***EARTH SYSTEMS*: GEOL 1301 Section 045**

Spring 2015 Course Duration: *Jan. 20–May 8, 2015*

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Required textbook: Understanding Earth; 7th Edition, Grotzinger and-Jordan (2014)

(ISBN13: 978-1-4641-3874-4; ISBN10: 1-4641-3874-5)

Or

Understanding Earth; 6th Edition, Grotzinger and Jordan (2010)

(ISBN13: 978-1-4292-1951-8; ISBN10: 1-4292-1951-3)

Course Content: An integrated study of the Earth, emphasizing interactions between plate tectonics, the geosphere, the atmosphere, the oceans, the biosphere, and human activities.

Student Learning Outcomes: After completing the course, you should be able to describe: 1) the characteristics of plate tectonics and its driving mechanism; 2) origin and composition of common minerals and rocks; 3) deformational features produced by Plate Tectonics and related stresses; 4) the interior of the Earth and the mechanisms that produce earthquakes, their magnitude and the type of damage inflicted; 5) how to determine relative and absolute time; 6) the biosphere and development of biodiversity; 7) controls on climate and its history; 8) the activity of surface and ground water and the hydrologic cycle; 9) ocean process and the interaction with the coast; and 10) the effect of human activity on the Earth system.

Course Mechanism: This is an internet course and students learn course contents and take exams in Blackboard (https://elearn.uta.edu/webapps/login/). For any questions about the course, you can contact the instructor by sending emails directly to maxhu@uta.edu (the preferred way than the email correspondence in Blackboard). In addition, you're very welcome to talk to the instructor in his office any time while you are on campus.

Reading the textbook and practicing the chapter-end questions are probably the most important steps to succeed in this course. In addition, you can watch the video files recorded for the lecture-based instruction session taught by Dr. Wickham on Tuesdays and Thursdays during the Spring semester of 2013, which are uploaded at the "Lecture Videos" folder of "Course Materials" in Blackboard. Lecture Notes (in pdf files), which go with the videos, are located at "Lecture Notes" folder. Remember that the exams and grading systems are different between lecture-based session and this internet session; just learn the course content, and ignore tests and grading systems associated with the lecture-based session.

"Textbook Materials" folder has a complete set of learning materials provided by the textbook publisher. Exam questions of this course are very similar to the practice questions of chapter-end quizzes in "Textbook Materials".

Suggested learning approach: for each chapter, briefly read the textbook first, watch the chapter video (and go over the Lecture Note file associated with the video, if necessary), go over the Lecture Note Powerpoint Chapter file in Course Documents, read textbook the second time, practice exercises (especially the chapter-end online quizzes; though they will not be directly counted in the course grade), go over the textbook about missed quiz questions, and then take the Exam of this course. Only 5 Exams (listed in the Course Schedule table of this syllabus) will be graded and counted in the course grade.

Notes about taking exams in Blackboard: All exams are taken at "Exams" folder of the Blackboard. You will have 70 minutes for an exam with 60 questions; each question is worthy of 1 point. The test questions (all multiple choices) come from the textbook. *You can take the 70-min long exam within a testing window of 96 hours (from 9 am of the start day to 9 am of the end day); the start and end dates are listed in the Course Schedule below.* Note that you'll only have one chance to take the exam and

once you start it, the clock will tick; therefore, allocate a time without being disturbed and have enough power for your laptop. Answer each question (there is only one correct answer) by clicking the circle; after you've answered all questions, click "Save All Answers" (there might be a prompt about the questions not answered), and "Save and Submit".

If you have legitimate reasons (sickness during all the four testing days, frozen internet during an exam, etc.), email me about the situation and I'll consider, case by case, to reopen the exam for you.

Expectations: Students are expected to read the textbook, frequently log into your MyMav email account to read emails about the news related to the course (also available in "Announcements" folder), log into Blackboard to view recorded videos, read lecture notes, practice the chapter-end online quiz, and most importantly complete exams within the specified testing window. The Course Schedule table below specifies which chapter(s) to read for each "class meeting" session, and which chapters the questions in exams will come from.

In this 3-unit course, there is a required lab component (GEOL 1301 Section 145, meets in Room 243 of Geosciences Building), which accounts for 25% of the final course grade. However, you can enroll in any lab section that better fits your schedule, not necessarily the GEOL 1301-145 section. Or you can enroll in GEOL 1301-145, but participate in another session that fits your schedule; however, remember to stick with the session you attend since your lab assignments might get lost if you attend several different sessions. At the end of the semester, the lab TA will provide me with your lab score to be folded into the final course grade.

Students should plan to attend the lab session during the first week to make sure they understand the policies and procedures. For any question about the lab component of this course, contact your lab TA or lab instructor Dr. Cornelia Winguth (cwingth@uta.edu).

Since the lab uses hazardous materials, students must finish the on-line safety training course "the Hazard Communication Training Course", which is accessible at **www.uta.edu/training.** Completion of the lab safety training is mandatory, and the students who do not complete it within the first two weeks of class will be dropped from the course.

