

Earth & the Environment

Syllabus



Instructor

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<http://www.depauw.edu/academics/departments-programs/geosciences/>

Class

1:40-2:40 pm MWF-Julian 222
8:00-9:50 am Th (LAB A)-Julian 222
1:40-3:30 pm Th (LAB B)-Julian 222

Office Hours

2:45-3:45 pm MWF
other times: stop in or by appt.

Text

Essentials of Geology
Marshak, S., 2013, 4th ed., Norton
bundled w/ *Geotours Workbook*,
Wilkerson, Wilkerson, & Marshak,
2012, Norton

Lab Fee

A **\$15 lab fee** (lab manual/supplies) will be charged to your student account after the adjustment period.

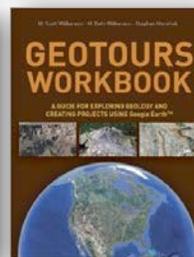
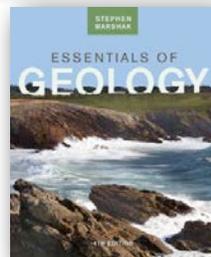
Materials

Calculator, ruler, small stapler, & USB drive

COURSE GOALS

To use observations, measurements, and the logic of science to gain an understanding of, and an appreciation for...

- the materials and landforms which make up the Earth, and
- the dynamic forces that constantly shape and change our evolving planet.



In essence, you will learn about geology and the Earth on which we live and hopefully leave this course as a better consumer of scientific knowledge with enhanced critical thinking and reasoning skills.

This syllabus is meant to provide an outline for the general flow of the course. At my discretion, I will add or omit topics and/or modify the timetable.



DESCRIPTION

This course employs a variety of teaching approaches to maximize student learning of geoscience content in a classroom where different students optimally learn material in different ways. Specifically, of the 5 hrs/wk of class time that we are together, ~3 hrs/wk will involve lecture/discussion (aka “lectures”) and ~2 hrs/wk will involve hands-on active learning (aka “labs”).

I purposely provide my slides as PDFs on Moodle, so that students can print them out before class and annotate them with notes during class. That way, students aren’t scrambling to write down every single word on a slide, allowing them to focus on the content and to participate in the discussion. To facilitate discussion, students must R & R before class (no, this is not “rest & relaxation”, but rather “read & retain” the chapter text). The best discussions often arise from

student questions about the material (and/or current events highlighted in the media). Our “lectures” will often include movie clips, animations, whiteboard drawings, etc., and active learning Geotour assignments using Google Earth. The latter is especially important because students not only “see it, hear it”, but can “see it, hear it, and then practice it” as well.

Our active-learning sessions in “lab” will allow us to be hands-on with minerals, rocks, maps, etc. To be most effective, be sure to R & R the lab materials before each Thursday session. The classroom should be open from ~8:00 am-5:00 pm weekdays for independent study (except when classes are being conducted in the room). Assignments typically are due at the beginning of the next week’s lab unless specified otherwise.

GRADES

The basis for final grades is described in the table below. All materials to be turned in for a grade must be clearly written (or typed) and stapled in order. Late assignments will not be accepted and will receive a “0”. Make-up exams/quizzes will not be given unless there is a documented emergency or unless we have arranged a make-up in advance because of exceptional circumstances. Reading quizzes will be unannounced and will cover assigned readings for both “lecture” and “lab”. I will drop the 3 lowest reading quiz scores because there may be absences that are unavoidable and because “unannounced” quizzes can’t be made up without disadvantaging those who were present originally.

Participation. Participation/engagement grades for this course will be based on a “standard” - “sub-standard” system. Everyone starts out with a “standard” grade, and I expect that most of you will finish the semester with this grade. A “standard” grade means you are attending class consistently, and you are participating in a reasonable way during most class sessions. If I judge your participation to be falling into the “sub-standard” range (e.g., excessive absences/tardiness, consistent lack of preparation or participation in activities, electronic distraction, sleeping/lack of attention, frequently getting up in class, etc.), I will explain the issue to you without penalty and will work with you to develop a plan for improvement. If an issue persists, I will explain the issue again and will assign a sub-standard participation grade. Each such sub-standard grade will result in lowering your final course grade by one percentage point.

