

# GEOL 3310-001: Geology and Astronomy

Class Meetings: Tuesday at 6:00 PM - 8:45 PM in Ratliff Building South Room 2024

## Instructor

Dr. Jenny Rashall

## Contact Info

### Email:

jrashall@uttyler.edu

### Office Hours via Zoom:

W/Th 1:00 PM-2:30 PM

or by appointment

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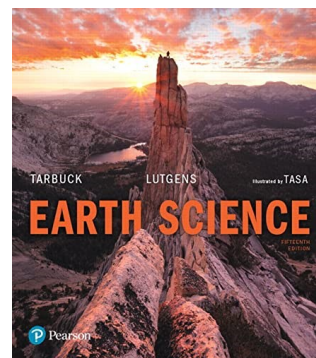
## Course Description:

This course consists of an introduction to astronomy (25%) and an introduction to physical geology (75%). Astronomy is the study of the universe, and how the Earth relates to other objects in space. Observations of stars, asteroids, and other celestial bodies help scientists develop an understanding of the Earth's formation. Geology is the study of the Earth, as well as its history. This course will explore Earth processes, natural resources, and how the Earth has changed throughout geologic time. There are no prerequisites.

## Materials:

The textbook for the course is **Earth Science (15th edition)** by Edward J. Tarbuck and Frederick K. Lutgens, ISBN-10: 0-134-54353-X, ISBN-13: 978-0-134-54353-6. We will not be utilizing any of the online content requiring an access code, so a used copy of the textbook would be sufficient.

Powerpoints, papers, videos, and other materials will be distributed throughout the semester via Canvas.



## Student Learning Outcomes:

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

- 1) Discuss the history of modern astronomy and scientists study space. (Critical Thinking, Communication Skills, Empirical and Quantitative Skills)
- 2) Differentiate between various celestial bodies and how they form (Critical Thinking)
- 3) Classify different types of natural resources, including minerals, rocks, and energy resources. (Critical Thinking, Empirical and Quantitative Skills)
- 4) Collaborate with classmates on geologic problem solving activities. (Critical Thinking, Communication, Empirical and Quantitative Skills, Teamwork)
- 5) Describe changes to the Earth System throughout geologic history. (Critical Thinking, Communication)
- 6) Differentiate between processes sculpting Earth's surface, including plate tectonics, weathering, gravity, etc. (Critical Thinking, Empirical and Quantitative Skills)



"Do not look at stars as bright spots only. Try to take in the vastness of the universe."

-Maria Mitchell



"The world is the geologist's great puzzle-box... the separate pieces of his puzzle remain a mystery till he detects their relation... then his fragments grow at once into a connected picture beneath his hand.."

-Louis Agassiz

### Canvas:

I will be using Canvas throughout the semester to post various course materials, including the syllabus, lecture PowerPoint slides, videos, or papers. I will also be posting announcements regularly regarding the course. Any corrections, date changes, reminders, or hints/tips for assignments will be posted in announcements. Weekly quizzes and discussions will be completed via Canvas.



### Grading:

All grades will be updated throughout the semester in Canvas so that you can keep up with your standings in the course. If you would like to meet with me to discuss the grade breakdown in detail, I am always happy to do so. Final grades will be calculated as follows:

- ◇ 4 Exams (15% each, 60% total)
- ◇ 10 Quizzes (2% each, 20% total)
- ◇ 5 Discussions (2% each, 10% total)
- ◇ Project (10% total)

We will tentatively be following a standard 90/80/70/60 grading scale, but that may be adjusted at my discretion based on overall class performance.

### Exams (60% of final grade):

Four exams (including the final exam) will be administered in-person during the scheduled lecture time. Dates for the four exams are included in the course schedule. Exams will cover material from the textbook, lecture PowerPoints, and any additional resources provided through Canvas as "required materials." Exams are not cumulative - not even the final exam - and will only include the content covered following the previous exam. Exam questions might include: multiple choice, fill-in-the-blank, true/false, matching, ordering, labeling images, and short answer. All smart devices must be put away during exams.

### Quizzes (20% of final grade):

Ten quizzes will be administered via Canvas weekly throughout the semester. Each Monday night at 11:59 PM, a quiz covering the previous week's content will be due. We are going to cover a lot of information this semester, and the quizzes are intended to help you stay up to date with studying as we approach the exams. The content for the quizzes will include lecture material and any additional required weekly readings. In some cases, an in-class activity might account for a portion of the weekly quiz grade - these assignments will be announced during class and students will be allowed to work together and ask questions. There will be no quizzes assigned on the week leading up to an exam.

### Discussions (10% of final grade):

Five discussions will be administered via Canvas throughout the semester - dates TBA. The discussions are meant to allow you each to do independent research and think critically about the prompt provided. Discussion responses should be written in your own words. Responses that have been copied and pasted from other sources will earn a 0. Each discussion will have a minimum word count required for full-credit consideration, as well as a required number of peer responses. Be sure to read the instructions carefully!

