

GEOL 1301-003: EARTH SYSTEMS
Fall 2015

Instructor: Angela Osen, PhD

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Office Hours: Mondays and Wednesdays: 4 pm-5 pm; other hours available by appointment only.

Section Information: GEOL 1301-003

Time and Place of Class Meetings: Geosciences Bldg. 100, Mondays and Wednesdays, 5:30-6:20 pm

Description of Course Content: Fundamentals of Geology using a “systems approach.” Students will learn geological concepts, principles, and related scientific terms. Students will learn about active geologic processes and the driving force of plate tectonics. Students will be exposed to the principles behind the formation of different rock types, and the nature of the earth’s interior.

Student Learning Outcomes: On completion of the course it is expected that: (I) The students will be able to describe the structure of the earth. (II) The students will be able to identify the characteristics of different rock types, how they are formed, and what minerals they are composed of. (III) The students will be able to explain plate tectonics and how associated processes lead to the cycling of rock. (IV) The students will be able to understand the concept of the geosphere as a set of distinct systems. (V) The students should be able to synthesize what they learn in the lectures and apply this knowledge to the problems they will be presented with in the Laboratory section of the course.

Required Textbooks and Other Course Materials: Understanding Earth, 7th Edition, J. Grotzinger & T Jordan, W.H. Freeman and Company, NY, ISBN-13: 978-1464138744

Descriptions of major assignments and examinations: There will be 5 regular exams during the course and 1 final exam (as marked on the syllabus), students have an option to take a comprehensive final after the regularly scheduled final exam to replace a low score or a missed exam. There will be additional extra credit exercises that will be announced in class or posted in Blackboard. The results from the class exams will make up 75% of the final grade (25% will be determined from effort in the Labs).

Attendance: Attendance of regular lectures is expected but not required; it is STRONGLY encouraged. Students must be present to take exams. Attendance will be tracked. These attendance rules apply to my course and are my own and not a matter of institutional policy.

Other Requirements: Lab attendance is expected.

Grading: A final letter grade will be assigned to each student in the following manner based on the cumulative percentage score from the class exams plus the score from the Lab exercises. A Grade => 90%, B Grade 80-89%, C Grade 70-79%, D Grade 60-69%, F grade <60%. Your grade is based on performance in both lecture and lab for GEOL 1301. The lecture portion of the grade is worth 75%

and the lab portion is 25% of the total course grade. Students are expected to keep track of their performance throughout the semester and seek guidance from available sources (including the instructor) if their performance drops below satisfactory levels.

Make-up Exams: There will be NO make-up exams without approved, written documentation. Students have an option to take an alternate comprehensive final exam to replace a missed or low scoring exam. This alternate test will be given directly after the regular final exam.

Expectations for Out-of-Class Study: Beyond the time required to attend each class meeting, students enrolled in this course should expect to spend at least an additional 9 hours per week of their own time in course-related activities, including reading required materials, completing assignments, preparing for exams, etc.

Grade Grievances: Any appeal of a grade in this course must follow the procedures and deadlines for grade-related grievances as published in the current undergraduate catalog. See: http://wweb.uta.edu/catalog/content/general/academic_regulations.aspx#10

Drop Policy: Students may drop or swap (adding and dropping a class concurrently) classes through self-service in MyMav from the beginning of the registration period through the late registration period. After the late registration period, students must see their academic advisor to drop a class or withdraw. Undeclared students must see an advisor in the University Advising Center. Drops can continue through a point two-thirds of the way through the term or session. It is the student's responsibility to officially withdraw if they do not plan to attend after registering. **Students will not be automatically dropped for non-attendance.** Repayment of certain types of financial aid administered through the University may be required as the result of dropping classes or withdrawing. For more information, contact the Office of Financial Aid and Scholarships (<http://wweb.uta.edu/aao/fao/>).