Q CERTIFICATION

Students must successfully satisfy both of the following criteria to receive Q certification:

1. Average 75% on the 3 Lab Quizzes & on the Geotour/Lab/Homework Assignments.
2. Receive a course grade of 70 (C-) or better

Percent of Final Grade		Grading Scale*	
Lecture Exam 1	20%	A	100-93%
Lecture Exam 2	20%	A-	92-90%
Lecture Exam 3	20%	B+	89-87%
Lab Quiz (minerals)	05%	B	86-83%
Lab Quiz (rocks)	05%	B-	82-80%
Lab Quiz (comprehensive)	10%	C+	79-77%
Geotour/Lab/Homework Assignments	10%	C	76-73%
Reading Quizzes	10%	C-	72-70%
		D+	69-67%
		D	66-63%
		D-	62-60%
		F	<60%
<i>*Numeric scores rounded up from 0.50. I reserve the right to adjust the grading scale up slightly (benefitting you!), if warranted by the class grade distribution.</i>			

KEYS TO SUCCESS IN THIS COURSE

1. **Read the Assigned Chapter** in a distraction-free environment and in advance of lecture over that material. As you're reading, carefully note any questions that you have.
2. **Take Good Notes.** Students with complete notes seem to do better in class. If possible, print out the lecture slides before class and annotate them from the lecture/discussion (including sketches from the whiteboard). Rewriting your notes will make them more legible and orderly, plus it will help you focus on areas that are still unclear. Be careful of falling into "TV-watching mode", as it is easy to look at the pictures and not take down any notes.
3. **Ask Questions.** The only stupid question is one that is unasked. Because you will be responsible for material in each assigned chapter whether that material is specifically covered during lecture or not, it is essential to ask questions to clarify any concepts that you do not understand. PLEASE do not be too shy, embarrassed, intimidated, afraid, etc. to ask questions.
4. **Know the Key Terms** at the end of each chapter (these are bold in the chapter text). If I use a term that you don't understand, PLEASE ASK me to define it.
5. **Use the Glossary** in the back of the book to help understand key terms.
6. **Answer the Review Questions** at the end of each chapter in order to **assess your learning of the material** on a regular basis. If you are unsure about any of the answers after checking the chapter text, PLEASE ASK me.
7. **Check out the Internet.** The companion web site for our text is <http://wwnorton.com/college/geo/essgeo4/>. On this web site is additional material & quizzes that will help enhance your understanding of the chapters & help you assess your progress. You also can use a search engine to find additional web sites of interest. Geotours can be found at: <http://wwnorton.com/college/geo/essgeo4/geotours.aspx>
8. **Create your own Study Aids.** Some people like to highlight text in the chapter, others like to make flash cards, and still others like to study in groups and discuss the material. Feel free to experiment with what works for you. In addition, the Academic Resource Center in Asbury Hall (1st floor) has Q tutors and trained people available to help you refine and improve your study habits and techniques.
9. **Study the Material on a Regular Basis.** It is important that everyone maintain good study habits by regularly working with the assigned material. Procrastination and cramming just don't work for most of us...it is best to get comfortable with the material as we go along so that you don't fall behind.
10. **Study for the Exam** as an Individual and then as a Group. Again, different people study in different ways. I've found that it helps to study as an individual first (thinking about what important concepts were emphasized in each chapter & lecture), then get together with others and study as a group (e.g., asking each other questions, brainstorming about what will be on the test, etc.).

FAQ:

Are lecture notes from the slides provided? PDF's of the lecture notes will be available in Moodle. Please bring printouts to class, so that you can annotate them. Please note that if I post notes from the last time the course was offered, I will post any revised PDF's of the lecture notes before the next corresponding exam.

