

## GEOS 210 Historical Geology — Fall Term 2017

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Office Hours: I am usually available Monday through Friday during the afternoons. If you would like to meet with me, sign up for an appointment on the scheduling sheet that is posted each week on my office door. You also are welcome to drop by my office in the afternoons even if you have not scheduled an appointment.

Class: 8:00-9:00 a.m., MWF, Rm. 226 Julian S&M.

Laboratory: 8:00-9:50 a.m., T, Rm. 226 Julian S&M.

Text: Historical Geology: Evolution of Earth & Life Through Time, 8<sup>th</sup> edition by R. Wicander and J. S. Monroe. Cengage Learning, 2016. ISBN: 978-1-305-11956-7.

Laboratory Manual: Laboratory Studies in Earth History, 10<sup>th</sup> edition by H. L. Levin & M. S. Smith. McGraw-Hill, 2014. ISBN: 978-0-07-809612-9.

*And some rin uphill and down dale,  
Knapping the chunky stones to pieces wi' hammers,  
Like sae mony roadmakers run daft –  
They say it is to see how the world was made.*

- Sir Walter Raleigh

### Course Goals

In this course we will study the evolution of earth and life through time. Specifically, you will learn about the major geologic and evolutionary events that occurred in the past, and how the two are interrelated. In the laboratory, we will work with problems that will supplement the class material and readings. Through this "hands-on" experience with problem solving, you will learn how to differentiate between hypothesis and theory, facts and interpretations. You will learn that, in many cases, there is no way of knowing the right answer; however, there are plausible interpretations that are consistent with the available facts.

### Course Outline

<u>Week</u>	<u>Topic</u>	<u>Reading Assignments</u>
1 (8/23/17)	Introduction/Review	Chapters 1, 2, & 3
2 (8/28/17)	Geologic Time <b>Laboratory #1:</b> Sedimentary Rocks in Hand Sample <b>Laboratory #6:</b> Sea-Floor Spreading and Plate Tectonics	Chapter 4
3 (9/4/17)	Rocks and Fossils <b>Laboratory #7:</b> Age Relations and Unconformity	Chapter 5
4 (9/11/17)	Sedimentary Rocks Depositional Environments <b>Laboratory #8:</b> Rock Units and Time-Rock Units	Chapter 6
5 (9/18/17)	Evolution <b>Laboratory #4:</b> Ancient Sedimentary Environments <b>Laboratory #5:</b> Major Tectonic Settings of Earth History	Chapter 7
6 (9/25/17)	Origin of the Universe, Solar System, and Earth <b>Laboratory #9:</b> Ancient Shorelines	

**Wednesday, September 27: DePauw Dialogue 2017 (classes cancelled)**

<u>Week</u>	<u>Topic</u>	<u>Reading Assignments</u>
7 (10/2/17)	Hadean & Archean Eons	Chapter 8
<b>Exam I (2 hours) - Tuesday, October 3</b>		
8 (10/9/17)	Proterozoic Eon <b>Laboratory #10:</b> Protists, Sponges, & Corals (pp. 97 - 118)	Chapter 9
<b>Fall Break: October 14-22 (no classes)</b>		
9 (10/23/17)	Paleozoic Earth History <b>Laboratory #10:</b> Bryozoans & Brachiopods (pp. 118 - 126)	Chapters 10 & 11
10 (10/30/17)	Paleozoic Life: Invertebrates <b>Laboratory #11:</b> Molluscs (pp. 128 - 138)	Chapter 12
11 (11/6/17)	Paleozoic Life: Vertebrates <b>Laboratory #11:</b> Arthropods, Echinoderms, Graptolites, & Plants (pp. 138 - 160)	Chapter 13
12 (11/13/17)	Mesozoic Earth History	Chapter 14
<b>Exam II (2 hours) - Tuesday, November 14</b>		
13 (11/20/17)	Mesozoic Life <b>Laboratory #12:</b> Fossil Indicators of Age, Environment, & Correlation (pp. 161 – 175)	Chapter 15
<b>Thanksgiving Recess: 11/22 – 11/26 (no classes)</b>		
14 (11/27/17)	Cenozoic Earth History Laboratory: Fossil Review	Chapters 16 & 17
15 (12/4/17)	Cenozoic Life	Chapter 18
<b>Fossil Examination (2 hours) - Tuesday, December 5, 8:00 a.m.</b>		
<b>Final Examination – Thursday, December 14, 8:30 – 11:30 a.m. (Comprehensive)</b>		

### Grading

Your course grade is based on two semester exams, twelve laboratory assignments, a fossil exam, and a comprehensive final exam. These components are weighted as follows:

Exam I	15%
Exam II	15%
Fossil Exam	15%
Lab Assignments	30%
Final Exam	25%

A =  $\geq 90\%$ ; B = 80-89%; C = 70-79%; D = 60-69%; F =  $< 60\%$

(Note: I will lower these ranges slightly if warranted by the class grade distribution.)

## Class Policies

1. Regular attendance is expected. Poor attendance and preparation for class will result in refusal on my part to give you reasonable attention and guidance in make-up work. See the Student Handbook for the University policy on attendance.
2. Cell phone and computer use during class are not allowed.
3. Late lab assignments will not be accepted. You will receive a grade of "0."
4. Make-up examinations are normally not given; however, I will consider requests for make-up exams on a case-by-case basis.
5. Academic dishonesty is not tolerated. Academic dishonesty includes, but is not limited to, cheating, fabrication, facilitating academic dishonesty by another student (e.g., allowing another student to copy your answers on a test or laboratory assignment), and plagiarism. **Use of any electronic device other than a calculator for any reason during exams is not permitted and is considered cheating.** All students should read and understand DePauw University's Academic Integrity Policy, which may be found at: <http://www.depauw.edu/handbooks/academic/policies/integrity/>. Violations will be handled in accordance with established University procedures as described in the Academic Integrity Policy. I encourage you to work together in the laboratory where discussions can foster successful solutions to problems. However, if you participate in a group, **you must be a contributing member and your written answers should be in your own words.** Merely sitting and **listening** to what others say, and then writing down whatever answer the group agrees upon, is academic dishonesty. This and all other violations will be handled in accordance with established University procedures as described in the Student Handbook.
6. It is the policy and practice of DePauw University to provide reasonable accommodations for students with properly documented disabilities. Written notification from Student Disability Services is required. If you are eligible to receive an accommodation and would like to request it for this course, please contact Student Disability Services. Allow one week advance notice to ensure enough time for reasonable accommodations to be made. Otherwise, it is not guaranteed that the accommodation can be provided on a timely basis. Accommodations are not retroactive. Students who have questions about Student Disability Services or who have, or think they may have, a disability (psychiatric, attentional, learning, vision, hearing, physical, medical, etc.) are invited to contact Student Disability Services for a confidential discussion in Union Building Suite 200 or by phone at 658-6267.