CEE/EAS 6751 Physical Properties and Rheology of Rocks

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Schedule and Location:
Lecture: T&Th 8:25-9:15am (Skiles 269)
Lab: F 8:00am - 10:45pm (TBA)

Course Objectives: The course is a quantitative introduction to the physical properties and rheology of rocks and their importance to various geophysical and engineering applications. The course treats specific subjects such as stresses in the Earth’s crust, classification of rocks, deformability and strength of intact rocks, rheological models and failure criteria of intact rocks, flow properties, properties characterizing hydromechanical coupled behaviors, rock mass behaviors, thermal/electric/magnetic properties of rocks, etc. The course includes laboratory sessions.

Textbook: A collection of handouts/notes and references will be used in this class.

Recommended References:

Grading: Homework 20%
Lab Report 20%
Quizzes 10%
Midterm Exam 20%
Final Project and Presentation 30%

\[ A \geq 90\% > B \geq 80\% > C \geq 70\% > D \geq 60\% > F \]

Office Hours: T&Th 9:30 – 10:30am or by appointment

Academic Honor Code
Full compliance with the GT Academic Honor Code (www.honor.gatech.edu) is expected. You are allowed (and encouraged) to work together with other students on homework, but you must write up and turn in your own solutions. For assignments using computer-generated outputs, it is NEVER appropriate for different students to turn in copies of the same printout. Please list any people with
whom you studied together for your assignment. Quizzes will be open book and given outside of the class period. Mid-term exam will be given in person during the lecture hour and closed book. But you will be allowed to bring one page/side of notes to the exam. For any questions involving these or any other Academic Honor Code issues, please consult us or www.honor.gatech.edu.

**Attendance**
In person class participation is expected. I do not plan to record videos of this class.

**Electronic Usage Policy**
Please turn your cell phone off when you are in class. Please notify the instructor if you will use a tablet or laptop to take notes.

**Homework**
Homework is assigned about biweekly. All the assignments will be posted in Canvas. HW should be submitted electronically in Canvas.

**Laboratory Periods**
The laboratory sessions will cover rheology measurement, rock classification and identification, uniaxial compression tests and Brazilian tensile test.

**Information Related to Covid-19:**
Students are expected to be familiar with and abide by the Institute guidelines, information, and updates related to Covid-19. Find campus operational updates, Frequently Asked Questions, and details on campus surveillance testing and vaccine appointments on the [Tech Moving Forward site](https://www.gatech.edu/campus-life/health-safety/covid-19).

**Academic Accommodations for Students with Disabilities:**
The Office of Disability Services helps ensure that students with disabilities have equal access to all programs and activities offered at Georgia Institute of Technology. Reasonable accommodations are provided to self-identified students with disabilities who meet the academic and technical requisites for admission or participation in the program of study. Incoming students with apparent course work deficiencies due to a disability should contact the coordinator for Students with Disabilities at 404-894-2563. Consideration may be given to the substitution or modification of certain course requirements – within the limitations impose by the accreditation criteria for the degree program in which the student is enrolled – and to the extent that such substitutions or modifications of the course or curriculum do not detract from the quality of the educational experience implied by the course or curriculum designation. Such substitutions or modifications must be approved by the school chair, department head, or college dean and the Undergraduate Curriculum Committee and/or the Graduate Committee. Additional information can be obtained from:

Office of Disability Services
Smithgall Student Services Building
Suite 123
353 Ferst Drive
Atlanta, GA 30332-0285
404-894-2563
[http://disabilityservices.gatech.edu/](http://disabilityservices.gatech.edu/)