Earth Processes

Last Updated: Thu, 07/31/2025

Course prefix: EAS

Course number: 2600

Section: A

CRN (you may add up to five):
81176

Instructor First Name: Samer

Instructor Last Name: Naif

Semester: Fall

Academic year: 2025

Course description:

This class will familiarize students with fundamental principles of Earth sciences and will show how these principles apply to myriad practical and societal issues that impact our lives. Topics covered will illustrate the interrelationships between plate tectonics and Earth's surface processes, geologic structures, natural resources and natural hazards. By completing this course, students will have the ability to infer much about the landscapes we encounter daily.

Course learning outcomes:

- Develop a qualitative understanding of plate tectonics and its driving forces
- Describe Earth's primary constitutive minerals and rocks, how they are formed, and their physical properties
- Distinguish Earth's internal structure and the chemical and physical mechanisms that alter and deform rocks
- Define and apply stratigraphic principles to reconstruct geologic history
- Determine the forces responsible for shaping Earth's landscapes

Required course materials:

Understanding Earth by Grotzinger and Jordan (8th Edition) ISBN # 978-1319055325

Lectures will closely follow the textbook. Previous students have noted that the 6th and 7th editions of this book cover most everything you need. The chapters in the earlier editions are in a different order and may have different titles.

Grading policy:

Labs – 25%

Lecture-based quizzes – 12%:

Written reports – 15%

Attendance (in-class polls) – 3%

Exams – 45%

Letter grade: A ≥ 90%; B = 80–89%; C = 70–79%; D = 60–69%; F <60%

Satisfactory/Unsatisfactory: S ≥ 70%.

There will be six quizzes assigned outside of class time. Each quiz is 15–20 minutes and will be administered online through Canvas. There will be three midterm exams and one final exam administered during class time. All exams must be taken in the classroom and students must present their GT ID card to log their attendance for each exam.

Attendance policy:

Attending lectures is required. Lectures will not be recorded, but lecture slides will be posted the morning of class. In-class polls will be used to log attendance.

Academic honesty/integrity statement:

Students are expected to maintain the highest standards of academic integrity. All work submitted must be original and properly cited. Plagiarism, cheating, or any form of academic dishonesty will result in immediate consequences as outlined in the university's academic integrity policy.

Core IMPACTS statement(s) (if applicable):

This is a Core IMPACTS course that is part of the STEM area.

Core IMPACTS refers to the core curriculum, which provides students with essential knowledge in foundational academic areas. This course will help students master course content, and support students’ broad academic and career goals.

This course should direct students toward a broad Orienting Question:

- How do I ask scientific questions or use data, mathematics, or technology to understand the universe?

Completion of this course should enable students to meet the following Learning Outcome:

- Students will use the scientific method and laboratory procedures or mathematical and computational methods to analyze data, solve problems, and explain natural phenomena.

Course content, activities and exercises in this course should help students develop the following Career-Ready Competencies:

- Inquiry and Analysis
- Problem-Solving
- Teamwork