



**GEOL 1211 – CRN 12062 (class) /1111 (labs) – Principles of Earth Science I
Labs Fall 2024: various meeting times, all in GEOL216**



INSTRUCTOR

Dr. Benjamin Brunner (*Note: in Spring, class is taught by Dr. Chapman*)

Office: 404A Geology Building

E-mail: bbrunner@utep.edu

Associate Professor, Geological Sciences, Room 404A

Office hours: *By appointment via email to* bbrunner@utep.edu

I do my best to meet with you asap – the email helps to find a time slot that works best.

LABS START IN THE WEEK OF SEPTEMBER 9, 2024

<i>TA</i>	<i>TA Email</i>	<i>Section</i>	<i>CRN</i>	<i>DAY</i>	<i>Start</i>	<i>End</i>
Stephanie Geogevich	sageorgevich@miners.utep.edu	001	15564	T	8:30	10:20
TBD	TBD@miners.utep.edu	002	12349	T	10:30	12:20
Stephanie Geogevich	sageorgevich@miners.utep.edu	003	15566	T	12:30	2:20
Eli Nyawunu	enyawunu@miners.utep.edu	05	12074	T	2:30	4:20
Jose Cabral	jjcabral@miners.utep.edu	10	13641	W	9:30	11:20
Ryan Helgerson	rthelgerson@miners.utep.edu	10	13842	W	11:30	1:20
Ryan Helgerson	rthelgerson@miners.utep.edu	10	15297	R	8:30	10:20
Eli Nyawunu	enyawunu@miners.utep.edu	3	11280	R	10:30	12:20
Angie Cano	alcano2@miners.utep.edu	4	11281	R	12:30	2:20
Sarafina Middaugh	samiddaugh@miners.utep.edu	5	11892	R	2:30	4:20
Jose Cabral	jjcabral@miners.utep.edu	8	13640	F	8:30	10:20
Angie Cano	alcano2@miners.utep.edu	9	16429	F	10:30	12:20

TAs in green: *not their first rodeo*. TAs in black: please be nice! ☺ (not that you should not be nice with Stephanie and Eli)

NOTE: you cannot switch labs without prior consent by Dr. Brunner

IN A NUTSHELL: YOUR PARTICIPATION IN THE LAB IS ESSENTIAL

• **Please note Dr. B's Killer Rules:**

- There will be team and group assignments. Not contributing to team/group efforts will be considered as not adhering to classroom etiquette.
- Classroom etiquette – after two warnings (e.g., disruptive behavior, social media use, etc.): you are out and will be dropped from the course!
- There will be sign-in sheets to check if you attend the classes and if you arrive on time. **More than two** unexcused (for instructions to get excused, continue reading) late arrivals/early departures or absences will automatically result in you getting dropped from the course (W until drop date, F after drop date). **More than four absences** (one third of labs) will get you dropped also with excuses.
- Active participation in the class is an almost 100% guarantee to get an A in this lab.



COURSE DESCRIPTION

Study of the earth as a planet. A survey of physical process operating in the atmosphere, lithosphere, and biosphere. Includes introduction to metrology, physical geology, soil, and vegetation. This course is divided into four sections. The first section focuses on plate tectonics and earthquakes. In the second section, students will learn about minerals, igneous rocks, and volcanic hazards. Metamorphic rocks and deformation are significant parts of section three together with an introduction to the atmosphere. The course concluded by focusing on climate change, global warming, and desert regions.

The lab topics align with the overall course, but follow a more hands-on path. Sometimes, lab activities will precede the topics from the class, in other cases, they will follow after those topics have been discussed in class. In all cases, the labs – with the assistance of the lab leader/teaching assistant – will be self-explanatory.

It is ok to ask your lab leader/teaching assistant questions about topics you struggle with in the class. They will be happy to help.

LEARNING OUTCOMES AND COURSE OBJECTIVES

1. Students will be familiar with Earth's Systems and spheres of study.
2. Students will be able to identify common Earth materials and interpret their composition, origin, uses, and relationship. This will be measured through a lab assignment on the application of Earth materials and minerals.
3. Students will be able to describe the processes operating at and beneath the Earth's surface, how those processes create the Earth's landscape, and how humans affect and are affected by the processes with respect to volcanism and the formation of igneous rocks.
4. Students will be able to describe the processes operating at and beneath the Earth's surface, how those processes create the Earth's landscape, and how humans affect and are affected by the processes involving volcanism.
5. Students will understand how and where different kinds of sedimentary and metamorphic rocks form and how this is important to interpret the history of the Earth.
6. Students will analyze and interpret the structures commonly found in geologic settings that inform geologists about Earth's history, processes, and type of movement.
7. Students will infer relationships among abundances of different rock types to analyze the density variations found within the Earth and incorporate that into an understanding of the Earth's internal layers.
8. Students will synthesize information from divergent plate boundary types to unravel the nature and characteristics of divergent boundaries.
9. Students will interpret data from regional Texas earthquakes to understand the occurrence of earthquakes and how to analyze different types of earthquake information.
10. Students will synthesize information from transform and convergent plate boundary types to unravel the nature and characteristics of transform and convergent boundaries.
11. Students will learn about surface water by analyzing stream data and occurrences of floods in local areas and arroyos and identify associated features that will impact the landscape and how surface water behaves as it flows across the landscape.
12. Students will calculate their water footprint and analyze water data from well information to interpret conditions related to groundwater supply and usage.
13. Students will analyze images of White Sands dunes to infer processes at the surface and related to wind conditions.
14. Students will learn about climate change from tree ring growth and plot and interpret carbon dioxide data.

