

Physical Geology 1 (G201)

Fall 2021 Syllabus

Welcome to Physical Geology!

In this course we will cover a range of geology topics that include the scientific process, plate tectonics, natural hazards from volcanoes and earthquakes, minerals and rocks, and mountain building. The class is designed to maximize your interaction with the material, engage and incorporate your own life experiences, and inspire your respect for the stewardship of the planet. No previous geology or science background is necessary for success!

Instructor & Course Information

- **Course Name:** Physical Geology I
- **Course Number:** G201
- **CRN:** 23767 and 23768
- **Instructor:** Deron Carter
- **Campus/Location:** Hybrid (instruction is online and lab is in person)
- **Course Access:** Moodle. *All LBCC students have a Moodle account. Access with Single Sign-On ID and password.*
- **Course Start Date:** Monday, September 27th
- **Class Time/Dates:** Zoom class, Tuesdays 10-11:50 am or 1-2:50 pm, In-person lab Thursdays, 10-11:50 am, or 1-2:50 pm MH 108
- **Zoom Office Hours:** please use this [link](#) to schedule a meeting with me
- **E-mail:** carterd@linnbenton.edu

Course Description:

A study of the Earth, fundamental geologic principles, and physical processes acting within and upon the Earth. Topics include Earth's interior, Earth materials, and tectonic processes and their influence on mountains, volcanoes, earthquakes, rocks and minerals. Laboratory component highlights rocks, minerals, and geophysical data. Field trips highlight topics. Geology courses do not need to be taken in sequence.

Learning Outcomes

After successful completion of the course you will be able to:

1. Describe the process of scientific inquiry in the context of plate tectonic theory.

2. Solve quantitative problems resulting from plate tectonic processes
3. Classify and identify important Earth materials
4. Use plate tectonic theory to explain geologic processes that occur on and below the surface of Earth

Required Text

Physical Geology (2nd edition), by Steven Earle, BC Open Textbook. The textbook is a free, open-educational resource, <https://opentextbc.ca/physicalgeology2ed/>.

Expectations

- Log into Moodle regularly.
- Attend weekly Zoom meeting and lab meeting on campus (masks required per LBCC policy).
- Complete all assigned weekly readings, and view assigned videos.
- Complete all weekly assignments after carefully reading assignment instructions.
- Regularly check your LBCC student email.
- Contact the [Student Help Desk](#) when technical issues arise.
- Ask me questions when you have them. I'm always happy to help.
- Communicate when something isn't working for you.
- Support your fellow students.

Course Schedule

G201 is what's called an "hybrid" class. This means you are required to attend our weekly Zoom meeting on Tuesday, lab on Thursday on campus. You access and submit all assignments in Moodle.

Although the weeks begin on Monday and end on Sunday, I will grant you access to the material on the previous Friday to accommodate those of you that would like to get a head start. Most weeks will follow the pattern below:

1. Every Friday at midnight (12:01 am), the upcoming week's material will be made available. This will include announcements, readings, videos, and assignments.
2. **Work due before Zoom class:** Each week you will complete a worksheet based on the content covered in the readings and video lectures. Worksheets are graded on completeness and thoughtfulness of answers. They do not need to be

100% correct to receive full credit, but must be your own work. They are always due before class.

3. **Attend our weekly Zoom class on Tuesday.** We meet Tuesday on Zoom at 10-11:50 am or 1-2:50 pm, depending on which section you registered for. You will bring your completed worksheet to this meeting, and review it in small groups, and then ask me questions. This will give you the opportunity to ask your peers and instructor questions about what didn't make sense, and teach others about what you have learned. We will also use some of this time to complete engaging in-class activities to help you learn material more deeply. These sessions will not be lecture focused.
4. **Road Check.** At the end of our Zoom class you will receive a link to fill out a weekly Road Check survey that helps you reflect on what you have learned and what you have questions about. You will also be able to provide me with feedback about how the class is going and what can be improved. Road checks are open for 24 hours and must be completed by then to receive credit.
5. **Scientist Spotlight and Application Questions.** In week 1, you will learn who geoscientists are and what they do in a Scientist Spotlight. The remaining weeks, you will submit an answer to an application question that requires you to analyze and synthesize content from the week. More instructions are found in Moodle. Assignments are always due at 11:59 pm on Sunday.
6. **In-person lab:** Attend our weekly in-person lab in Madrone Hall 108. Please remember **masks are required!** Please either print a copy of the lab assignment from Moodle, or bring a laptop to the lab. If you do not have access to a laptop or printer, laptops are available to use.
7. **Module quizzes:** Module quizzes are due Sunday by 11:59 pm and include 10-15 multiple-choice questions. They are open notes and books. You will have one attempt and 20-30 minutes to complete the quiz. These quizzes are comprehensive, so they cover material from previous weeks and new material. Please review your module guide and study before taking the quizzes.
8. **Final Exam:** The final exam covers all 10 weeks and is open note and book, but must be completed individually. The final exam will be open Monday of finals week and close at 3 pm on Wednesday of finals week.

Evaluation

Grading

You will receive a letter grade (A-F) in this course. There is no Pass/No Pass option. Your grade will be calculated based on the following criteria:

1. Module Guides = 50 points (12%)
2. Scientist Spotlight and Application Questions = 100 points (25%)
3. Labs (drop lowest) = 70 points (18%)
4. Weekly Quizzes = 100 points (25%)
5. Final Exam = 50 points (12%)
6. Weekly Roadchecks = 30 points (8%)

Total = 400 points

Grading Scale

A	100-90%
B	89-80%
C	79-70%
D	69-60%
F	below 60%

Grades 0.5% or higher will be rounded up. For example, a 89.5% will be rounded up to 90%.

