

Geology 101/201: Introduction to Geology: Solid Earth/ Physical Geology I Fall 2013

Instructor: Deron Carter **Office:** MH 110 **email:** carterd@linnbenton.edu **phone:** 917-4745

Office hours: M and W 2:30-3:30; T/Th 12:30-1:00

Best way to reach me: email if I don't pick up the phone when you call. Voicemail is a "slower response."

Required materials:

- Essentials of Geology, Marshak (4th ed.)
- G101/201 Lab manual (LBCC)
- Scientific calculator (non-graphing OK) and computer/internet access with GoogleEarth

Class website/Moodle: elearning.linnbenton.edu/

Welcome to Geology!

The study of the geosciences requires both the ability to look at the big picture and the ability to fill in that big picture with details. In this course we will explore the atoms, minerals, and rocks that make up the Earth and the tectonic processes that drive earthquakes and volcanoes. This class is not about memorizing the names of 100 different rocks and how to distinguish them. Instead, it's about a way of looking at the world around you, and learning how to be confident in your observations and interpretations of that world.

Course Goals:

- To better understand the natural world. The knowledge you build in this course will encourage you to become more curious about how the Earth works.
- To have a general knowledge of science and geology so you can make more informed decisions as a contributing member to society.
- To develop and improve life-long skills such as problem solving, critical thinking, oral communication, and group work. I hope that the skills you learn and refine in this class will carry over into your other classes and your personal life.

101 is geared towards non-science majors. Science majors/minors should take 201. If you are unclear about which course to enroll in please ask! **Math 65** is the prerequisite.

GRADING:

		Scale for final grade:	
Exams (plus extra assignments for 201 students)	40%	A	100-90%
Online reading quizzes (due Mondays @ 10 AM)	15%	B	89-80%
Lab exercises	20%	C	79-70%
In-class assignments and field trip or makeup	10%	D	69-60%
Geotours Homework (due Fridays @ 10 AM)	15%	F	59%-below

Other possible grades: A **Y grade** will be not be assigned to any student who submits any work after the end of the second week of classes. An **incomplete grade (IN)** will only be considered if a student has talked to me in advance, and a signed agreement between the student and myself is completed. I will only consider an IN grade if the student has a good reason for making the request, has only the minority of coursework to complete, and has scored a C or better on work that has been submitted.

Exams: There are three exams. There is no comprehensive final. Each exam has an individual and group portion. Please let me know ahead of time if you cannot attend an exam day. **Once exams are returned there are no make ups.**

201 STUDENTS ONLY: 201 students will have additional assignments, as well as a course-long project that will culminate in a poster. These assignments will count as a "fourth" exam.

Online Reading Quizzes: Are conducted online through Moodle. I provide a reading guide to help you focus on what is important. Quiz questions come from the reading guides. The quizzes are timed. **Quizzes are due each Monday at 10 AM. No late submissions or make ups; however, I drop your lowest quiz grade.**

Lab exercises: Labs cannot be made up, but I will **drop your lowest lab score.** However, if you complete all ten labs, I will count your lowest score as extra credit. **Since this is a lab-based class if you miss more than three labs you will fail the class.**

In-class questions and group assignments: I have found that students get much more out of class and have a lot more fun if we devote some class time to group activities rather than me standing up and talking, talking, talking. So, on non-lab days we will spend some time working in groups solving problems. **You must be in class to receive credit for these assignments; I will drop your lowest score.**

Field trip/make up writing assignment. We will investigate the geology of the Mary's Peak on Saturday, October 12. We will leave from Albany at 8:30 am, and return by about 1:30 pm. Some transportation is provided, but you may drive your own personal vehicle. If you cannot attend you may make up the field trip with a writing assignment. Details will be provided in class and on Moodle.

Online homework: Homework problems are assigned and submitted through our course Moodle page. You will need a computer with access to GoogleEarth to complete the HWs. ***The computer lab in the Learning Center has all the files you need, or you can download GoogleEarth and other files to your home computer.*** Homework must be **submitted by Friday at 10 AM and late work is not accepted.** I will drop your lowest homework.

