**Geology 202: Physical Geology II (4 credits), Winter 2020 (CRN 31601)**

Instructor: Deron Carter

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Office hours: M 11:20-12:00 and 2:20-3, T and Th 10:20-11:30, W 11:20-12:00 2:20-4:00, or by appointment. I am here to help you and answer questions during office hours.

Class meeting times: M and 10-11:20 am, F 1-11:50 am in MH 108

Prerequisite: Math 75 or instructor consent

**Welcome to Geology!**

My goal is for all students to succeed and excel in this class! This course introduces you to geology, with a focus on the processes that occur on or near Earth’s surface, such as landslides, streams, groundwater, wind, waves, and glacial erosion. These processes produce many of Earth’s most beautiful features, but also pose deadly hazards. You will also learn the role humans play in modifying Earth and its climate, analyze future impacts, and evaluate possible solutions.

**Course Learning Outcomes**

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

* Solve quantitative problems resulting from Earth surface processes.
* Explain how Earth surface processes pose hazards to humans.
* Describe landforms related Earth surface processes.
* Explain geological processes that produce landforms

**Course Materials**

* **Readings**
  + **Textbook:** Physical Geology 2nd Edition, by Steven Earle, BC Open Textbook. The textbook is a free, open-educational resource, available at: <https://opentextbc.ca/physicalgeology2ed/>.
  + The Math You Need, When You Need It, website: <https://serc.carleton.edu/mathyouneed/index.html>
  + Deserts: Geology and Resource, by A.S. Walker, USGS Publications. Online: <https://pubs.usgs.gov/gip/deserts/>, PDF: <https://pubs.usgs.gov/gip/7000004/report.pdf>
* **G202 Course packet**, by Deron Carter. Buy this at the bookstore, and bring to class every Friday in lab days.
* **Moodle.** This is our online class hub: you will check grades, review syllabus and powerpoints, and submit homework assignments. Textbook links are also posted here.
* **Calculator.** Any type will do for this class, but only non-graphing calculators (no phones) can be used on exams. I will provide a set for exams.

**Grading (subject to change)**

* 2 Unit exams (50 pts each) = 100 points (25%)
* Comprehensive Final Exam = 100 points (25%)
* Labs (10 at 10 points each) = 100 points (25%)
* Reading Quizzes (6 at 10 points each) = 60 points (15%)
* Homework (8 at 5 points each) = 40 points (10%)

**Total = 400 points**

**Grading Scale**

A = 100-90%

B = 89-80%

C = 79-70%

D = 69-60%

F = 59% and below

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 a course grade of a C or better when the request is made.

**Unit 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.

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

**Lab exercises and lab quiz:** Labs occur each Friday. Most labs include the following format:

* **Prelab:** Due at the beginning of lab. Late prelabs not accepted. Prelabs help prepare you for lab by reading methods and/practicing quantitative skills needed for the lab. Prelabs are graded only on completion, and you will receive 2 points for a fully completed prelab, and 1 point for a partially complete prelab.
* **Lab Questions:** You will work with other students during lab to answer questions in your lab packet. However, you must answer in your own words and numbers. I will check your answers for correctness during lab, and you will receive four points for completing the lab by the end of the lab period.
* **Lab Quiz:** Finally, you will take a short, 4-question lab quiz on Moodle. You may use your completed lab to help you answer these questions. The quizzes are not timed, and you will have 2 attempts. Lab quizzes are always due the following Friday at 10:00 am.

**Lab report**: For two labs you will submit a lab report in lieu of lab questions and a lab quiz. I will provide details in class and on Moodle.

**Field Trip to Baker Creek Landslide:** This field trip will occur during our lab period on Friday, January 24. The field trip is located in the McDonald Forest, outside of Corvallis. We will hike (~¼ mile) to the landslide to make observations, and go rain or shine. Please be prepared with shoes that can get muddy/wet and a rain jacket. You may drive your own vehicle, and limited transportation is provided for those that need it. Driving directions will be posted on Moodle.

**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 before we discuss them. I provide reading guides on Moodle 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. There are no make ups, but your lowest quiz is dropped. Reading guides must be printed from Moodle and completed in your own handwriting. Please see me if you have any questions or concerns.

