Summer 2020
GS 106: Physical Science –Principles of Earth Science

Welcome to Earth Science!

Earth's processes and issues are in the news today; with volcanic eruptions, earthquakes and tsunamis, dwindling resources, climate change and the drive for cleaner energy production, Earth Science is more relevant than ever.

Instructor: Sheila Alfsen email: alfsens@linnbenton.edu
Date Range: Start 6/28/20 End: 9/05/20
Place: Online
Credit: 4 hours **Prerequisites:** None **CRN** 15047
Contact Information: Contact me any time by email with questions or concerns.

Course Description: An overview of our fascinating planet designed for non-science majors who are interested in the natural world. We will study the rocks that make up Earth's crust, Earth's history, the interior of the Earth, landscapes, the oceans and atmosphere, weather, climate and energy resources. This class satisfies the physical science requirement for the AAOT and AS degrees.

Online courses: Online courses are not for everyone. *This course is best suited for students that are highly self motivated.* It requires a high degree of self-discipline on a **weekly** basis. I expect you to know the basics of how to work a computer, word-processing/spreadsheet programs, and navigate the internet.

System Requirements: Computer with access to high-speed internet. *It is your responsibility to ensure that you have the correct computer requirements to participate in this course.*

Text and additional materials: *Foundations of Earth Science,* 8th edition, Lutgens/Tarbuck
ISBN-13: 978-0-134-18481-4.
You must also purchase:
1) GS106 Mineral Kit
2) GS106 Rock Study Kit

There is **NO** lab manual to be purchased for this course.
All materials required can be purchased from the campus bookstore in Albany.
Additional materials that you will need to collect for labs are listed in a Materials List below your syllabus on the Moodle course.

Moodle - This class uses Moodle. You will find all of your course materials listed by the week and will submit all assignments online. Log into your Moodle account by going to http://elearning.linnbenton.edu/

It is important that you update your Moodle profile with the email address you will check so I can be in contact with you!

Course set up: There are ten units you will work through, one for each week. Each unit has specific assignments (listed below) that **must be completed by due dates**.

Components of course:

- Readings from textbook
- Videos and video worksheets
- Labs and activities (done at home)
- Forum discussions
- Exams

Reading from textbook: All readings are from the text book and are listed in each unit.

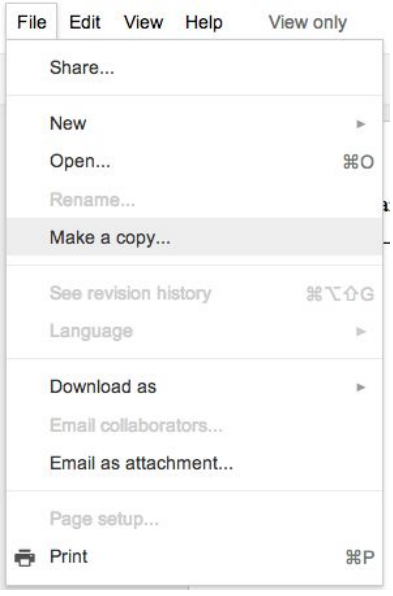
Videos: These are 30 minute videos that you will stream from the Earth Revealed website (http://www.learner.org/resources/series78.html). Scroll down the page to see the individual program descriptions and select the film/films that are required each week. Video worksheets will be in each unit for you to use as a guide while viewing the video.
Submission instructions for video worksheets: You will submit the video worksheets via Moodle (they are part of your grade). Video worksheets will be submitted by copy/pasting your completed worksheet into the submission box. You will not be allowed to attach a file. I ask that your answers be in either **red** or **bold** font for clarity when I grade them.

Labs and Activities: There is **no lab manual** to purchase for this course. Labs and activities will be posted in each unit. They are done at home with your purchased materials and simple household items. A list of the simple materials that you need to provide is posted on the Moodle site below this syllabus to allow you to have time to obtain them.
Submission instructions for labs: For the labs, I will give you an option to submit them by attaching a file, in case submission by copy/pasting does not work. (sometimes images will not come through the submission box). I ask that your answers be in either red or **bold** font for clarity when I grade them.

Instructions for finding/saving video worksheets and labs in your Moodle course:
This course utilizes Google Docs to deliver course material to you. You will not be able to fill in your worksheets and labs unless you ***save*** the document(s) to your computer. Here's how:

- **Step 1**: Log into your **LBCC RoadRunner email account**.
- **Step 2**: Click the link in each assignment to view the worksheet/lab. This will open in a new browser tab in Google Docs.
- **Step 3**: Click the Open with Google Docs tab at the top of the page.

  Step 4: File menu > Select "Make a copy" This will save a copy of the Google Doc that you can edit.



- ***Submit worksheets*** by copying and pasting them into the submission box. Don't share the Google Doc file.
- ***Submit labs*** by attaching the file.

Forum discussions: To overcome the impersonal aspects of an online class, each week a forum discussion will be posted for you to contemplate and make a comment or question about. This is your chance to interact with your instructor and classmates. Each week you will be expected to:

- Post **one comment** addressing the question to the best of your ability. It may be an observation you have while studying the topic or an opinion you have. There is no one correct answer!
- Post **one response** to what another student has posted.