### **Project (10% of final grade):**

Each student will complete an individual project that will consist of a 3-4 minute recorded lecture, including a PowerPoint and audio, over a geology or astronomy topic of the students' choosing. Topics must be approved by me. Deadline for topic approval and submission of the final project can be found in the schedule below.

### **General Course Policies:**

- ◇ Students are expected to attend each class to complete lecture notes and in-class assignments in anticipation of weekly quizzes. Only students with officially excused absences will be allowed to make up missed work. Officially excused absences include university-related travel, illness, death in the family, or other situations that will be considered on a case-by-case basis. It is necessary for the student to contact the instructor regarding absences or missed assignments in a timely manner.
- ◇ Attendance will be taken in each class.
- ◇ Class assignments should be completed by the assigned deadlines. No late work will be submitted without approved documentation.
- ◇ Although I encourage students study for exams together and communicate during in-class activities, assignments submitted via Canvas should all be completed independently. Collaboration on discussions or weekly quizzes is considered a violation of the UT Tyler Honor Code.

## **UNIVERSITY POLICIES**

### **Student Academic Conduct:**

Although students are encouraged to study and prepare for examinations with other students, each student must work alone and neither give nor receive help from any sources when taking exams. ***Under NO circumstances will cheating be tolerated!*** University regulations are explicit about academic dishonesty and these regulations will be strictly enforced. **The minimum penalty for cheating is a zero for the exam;** the maximum penalties, up to expulsion from the university, will be pursued in extreme or repeat cases.

**UT Tyler Honor Code:** Every member of the UT Tyler community joins together to embrace: Honor and integrity that will not allow me to lie, cheat, or steal, nor to accept the actions of those who do.

Students are expected to help enforce this policy and are encouraged to obtain a copy of *A Student's Guide to Conduct and Discipline at UT Tyler*, available in the Office of Student Affairs.

### **Students Rights and Responsibilities**

To know and understand the policies that affect your rights and responsibilities as a student at UT Tyler, please follow this link: <http://www.uttyler.edu/wellness/rightsresponsibilities.php>

### **Disability Services:**

In accordance with Section 504 of the Rehabilitation Act, Americans with Disabilities Act (ADA) and the ADA Amendments Act (ADAAA) the University offers accommodations to students with learning, physical and/or psychiatric disabilities. If you have a disability, including non-visible disabilities such as chronic diseases, learning disabilities, head injury, PTSD or ADHD, or you have a history of modifications or accommodations in a previous educational environment you are encouraged to contact the Student Accessibility and Resources office and schedule an interview with the Accessibility Case Manager/ADA Coordinator, Cynthia Lowery Staples. If you are unsure if the above criteria applies to you, but have questions or concerns please contact the SAR office. For more information or to set up an appointment please visit the SAR office located in the University Center, Room 3150 or call 903.566.7079. You may also send an email to [cstaples@uttyler.edu](mailto:cstaples@uttyler.edu).

## University Policies Continued

### Campus Carry

We respect the right and privacy of students 21 and over who are duly licensed to carry concealed weapons in this class. License holders are expected to behave responsibly and keep a handgun secure and concealed.

More information is available at <http://www.uttyler.edu/about/campus-carry/index.php>

### UT Tyler a Tobacco-Free University

All forms of tobacco will not be permitted on the UT Tyler main campus, branch campuses, and any property owned by UT Tyler. This applies to all members of the University community, including students, faculty, staff, University affiliates, contractors, and visitors. Forms of tobacco not permitted include cigarettes, cigars, pipes, water pipes (hookah), bidis, kreteks, electronic cigarettes, smokeless tobacco, snuff, chewing tobacco, and all other tobacco products. There are several cessation programs available to students looking to quit smoking, including counseling, quit lines, and group support. For more information on cessation programs please visit [www.uttyler.edu/tobacco-free](http://www.uttyler.edu/tobacco-free).

### Grade Replacement/Forgiveness and Census Date Policies

Students repeating a course for grade forgiveness (grade replacement) must file a Grade Replacement Contract with the Enrollment Services Center (ADM 230) on or before the Census Date of the semester in which the course will be repeated. Grade Replacement Contracts are available in the Enrollment Services Center or at <http://www.uttyler.edu/registrar>. Each semester's Census Date can be found on the Contract itself, on the Academic Calendar, or in the information pamphlets published each semester by the Office of the Registrar. Failure to file a Grade Replacement Contract will result in both the original and repeated grade being used to calculate your overall grade point average. Undergraduates are eligible to exercise grade replacement for only three course repeats during their career at UT Tyler; graduates are eligible for two grade replacements. Full policy details are printed on each Grade Replacement Contract. The Census Date is the deadline for many forms and enrollment actions of which students need to be aware. These include:

- ◇ Submitting Grade Replacement Contracts, Transient Forms, requests to withhold directory information, approvals for taking courses as Audit, Pass/Fail or Credit/No Credit.
- ◇ Receiving 100% refunds for partial withdrawals. (There is no refund for these after the Census Date)
- ◇ Schedule adjustments (section changes, adding a new class, dropping without a "W" grade)
- ◇ Being reinstated or re-enrolled in classes after being dropped for non-payment
- ◇ Completing the process for tuition exemptions or waivers through Financial Aid

### Student Absence Due to Religious Observance:

Students who anticipate being absent from class due to a religious observance are requested to inform the instructor of such absences by the second class meeting of the semester.

