

# GEOL 1313 (CRN 14775) Introduction to Physical Geology Lecture Syllabus Fall 2022

**Lecture: *In person***- Tuesday and Thursday 1:30 - 2:50pm in Rm. 128 UGLC. You will need to attend class to take the quizzes and participate in group learning sessions.

## Physical Geology Labs GEOL 1113: *In person*

Lab is a separate class and not required for enrollment in GEOL 1313, but is highly recommended! Lab starts the first week of classes 8/22/2022.

### Meet Your Instructors

#### Lecture Instructor: Dr. Katherine Giles

Office: 201A Geological Sciences Building

Email: [kagiles@utep.edu](mailto:kagiles@utep.edu)

Office Hours: In person or virtual

T & Th: 12:30 -1:30pm, GS 201

*Or feel free to contact me via email anytime with any questions or to set up an individual appointment. Can be via Zoom for your convenience.*



#### Lecture Teaching Assistant:

**Michel Luna Lucero**

Email: [meluna4@miners.utep.edu](mailto:meluna4@miners.utep.edu)

Office Hours: Email Michel with questions or to set up a time to zoom.

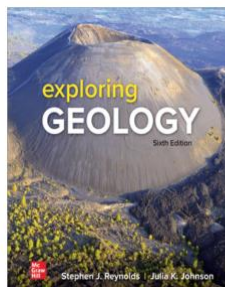


#### Required Lecture Textbook:

*Exploring Geology* 6<sup>th</sup> Edition, 2022

By Steve Reynolds & Julia Johnson.

- ***Required Access to McGraw Hill Connect for the textbook***



Exploring Geology  
6<sup>th</sup> Edition

By Stephen Reynolds and Julia Johnson

ISBN10: 126072221X

ISBN13: 9781260722215

Copyright: 2022

[Read more +](#)

### **McGraw-Hill's Connect and SmartBook:**

The textbook & McGraw Hill Connect can be purchased together or separately through the UTEP Bookstore or [McGraw-Hill](#). ***When you purchase access to McGraw-Hill's Connect, it includes access to an on-line version of the textbook.*** Some students in the past purchased Connect access through secondary retailers and had problems with the codes for Connect.

Connect is an online homework and learning management platform that is linked to your textbook. Connect uses technology that adapts content to your skill level to make more-efficient use of your study time and create a more-effective reading experience. This tool helps you stay organized with assignments, target difficult material to practice and improve your skills, review for exams, and track your performance. The assignments within the Connect framework are SmartBook assignments, which we have found are particularly helpful. The SmartBook assignments are integrated into BlackBoard and you'll need to register within BlackBoard by following this [video](#).

If you are having trouble registering for or accessing Connect, please contact McGraw-Hill Education's Customer Support.

Website: [www.mhhe.com/support](http://www.mhhe.com/support) | Phone: (800) 331-5094 Hours (EST)

Sunday: 12 PM - 12 AM

Monday - Thursday: 24 hours

Friday: 12 AM - 9 PM Saturday: 10 AM - 8 PM

### **Course Description**

Physical geology is the study of earth materials, structures, and events. We begin by focusing on plate tectonics, minerals as a building unit for rocks, and igneous rocks. We then turn to sedimentary and metamorphic rocks, deformation, the techniques used for age determinations, and earthquakes and crustal deformation. The final part of the semester takes the basic knowledge we have built and explores weather and climate, surface water and groundwater, and Earth resources.

### **Learning Outcomes**

- Understand the interrelationships between Earth processes and materials
- Recognize various tectonic settings on Earth
- Predict the nature of seismic and volcanic activity at the various tectonic settings
- Understand plate tectonics and the concept of a dynamic planet
- Understand what drives geologic processes
- Identify rocks and minerals by their physical properties and relate them to their environment of formation
- Understand the rock cycle, the water cycle, and the life cycle (evolution)
- Appreciate the variety of temporal and spatial scales of cycles
- Apply physics, chemistry, biology and mathematics to solve geologic problems
- Draw connections between geology and human events

