

University of Texas at El Paso (UTEP)



Department of Geological Sciences

Fall 2020, CRN 13691, Online

GEOL 1313: Introduction to Physical Geology

Instructor: Dr. Mark Engle (maengle@utep.edu)

Office: Geology Building 302A

Office hours: Mondays 10:30 AM to 12:30 PM via Blackboard Collaborate. Otherwise send me an e-mail and I'll do my best to respond or we can set up a meeting through Blackboard.

Teaching Assistant: Martha Gallegos (mgallegos15@miners.utep.edu)

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 Outcome

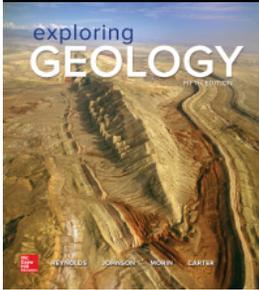
At the end of the course, students will:

- 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

Learning Modules

This course is designed using a modular format—that is, each week is “packaged” as a single module so that all the materials, lectures, submission areas, discussion posts are in one area for a given week. There will be a forum or message board contained in each module, that will allow you to ask questions or discuss the week’s material. It’s likely that if you are confused or have questions, others in the class are too. So, I would request that you upload questions there and Ms. Gallegos and I will check there regularly. Of course, we are also available for individual questions via e-mail or through office hour meetings. I may also add information about current events related to geology there as well.

Required Materials:



1) Exploring Geology, 5th Edition, by Steve Reynolds, Julia Johnson, Paul Morin, Charles Carter. McGraw-Hill.

2) Access to McGraw-Hill’s Connect for the Textbook.

The two can be purchased together or separately through the UTEP Bookstore or [McGraw-Hill](#). Some students in the past purchased Connect access though secondary retailers and had problems with the codes for Connect.

Using McGraw-Hill’s Connect and LearnSmart:

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 LearnSmart assignments, which we have found are particularly helpful. The LearnSmart 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 | 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

Ensure your computer meets system requirements by going to this link:
<http://connect.mheducation.com/connect/troubleshoot.do>

Attendance/Lectures:

Attendance, which is key to success in this class, is mandatory. In terms of on-line attendance, the course videos for the 2 or 3 lectures will be released at the beginning of each week (Monday, unless it is a holiday). You can watch them at your convenience, but I would not suggest watching them all at once or back-to-back. Based on feedback from other instructors regarding on-line learning, the lectures will not be a full 50-minutes. Instead, they will highlight key topics and will ask you to answer basic questions to test your understanding. To encourage video attendance, I will describe assignments in the lectures (either a concept sketches or something else) which will be due by Friday at noon of that week, unless specified otherwise.

Course Communication:

Because this is an online class, we won't see each other in the ways you may be accustomed to: during class time, small group meetings, and office hours. However, there are a number of ways we can keep the communication channels open:

- **Office Hours:** We will not be able to meet on campus, but I will still have office hours for your questions and comments about the course. My office hours will be held on Blackboard Collaborate during the following times:
Mondays: 10:30 A.M.-12:30 P.M. Mountain Time
- **Email:** UTEP e-mail is the best way to contact me (maengle@utep.edu). I will make every attempt to respond to your e-mail within 24-48 hours of receipt. When e-mailing me, be sure to email from your UTEP student account and please put the course number in the subject line. In the body of your e-mail, clearly state your question. At the end of your e-mail, be sure to put your first and last name, and your university identification number.
- **Discussion Board:** If you have a question that you believe other students may also have, please post it in the Help Board of the discussion boards inside of Blackboard for the corresponding week. Please respond to other students' questions if you have a helpful response.
- **Announcements:** Check the Blackboard announcements frequently for any updates, deadlines, or other important messages.

Course etiquette:

Exams will be open-book from your lecture notes and concept sketches (this does not include notes from your labs or the book itself). Therefore, it is very important that you take notes during the lectures.

Grading:

1. LearnSmart assignments, available through Graw-Hill Connect. These assignments will be due on Monday at noon for the week assigned (unless Monday is a holiday, in which case they will be due on Wednesday at noon). They are intended to get you started with

learning the material in the chapters prior to lecture so that we can spend lecture time on advanced topics.

There will be no make-up exams or extensions on LearnSmart deadlines!

2. Concept sketches or other assignments (1 most weeks). They will be announced during the lectures to encourage “attendance” to the lectures. Concept sketches can be hand-drawn or drawn digitally using a program such as Inkscape (free from Inkscape.org) or Illustrator and will be graded both on their ability to capture key parts of the drawing and for explanatory text describing the drawing. The weekly assignments will need to be uploaded to Blackboard by Friday at 5 PM for the week assigned. Please adjust the file size/image resolution to be readable, but not extremely high resolution to make files too large (e.g., > 10 MB).

There will be no make-up exams or extensions on assignments!

3. Four online exams will be given throughout the semester, using Blackboard, on the specified date. In addition, a comprehensive final exam will be given on the date determined by the University. The highest scores from 4 of the exams will be used to determine the grade for this category. Each exam will cover the material from that segment of the lecture, except for the comprehensive final exam. The dates for the exams are listed in the schedule at the end of the syllabus.

Missed Exams: You may drop one exam for whatever reason and take the final to replace it. **There will be no makeup exams!!!**

Test Proctoring Software:

The online exams will make use of Respondus Lock Down Browser and Respondus Monitor inside of Blackboard to promote academic integrity. You are encouraged to learn more about how to use these programs prior to the first test.

