

Geology 101

Lectures MWF, 9:00 a.m.

Text: *Essentials of Geology*, 2nd edition, by Stephen Marshak

Lab manuals will be distributed at the first meeting of lab.

Instructor: Dr. Jacqueline Caplan-Auerbach (please call me Jackie)

Office: ES 236 (or find me in my lab, ES 202)

Phone: 650-4153

Email: jackie@geol.wvu.edu

Office hours: Monday, Wednesday, 1:00-2:00 p.m., or by appointment

Date	Topic	Chapter to read
Wednesday, 9/27	Introduction to class; How science works	Prelude (NOT preface!)
Friday, 9/29	Formation of universe and solar system	1
Monday, 10/2	Structure and age of the Earth	1
Wednesday, 10/4	Absolute dating and geologic time	10, sections 10.8-10.11
Friday, 10/6	Life before plate tectonics: continental drift, sea floor spreading	2
Monday, 10/9	Plate tectonics	2
Wednesday, 10/11	Exam review	
Friday, 10/13	FIRST MIDTERM EXAM	
Monday, 10/16	Minerals	3
Wednesday, 10/18	Igneous rocks	4
Friday, 10/20	Sedimentary rocks	5
Monday, 10/23	Metamorphic rocks	6
Wednesday, 10/25	Relative dating and geologic time	10
Friday, 10/27	Exam review	
Monday, 10/30	SECOND MIDTERM EXAM	
Wednesday, 11/1	Volcanoes	7
Friday, 11/3	Volcanic hazards	7
Monday, 11/6	Earthquakes	8
Wednesday, 11/8	Earthquake hazards	8
Friday, 11/10	<i>VETERAN'S DAY—NO CLASS</i>	
Monday, 11/13	Mass wasting (guest lecture)	13
Wednesday, 11/15	Tsunamis	
Friday, 11/17	Local hazards, exam review	
Monday, 11/20	THIRD MIDTERM EXAM	
Wednesday, 11/22	Streams, floods	14
Friday, 11/24	Groundwater and hydrologic cycle	16
Monday, 11/27	<i>THANKSGIVING HOLIDAY—NO CLASS</i>	
Wednesday, 11/19	Oceans and coastal processes	15
Friday, 12/1	Glaciers	18
Monday, 12/4	Climate change and carbon cycle	19
Wednesday, 12/6	Climate change and how science works	19
Friday, 12/8	Final review	
Monday, 12/11	FINAL EXAM—10:30-12:30	

Class goals: Geology is the study of the earth: of what it is composed, how it formed, and what processes continue to shape it. This may sound like it has little to do with your daily life, but in fact of all sciences, geology is probably the most relevant to the

non-scientist. While my ideal goal for this class is that you should all discover a latent passion for geology, change majors and become earth scientists, this is probably not entirely reasonable. Instead, my hope is that you should learn to see earth science in a way that is personally meaningful. In this class you will learn how you are affected by your local and regional geology. This includes learning how to determine whether your home is in a seismically hazardous area, a flood plain or in a region prone to landsliding. What you learn in this class will hopefully improve your understanding of issues such as water use and global climate change. It is my hope that you will be more adept at reading about these issues in the newspaper and that you will be a more educated voter on issues related to the earth and its resources. Most of all, you will learn how science really works, and how to determine if something is “good science”.

Grades: This course includes a lab which is worth 25% of your total grade. The remaining 75% is based primarily on 4 exams of equal weight...three mid-term exams and a cumulative final. Other assignments or pop quizzes will be at my discretion. Exams will contain a combination of multiple choice and short answer/fill in/diagram type questions. Final letter grades are based on: 100-92.5% = A; 92.4-90% = A-; 89.9-87.5% = B+; 87.4-82.5% = B-; 79.9-77.5% = C+, 77.4-72.5% = C; 72.4-70% = C-; 69.9-67.5% = D+; 67.4-62.5% = D; 62.4-60% = D-; <60% = F.

Lab: You must be signed up for a lab to take this course (in fact, you couldn't have signed up for it without one, so you already know this.) Lab does NOT meet on the first week of class, but will meet every subsequent week and is a critical part of the Geology 101 experience. Although we try to keep lab and lecture somewhat in sync, there may be times when your lab topic is quite different from what we're discussing in lab. It is important to note that because lab and lecture are totally separate, *any questions or concerns you have regarding the lab section of class must be taken up with your TA*, not with me.

Reading assignments: You will note on the syllabus above that each day a chapter or a portion of a chapter is assigned for reading. You may opt to do the reading after lecture if that works better for you, but please make sure you take advantage of both lecture and the text. The exams will emphasize material presented in class, but I will assume that you have done the reading and may supplement the exam with material from the text. Please note that some parts of the class have more reading than others (the second exam covers 5 chapters while exams 1 and 3 cover 3 chapters). Please budget your reading and studying time accordingly.

Office hours and contact: Please do not hesitate to contact me during my office hours or by appointment if those hours do not work with your schedule. You may also email me at the address shown above. I am very flexible with meeting times, so if my office hours don't fit with your schedule, I promise that we will find a way to meet if need be. If there is a problem and you are unable to attend one of the exams, *it is your responsibility to tell me in advance and work out an alternative.*

Academic success and support services: Please feel free to talk to me anytime about your performance in the course or possible ways you can improve. Academic support services are also available if you need them. Tutors are available for a fee through the Tutorial and Academic Skills Center (TASC) at 650-3855 or <http://www.wvu.edu/depts/tutorialcenter/home.htm> . If you need disability-related

accommodations, please notify Student Support Services at 650-3083 (phone) or 650-3725 (TTY) or <http://www.wvu.edu/depts/drs/>

Academic honesty: You are responsible for knowing the university policies on Academic honesty and plagiarism which may be found at <http://www.library.wvu.edu/ref/plagiarism.html>. I will expect that you understand what plagiarism is, and how to avoid it, but if you have any questions, please ask me rather than risk accidentally committing an act of academic dishonesty. Please also note that unless it is explicitly stated in an assignment, you are expected to do all of your work yourself. This means that although you and a friend may discuss the assignment, you must write them up completely separately. *Again, see me if this is not clear.*

Attendance, Tardiness, Leaving Early, and Cell Phones: Attendance is not mandatory and you will not be marked down for any absences but please understand that this is a lecture course and in order to get the information, you will have to be in class taking notes. If you cannot attend a class, please get notes from your classmates. I'll be happy to answer any questions you have about the notes but I will not re-teach the class to you. Lecture notes will be posted on line, but should not be considered a substitute for class attendance.

I recognize that circumstances beyond one's control often lead to tardiness, and as a consequence I will not have a problem with you showing up a few minutes late once in a while. I WILL have a problem if you consistently arrive late. Late arrivals disrupt everyone so please be considerate of your fellow students and me and get to class on time. If you have to be late, take the first available seat you can find. The same thing goes for leaving early. If for some reason you must leave early, please choose a seat where your departure will be the least disruptive to the class.

Regarding cell phones... under NO circumstances should a cell phone or pager ring or ever be answered in class. If you are waiting for an important call, please let me know, but recognize that I may ask you to wait for your call outside. If there is a circumstance that requires you to be in cell phone or pager contact (if, for example, you moonlight as an EMT or you're awaiting the birth of your first child), please discuss this with me in advance of class. If your cell phone rings in class, you will be asked to leave. If you answer your phone in class you will be asked to leave and not return.