

# **GEOL 1301 – Section 002 EARTH SYSTEMS**

**Fall 2017**

Instructor: Dr. Cornelia Winguth

MoWe 10:00– 10:50 a.m., Geosciences 100

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

**Textbook: Launchpad with Understanding Earth**, by J. Grotzinger and T. Jordan, 7<sup>th</sup> Edition, W.H. Freeman and Company; ISBN13: 978-1464138744

To register for the course go to:

**<http://www.macmillanhighered.com/launchpad/understandingearth7e/5731290>**

**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.

**Office Hours:** Monday/Wednesday 12-1 p.m. or by appointment, Geosciences 233A

**Email:** cwinguth@uta.edu

**Phone:** 817-272 0366

**Faculty Profile:** <https://mentis.uta.edu/explore/profile/cornelia-winguth>

**Course Material Available via Blackboard** (<http://elearn.uta.edu/>, login with your NetID and password)

## **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.

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### **Course Policies and Grading**

#### **Exams:**

Exams will be multiple choice, “fill-in-the-blank”, and some short answer questions. Exams must be taken at the scheduled time. Make-up exams only in case of illness or family emergency with supporting documentation. Students who do not take an exam receive zero points as a grade on that exam.

**No use of cell phones or other electronic devices during exams.**

#### **Grading and Grade Calculation:**

|                 |                      |                          |
|-----------------|----------------------|--------------------------|
| <u>Grading:</u> | Lab Portion:         | 25% of course            |
|                 | Lecture Portion:     | 75% of course            |
|                 | Lecture Portion:     |                          |
|                 | Homework (Launchpad) | 10% of course            |
|                 | Exams                | 45% of course (15% each) |
|                 | Final Exam           | 20% of course            |

#### Final grade calculation:

$0.25 \times \text{lab} + 0.1 \times \text{homework} + 0.45 \times \text{exams} + 0.2 \times \text{final exam}$

#### **Homework:**

Homework assignments will be administered through Launchpad. Due dates will be announced in class and on Blackboard.

#### **Attendance:**

At The University of Texas at Arlington, taking attendance is not required. Rather, each faculty member is free to develop his or her own methods of evaluating students' academic performance, which includes establishing course-specific policies on attendance. As the instructor of this section, I strongly recommend attendance and will count it as extra credit.

#### **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://wwwb.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). Only those students who have officially documented a need for an accommodation will have their request honored. 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 calling 817-272-3364. 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).

**Counseling and Psychological Services (CAPS):**

[www.uta.edu/caps/](http://www.uta.edu/caps/) or calling 817-272-3671 is available to all students to help increase their understanding of personal issues, address mental and behavioral health problems and make positive changes in their lives.

**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 Policy:**

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:**

Academic dishonesty (such as cheating, plagiarism, taking an exam for another person, etc.) will not be tolerated in any form and will be disciplined in accordance with University regulations and procedures. 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.*

UT Arlington faculty members may employ the Honor Code in their courses by 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. Additional information is available at <https://www.uta.edu/conduct/>.

**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>

### **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/>.

### **Student Feedback Survey:**

At the end of each term, students enrolled in classes 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>.

### **Final Review Week:**

A period of five class days prior to the first day of final examinations 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. 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 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).

### **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. One exit is located in the middle of the lecture hall (to the left), and two exits are located to the left and right of the lecture hall main entrance. 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.

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| <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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### Class Schedule

| Sessions                         | Topics*                      | Textbook Chapters |
|----------------------------------|------------------------------|-------------------|
| Aug. 28                          | Introduction<br>Earth System | 1                 |
| Aug. 30                          | Minerals                     | 3                 |
| Sept. 6                          | Igneous Rocks                | 4                 |
| Sept. 11                         | Sedimentary Rocks            | 5                 |
| Sept. 13                         | Metamorphic Rocks            | 6                 |
| <b>Sept. 18</b>                  | <b>Exam 1</b>                |                   |
| Sept. 20                         | Plate Tectonics              | 2                 |
| Sept. 25                         | Plate Tectonics              | 2                 |
| Sept. 27                         | Deformation                  | 7                 |
| Oct. 2                           | Clocks in Rocks              | 8                 |
| Oct. 4                           | Clocks in Rocks              | 8                 |
| Oct. 9                           | History of the Continents    | 10                |
| Oct. 11                          | Volcanoes                    | 12                |
| <b>Oct. 16</b>                   | <b>Exam 2</b>                |                   |
| Oct. 18                          | Earthquakes                  | 13                |
| Oct. 23                          | Earth's Interior             | 14                |
| Oct. 25                          | Climate System               | 15                |
| Oct. 30                          | Climate System               | 15                |
| Nov. 1                           | Weathering                   | 16                |
| Nov. 6                           | Hydrologic Cycle             | 17                |
| Nov. 8                           | Stream Transport             | 18                |
| <b>Nov. 13</b>                   | <b>Exam 3</b>                |                   |
| Nov. 15                          | Winds and Deserts            | 19                |
| Nov. 20                          | Coastlines and Ocean Basins  | 20                |
| Nov. 22                          | Glaciers                     | 21                |
| Nov. 27                          | Human Impact                 | 23                |
| Nov. 29                          | Human Impact                 | 23                |
| Dec. 4                           | Review                       |                   |
| Dec. 6                           | Review                       |                   |
| <b>Dec. 11,<br/>8:00-10:30am</b> | <b>FINAL EXAM</b>            |                   |

\* Schedule of topics is tentative.