Geology 203: Historical Geology (CRN 41673 and 41674)

## Instructor Information and Availability

**Instructor:** Deron Carter

**email:** [carterd@linnbenton.edu](mailto:carterd@linnbenton.edu)

I intend to respond to student inquiries made by email within 24 hours during the work week. You can email me any time, but please do not expect a reply over the weekend.

**Virtual Office Hour (for advising and individual student meetings):** Monday 1-2 pm (on Zoom)

**Live Study Sessions/Office hours:** Wednesday 1-2 pm and Friday 10-11 am (Live study sessions/help on Zoom- link will be posted in Moodle)

## A note about COVID-19, the Coronavirus and this term:

* I understand that many of you have not taken an online course. I will be extremely flexible and willing to help you in any way I can. **I want ALL students to succeed in this course!**
* The college has an amazing [FAQ](https://www.linnbenton.edu/faculty-and-staff/college-services/public-safety-emergency-planning-ehs/covid19/faq-students.php) page about how the term will work (and how to access basic needs resources, such as food and rent if you need them).
* If you do not have access to a computer, call the LBCC library at 541-917-4630. If you do not have internet access there are lots of [options](https://www.linnbenton.edu/faculty-and-staff/college-services/public-safety-emergency-planning-ehs/covid19/faq-students.php).
* The course will be conducted through Moodle, but there will be options to study and work together with myself and other students online.
* All of my course materials will be posted on Moodle, and you will turn in assignments through Moodle.
* While the course will mainly be taught through Moodle, you will have the option to use Zoom to connect with me and other students. I will host at least two OPTIONAL Zoom sessions a week where we can discuss topics, ask and answer each others' questions, work on class and lab activities, and just generally check in on each other's well-being. I know not everyone will be able to participate, but I hope many of you will (parents--OK if you have kids at home, I do, too)!

## Course Materials

Required:

* **Textbook:** Physical Geology (2nd edition) by Earle, University of British Columbia. View or download at: <https://opentextbc.ca/physicalgeology2ed/>. This is a **free**, open-educational resource.
* **Moodle.** This is our online class hub: you will check grades, review syllabus and powerpoints, carry on discussions with your instructor and classmates, take quizzes and submit assignments.
* **Calculator--**the one on your phone is OK!
* **Access to Google Suite** (docs, slides, and sheets—available with LBCC email)

Recommended:

* **Zoom accoun**t through LBCC. Register at <https://linnbenton.zoom.us/> using your LBCC email and password.
* **Moodle app** for your phone.

## Course Description

A study of Earth and fundamental geologic principles as interpreted through the fossil and rock record. Topics include fossils and stratigraphic principles, geologic time and age dating, mountain building, global change, and the geologic history of the North American continent. Laboratory component highlights rocks, fossils, and geologic maps. Field trips highlight topics discussed. Geology courses do not need to be taken in sequence. Prerequisite: Math 75. Counts as Physical Science Perspective for AS/OSU degrees and Science with Lab for AAOT degree. Articulates as GEO 203 at OSU.

## Student Learning Outcomes

Upon successful completion of this course, students will be able to:

* 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.

# Class Policies

## Behavior and Expectations

Students are most successful when they ask questions, actively participate in class, and complete assignments. The more effort that you as the student puts in the more that you will get out of this class-I hope you can leave here with the knowledge and critical thinking skills to look at the world around you a bit differently. As an instructor I am here to support you so please contact me or see me study sessions with any questions/concerns you may have.

### Academic Integrity

Make sure the work you turn in is your work- though you certainly can work with other students it is expected that you turn in your own work. Any cheating, plagiarism, etc., may result in a zero and possible recommendation to the administration for further consequences. You are held accountable to the [Student Code of Conduct](https://www.linnbenton.edu/current-students/administration-information/policies/students-rights-responsibilities-and-conduct), which outlines expectations pertaining to academic honesty (including cheating and plagiarism), classroom conduct, and general conduct.

### Statement of Respect

Your instructor will make every attempt to create an environment free of distraction and one open to free discourse. The college environment is one of exploring ideas, but also in a context of mutual respect for your peers and instructors. If a pattern of disrespect develops the instructor reserves the right to discuss appropriate behavioral expectations with individuals who may not fully understand this responsibility. At no time will a hostile or condescending discussion be permitted.

## Grading (subject to change):

Practice Questions: 50 points (12%)

Labs: 90 points (22%)

Discussion posts: 50 points (12%)

Module Assessments: 180 points (44%)

Final Project: 35 points (9%)

Total: 405 point

**Final Grade Breakdown**

|  |  |
| --- | --- |
| **Letter Grade** | **Percentage** |
| A | 90-100% |
| B | 80-89% |
| C | 70-79% |
| D | 60-69% |
| F | 0-59% |

### Class Organization:

The class will be organized into 10 modules. Each module is highly structured to provide the opportunity to actively think and practice the topics each week. Expect to take up to 10 hours a week to be successful in this class. Please note that modules are only available one week at a time. Each module is broken into three sections: **PREPARE, ENGAGE, and ASSESS**. Below is a brief description of each part of a module.