In summary, while offering the flexibility of learning at your convenient time, I like to emphasize that this internet course will be as rigorous as the lecture-based GEOL 1301 session. It needs motivation, self-discipline, and other attributes for you to succeed in the course.

Course Schedule (video 1T: recorded in Week 1 on Tuesday; video 1R: recorded in Week 1 on Thursday)

Week	Dates	Topic	Files in Blackboard
1	Jan. 20, 22	The Earth System (Ch. 1)	Chapter 1 [video 1T (recorded on 1/15/13); video 1R (1/17/13)]
2	Jan. 27, 29	Plate Tectonic System (Ch. 2)	Chapter 2 [video 2T (1/22/13); video 2R (1/24/13)]
3	Feb. 3, 5	Earth Materials (Ch. 3)	Chapter 3 [video 3T (1/29/13); video 3R (1/31/13)]
	Feb. 6-10	**Exam #1**	**Ch. 1, 2, 3**
4	Feb. 10, 12	Igneous Rocks: Magma & Volcanoes (Ch. 4)	Chapter 4 [video 4T (no video because of exam; 2/5/13); video 4R (2/7/13)]
5	Feb. 17, 19	Sedimentary Rocks: Surface Processes (Ch. 5); Deformation (Ch. 7)	Chapter 5 [video 5T (2/12/13)]; Chapter 7 [video 5R (2/14/13)]
6	Feb. 24, 26	Deformation (Ch. 7); watch AGI video "Building the Planet" yourself	Chapter 7 [video 6T (2/19/13)]; video 6R (no video; 2/21/13)
	Feb. 27-	**Exam #2**	**Ch. 4, 5, 7**

	March 3		
7	Mar. 3, 5	Clocks in Rocks: Geologic Time (Ch. 8); Review	Chapter 8 [video 7T (2/26/13)]; Review [video 7R (2/28/13)]
8	Mar 10, 12	Spring Break (no class)	
9	Mar. 17, 19	Metamorphism & Metamorphic Rocks (Ch. 6)	video 8T (no video because of exam, 3/5/13); Chapter 6 [video 8R (3/7/13)]
10	Mar. 24, 26	Geobiology (Ch. 11)	Chapter 11 [video 9T(3/19/13); video 9R (3/21/13)]
	Mar. 27-31	**Exam #3**	**Ch. 6, 8, 11**
11	Mar. 31, Apr. 2	Earthquakes (Ch. 13); Review	Chapter 13 [video 10T (3/26/13)]; Review [video 10R (3/28/13)]
	Apr. 3	*Last Day to Drop the Course*	
12	Apr. 7, 9	Earth's Interior (Ch. 14)	video 11T (no video because of exam, 4/2/13); Chapter 14 [video 11R (4/4/13)]
13	Apr. 14, 16	Climate System (Ch. 15)	Chapter 15 [video 12T (4/9/13); video 12R (4/11/13)]
	Apr. 17-21	**Exam #4**	**Ch. 13, 14, 15**
14	Apr. 21, 23	Climate System (Ch. 15); Hydrologic Cycle/groundwater (Ch. 17)	Chapters 15 &17 [video 13T (4/16/13)]; Chapter 17 [video 13R (4/18/13)]
15	Apr. 28, 30	Coastlines & Ocean Basins (Ch. 20)	No videos because of technical difficulties
16	May 5, 7	Human Impact (Ch. 23)	Chapter 23 [video 15T (4/30/13); video 15R (5/2/13)]
	May 8-12	**Exam #5**	**Ch. 17, 20, 23**

Grading:

5 exams @ 60 points each	= 300 points
Lab grade @ 100 points (25% of grade)	= 100 points
TOTAL	**= 400 points**

Grade Cutoffs (percentages): A: ≥ 90; B: 89.99 to 80; C: 79.99 to 70; D: 69.99 to 60; F: ≤ 59.99.

Extra points: only offered near the end of semester for students who attempted all Exams, but still with a failing grade.

Attendance Policy: This internet course offers the flexibility of learning at your convenient time. However, this course is as rigorous as any traditional classroom course, and it needs motivation and self-disciplines to succeed in the course.

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 / graduate catalog.

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.

Throughout the semester, I will periodically send you emails about the course (e.g., when to take the exam); you need to check into your UTA's MavMail account regular for course-related announcements.

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/ses/fao).

Student Feedback Survey:

At the end of each term, students enrolled in classes categorized as lecture, seminar, or laboratory shall be directed to complete a 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.

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.

Americans with Disabilities Act:

The University of Texas at 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). 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 that disability. Any student requiring an accommodation for this course must provide the instructor with official documentation in the form of a letter certified by the staff in the Office for Students with Disabilities, University Hall 102. 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.

Academic Integrity:

All students enrolled in this course 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.

Instructors 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.

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 www.uta.edu/resources.

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. 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 handicapped individuals.

UT Arlington Library Resources:

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
Database List..... http://www.uta.edu/library/databases/index.php
Course Reserves..... http://pulse.uta.edu/vwebv/enterCourseReserve.do
Library Catalog ..... http://discover.uta.edu/
E-Journals..... http://liblink.uta.edu/UTAlink/az
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