ASSIGNMENTS - GRADES

- Every assignment is due in the lab (Room 216, Geology building) on the day of your lab: you will do the exercise in class and turn in the lab manual at the end of the lab period for grading. Late work will not be accepted without a valid reason (see instructions to get excused, continue reading).
- Active participation in the lab is an almost 100% guarantee to get an A because your lab leader/teaching assistant will be happy to help you figuring things out.

YOUR ARE IMPORTANT TO US, AND WE KNOW THAT “SHIT HAPPENS”

Please contact Dr. Brunner about any concerns, schedule conflicts, etc. in advance or otherwise as soon as possible! Valid excuses include illness, absence with the instructor's prior approval, official University business, etc.

Accommodations are possible for active duty military and others, but arrangements must be made in a timely manner. If you are in the military with the potential of being called to military service and/or training during the course of the semester, you are encouraged to contact the instructor as soon as possible.

If you think you may have a *disability or if you are experiencing learning difficulties*, please contact the Center for Accommodations and Support Services (CASS), East Union Bldg, Room 106:

Office: 915-747-5148 / Email: cass@utep.edu / <https://www.utep.edu/student-affairs/cass/>

Course Drop Deadline: Friday, November 1, 2024

The College of Science will not approve any student- or faculty-initiated drop requests for a course after that date, except under circumstances of complete withdrawal of all courses due to medical or non-medical reasons.



Never swim alone!

NOW TO SOME LEGAL LANGUAGE:

Cheating/Plagiarism:

Cheating is unethical and not acceptable. Plagiarism is using information or original wording in a paper without giving credit to the source of that information or wording: it is also not acceptable. Do not submit work under your name that you did not do yourself. You may not submit work for this class that you did for another class. If you are found to be cheating or plagiarizing, you will be subject to disciplinary action, per UTEP catalog policy. Refer to <http://www.utep.edu/dos/acadintg.htm> for further information.

This is also critical for the use of modern AI tools such as ChatGPT.



How to be excused for absence or being late/leaving early the class:

- Apply to be excused by writing email to Dr. Brunner bbrunner@utep.edu and **YOUR LAB TA** email_of_your_lab_TA@miners.utep.edu
- Subject line MUST include (in this order): Principles 1111 Lab – YOUR NAME – Date of absence
- If absence is foreseeable (examples: job interview, surgery, wedding): before the absence
- If absence was not foreseeable (examples: migraine, car crash, childbirth, being arrested): asap, when can be done safely (do not text and drive!). Not finding a parking spot is NOT an excuse – it is bad planning.
- Student must ensure that excuse for absence has been granted, i.e. must have received email with confirmation of excuse of absence from Dr. Brunner or the TA responsible for the lab. Please note that Dr. Brunner is fully responsible for *granting the absence* – please do not try to ‘convince’ your TA, it is not going to help.

Example for emails about planned and unforeseen absences:

Example for emails to request being excused from late/absence

Text in green color and italics represents parts that you need to adjust to your specific situation.

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Subject line: Principles 1111 Lab – Ethan Hunt – September 18, 2024

Dear Best Lab TA in the Whole Wide Universe, dear Dr. Brunner,

I have been asked by my employer to travel on September 18th to an undisclosed location where a third party will attempt to steal a nuclear bomb. Unfortunately, this date coincides with your Principles Lab, but cannot be moved because we have no control over the plans of the criminals. Could you please excuse me from class on that date?

I will ensure to catch up with everything I missed in class and am aware that it is my responsibility to do so.

All the best,

Ethan ‘not all missions are impossible’ Hunt – Note: this message will self-destruct in 10 seconds



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Subject line: Principles 1111 Lab – Natasha Romanova - August 28, 2024

Dear Most Patient and Understanding TA in the Whole Wide Universe, dear Dr. Brunner,

Last Wednesday, on my way to University I became aware of an accident on the side of the road. I stopped and helped a person who was hurt in the incident. This led to a delayed arrival at UTEP, and I came 15 minutes late to your class. Could you please excuse me for arriving late?

I will ensure to catch up with everything I missed in class and am aware that it is my responsibility to do so.

All the best,

Black Widow



SCHEDULE OF TOPICS – *subject to change!*

Date:	Topic:	Reading
Week 1 08/26/24	NO LAB	Syllabus
Week 2 09/02/24	NO LAB	Syllabus
Week 3 09/09/24	• Minerals	In-lab assignment
Week 4 09/16/24	• Rocks	In-lab assignment
Week 5 09/23/24	• Volcanoes and Volcanic Hazards	In-lab assignment
Week 6 09/30/24	• Earthquakes	In-lab assignment
Week 7 10/07/24	• Plate Tectonics I	In-lab assignment
Week 8 10/14/24	• Plate Tectonics II	In-lab assignment
Week 9 10/21/24	• Water on the Surface and Underground	In-lab assignment
Week 10 10/28/24	• Oceans Friday 11/01/24 Fall Drop/Withdrawal Deadline	In-lab assignment
Week 11 11/04/24	• Atmosphere Circulation and Global Climate	In-lab assignment
Week 12 11/11/24	• Deserts and Wind	In-lab assignment
Week 13 11/18/23	• Double Lab: Understanding Recent Climate Change / Environmental Footprint	In-lab assignment
Week 14 11/25/24	• Environmental Footprint Thu/Fri Nov 28-29: Thanksgiving – University is closed	In-lab assignment
Week 15 12/02/24	NO LAB Thursday Dec 05, 2024: Last Day of Classes	Relax
Week 16 12/11/24	<i>Final Exams: GOOD LUCK!</i>	None for us!

