# EAS 2600 A

## Earth Processes

## Fall 2026

*Note: This is the plan we very much hope to follow. Adjustments to testing dates, number of exams, exam drop policies, homework, grading percentages etc. may be necessary to accommodate unforeseen circumstances.*

### 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.

### Expected 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

### Instructor

Dr. Samer Naif (snaif@eas.gatech.edu)

### Textbook

*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.

## Lab Materials

See the lab syllabus for information regarding the lab portion of this class. There is also a separate Canvas page for the lab sections. All handouts, quizzes, grading policies, grades, TA contact information and time slots are posted there.

## Grading Policy

| | |
|---|---|
| Labs | 25% |
| Lecture-based quizzes | 12% |
| Written reports | 15% |
| Attendance (polls) | 3% |
| Exams | 45% |

Letter grade

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

Satisfactory/Unsatisfactory: S ≥ 70%.

As a 2000 level class, mid-term grades of satisfactory or unsatisfactory must be reported. This report is typically due shortly after Exam #1. An Exam #1 score below 69.9 will receive a mid-term grade of unsatisfactory.

## Attendance Policy

Attending lectures in-person 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. Attend 20 lectures to receive full credit for the in-class polls.

## In-class Polls

We will use PointSolutions for question polling during the lectures in this course. The purpose is three-fold: to create engaging learning experiences by having everybody participate, to help both you and I understand how well you are learning the content, and to give students credit for attending lectures.

PointSolutions is free to students at Georgia Tech. The first thing you need to do is create your PointSolutions account, if you are new to the service, and register your account with the course. You can do this by accessing the course site in Canvas and selecting PointSolutions on the left menu bar. Then you can follow the instructions on the screen to complete the process.

To participate in the question polling, you may use the PointSolutions app or a web browser. The app is available for download at Google Play and the iOS App Store. If you

prefer using your browser, you may log on to student.turningtechnologies.com to participate. Please note that in either case, you will need to use your GT email to sign in. You will be prompted to the GT login page once you enter your email.

If you need any assistance with using PointSolutions, you may visit the PointSolutions support site, where you can chat with a support agent or create a support ticket. The local support email at Georgia Tech is clickers@gatech.edu.

## Lecture-based Quizzes

There will be six quizzes assigned outside of class time. Each quiz is 15–20 minutes and will be administered online through Canvas. The two lowest grades will be dropped. If for any reason you miss a quiz, it will be considered your dropped quiz.

## Exams

There will be three midterm exams and one final exam administered online through Canvas during class time. **The exam must be taken in the classroom and students must present their GT ID card** to log their attendance for the exam. The lowest grade of the four exams will be dropped. If for any reason you cannot take an exam, it will be considered your dropped exam. The final exam is comprehensive

## Course Topics and Lecture Order

We will cover on average around one chapter per one or two lectures. Lecture or lab order will be varied on occasion to accommodate current newsworthy events related to the content of the class or cancellations due to unforeseen events.

Lectures: (Timing, order, and specific topics may be changed)

**indicates chapter will be covered over two lectures*

- Introduction
- Plate tectonics* (Ch. 2)
- Minerals* (Ch. 3)
- Igneous Rocks* (Ch. 4)
- Metamorphic Rocks (Ch. 7)
- Volcanoes* (Ch. 5)
- Deformation* (Ch. 8)
- Earthquakes* (Ch. 10)
- Earth's Interior (Ch. 11)
- Sedimentary Rocks (Ch. 6)
- Surface Processes* (Ch. 16)
- Clocks in Rocks* (Ch. 9)
- Hydrologic Cycle* (Ch. 17)
- Stream Transport (Ch. 18)
- Glaciers (Ch. 15)

## Absences

If for any reason you cannot take an exam (illness, wedding, family obligations, music recital, job interview, etc.), it will be considered your "dropped" exam. In the rare event that you will be absent for an additional exam, or you have a GT documented official absence, you must obtain the instructor's approval at least *one week BEFORE* the scheduled date to make up the exam. To obtain permission, you must provide relevant documentation. Remember that you must ask for permission in advance in all but unanticipated emergency situations. Finally, in emergency situations (death in the family, illness requiring sudden hospitalization, etc.) you should go to the Dean of Students – the good folks there will assist you.