Should we copy all the text on the slides? There shouldn't be a need with access to PDF's of the lecture notes. However, it is *far better* to listen to me/our discussion and take notes than to copy the slides. Sometimes text on slides is really just to trigger me on a topic and not something to be committed to your notes. In addition, I commonly go more in-depth than what is on the slides, and you will be responsible for knowing that detail on the exams.

Can we have an exam review sheet? I always do oral Q&A reviews before every lecture exam to clarify geoscience concepts.

ORDER OF TOPICS

Week Starting	Lecture Topics & [Reading Assignments]	Lab Topics
01: 08/25	Syllabus [Preface & Prelude] Earth in Context [Chap 1; 9-21]	Introduction to Google Earth & Geotours
02: 09/01	Earth in Context [Chap 1; 21-33] Plate Tectonics I [Chap 2; 6-7, 34-49]	Measuring the Earth using a GPS*
03: 09/08	Plate Tectonics 2 [Chap 2; 49-69]	Minerals I
04: 09/15	Minerals [Chap 3; 71-87]	Minerals II
05: 09/22	Rock Groups [Interlude A; 88-95] Rock Cycle [Interlude C; 210-215] Igneous Rocks [Chap 4; 96-117] <i>Exam Review</i>	Lab Quiz #1: Minerals
06: 09/29	Exam #1 Weathering [Interlude B; 148-156]	Igneous Rocks
07: 10/06	Sedimentary Rocks [Chap 6; 162-187] Metamorphic Rocks [Chap 7; 188-209]	Sedimentary Rocks Metamorphic Rocks
08: 10/13	Volcanoes [Chap 5; 118-147] Geologic Time [Chap 10; 304-327] <i>[Geologic Time Scroll]</i>	Lab Quiz #2: Rocks
09: 10/20	Fall Break (10/18-10/26)	
10: 10/27	Hydrologic Cycle [Interlude F; 386-395] <i>Exam Review</i> last day to withdraw with W-10/31	<i>Field Trip to the DePauw Nature Park*</i>
11: 11/03	Exam #2 River Systems [Chap 14; 416-443] Groundwater Systems [Chap 16; 472-495]	<i>Field Trip to Shades State Park*</i>
12: 11/10	Earth's Resources [Chap 12; 352-385]	Topographic Maps I
13: 11/17	Crustal Deformation [Chap 9; 264-291]	Topographic Maps II
14: 11/24	Earthquakes [Chap 8; 216-251 & Interlude D; 252-263]	Thanksgiving (11/26-11/30; no lab)
15: 12/01	Global Change [Chap 19; 544-556]	Earthquakes
16: 12/08	Global Change [Chap 19; 557-567] <i>Exam Review</i>	Lab Quiz #3:

Exam #3: Fri, Dec 19, 8:30-11:30 am, Julian 222

Note: These topics and exam times are subject to change.

*You must be present in lab to get full credit.

Students willing to become certified for driving University vehicles should visit <http://www.depauw.edu/studentlife/campus-safety/publicsafety/education-and-awareness/drivers-safety/> to find out about driver certification classes.

Policy Page

ADAAA STATEMENT

DePauw University is committed to providing equal access to academic programs and university administered activities with reasonable accommodations to students with disabilities, in compliance with the Americans With Disabilities Act and Amendments (ADAAA). Any student who feels she or he may need an accommodation based on the impact of a disability or learning challenge is strongly encouraged to contact Pamela Roberts, Director of Student Disability Services and ADA Compliance for further information on how to receive accommodations and support. Contact information for Student Disability Services is: 408 S. Locust Street, Suite 200, in The Memorial Student Union Building (765-658-6267). It is the responsibility of the student to share the letter of accommodation with faculty and staff members. Accommodations will not be implemented until the faculty or staff member has received the official letter. Accommodations are not retroactive. It is the responsibility of the student to discuss implementation of accommodations with each faculty and staff member receiving the letter.