Disability Accommodations: UT Arlington is on record as being committed to both the spirit and letter of all federal equal opportunity legislation, including *The Americans with Disabilities Act (ADA)*, *The Americans with Disabilities Amendments Act (ADAAA)*, and *Section 504 of the Rehabilitation Act*. All instructors at UT Arlington are required by law to provide "reasonable accommodations" to students with disabilities, so as not to discriminate on the basis of disability. Students are responsible for providing the instructor with official notification in the form of a letter certified by the **Office for Students with Disabilities (OSD)**. Students experiencing a range of conditions (Physical, Learning, Chronic Health, Mental Health, and Sensory) that may cause diminished academic performance or other barriers to learning may seek services and/or accommodations by contacting:

The Office for Students with Disabilities, (OSD) www.uta.edu/disability or calling 817-272-3364.
Counseling and Psychological Services, (CAPS) www.uta.edu/caps/ or calling 817-272-3671.

Only those students who have officially documented a need for an accommodation will have their request honored. Information regarding diagnostic criteria and policies for obtaining disability-based academic accommodations can be found at www.uta.edu/disability or by calling the Office for Students with Disabilities at (817) 272-3364.

Title IX: *The University of Texas at Arlington does not discriminate on the basis of race, color, national origin, religion, age, gender, sexual orientation, disabilities, genetic information, and/or veteran status in its educational programs or activities it operates. For more information, visit uta.edu/eos. For information regarding Title IX, visit www.uta.edu/titleIX.*

Academic Integrity: Students enrolled all UT Arlington courses are expected to adhere to the UT Arlington Honor Code:

I pledge, on my honor, to uphold UT Arlington's tradition of academic integrity, a tradition that values hard work and honest effort in the pursuit of academic excellence.

I promise that I will submit only work that I personally create or contribute to group collaborations, and I will appropriately reference any work from other sources. I will follow the highest standards of integrity and uphold the spirit of the Honor Code.

UT Arlington faculty members may employ the Honor Code as they see fit in their courses, including (but not limited to) having students acknowledge the honor code as part of an examination or requiring students to incorporate the honor code into any work submitted. Per UT System *Regents' Rule* 50101, §2.2, suspected violations of university's standards for academic integrity (including the Honor Code) will be referred to the Office of Student Conduct. Violators will be disciplined in accordance with University policy, which may result in the student's suspension or expulsion from the University. Violations of the academic integrity policy will result in a zero for the assignment/exam and violators will be referred to the Office of Student Conduct.

Lab Safety Training: **Students registered for this course must complete all required lab safety training prior to entering the lab and undertaking any activities.** Once completed, Lab Safety Training is valid for the remainder of the same academic year (i.e., through the following August) and must be completed anew in subsequent years. There are no exceptions to this University policy. Failure to complete the required training will preclude participation in any lab activities, including those for which a grade is assigned.

Electronic Communication: UT Arlington has adopted MavMail as its official means to communicate with students about important deadlines and events, as well as to transact university-related business regarding financial aid, tuition, grades, graduation, etc. All students are assigned a MavMail account and are responsible for checking the inbox regularly. There is no additional charge to students for using this account, which remains active even after graduation. Information about activating and using MavMail is available at <http://www.uta.edu/oit/cs/email/mavmail.php>.

Student Feedback Survey: At the end of each term, students enrolled in classes categorized as "lecture," "seminar," or "laboratory" shall be directed to complete an online Student Feedback Survey (SFS). Instructions on how to access the SFS for this course will be sent directly to each student through MavMail approximately 10 days before the end of the term. Each student's feedback enters the SFS database anonymously and is aggregated with that of other students enrolled in the course. UT Arlington's effort to solicit, gather, tabulate, and publish student feedback is required by state law; students are strongly urged to participate. For more information, visit <http://www.uta.edu/sfs>.

Final Review Week: A period of five class days prior to the first day of final examinations in the long sessions shall be designated as Final Review Week. The purpose of this week is to allow students sufficient time to prepare for final examinations. During this week, there shall be no scheduled activities such as required field trips or performances; and no instructor shall assign any themes, research problems or exercises of similar scope that have a completion date during or following this week *unless specified in the class syllabus*. During Final Review Week, an instructor shall not give any examinations constituting 10% or more of the final grade, except makeup tests and laboratory examinations. In addition, no instructor shall give any portion of the final examination during Final Review Week. During this week, classes are held as scheduled. In addition, instructors are not required to limit content to topics that have been previously covered; they may introduce new concepts as appropriate.