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 grades 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.

Late Work

On-time assignments are an essential element of college success. Please talk to me if you are having difficulty meeting course deadlines and we can work on a solution so that you don't get behind. I may allow a late assignment if you communicate your need for an extension in advance of the deadline.

Remote Instructional Methods

For our class, you will access all course materials in your student Moodle account.

Learning Material & Assignments

Readings, links, and assignments will be organized by week in Moodle. You can access them at any time during the week as long as you have completed the work by the deadlines.

Technology Requirements:

You will need access to a computer and reliable internet. We recognize that technology may represent a barrier to some students during this period. LBCC offers several resources to students which may help you address these barriers. See LBCC's COVID-19 frequently asked questions for students. If you know your circumstances will make it difficult, please contact me as soon as possible so we can work together to find a solution.

College Policies

Disability services and personal emergency arrangements:

Students who may need accommodations due to documented disabilities, who have medical information which the instructor should know, or who need special arrangements in an emergency should speak with their instructor during the first week of class. If you believe you may need accommodations but are not yet registered with the Center for Accessibility Resources (CFAR), please visit the CFAR Website for steps on how to apply for services or call 541-917-4789.

Basic Needs

Any student who has difficulty affording groceries or accessing sufficient food to eat every day, or who lacks a safe and stable place to live, and believes this may affect their performance in the course, is urged to contact the Roadrunner Resource Center for support (resources@linnbenton.edu , or visit us on the web www.linnbenton.edu/RRC under Student Support for Current Students). Our office can help students get

connected to resources to help. Furthermore, please notify the professor if you are comfortable in doing so. This will enable them to provide any resources that they may possess.

LBCC Comprehensive Statement of Nondiscrimination

LBCC prohibits unlawful discrimination based on race, color, religion, ethnicity, use of native language, national origin, sex, sexual orientation, gender, gender identity, marital status, disability, veteran status, age, or any other status protected under applicable federal, state, or local laws. For further information see Board Policy P1015 in our Board Policies and Administrative Rules. Title II, IX, & Section 504: Scott Rolen, CC-108, 541-917-4425; Lynne Cox, T-107B, 541-917-4806, LBCC, Albany, Oregon. To report: [linnbenton-advocate.symplicity.com/public report](http://linnbenton-advocate.symplicity.com/public-report).

Know your rights and responsibilities

LBCC students have rights: the right to free speech, the right to assemble, the right of a free press, etc. LBCC students also have responsibilities to their community: the responsibility to participate and engage in class, the responsibility to advocate for their needs (ask for help), the responsibility to support a respectful teaching and learning environment, the responsibility to treat all persons with respect, the responsibility to be truthful and honest in all work and communications, and the responsibility to follow staff directions, local, state, and federal laws.

Rights and responsibilities balance together to create the best learning environment. For example, while you have free speech in the café or courtyard, in class the instructor decides whose turn it is to talk and what the topics for conversation will be. Students are free to believe what they believe, but instructors may require students to learn and recite concepts, principles, or theories for a class even if the student does not believe those concepts. You play a role in creating a positive community at LBCC.

Please review your rights and responsibilities (<http://linnbenton.edu/go/studentrights>).

If you believe a student is violating your rights, ask to be treated with respect. If that does not cure the situation, report to Associate Dean Dr. Lynne Cox, Takena Hall Rm. 107. If you believe a faculty member or LBCC employee is violating your rights, please report to Human Resources, Scott Rolen, Calapooia Center Rm. 108.

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.

Proposed Class Schedule

- Module Guides are due before Tuesday's Zoom class.
- Labs, Weekly Assignments, and Quizzes are due Sunday at 11:59 pm.

Week 1: 9/27-10/3

- Due: Module Guide, quiz, Lab 1, Scientist Spotlight Assignment
- Focus/Topics: Introduction to Geology and Scientific Process

Week 2: 10/4-10/10

- Due: Module Guide, quiz, Lab 2, Application Question
- Focus/topic: Earth's Interior and Tectonic Plates

Week 3: 10/11-10/17

- Due: Module Guide, quiz, Lab 3, Application Question
- Focus/topic: Plate Boundaries and Hot Spots

Week 4: 10/18-10/24

- Due: Module Guide, quiz, Lab 4, Application Question
- Focus/topic: Earthquakes and hazards, and Earth's Interior

Week 5: 10/25-10/31

- Due: Module Guide, quiz, Lab 5, Application Question
- Focus/topic: Minerals and mineral resources

Week 6: 11/1-11/7

- Due: Module Guide, quiz, Lab 6, Application Question
- Focus/topic: Igneous rocks and magmas

Week 7: 11/8-11/14 (No lab this week, LBCC closed 11/11 for Veteran's Day)

- Due: Module Guide, quiz, Application Question
- Focus/topic: Volcanism and hazards, and Mt. St. Helens

Week 8: 11/15-11/21

- Due: Module Guide, quiz, Lab 7, Application Question
- Focus/topic: Weathering, erosion, and sedimentary rocks

Week 9: 11/22- 11/28 (No lab this week, LBCC closed 11/25-11/26).

- Due: Module Guide, quiz, Application Question
- Focus/topic: Geologic structures and mountain building

Week 10: 11/29-12/5

- Due: Module Guide, quiz, Lab 7, Application Question
- Focus/topic: Metamorphism, metamorphic rocks, and the rock cycle

Week 11: 12/6-12/8

- Due: Final Exam, you may take anytime 12/6-12/8
- Focus/topic: Final Exam