ATTENDANCE

Regular and on-time attendance is expected and monitored (see the Student Handbook <http://www.depauw.edu/handbooks/academic/policies/attendance/>). As stated in the Student Handbook, excessive absences can be grounds for being dismissed from the course. In addition, it has been my experience that learning comprehension improves dramatically when students are present to listen to lectures, to ask questions, and to discuss the material in the classroom setting. In addition, some activities (e.g., field work) require attendance to receive credit. Should you know that you will be absent (e.g., health issue regarding yourself or immediate family, athletic obligation, etc), please contact me in advance (or ASAP afterwards) to make arrangements about assignments.

ACADEMIC INTEGRITY

Any attempt to gain an unfair advantage over other students in the class will be handled in accordance with established University procedures as described

in the Academic Handbook section on Academic Dishonesty:

<http://www.depauw.edu/handbooks/academic/policies/integrity/>

Writing Center Information on Plagiarism:

<http://www.depauw.edu/academics/academic-resources/academic-resource-center/w-center/w-center-handouts/>

CELL PHONE & COMPUTER USE

Before class begins, turn off your cell phone (or set it to vibrate) and put it away (face down on top of the table or in your backpack...not in the table or on your person). Do not check or send voicemail or text messages during class, and do not leave class to check or send messages unless 1) you have an emergency (*inform your instructor prior to class starting of special circumstances involving a personal emergency situation that would require you to use your phone when class is in session*) or 2) are on an instructor-designated break. In other words, do not use your cell phone in class for any reason at any time unless you have consulted with the course instructor. I will have my cell phone on in the case of a campus emergency.

If you have a cell phone on your person or on your desk/table during an exam without the instructor's permission, you will receive a 0 on the exam, and you will automatically be considered in violation of DePauw's academic integrity policy on cheating due to unauthorized use of a cell phone. You may not take your cell phone with you on bathroom breaks during exams.

Please read the following: <http://www.insidehighered.com/blogs/just-visiting/open-letter-incoming-freshmen>

Laptops, tablets, and other electronic devices are not allowed to be used in the classroom except for activities directly related to our course as specified by your instructor (e.g., do not check or send emails, chats, or texts, do not use your web browser except for course-sanctioned activities, etc.). Quit all programs not specifically designated by your instructor (not only reducing temptation, but also helping your computer run more efficiently).

Violating the cell phone & computer use policy is one way students may be considered not engaged/participating in course activities (see the Grades discussion on participation above).

Policy Page

CLASSROOM BEHAVIOR

- **Early is on time, and on time is late** (especially on days with field experiments). On field experiment days, please arrive early so that we can load instruments and get to the field site promptly.
- **Respect everyone** (yourself, your peers, and your instructor).
- **Listen and contribute.** Lecture and discussion portions of our class can quickly morph to lecture only if you are not an active and contributing participant in class.
- **Work to the best of your ability.** True learning is hard work and is constructed and nurtured by you (not simply transferred from the instructor). A strong work ethic will not only serve you well in this course, but in life in general. Do not settle for less than your best effort.
- **Be aware of consequences (positive & negative).** If you make good decisions (e.g., reading the course materials, taking notes, asking questions, working hard, etc.), you will likely experience good consequences such as enhanced understanding of geoscience processes, improved grades, and general success in life. Conversely, poor decisions (e.g., waiting to cram right before an exam or assignment, pulling an “all-nighter” and coming to class exhausted, relying on energy drinks or other substances, distracting yourself or others with cell phones or laptops, etc.) typically have negative consequences that cause your understanding of course content to suffer.
- **Consider the classroom your workplace.** Once you step inside the classroom, commit yourself to learning as much as you can during that time. Do not routinely get up during class to take care of personal needs (e.g., bathroom breaks, social networking, etc.). Please address these needs during the break between classes. If an emergency occurs, please feel free to leave the classroom to address it.

AUDIO/VISUAL POLICY

- No video, audio, or still picture recordings are allowed during class without the instructor's permission.
- No video recordings, still picture, or other means of duplication (e.g., xeroxing) of homework assignments, labs, exams, etc. are allowed without the instructor's permission.
- ADA/AA accommodations pertaining to recordings of lectures for taking notes is typically addressed by the instructor providing handouts of lecture slides/materials.