In order to receive full credit, post your response ***no later than Thursday*** of each week. This will give others ample time to read what you have posted and respond. *I expect you to participate in it each week as it is part of your grade.* Your participation during discussions and questions are important!

Note: I will post a follow up to the discussion most weeks, which will open on Fridays. You need not reply to it for a grade, but it will be helpful if you let me know you are reading them. They will contain important information.

Exams/Quizzes: There are two exams: one mid-term and one final. Each contains essay questions as well as multiple choice. Exams will be taken online with a time limit. Make sure you are thoroughly prepared (re-read chapter, completed all homework, viewed films, etc.) before you log on for the exam. Make use of the prep cards in the back of the book to study. You need to be very familiar with the content before going into an exam, because once you are in, you will not have unlimited time to search for answers.
Note: Unlike assignments which you will have a week to complete, **exams are only open for 4 days**. ***Watch for due dates on exams carefully!***

Classwork expectations:
Please complete all of the required work and submit it on time via the Moodle classroom. Make sure your work is your own, in your own words, ***even*** if you studied and worked with someone else. Identical assignments will **not** be accepted and suspicion of cheating will be reported to the dean. ***Likewise, copy/pasting information from the internet on any of your written work will be considered plagiarism, and will result in serious consequences.***

Grading:	Exams (10, 100, 100)	210 points	**SCALE:**
	Video Worksheets (5ea)	95 points	100 – 90%A 89 – 80% B 79 – 70% C 69 – 60% D 59 or below F
	Labs (10ea)	90 points	
	Forum Discussions (5ea)	45 points	
	Activities (5ea)	20 points	
	Final Project	40 points	
Total----------		500 points	

Other Possible Grades: A Y grade will not be assigned to any student who submits any work after the first week of classes. An incomplete grade (I) will only be considered if: the student has talked to me in advance, signed an agreement, has a valid reason for requesting it, ***and*** completed the majority of the work (80% or more) with a C or better grade.

Course Outcome: It is my hope that by the end of the term you will have an increased awareness and understanding of the basic geologic and meteorological processes that operate on the Earth in order to be informed citizens, to evaluate media statements and make informed decisions. In addition, I hope you will gain an appreciation of the workings of science and understand the natural forces and issues that affect Oregonians.

Diversity: The LBCC community is enriched by diversity. Each individual has worth and makes contributions to create that diversity at the college. Everyone has the right to think, learn, and work together in an environment of respect, tolerance, and goodwill. LBCC prohibits unlawful discrimination based on race, color, religion, ethnicity, use of native language, national origin, sex, sexual orientation, marital status, disability, veteran status, age, or any other status protected under applicable federal, state, or local laws.

HELP Tips:

- It is **important** that you read the textbook pages assigned to you **before** attempting to do your homework. Your textbook is considered your basic starting point for course content.
- Vocabulary is critical to learning and communication in science. Key terms are in bold throughout your text. Glossary definitions for them are located in gray boxes on the sides of the pages in each chapter as they are introduced.
- There is a section in your Moodle course entitled RESOURCES FOR HELP. Use them as necessary.
- Help with Labs via Zoom is available. Look for the link to it in the RESOURCES FOR HELP section.
- ASK QUESTIONS! Jot down things you don't understand to ask me or your classmates in discussions. It's the best way to learn and I am always happy to help you.

Class Schedule

Week of:	Topic	Video and worksheet	Reading and questions	Activities and assignments	Lab	Discussion board question
1 6/28	Introduction Minerals, atoms, elements	**Earth Revealed:** Down to Earth, Minerals	Chapters 15 and 1	Crystallization (first part)	Solar System	Personal introductions Our Earth in the solar system
2 7/05	Rock types, rock cycle, and volcanoes	**Earth Revealed:** Intrusive Igneous Rocks, Volcanism	Chapters 2 and 7	Crystallization (second part)	Mineral and Rock lab	Rock Cycle
3 7/12	Geologic Time	**Earth Revealed:** Geologic Time, Evolution Through Time	Chapter 8	Geologic timeline	Radio-activity & Geo-chronology	Rock Record
4 7/19	Plate tectonics	**Earth Revealed:** Birth of a Theory,	Chapter 5		Plate tectonics	A Crazy Idea

		Plate Dynamics				
5 7/26	Earthquakes **Midtern 7-31 to 8-03**	**Earth Revealed:** Earthquakes, Living with Earth Part I	Chapter 6		Earthquake lab	Comparing Earthquakes
6 8/02	Surface processes: groundwater, streams, glaciers, wind	**Earth Revealed:** Groundwater, Running Water I, Glaciers	Chapters 3 and 4		Porosity and Permeability	Wearing away the land
7 8/09	Oceans	**Earth Revealed:** The Sea Floor, Waves, Beaches and Coasts	Chapters 9 and 10	Ocean floor features	Oceans	Oceans and You
8 8/16	Atmosphere and weather	**Habitable Planet:** Oceans Earth's Changing Climate	Read Chapters 11 and 12	Water cycle and cloud formation	Weather	Climates and Climate Change
9 8/23	Climate change and energy resources	**Earth Revealed:** Preserving the Legacy **Habitable Planet:** Energy Challenges	Chapters 13 and 14		Climate change	Our Energy Practices
10	Final Project Due 8-29 **Final Exam** **Opens 8/28** **Closes 9/01**				Comparing energy resources	