Your responsibilities:

1. A huge amount of the learning in this course happens in real time, during class. **Come ready to participate** and work. Long lectures will be rare occurrences in this class, so you should be prepared to be active throughout the class.
2. If you absolutely **MUST** be absent, **please let me know ahead of time.** You may or may not be able to make up the work done in class.
3. I expect you **to check the Moodle website regularly** to stay updated with current class information and due dates.
4. **Respect** your instructors and your classmates, and we will return the favor. Respect includes creating an environment conducive to learning, which means **being on time, staying for the entire class, turning off cell phones, listening, and contributing.**
5. **Honor Code Considerations:** This class is highly collaborative; however, there are expectations for individual work as well. If it is ever unclear to you, please ask. Any cheating, plagiarism, etc., may result in a zero and possible recommendation to the administration for further consequences.
6. **Special accommodations:** Students who may need accommodations due to documented disabilities, who have medical information which I should know, or who need special arrangements in an emergency, should speak with me during the first week of class. If you have not accessed services and think you may need them, please contact Disability Services, 917-4789. LBCC is an equal opportunity educator and employer.

My responsibility:

I am here to help you learn. Only you can do the learning, but expect me to be available for help during class and office hours and to facilitate the learning process.

A FINAL NOTE: I believe that we are all resources for this course. To that end, I hope you ask questions and initiate discussions in class. In this way, I think we will all learn a lot more! ***Thanks, Deron***

TENATIVE SCHEDULE and DUE DATES (in bold face) (subject to change):

Week of; reading	M	W	F
1. Reading: Prelude (p. 1-8) and Ch. 2	Introductions	Plate tectonics Lab: Tectonics jigsaw	No HW Plate boundaries Lab: finish jigsaw
2. Reading: Ch. 8	Ch.2 Reading quiz Plate rates Collisions and hot spots	Seismology and earthquakes	Geotours B (part 1) due Magnitude and intensity Lab: Earthquake location
3. Reading: p. 24-30 and Interlude D	Ch. 8 Reading quiz Earthquake hazards	Earthquakes in the Pacific NW	Geotours B (part 2) due Lab: Earthquake recurrence Marys Peak Field Trip tomorrow (Oct 12)
4. Reading: Ch.3	Ch. 1 & Int. D quiz NO CLASS due to Mary's Peak Field Trip	Earth's interior	Geotours H due Lab: Density, isostasy and topography
5. Reading: Ch. 4	Ch. 3 Reading quiz EXAM 1 (weeks 1-4)	Atoms, matter, and minerals	Geotours C due Lab: Minerals
6. Reading: Ch. 5	Ch. 4 Reading quiz Magmas and plate tectonics	Forming igneous rocks and magma chambers	Geotours D due Lab: Igneous rocks
7. Reading: Interlude B and Ch. 6	Ch. 5 Reading quiz Volcanic eruptions	Volcanic landforms and hazards	Geotours E due EXAM 2 (weeks 5-7)
8. Reading: Ch. 7	Ch. 6 Reading quiz NO CLASS VETERANS DAY	Weathering and sediments	Geotours F due Lab: Sedimentary rocks
9. Reading: Interlude C	Ch. 7 Reading quiz Sedimentary environments	Metamorphism and metamorphic rocks	Geotours G due NO CLASS THANKSGIVING
10. Reading: review chapters and study guide for final exam	No reading quiz Lab: Metamorphic rocks	201 project presentations Lab Final: Rocks and tectonics	No HW 201 project presentations Final Lab: Rocks and tectonics presentations
11. Finals Week	10 am class's final time: 8:00-9:50 am 1 pm class's final time: 1:00-2:50 pm		

*All Reading Quizzes and Homeworks are completed and submitted through Moodle:
elearning.linnbenton.edu/*