

Geology 203: Historical Geology, Spring 2018

Instructor: Deron Carter

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Office hours: M 11:30-12 and 2:30-3, T 10-11, W 11:30-12 and 2:30-3, or by appointment

CRN: 41673

Class meeting times: Monday and Wednesday 1-2:20, Friday 1-2:50 in MH 108

Welcome to Geology!

G203 introduces Earth history through the rock and fossil record. Topics include fossils, stratigraphy, geologic time, and biological and geological events in Earth's history. This class is not about memorizing the names of 100s of 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 Learning Outcomes

- Solve quantitative problems relating to geologic time.
- Apply geochronological methods to determine a sequence of geologic events.
- Use geologic cross sections and maps to describe geologic structures.
- Summarize biological and geological changes to Earth over time.

This course counts as a Physical Science Perspective at OSU and the Science/Math requirement for AAOT. Required for Geology majors and counts for Earth Science requirement for Fish and Wildlife majors

Learning Resources

- Textbook: GEOL, by Wicander and Monroe (2nd edition, but older edition is OK!), Cengage publishing
- G203 Course packet, by Deron Carter
- Class Moodle site: elearning.linnbenton.edu

Grading (subject to change)

- 2 Exams (100 points each) = 200 points
- Comprehensive Final Exam = 150 points
- Labs = 90 points
- Reading Quizzes = 60 points
- Geologic Timescale Quiz = 20 points
- Field Trip or Article Review = 20 points
- Exam wrappers = 10 points

Total = 550 points

Grading Scale

Grades are calculated by taking the points you earn divided by the total class points (550 points).

A = 100-90%

B = 89-80%

C = 79-70%

D = 69-60%

F = 59% and below

Exams: The two exams will be administered as a 2-stage "pyramid" tests. You will have a set period of time to take the exam, turn it in, then retake the exam with a group of students in the class (graded 85% for the "solo" effort and 15% for the "group" effort). Your group score cannot lower your grade. If you know you will be absent on an exam day let me know ahead of time to schedule a make up. Once exams are returned they cannot be made up.

Final Exam: This exam is comprehensive and will be completed individually; no “pyramid” format.

Lab exercises: Labs cannot be made up, but I will drop your lowest lab score. Prelabs are due at the beginning of class. Lab reports are due at the end of class Friday or the next class period.

Reading Quizzes: Much of class will be devoted to discussion and active learning. To make this work everyone must be prepared when coming to class, so it is important that everyone read the assigned readings in the text prior to our discussion of the topic. I provide reading guides on our Moodle site to help you focus on what is important in the text. You may use your Reading Guides during the quiz and the quiz will cover just the information in the Reading Guides. You may not use your books or class notes on the quizzes. Before the quiz you are welcome to ask Deron questions about parts of the Reading Guide that you do not understand or could not find in the text. Quizzes start at the beginning of class, so if you are late you will have less time to complete it. There are no make ups, but your lowest quiz is dropped.

Geologic Timescale Quiz: As a student of historical geology it is important to learn the geologic timescale. You will be quizzed on it Monday, April 16. I will tell you what you need to study for in class. Once the quiz is returned it cannot be made up.

Field Trip: We will have an all-day field trip to the Oregon Coast on Saturday, May 19, departing/returning to LBCC 8:00 am/5:30 pm. You may drive your own vehicle; some transportation is provided for those that cannot. You will need to bring a lunch, water, clipboard, pencils, and have shoes that can get wet/muddy, and a rain coat. If you cannot attend you must let me know ahead of time, and complete an article review.

Exam wrappers: You will complete a short self-reflection assignment after taking Exams 1 and 2. I will provide more details in class.

Statement of Inclusion: To promote academic excellence and learning environments that encourage multiple perspectives and the free exchange of ideas, all courses at LBCC will provide students the opportunity to interact with values, opinions, and/or beliefs different than their own in safe, positive and nurturing learning environments. LBCC is committed to producing culturally literate individuals capable of interacting, collaborating and problem-solving in an ever-changing community and diverse workforce. LBCC is an equal opportunity educator and employer.

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. LBCC is committed to inclusiveness and equal access to higher education. If you have approved accommodations through the Center for Accessibility Resources (CFAR) and would like to use your accommodations in this class, please talk to your instructor as soon as possible to discuss your needs. If you believe you may need accommodation but are not yet registered with CFAR, please visit the CFAR website at www.linnbenton.edu/cfar for steps on how to apply for services or call 541-917-4789.

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 sincerely believe that each of us can be a resource in this course. I hope you will ask questions, initiate discussion, and take an active part in the class and your learning. In this way, I think we will all learn more! **Thanks, Deron**

COURSE SCHEDULE (subject to change):

Due dates in bold face

| Week | Monday | Wednesday | Friday |
|----------------|--|---|---|
| 1 4/2-4/6 | <i>NO CLASS</i> <i>LBCC in service</i> | Class introductions | Lab: Rock cycle |
| 2 4/9-4/13 | Ch 16 Reading Quiz Relative dating | Numerical dating | Lab: Geologic time |
| 3 4/16-4/20 | Geol. Timescale Quiz Sedimentary environments | Plate tectonics | Lab: Sedimentary environments |
| 4 4/23-4/27 | EXAM 1 | Hadean and Archean Earth | Lab: Geologic Timeline |
| 5 4/30-5/4 | Early Earth RQ Proterozoic Earth | Paleozoic Earth | Lab: Fossils |
| 6 5/7-5/11 | Phanerozoic RQ Mesozoic Earth | Cenozoic Earth | Lab: Dinosaur tracks |
| 7 5/14-5/18 | EXAM 2 | Deciphering Earth's climate history | Lab: Paleoclimate Coast field Trip Saturday, 5/19 |
| 8 5/21-5/25 | Biodiversity RQ Geologic time and mass extinctions | Mass extinction RQ Mass extinction causes | Lab: K-Pg extinction |
| 9 5/28-6/1 | <i>NO CLASS</i> <i>MEMORIAL DAY</i> | Carbon cycle RQ Earth Systems and mass extinctions | Lab: Critter count* |
| 10 6/4-6/9 | Environmental changes impact organisms: Horses | 6th Extinction RQ The sixth extinction Earth's geologic future? | Lab: Fossils under your feet* |
| Final 6/11 | FINAL EXAM 1:00-2:50 pm MH 108 | | |

*These labs are not in your manual and will be handed out in class.

IMPORTANT DATES:

- Last day to add/drop a class with a full refund: April 9
- Last day to withdraw from a class in person: May 18