

**EARTH SYSTEMS: GEOL 1301 Section 045**

**Fall 2016 Course Duration: *Jan. 17–May 5, 2016***

Dr. (Max) Qinhong Hu, Office: Room 205 of Geosciences Bldg.

Office phone: 817-272-2598; email: [maxhu@uta.edu](mailto:maxhu@uta.edu)

Office hours: Wed. & Fri. 1 pm–3 pm; or set up an appointment with emails

Faculty profile: <https://mentis.uta.edu/public/#profile/profile/edit/id/2361/category/1>;

<http://www.uta.edu/ees/faculty/hu/>

*Required textbook: Understanding Earth; 7<sup>th</sup> Edition, Grotzinger and Jordan (2014)*

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

*Or*

*Understanding Earth; 6<sup>th</sup> Edition, Grotzinger and Jordan (2010)*

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

**This course satisfies the University of Texas at Arlington core curriculum requirement in Life and Physical Sciences.**

**Course Description:** The fundamental principles and concepts of geology will be taught using a “systems approach”. Students will learn about the different kinds of rocks and their formation. The Earth’s structure, as well as geologic processes such as earthquakes, volcanic activity, and mountain-building, will be studied in the framework of plate tectonics. Other topics include hydrologic processes, deserts, glaciers, and the climate system.

**Student Learning Outcomes:** After completion of this class, students will be able to (I) identify the characteristics of different rock types and their formation processes, (II) describe the structure of the Earth, (III) explain plate tectonics and the processes associated with plate boundaries, (IV) understand how interactions between geosphere, hydrosphere, atmosphere, and biosphere shape the Earth. Students will enhance their critical thinking skills, communication skills, empirical and quantitative skills, and teamwork skills by completing assignments pertaining to the above listed learning outcomes.

**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](mailto: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 (Note: some students feel that viewing these videos does not help much for this course), which are uploaded at the "Lecture Videos" folder 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 available at Textbook Materials folder in Blackboard (especially the chapter-end online quizzes; though they will not be directly counted in the course grade. Also note these exercises will **NOT** be graded, and

ignore the note of late submission for these exercises after you hit the submission), 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, and each Exam will ONLY be released (to appear in your Blackboard) within its testing window (the start and end dates of each Exam are listed in the Course Schedule below). You will have 70 minutes for an exam with 60 questions; each question is worthy of 1 point for a total of 60 points. 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). 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".

At the beginning of semester when you are reading the syllabus, set up an effective reminder system (cell phone, calendar, note on refrigerator, etc.) about the testing window of all 5 Exams.

Late-take of Exams: After 4-day testing window, the Exam will still appear in your Blackboard for 5 more days for you to take and submit, with a Late and Time Stamp marked on your submission. For each late day, 10 points will be deducted. For example, if you take the Exam within the 2<sup>nd</sup> day of original expiration date, you can still earn up to 40 points ( $60 - 2 \times 10$ ).

To summarize, the Exam will appear in your Blackboard at 9 am of the start date, mark "late" for submission done after 9 am 4 days later, and disappear at 9 am 9 days after the start date.

If you have legitimate reasons (sickness during all of 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. Otherwise, a retake requested will NOT commonly granted as the Exam is opened for 4 days to fit your schedule.

**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.

**Lab component of the course:** In this 3-unit course, there is a required lab component (GEOL 1301 Section 145) to meet 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.

### **Signature Assignment and Other Activities (to be Completed in Lab):**

#### *Discovering plate boundaries:*

In this exercise, students will acquire knowledge about the locations of the Earth's tectonic plates, the processes associated with plate boundaries, and the classification of plate boundaries by observing, describing, and categorizing data. Students will randomly be assigned a tectonic plate as well as a geoscientific specialty. They will assemble in their specialty group and their plate group independently and develop plate boundary classification schemes based on their observations. Each group will present their

findings to the other groups. The maps submitted, the oral presentation, as well as a written summary will all be graded for this exercise.

This activity includes all of the required core objectives: critical thinking (through inquiry, analysis and synthesis of data), communication skills (through visual, oral, and written presentation), empirical and quantitative skills (through assembling and categorizing data), and teamwork (through the participation in two different working groups).

#### *Other Exercises:*

Additional lab exercises will be assigned on the topics of mineral and rock classification, geologic time, topographic and geologic maps as well as glaciers and climate, which address the core objectives of critical thinking skills and empirical and quantitative skills.

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 (cwinguth@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](http://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.

**Note:** for some students who really need to commute a long distance to just come to UTA to participate in lab activities, web-based lab exercises can be offered; you will need to contact the course instructor for approval. In this case, you continue to register your lab section without showing up. The course instructor will assign a lab score at the end of class, even though you will have zero from lab TA. **Do let TA** (and Dr. Cornelia Winguth) be aware that you have my approval, so they will not wonder about no-show of you to the lab.

**Please remember** that physically attending the lab component (e.g., to touch and examine the specimen and participate in group activities) is better for your learning.