## Course Grading

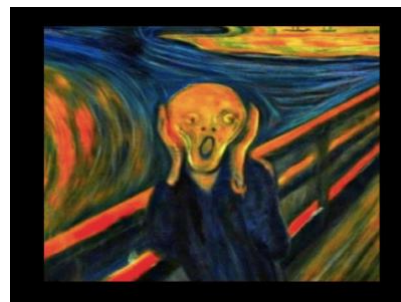
### Course Grading Breakdown:

**Weekly Smartbook Reading Assignment (10%)**

**5 Concept Sketches (10%)**

**Weekly Assignments on McGraw Connect (40%)**

**4 Exams (40%)**



**Grading scale: 90%-100%=A; 80%-89.9%=B; 70%-79.9%=C; 60%-69.9%=D; <60% =F**

### Weekly Smartbook Reading Assignments (10%)

There will be a weekly reading assignment through Smartbook on Blackboard. It will be in the folder marked for that week (ex: Week 1 folder). The Smartbook assignment has you answering a series of questions while you read to assess your comprehension of the material. The reading needs to be completed before 1:00pm Tuesday of the week that chapter will be discussed.

Except Chapter 1 Week 1, which I gave you longer to complete while the class settles in. Note: some weeks have 2 chapters to read & we'll have 2 reading assignments that week. The book is written as series of scientific questions. These questions highlight the most important concepts covered in that particular chapter and will be discussed in class. So focus on the topics covered in the questions.

### Concept Sketches (10%)

There will be 5 separate Concept Sketch assignments made throughout the semester. The assignments will be given in class and will be handed in for grading during class one week later. The topic of the sketch will be announced in class. For a review of what a Concept Sketch constitutes see Chapter 1.8 of the textbook.

### Weekly Question Assignments on McGraw Connects (40%)

SmartBook assignments, available through McGraw-Hill Connect via Blackboard (1 per week). These assignments will be due on Sunday at 11:59PM for the end of week assigned. They are intended to have you reviewing the material you read and discussed during the lecture to assess your comprehension of the material before moving on to another topic the next week.

### Exams (40%)

There will be 4 exams given. Each exam will cover  $\frac{1}{4}$  or so of the class content (see schedule for what is covered on each exam). The final exam is not required but may be used to replace a low score from 1 of the 4 exams or a missed exam. The final exam is cumulative covering all material covered in this class over the course of the semester. The dates & content of exams are listed in the schedule.

**Important Notes:**

1) Learning in teams through open discussion has been shown to be much more effective than learning alone and is highly encouraged in this class!

2) Course Drop Deadline: Oct. 28, 2022:

The College of Science aligns with UTEP's posted drop date of Oct. 28

Fall 2022 semester. 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.

3) There is no make-up for **unexcused** missed weekly reading assignments or Exams or late turn-in of Weekly Smartbook homework or Extra Credit exercises

*See below on how to be excused from absence/late arrival to class*

5) If you think you may have a *disability or if you are experiencing learning difficulties*, please let Dr. Giles know & contact the Center for Accommodations and Support Services (CASS), East Union Bldg, Room 106; Office Phone: 915-747-5148 / Email: [cass@utep.edu](mailto:cass@utep.edu) / <https://www.utep.edu/student-affairs/cass/>

**Excused Absences:**

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 Dr. Giles as soon as possible.

**How to be excused for absence or being late to class:**

- Apply to be excused by writing an email to Dr. Giles at: [kagiles@utep.edu](mailto:kagiles@utep.edu) explaining your absence
- Subject line MUST include (in this order): Geol 1313– YOUR NAME – Date of absence
- If absence is foreseeable (examples: job interview, professional meeting, surgery, etc): send message before the absence
- If absence was not foreseeable (examples: covid, migraine, car crash, childbirth, being arrested): asap, when it can be done safely (do not text and drive!).
- Student must ensure that they have been excused for an absence in a timely fashion

**COVID-19 PRECAUTION STATEMENT**

Please stay home if you have been diagnosed with COVID-19 or are experiencing COVID-19 symptoms. If you are feeling unwell, please let me know as soon as possible, so that we can work on appropriate accommodations. If you have tested positive for COVID-19, you are encouraged to report your results to [covidaction@utep.edu](mailto:covidaction@utep.edu), so that the Dean of Students Office can provide you with support and help with communication with your professors. The Student Health Center is equipped to provide COVID-19 testing.