## Academic Integrity

It is expected that all students are aware of their individual responsibilities under the **Georgia Tech Academic Honor Code**, which **will be strictly adhered to** and is central to the tenets of this course. In particular, improperly obtaining and using written or verbal information in the preparation of an exam or lab exercise will not be tolerated. All assignments must be entirely your own work. If you are caught cheating on exams or labs, you will be turned in to the Dean of Students. The complete text of the Academic Honor Code is found at http://www.catalog.gatech.edu/policies/honor-code/ or https://catalog.gatech.edu/rules/18/.

Generative AI: You are welcome, even encouraged, to use large language models and generative AI (e.g., chatGPT) to assist with your learning in this course. Where I draw the line is if you use these tools to complete assignments or write your reports. That is plagiarism, which I take very seriously. Highly recommended, check out this link to download the USG Student Guide to GenAI Literacy. If you are not sure whether you are using these tools in an appropriate manner, ask me first! I am happy to discuss.

Sage Advice: For any introductory class such as this one, you will need to learn a lot of terminology. Thus, doing well on the quizzes and exams will require memorizing basic information. It is impossible to commit all the necessary material to memory the night before an exam. To be successful you will need to pace yourselves and study the material iteratively over time.

Student-Faculty Expectations: As members of the Georgia Tech community, we are committed to creating a learning environment in which all students feel safe and included. All members of this class are expected to contribute to a respectful, welcoming and inclusive environment for every other member of the class. Please see this http://catalog.gatech.edu/rules/22/ for some basic expectations that we should have of each other. We welcome and encourage your constructive feedback and/or suggestions for improvement.

## Accommodations for Students with Disabilities

If you are a student with learning needs that require special accommodation, contact the Office of Disability Services at http://disabilityservices.gatech.edu or by phone at (404) 894-2563 as soon as possible, to make an appointment to discuss your special needs and to obtain an accommodations letter. Please also e-mail the instructor as soon as possible to discuss your learning needs.

## Student Resources and Well Being

Georgia Tech can be very stressful at times. Fortunately, Georgia Tech has organized resources related to Well Being which can be accessed here. Additional resources are compiled below.

Academic Support

- Center for Academic Success
  - 1-to-1 tutoring
  - Peer-Led Undergraduate Study (PLUS)
  - Drop-In Tutoring

- OMED Educational Services - Group study sessions and tutoring programs
- Communication Center - Individualized help with writing and multimedia projects
- Academic Coaching
- Find Your Advisor for your major

Personal Support

Georgia Tech Resources

- Office of the Dean of Students | **404-894-6367**
- Counseling Center | **404-894-2575** | Smithgall Student Services Building 2nd floor
  - Services include short-term individual counseling, group counseling, couples counseling, testing and assessment, referral services, and crisis intervention.
  - *Students in crisis may walk in during business hours (8am-5pm, Monday through Friday) or contact the counselor on call after hours at **404-894-2204**.*
- Stamps Health Services | **404-894-1420**
- OMED Educational Services | **404-894-3959**
- Women's Resource Center | **404-385-0230**
- LGBTQIA Resource Center | **404 385 4780**
- Veteran's Resource Center | **404-385-2067**
- Georgia Tech Police | **404-894-2500**

National Resources

- The National Suicide Prevention Lifeline | **1-800-273-8255**
  - Free and confidential support 24/7 to those in suicidal or emotional distress

- The Trevor Project
    - Crisis intervention and suicide prevention support to members of the LGBTQ+ community and their friends
    - Telephone | **1-866-488-7386** | 24 hours a day, 7 days a week
    - Online chat | 24 hours a day, 7 days a week
    - Text message | Text "START" to **687687** | 24hrs day, 7 days a week

## Core IMPACTS

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