Instructor: Jeff Eaton
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Texts:

Purpose of Class: To acquaint the student with the physical and biological history of our planet (lecture) and the methods used to interpret this history (lab).

Basis for Grade: Two one-hour exams worth 100 points each and a comprehensive final worth 200 points (total of 400 points based on exams). There will be occasional pop quizzes on critical material and on text reading. Reading the text is an important part of this class. There are 14 labs, each is worth 20 points (280 points). Labs are also an important component and will be graded critically. Labs are due by following lab (the last lab is due on the last day of classes). There is also a short paper due on the Monday of the last week of classes that is your review of a journal article (worth 50 points). There is a total of 730 points.

Page numbers for the 6th & 5th edition are shown in parentheses:
Aug. 25: Introduction: purpose of class, goals and objectives, expectations, and basis for grade.
Aug. 27: LAB 1 Lab Manual Exercise 1 (also look at Chapter 6, Sedimentary Rock Properties, p. 94-101) - Description and Classification of Sedimentary Rocks, answer all questions and examine rock samples in drawers. Let’s talk about rocks!
Aug. 29: Geologic time concepts and methods: Chapter 4.
Sept. 3 – NO CLASSES – Labor Day
Sept. 3: Rock, fossils and time (stratigraphic principles): Chapter 5 (lecture carried on in lab 2).
Sept. 3: LAB 2 - Interpretation of Sedimentary Rocks (samples in marked drawer), Lab Manual Exercise 2.
Sept. 5: Review of Plate Tectonic concepts: Chapter 3, p. 44-59 (50-61; 45-58).
Sept. 10: Review (I hope!) of organization of life.
Sept. 10: LAB 3 - Relative Time and Sequence of Events - Lab Manual Exercise 3.
Sept. 15: Classification: Chapter 7, p.146-151 (142-151; 135-144).
Sept. 19: NO CLASS – I’m on a fieldtrip
Oct. 1: Late Paleozoic –Absaroka sequence; Cordilleran & Ouchita belts: Chapter 11, p. 218-231 (225-237; 218-228).
Oct. 3: Catch-up and review.
Oct. 6: EXAM 1 – in class.
Oct. 8: **LAB 7** - Geophysical Applications in Stratigraphy, Lab Manual Exercise 7 and Contour Interval and cross-section handout.

**Burgess Shale video.**

Oct. 17: **NO CLASSES** – Fall break.
Oct. 29: **LAB 10** – Precambrian and Cambrian life. Handout (Precambrian and some Early Paleozoic Life forms) and Lab Manual Exercise 10 (see drawer for specimens).
Oct. 31: Cenozoic tectonic review.

Nov. 3: Catch up and review.
Nov. 4: Last day to withdraw from an individual class with a “W”
Nov. 5: **EXAM II** (only through Mesozoic!) – in this classroom
Nov. 7: Get exam back. Discuss use of GeoRef and Google Scholar for term paper, and the nature of the term paper
Nov. 12: Finish Cenozoic life Cenozoic life - birds and diversification of mammals:
Nov. 17: Quaternary tectonism and volcanism, the onset of the Ice Age: Chapter 17, p. 354-361 (348-357).
Nov. 21: Pleistocene faunas and extinction; Chapter 18, p. 381-386 (394-398; 390-394).
Nov. 24: Early Primates and the rise of hominids: Chapter 19, p. 389-402 (401-413; 398-410).
Nov. 26: Perspectives on the future of Earth’s history (Epilogue in textbook).
Nov. 27-28: **NO CLASSES** – Thanksgiving vacation
Dec. 1: Review of first third of class. **REVIEW PAPER DUE.**
Dec. 3: Review of second third of class.
Dec. 3: **NO LAB**
Dec. 5: Review of last third of class.

**Final Exam:** 11:30 AM – 1:20 PM, Monday, December 8, in this classroom.

**Review Paper due Dec. 1:** You are to select a single article from a geological journal that is relevant to some major aspect of Earth History. You are to write a short paper (about 3 pages). This paper should be organized as follows: **Introduction** (why this paper is of important to Earth History); **Contents of the Paper** (what is the basic argument presented and what is the evidence for their argument?); **Conclusions** (do you think the paper achieved its goals – what future research might result from their paper? Be creative and thoughtful here). Include a copy of the paper you are reviewing with your paper so I can look at what you have read and submit a copy of your paper. This paper is worth 50 points.

The point of this exercise is to get you into reading primary scientific literature an assessing your skills are coping with primary literature. You must read a **PEER REVIEWED** journal, not Discovery Magazine or an online blog. You can find excellent literature at Google Scholar where you can often download as PDF files excellent and recent journal articles (use university computers, or log into the Weber home page – we have paid to have online access to many journals).