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. 17, 19	The Earth System (Ch. 1)	Chapter 1 [ video 1T (recorded on 1/15/13); video 1R (1/17/13)]
2	Jan. 24, 26	Plate Tectonic System (Ch. 2)	Chapter 2 [video 2T (1/22/13); video 2R (1/24/13)]
3	Jan. 31, Feb. 2	Earth Materials (Ch. 3)	Chapter 3 [video 3T (1/29/13); video 3R (1/31/13)]
	<b>Feb. 3-7</b>	<b>Exam #1</b>	<b>Ch. 1, 2, 3</b>
4	Feb. 7, 9	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. 14, 16	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. 21, 23	Deformation (Ch. 7); watch AGI video "Building the Planet" yourself	Chapter 7 [video 6T (2/19/13)]; video 6R (no video; 2/21/13)

	<b>Feb. 24-28</b>	<b>Exam #2</b>	<b>Ch. 4, 5, 7</b>
7	Feb. 28, Mar. 2	Clocks in Rocks: Geologic Time (Ch. 8); Review	Chapter 8 [video 7T (2/26/13)]; Review [video 7R (2/28/13)]
8	Mar. 7, 9	Metamorphism & Metamorphic Rocks (Ch. 6)	video 8T (no video because of exam, 3/5/13); Chapter 6 [video 8R (3/7/13)]
<b>9</b>	<b>Mar. 14, 16</b>	<b>Spring Break (no class)</b>	
10	Mar. 21, 23	Geobiology (Ch. 11)	Chapter 11 [video 9T(3/19/13); video 9R (3/21/13)]
	<b>Mar. 24-28</b>	<b>Exam #3</b>	<b>Ch. 6, 8, 11</b>
11	Mar. 28, 30	Earthquakes (Ch. 13); Review	Chapter 13 [video 10T (3/26/13)]; Review [video 10R (3/28/13)]
	<i>Apr. 3</i>	<i>Last Day to Drop the Course</i>	
12	Apr. 4, 6	Earth's Interior (Ch. 14)	video 11T (no video because of exam, 4/2/13); Chapter 14 [video 11R (4/4/13)]
13	Apr. 11, 13	Climate System (Ch. 15)	Chapter 15 [video 12T (4/9/13); video 12R (4/11/13)]
	<b>Apr. 14-18</b>	<b>Exam #4</b>	<b>Ch. 13, 14, 15</b>
14	Apr. 18, 20	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. 25, 27	Coastlines & Ocean Basins (Ch. 20)	No videos because of technical difficulties
16	May 2, 4	Human Impact (Ch. 23)	Chapter 23 [video 15T (4/30/13); video 15R (5/2/13)]
	<b>May 5-9</b>	<b>Exam #5</b>	<b>Ch. 17, 20, 23</b>

### Grading:

5 exams @ 60 points each = 300 points

Lab grade @ 100 points (25% of grade) = 100 points

**TOTAL = 400 points**

Your grade (in percentage) = (your total score / 400) × 100

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

**Extra credits are ONLY offered for students who have attempted all Exams, but still showing a failing grade (F); in other words, you will get D, if you take other Exams. No other options are offered for a student to raise an otherwise grade of C to B.**

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; see "Student Support Services," below.

**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.

**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://www.uta.edu/ses/fao>).

**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.

**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>.

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.

**Disabilities 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](http://www.uta.edu/disability) or call 817-272-3364.

Counseling and Psychological Services, (CAPS) [www.uta.edu/caps/](http://www.uta.edu/caps/) or call 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](http://www.uta.edu/disability) or by calling the Office for Students with Disabilities at (817) 272-3364.

**Non-Discrimination Policy:** 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](http://uta.edu/eos).

**Title IX:** The University of Texas at Arlington ("University") is committed to maintaining a learning and working environment that is free from discrimination based on sex in accordance with Title IX of the Higher Education Amendments of 1972 (Title IX), which prohibits discrimination on the basis of sex in educational programs or



activities; Title VII of the Civil Rights Act of 1964 (Title VII), which prohibits sex discrimination in employment; and the Campus Sexual Violence Elimination Act (SaVE Act). Sexual misconduct is a form of sex discrimination and will not be tolerated. For information regarding Title IX, visit [www.uta.edu/titleIX](http://www.uta.edu/titleIX) or contact Ms. Jean Hood, Vice President and Title IX Coordinator at (817) 272-7091 or [jmhood@uta.edu](mailto:jmhood@uta.edu).

**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.

**Campus Carry:** Effective August 1, 2016, the Campus Carry law (Senate Bill 11) allows those licensed individuals to carry a concealed handgun in buildings on public university campuses, except in locations the University establishes as prohibited. Under the new law, openly carrying handguns is not allowed on college campuses. For more information, visit <http://www.uta.edu/news/info/campus-carry/>.

**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.

**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>.

**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](mailto:resources@uta.edu), or view the information at [www.uta.edu/resources](http://www.uta.edu/resources).

**The English Writing Center (411LIBR):** [Optional.] Hours are 9 am to 8 pm Mondays-Thursdays, 9 am to 3 pm Fridays and Noon to 5 pm Saturdays and Sundays. Walk In *Quick Hits* sessions during all open hours Mon-

Thurs. Register and make appointments online at <http://uta.mywconline.com>. Classroom Visits, Workshops, and advanced services for graduate students and faculty are also available. Please see [www.uta.edu/owl](http://www.uta.edu/owl) for detailed information.

### 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>

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