### PREPARE:

### Watch videos, recorded lectures, reading assignments, and note taking

Each week you will watch short videos, view a narrated powerpoint, and/or complete a reading assignment. **Take notes while you watch or read, just like you would during an in-class lecture.** There will be opportunities to practice and think about the concepts embedded in the videos and powerpoints. Please pause the video and take the time to actively write or draw and engage with the material at these times.

### ENGAGE:

### Practice Questions (over videos, lectures, and readings)

Each week you will be assigned a reading, video or combination of both to introduce the new topic followed by recorded lectures. After viewing these and taking notes, you will complete a short multiple-choice quiz on Moodle. All questions come directly from the videos, lectures, and/or readings. These quizzes have unlimited time to complete with 2 attempts for each question. Each set is worth 5 points

### Discussion Posts

We will maintain a robust, vibrant discussion about Earth history using the forum in Moodle. Each module requires you to add to the discussion with a forum post, and continue the discussion by replying to another student’s post. The posts and replies are graded using a simple rubric that is provided on Moodle. Each post is worth up to 5 points.

### Labs

Labs are a critical component for the learning processes in any science class. They provide an active learning experience requiring students to participate in thinking like a scientist . This is a lab class and you must complete 60% of the labs to pass this class. Each lab is worth 10 points and will be graded using the rubric explained on Moodle. I will then post a short video going over the lab so you can check in and make sure you are on the right track before taking the module assessment.

### ASSESS:

### Module Assessments

Module Assessments are important opportunities to practice and assess skills and knowledge you are expected to understand for this class. These assessments will be short quizzes or short, open-ended writing assignments. Quizzes will be timed and you will only have one attempt to complete them. These are worth 20 points.

### Final Project

You will write a short essay in which you compare and contrast current human-caused extinctions with past mass extinctions in terms of evidence, magnitudes, and causes. This essay is due by Friday, June 12 at 11:59 p.m. Instructions and a rubric will be provided on Moodle, and it is worth 40 points. **There is no final exam.**

### Study Sessions (optional)

Two live study sessions will be available for drop in help and group work. The zoom link will be provided on Moodle and you are welcome to join at any time during the posted times. The Monday session will be more focused on the reading and lecture- we can go over any questions you have. The Wednesday session will be more focused on the lab but you can still come with questions about the reading or lecture. You are welcome to Zoom in with questions or to work with other students on the lab in breakout groups.

## Due Dates and Late Work

Modules are open for one week. Each week there are two due dates.

**Due each Thursday by 11:59 pm:**

* Practice questions are due
* Discussion posts are due
* Labs are due

**Due Sunday at 11:59 pm:**

* Discussion post replies are due
* Module assessments are due

**Due by June 12 at 11:59 pm**

Final Assessment

### Late Work Policy

Late work is not accepted; however, if you ever need an extension, please ask before an assignment is due!

### Incomplete Grades

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. IN grade are assigned only 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.

# College Policies

## Disability and Access Statement

You should meet with your instructor during the first week of class if:

1. You have a documented disability and need accommodations.

2. Your instructor needs to know medical information about you.

3. You need special arrangements in the event of an emergency.

If you have documented your disability, remember that you must make your request for accommodations through the Center for Accessibility Resources Online Services web page every term in order to receive accommodations. If you believe you may need accommodations 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.

## 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.

# Changes to the Syllabus

I reserve the right to change the contents of this syllabus due to unforeseen circumstances. You will be given notice of relevant changes in class, through a Moodle Announcement, or through LBCC e-mail.

### Module Topics List (subject to change)

|  |  |
| --- | --- |
| Week | Module Topics |
| 1 | Class Introduction, Introduction to Moodle  Introduction to Earth History |
| 2 | Plate Tectonics |
| 3 | Geologic Time: Relative and Numerical Dating |
| 4 | Interpreting Earth History Through Sedimentary Rocks |
| 5 | Earth: the First Four Billion Years |
| 6 | Introduction to the Geologic Timeline and Mass Extinctions |
| 7 | Causes of Mass Extinctions |
| 8 | History of Climate Change |
| 9 | Adaptive Radiation: Impact of Environmental Change on Organisms |
| 10 | The Sixth Extinction and the Anthropocene  Final Project Due June 12, 11:59 pm |

**Due Dates:**

* Practice questions, discussion posts, and labs are due Thursday at 11:59 pm
* Module assessments and discussion post replies are due on Sunday at 11:59 pm
* Final project is due Friday June 12 by 11:59 pm