

**EVOLUTION OF THE EARTH (HISTORICAL GEOLOGY) 109, 4 CREDITS, FALL 2010.
LECTURE AND LAB SYLLABUS**

Instructors: Joseph E. Peterson

Office: Harrington Hall 211, Office Hours: 10:30-12:30 MWF

Texts: Lecture: Prothero & Dott, Evolution of the Earth, 8th Ed.
Lab: Frey et. Al., Earth History
Supplementary Lab Text: (Available at book store)

Class Hours: Lecture: 1:50-2:50 MWF
Lab Section 001: 1:50-4:00 R
Lab Section 002: 8:00-10:10 F

Course Objectives:

- 1) Learn the history and development of geological science and fundamental stratigraphic principles. Understand the scientific method and be able to understand and evaluate multiple working hypotheses.
- 2) Develop a general understanding of sedimentologic, stratigraphic, and paleontologic concepts required to decipher Earth history.
- 3) Gain an understanding of global processes and their impact on the shaping of the Earth.
- 4) Learn the basic geological history of the Earth with emphasis on North America. Learn the basic history and evolution of life.

Grading:

Scores will not be curved. Letter grades will be assigned as follows: A (100-90%), B (89-80%), C (79-70%), D (69-60%), F (<60%). Attendance will be kept by random pop quizzes.

Make Up Policy:

No make-up exams or assignments will be permitted without a valid, pre-arranged excuse. **ALL** absences due to illness will require a doctor's note in order to make up missed assignments, labs, or tests. If you are unable to make an exam, you **MUST** contact me **BEFORE** the exam is given via email, phone, etc.

Field Trip:

A 1 day field trip to Baraboo and subsequent quiz is a required part of this course. The date for the trip will be announced ASAP. Students who are unable to attend the field trip (e.g. physical disability) will be allowed to gain equivalent credit by writing a term paper. ***Arrangements must be made in advance.***

109 Lecture Schedule. Fall 2010 (*subject to change*)
Text: Prothero & Dott, Evolution of the Earth, 8th Ed.

Week 1 (9/8-9/10)	Course introduction, Chapter 1: Time and terrestrial change
Week 2 (9/13-9/17)	Chapter 2: Floods, fossils and heresies
Week 3 (9/20-9/24)	Chapter 3: Evolution
Week 4 (9/27-10/1)	Chapter 4: Relative age dating & stratigraphy, Chapter 5: Numerical age dating
Week 5 (10/4-10/8)	Chapter 6: Origin & Evolution of the Early Earth
Week 6 (10/11-10/15)	Chapter 7: Mountain building and plate tectonics
Week 7 (10/18-10/22)	Chapter 8: Cryptozoic History
Week 8 (10/25-10/28)	Chapter 9: Early Life Patterns
Week 9 (11/1-11/5)	Chapter 10: Proterozoic History
Week 10 (11/8-11/12)	Chapter 11: Early Paleozoic
Week 11 (11/15-11/19)	Chapter 12: Middle Paleozoic
Week 12 (11/22-11/26)	Chapter 13: Late Paleozoic, Thanksgiving Recess
Week 13 (11/29-12/3)	Chapter 13: Late Paleozoic, Chapter 14: Mesozoic Era
Week 14 (12/6-12/10)	Chapter 15: Cenozoic History, Chapter 16: Pleistocene Glaciation
Week 15 (12/13-12/17)	Chapter 17: Best of all Possible Worlds?

109 Lab Schedule. Fall 2010 (*subject to change*)
Text: Frey et al., Earth History and Supplementary Lab Text

Week 1 (9/8-9/10)	No Lab
Week 2 (9/13-9/17)	Intro to rocks and minerals: Supplementary Lab Text p. L-1
Week 3 (9/20-9/24)	Sedimentary Rocks: Earth History ch. 1, 2 + Supplementary Lab p. L-16
Week 4 (9/27-10/1)	Quiz + Intro to fossils, Earth History, ch. 3
Week 5 (10/4-10/8)	Stratigraphic Principles, Earth History, ch. 4,6
Week 6 (10/11-10/15)	Topographic and geological maps, Earth History, ch. 7
Week 7 (10/18-10/22)	Quiz + Construction of geologic maps, Earth History, ch. 13
Week 8 (10/25-10/28)	Prep. For Baraboo Trip (tentative), Supplementary Text p. L-26
Week 9 (11/1-11/5)	Baraboo Quiz
Week 10 (11/8-11/12)	Early Paleozoic Fossils, Earth History, ch. 8, Supplementary p. L-22
Week 11 (11/15-11/19)	Late Paleozoic Fossils, Earth History, ch. 9
Week 12 (11/22-11/26)	Thanksgiving Break
Week 13 (11/29-12/3)	Mesozoic Fossils, Earth History, ch. 10
Week 14 (12/6-12/10)	Cenozoic Fossils
Week 15 (12/13-12/17)	Fossils Quiz