At this time, masks and vaccination are not required for UTEP students and employees. As a Texas public university, we are a state agency subject to state regulations and UT System rules. Accordingly, we do not deny anyone services based on a vaccination status or whether or not they're wearing a mask.

### **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 important for your Individual Concept Sketches – make sure that they are ‘yours’, even if you are working in teams.*

### **Extra Credit Projects**

There are three extra credit projects that are each worth 10-20 points towards your grade. *Please note the assignment deadlines.*

1. **VIDEO SUMMARY (Due Sept. 29 at 5 PM):** Watch a Nova, Discovery, National Geographic, or other television, video, documentary, or online special, with a geology focus. Write a 2-page summary (1.5 spaced, size 11 font, 1” margins), including any relevant information and your thoughts on it. Worth 2%.
2. **RESEARCH PAPER (Due Oct. 18 at 5 PM):** Pick an item you own that is composed of geologic materials and write a 3-page research paper (1.5 spaced, size 11 font, 1” margins, length not including references, figures, or tables) about it. The report needs to include a list of: 1) what geologic materials it is made of (e.g., car tires are made of rubber, which comes from oil); 2) what countries the geologic materials are mined, processes, and recycled in (Google the U.S. Geological Survey’s Mineral Yearbooks); 3) where the item was made and how it was transported to you (think about what fuels were used to get it to you); and 4) can the item be recycled, is it recycled and if so, where is it recycled?; and 5) how this exercise had made you re-think your behaviors. Make sure to include a title, figures or photographs (1 minimum), and references (3 minimum, 2 may be webpages). Make sure to proofread your paper. Worth 5%.
3. **GEOLOGY PAMPHLET (Due Nov. 22 at 5 PM):** Pick a local hiking trail, nature path, or scenic drive in the El Paso region. Create a pamphlet describing the geology along the trail that could be used by others to learn about local geology. Your pamphlet should include a title, text, photos, figures, and references. You should go hike the trail (which will be the fun part!) and observe the rocks, sediments, or other geologic features you observe along your hike. Worth 5%.

Week	Topic	Textbook Chapter	SmartBook Assignment
WK 1 8/23 & 8/25	Introduction and Nature of Geology	1	None
WK 2 8/30 & 9/1	Plate Tectonics	3	3
WK 3 9/6 & 9/8	Earth materials	4	4
WK 4 9/13 & 9/15	Magmas and igneous activity; Volcanoes	5, 6	5
WK 5 9/20 & 9/22	Sedimentary rocks; <b>Exam 1 on 9/22 on material covered thru WK 4</b>	7	7
WK 6 9/27 & 9/29	Deformation/metamorphism; <i>Extra Credit #1 due on 9/29</i>	8	8
WK 7 10/4 & 10/6	Geologic time	9	9
WK 8 10/11&10/13	Seafloor, mountains, and basins; <b>Exam 2 10/13 on material from WK5 – 7</b>	10, 11	10,11
WK 9 10/18 & 10/20	Earthquakes and Hazards, Earth interior; <i>Extra Credit #2 due on 10/18</i>	12	12
WK 10 10/25 & 10/27	Climate and weather; <i>Last Drop/W day is 10/28</i>	13	13
WK 11 11/1 & 11/3	Weather, soils, and unstable slopes	15	15
WK 12 11/8 & 11/10	Streams and flooding; <b>Exam 3 11/12 on material from WK8-11</b>	16	16
WK 13 11/15 & 11/17	Water resources	17	17
WK 14 11/22	Energy and mineral resources; Thanksgiving Holiday (11/24-11/25) - no lecture; <i>Extra Credit #3 due on 11/22</i>	18	18
WK 15 11/29&12/1	Review on 11/29; <b>Exam 4 12/1 (last class) on material WK12-14</b>		
<b>Final Exam 12/8</b>	<b>1:00 – 3:45pm</b>	<b>UGLC 128</b>	

**COURSE SCHEDULE**