Please review the following guidelines:

- The assessments will only be available at the times identified on the course calendar.
- You may take the test at any time during the 24-hour window.
- A reliable Internet connection is essential to completing the exam. If you must go to a location to take the exam (such as the library), be sure to follow their health and safety requirements.
- You have 1 attempts to take the test. Once the window closes, your answers will be saved, and no changes can be made.
- Respondus Lockdown Browser will require that all internet tabs are closed prior to the start of the test.
- Respondus Monitor requires a webcam and microphone.
- You will be required to show the webcam your student ID prior to the start of the test.

- Your face should be completely visible during the test. Blocking the camera will disable the test.
- No textbook, on-line, or electronic materials are permitted during the test. If you wish to use your notes or concept sketches, please have them printed out and placed in front of or next to you. Respondus Monitor requires you to take a video of your surrounding area (desk, chair, walls, etc.)
- You should not have conversations with other people and/or leave and return to the area during the test.

Extra Credit

There are three extra credit projects that are each worth 5 points towards your exams grade. Students may complete as many of these projects as they like. *Please note the deadlines to turn each of these assignments.*

1. **VIDEO SUMMARY (Due Sept. 28 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.
2. **RESEARCH PAPER (Due Oct. 19 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) 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, processed, 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.
3. **GEOLOGY PAMPHLET (Due Nov. 23 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.

In addition to the extra credit assignments, every time you attend and participate in a tutoring session with the class tutor (Vivian Rosas), you will earn 1 point towards your exam grade (to a maximum of 10 points).

Your final grade is based on the Learn Smart assignments, in-class assignments/concept sketches, and exams. Average from LearnSmart: 33%, average from assignments/concept sketches 33%, average of the 4 exams: 33%.

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

Getting dropped from class: If you are severely failing the class (grade <40%) at the Drop Date (October 30, 2020) or miss 3 or more assignments in a row, I may drop you course. If you would like to remain in the class and are under one or more of those conditions, please contact me prior to the drop date.

Students with Disabilities

If you have a disability or if you are experiencing learning difficulties, please contact the Center for Accommodations and Support Services (CASS) or visit their portal (cassportal.utep.edu). You may contact them Monday through Friday 8:00a.m.-5:00p.m. Phone:(915) 747-5148. Union Building East Room 106 cass@utep.edu. They provide any necessary accommodations. You should also meet with me in order to facilitate your needs. You are expected to provide documentation of your disability in order to make special arrangements in this class.

Academic Misconduct

Academic dishonesty will be not tolerated in this class (please refer to the student conduct code handbook for details regarding university policy and definitions). Dishonesty includes, but is not limited to, plagiarism on term papers, unauthorized notes brought into an exam; copying answers from another student or letting another student copy your answers. The penalty for the first offense will be a grade of zero points on the exam or assignment. Penalty for the second offense will be an F for the course.

Helpful Hints:

- Watch the video lectures for the week, but space them out!
- Review material regularly - multiple short study sessions over a period of weeks are more effective than a single "cram" the night before an exam.
- Form a study group. Each member should study material on their own before meeting with the group for discussion and comparison.
- Write out definitions and answers to essay questions. Use the board in an empty classroom or your class notebook. Don't just passively read your notes!
- Ask questions in Blackboard you don't know or are confused.
- Combine class notes, textbook, and web materials when studying. Each provides a different perspective.
- Pay attention to the news and current events to see how they relate to geology.
- Read your text in SMALL doses; don't plan on one massive reading session the night before the exam.
- Be sure to look at the pictures and diagrams in the text.

Campus Carry

Persons holding a Concealed Handgun License can lawfully carry their handgun into a UTEP classroom as long as the gun remains concealed. Open carry remains prohibited on campus. In other words, none of us should see (or be able to tell that there is) a gun at UTEP. Call the University Police at 747-5611 or dial 911 if you see any individual on campus with a handgun or other type of weapon. For more information on campus carry, see [<http://sa.utep.edu/campuscarry/>]; for more information on overall campus safety, see [<http://admin.utep.edu/emergency/>].

COURSE OUTLINE

Week (date indicates Monday of that week)	Topic	Reading assignment, chapter	LearnSmart Assignment (due Monday at noon, unless otherwise noted)*
Week 1 (8/24)	Introduction and Nature of Geology	1	
Week 2 (8/31)	Plate Tectonics (1st LearnSmart assignment due on 8/31 at noon)	3	3
Week 3 (9/7)	Earth materials; Labor Day (9/7) – no lecture	4	4 (Due on 9/9)
Week 4 (9/14)	Magma and igneous activity	5	5
Week 5 (9/21)	Sedimentary rocks; Exam 1 on 9/25	7	7
Week 6 (9/28)	Deformation and metamorphism; <i>Extra Credit #1 due on 9/28</i>	8	8
Week 7 (10/5)	Geologic time	9	9
Week 8 (10/12)	Seafloor, mountains, and basins; Exam 2 on 10/16	10, 11	10, 11
Week 9 (10/19)	Earthquakes and Hazards, Earth interior; <i>Extra Credit #2 due on 10/19</i>	12	12
Week 10 (10/26)	Climate and weather	13	13
Week 11 (11/2)	Weather, soils, and unstable slopes	15	15
Week 12 (11/9)	Streams and flooding; Exam 3 on 11/13	16	16
Week 13 (11/16)	Water resources	17	17
Week 14 (11/23)	Energy and mineral resources; Thanksgiving Holiday (11/26-11/27) - no lecture; <i>Extra Credit #3 due on 11/23</i>	18	18
Week 15 (11/30)	Review on 11/30; Exam 4 on 12/2 (last day of classes)		
Final Exam	12/11		

* The weekly LearnSmart assignments are included in the weekly module in BlackBoard for the corresponding week. For example, the first LearnSmart assignment is due at noon on Monday of week 2 and can be found within the BlackBoard module for week 2 (which will be available at least 1 week in advance of the due date).

UPDATED 8/21/20