**Homework:** The purpose of these assignments is to practice geology outside of the classroom, or prepare for an in-class activity. These assignments are posted on Moodle, and are only graded on a completion basis. You must meet the minimum requirements to receive credit (i.e. word count, etc.).

### Campus Resources

Russell Ruby is a **geology tutor** at the Science Help Desk, located on the first floor of Madrone Hall in the Atrium. He can help with geology there on M/W 9-12, T 12-3, and F 12-1.

Any student who has difficulty affording groceries or food, or who lacks a safe and stable place to live, is urged to contact the **Roadrunner Resource Center (T-112):** [www.linnbenton.edu/rcc](http://www.linnbenton.edu/rcc). Furthermore, please talk with your instructor if you are comfortable doing so. This will enable them to provide any resources that they may have.

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.

**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. **Be prepared** for class by completing the required work outside of class.

2. In class, **take notes. If you miss lecture, please get notes from another student**, and do not just rely on lecture slides posted on Moodle.

3. **Actively participate** in class and **respect** your peers ideas, beliefs, and backgrounds.

4. **Check the Moodle** website regularly to stay updated with current class information and due dates.

5. **Be on time**, stay for the entire class, listen, and contribute. If you are absent, please let me know.

6. **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.

**My responsibility:**

I am here to help you learn. I want each and every student to succeed in this class. 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.

***Thanks, Deron***

COURSE SCHEDULE (subject to change):

**Due dates or holidays in bold face**

|  |  |  |  |
| --- | --- | --- | --- |
| Week | Monday | Wednesday | Friday |
| 1  1/6-  1/12 | Introductions  Planet Earth | Read\*: Ch. 1  Reading the landscape | Read: TMYN Topo Maps and Unit Conversions  **Prelab due**  Lab: Topographic Maps |
| 2  1/13-  1/19 | Read: Ch. 15  **Reading Quiz 1**  Mass movement | **HW 1 due**  Mass movement | Read: TMYN Trig  **Prelab due**  **Moodle lab quiz due**  Lab: Angle of repose |
| 3  1/20-  1/26 | **NO CLASS**  **MLK, Jr. Day**  **LBCC closed** | Read: Ch. 13  **Reading Quiz 2 due**  Streams and floods | **Moodle Lab quiz due**  Lab: Field Trip to Baker Creek Landslide |
| 4  1/27-  2/2 | **HW 2 due**  Streams and floods | **Exam 1** | Read: TMYN Graphing  **Lab report due**  Lab: Streams and floods |
| 5  2/3-  2/9 | Read: Ch. 14  **Reading Quiz 3 due**  Groundwater, caves, and karst | **HW 3 due**  Groundwater, caves, and karst | Read: TMYN Slope  **Prelab due**  **Lab report due**  Lab: Groundwater consulting |
| 6  2/10-  2/16 | Read: Ch. 17  **Reading Quiz 4 due**  Shorelines and coastal processes | **HW 4 due**  Shorelines and coastal processes | **Prelab due**  **Lab report due**  Lab: Wave tanks |
| 7  2/17-  2/23 | **NO CLASS**  **President’s Day**  **LBCC closed** | Read: Deserts USGS publication  **Reading Quiz 5 due**  Deserts and wind | **Prelab due**  **Moodle Lab Quiz due**  Lab: Deserts |
| 8  2/24-  3/1 | **Exam 2** | Read: Ch. 16  **Reading Quiz 6 due**  Glaciers | **Prelab due**  **Moodle Lab Quiz due**  Lab: Glacier flow |
| 9  3/2-  3/8 | **HW 6 due**  Glaciers | **HW 7 due**  Climate change and energy resources | **Prelab due**  **Moodle Lab Quiz due**  Lab: Glaciers |
| 10  3/9-  3/15 | Read: Ch. 19  **Reading Quiz 7 due**  Climate change and energy resources | **HW 8 due**  Climate change and energy resources | **Prelab due**  **Moodle Lab Quiz due**  Lab: Ice cores |
| 11 | **Monday, March 16**  **Final Exam**  8:00-9:50 am  MH 108 |  |  |

**\*Links to all reading assignments posted on Moodle**