### Student Absence for University-Sponsored Events and Activities:

If you intend to be absent for a university-sponsored event or activity, you (or the event sponsor) must notify the instructor at least two weeks prior to the date of the planned absence. At that time the instructor will set a date and time when make-up assignments will be completed.

### Social Security and FERPA Statement:

It is the policy of The University of Texas at Tyler to protect the confidential nature of social security numbers. The University has changed its computer programming so that all students have an identification number. The electronic transmission of grades (e.g., via e-mail) risks violation of the Family Educational Rights and Privacy Act; grades will not be transmitted electronically.

### Emergency Exits and Evacuation:

Everyone is required to exit the building when a fire alarm goes off. Follow your instructor's directions regarding the appropriate exit.

## Course Schedule\*

Date	Topic/Chapter
8/23/2022	Ch. 1 Introduction; Ch. 21 Origins of Modern Astronomy Quiz 1 Due 8/29/2022 at 11:59 PM
8/30/2022	Ch. 23: Light, Telescopes, and the Sun; Ch. 22 Touring our Solar System pt. 1 Quiz 2 Due 9/5/2022 at 11:59 PM
9/6/2022	Ch. 22: Touring our Solar System pt. 2; Ch. 24: Beyond our Solar System
9/13/2022	Exam 1; Ch. 2: Matter and Minerals Quiz 3 Due 8/19/2022 at 11:59 PM
9/20/2022	Ch. 3: Rocks: Materials of the Solid Earth pt. 1 Quiz 4 & Proposal for Project Due 9/26/2022 at 11:59 PM
9/27/2022	Ch. 3: Rocks: Materials of Solid Earth pt. 2 (and other energy resource materials) Quiz 5 Due 10/3/2022 at 11:59 PM
10/4/2022	Ch. 4: Plate Tectonics
10/11/2022	Exam 2; Ch. 5: Earthquakes and Earth's Interior Quiz 6 Due 10/17/2022 at 11:59 PM
10/18/2022	Ch. 6: Volcanoes; Ch. 7: Crustal Deformation and Mountain Building Quiz 7 Due 10/24/2022 at 11:59 PM
10/25/2022	Ch. 8: Weathering, Soil, and Mass Movement Quiz 8 Due 10/31/2022 at 11:59 PM
11/1/2022	Ch. 9: Running Water and Groundwater
11/8/2022	Exam 3; Ch. 10: Glaciers, Deserts, and Wind Quiz 9 Due 11/14/2022 at 11:59 PM
11/15/2022	Ch. 11: Geologic Time Quiz 10 Due 11/21/2022 at 11:59 PM
11/22/2022	No Class—Thanksgiving Break Project Due 11/28/2022
11/29/2022	Ch. 12: Earth's Evolution Through Geologic Time
12/6/2022	Final Exam

Reminder! Discussion deadlines are not included in the schedule and will be assigned during the semester.

### Other Important Fall 2022 Dates

9/2/2022	Census Date
9/5/2022	Labor Day Holiday (no class)
11/4/2022	Last Day to Drop with a W
11/21/2022	Start of Thanksgiving Break (no class)
11/26/2022	End of Thanksgiving Break
12/5/2022	Study Day

\*As the instructor of this course, I, Dr. Jenny Rashall, reserve the right to alter the schedule as needed throughout the semester. Changes to the schedule will be announced in class and via Canvas announcement. An updated version of the syllabus will be added to Canvas.

## How to Succeed in the Course

In this course, we will be covering a lot of material in a short amount of time. If you would like to do well in the class, I offer these suggestions:

- ◇ CARE ABOUT YOUR GRADE FROM DAY ONE! I can't do much for you if you come to me in the last few weeks of class and ask how to improve your grade. If your grades aren't where you want them to be by the first exam, please get in touch with me as soon as you can.
- ◇ STAY UP TO DATE WITH THE MATERIAL! Keep in mind, a general rule is to expect to spend an additional 1-3 hours each week per credit hour of a course studying beyond the class meeting time. Be sure to read the current chapter in the book and review the lecture content in the same week. You will have weekly quizzes, so it is important to stay on top of the content.
- ◇ COME TO CLASS! It is important to come to each class to complete your lecture notes and any in-class activities in preparation of the weekly quizzes and exams.
- ◇ FIND A STUDY GROUP! This is a great course to study with other people. Each student in the class will connect with different aspects of the course, and discussing the topics with each other will help with retention.
- ◇ ASK QUESTIONS! If you don't understand something, please ask! We only meet once a week, but I am available throughout the week via email and Zoom. I am always happy to meet with you to discuss anything that you need.
- ◇ COMMUNICATE! I can't stress this enough. As I've already said, I'm here to help. If you are struggling with the course content or have a family emergency and miss a class, the sooner you get in touch with me, the better.