regulation 802, Revision 2, <http://uwadmnweb.uwyo.edu/legal/Uniregs/ur802.htm> defines academic dishonesty as "an act attempted or performed which misrepresents one's involvement in an academic task in any way, or permits another student to misrepresent the latter's involvement in an academic task by assisting the misrepresentation." Academic dishonesty will not be tolerated in this course and will be handled following the policies and procedures outlined in the above University Regulation.

**Students with Disabilities:** If you have a physical, learning, or psychological disability and require accommodations, please let me know as soon as possible. You will need to register with, and provide documentation of your disability to, University Disability Support Services (UDSS) in SEO, room 330 Knight Hall, 766-6189, TTY: 766-3073.

**Changes to the Syllabus:** The course schedule is an outline of the major topics we will discuss in class. Given the breadth of material that we will discuss and the level of student interest, it may be necessary from time to time to deviate from this course outline. Thus, the schedule will be flexible and is likely to evolve through time, and any significant modifications will be announced in advance in class.