Emergency Exit Procedures: Should we experience an emergency event that requires us to vacate the building, students should exit the room and move toward the nearest exit, which is located to the North of the stage or at the back of the classroom, then exit building using North or South doors. When exiting the building during an emergency, one should never take an elevator but should use the stairwells. Faculty members and instructional staff will assist students in selecting the safest route for evacuation and will make arrangements to assist individuals with disabilities.

Student Support Services: UT Arlington provides a variety of resources and programs designed to help students develop academic skills, deal with personal situations, and better understand concepts and information related to their courses. Resources include tutoring, major-based learning centers, developmental education, advising and mentoring, personal counseling, and federally funded programs. For individualized referrals, students may visit the reception desk at University College (Ransom Hall), call the Maverick Resource Hotline at 817-272-6107, send a message to resources@uta.edu, or view the information at <http://www.uta.edu/universitycollege/resources/index.php>

Course Schedule: “As the instructor for this course, I reserve the right to adjust this schedule in any way that serves the educational needs of the students enrolled in this course.—*Angela Osen, PhD*”

Week & Dates		Topics	Chapter
1	Aug. 31 & Sep. 2	Introduction to GEOL 1301 The Earth System	1
2	Sep. 9	Plate Tectonics: The Unifying Theory	2
3	Sep. 14 & 16	Plate Tectonics (continued) Earth Materials: Minerals and Rocks	2 3
4	Sep. 21 & 23	Sept. 21st: Exam 1: Chapters 1-3 Igneous Rocks: Solids from Melts	Exam Ch 1-3 4
5	Sep. 28 & 30	Sedimentation: Rocks Formed by Surface Processes Metamorphism: Alteration of Rocks by Temperature and Pressure	5 6
6	Oct. 5 & 7	Oct. 5th: Exam 2: Chapters 4-6 Deformation: Modification of Rocks by Folding and Fracturing	Exam Ch. 4-6 7
7	Oct. 12 & 14	Clocks in Rocks: Timing the Geologic Record History of the Continents	8 10
8	Oct. 19 & 21	Geobiology: Life Interacts with Earth Oct. 21: Exam 3: Chapters 7,8,10,11	11 Exam Ch. 7,8,10,11
9	Oct. 26 & 28	Volcanoes Earthquakes	12 13
10	Nov. 2 & 5	Exploring Earth's Interior Exam 4: Chapters 12-14	14 Exam Ch. 12-14
11	Nov. 9 & 11	The Climate System Weathering, Erosion, and Mass Wasting	15 16

12	Nov. 16 & 18	The Hydrologic Cycle and Groundwater Stream Transport	17 18
13	Nov. 23 & 25	Exam 5: Chapters 15-18 Winds and Deserts	Exam Ch. 15-18 Ch. 19
14	Nov. 30 & Dec. 2	Coastlines and Ocean Basins Glaciers: The Work of Ice	20 21
15	Dec. 7 & 9	Landscape Development, Human Impact on the Environment Review	22 & 23
16	Dec. 14	Final: Chapters 19-23, optional make-up exam/comprehensive Finals Week	

*Instructor reserves the right to change the schedule as necessary

**Instructor reserves the right to give an exam remotely in case of inclement weather.

Helpful library websites:

- Library Home Page <http://www.uta.edu/library>
- Subject Guides <http://libguides.uta.edu>
- Subject Librarians <http://www.uta.edu/library/help/subject-librarians.php>
- Course Reserves <http://pulse.uta.edu/vwebv/enterCourseReserve.do>
- Library Tutorials <http://www.uta.edu/library/help/tutorials.php>
- Connecting from Off- Campus <http://libguides.uta.edu/offcampus>
- Ask A Librarian <http://ask.uta.edu>

Emergency Phone Numbers: In case of an on-campus emergency, call the UT Arlington Police Department at **817-272-3003** (non-campus phone), **2-3003** (campus phone). You may also dial 911. Non-emergency number 817-272-3381