

EAS 22700 – B1000 Structural Geology, City College of New York
Spring Semester, 2016

Designation: EAS 22700 is a required course for EAS majors, and is one of the courses that can be taken to satisfy the science distribution requirement in the general education core curriculum.

Course Description: An introduction to the geometry and interpretation of common earth structures (e.g. faults and folds), stress analyses, generation and interpretation of geologic maps and cross sections, introductory tectonics, regional geology of New York, basic field observations and methods.

Course Structure: This course takes place Monday and Wednesday from 3:30-4:20pm. The lab is on Fridays 2:00-4:30pm. Both take place in MR-042

Textbook: Structural Geology of Rocks and Regions, 2nd edition by Davis & Reynolds. There is a 3rd edition now, so the second edition can be purchased at a significant discount. Supplemental readings will also be available on Blackboard.

Course Objectives: After taking this course, students will be able to:

1. Read and interpret geologic maps
2. Make and interpret cross sections in terms of geologic events
3. Recognize geologic structures such as joints, faults, folds
4. Plot and interpret geologic data on stereonet
5. Use theory regarding stress and strain to interpret the origin of rock structures
6. Use structural mapping equipment to collect geologic data in the field

Instructor: Prof. Steve Kidder, Earth and Atmospheric Sciences Office: MR-831; Phone: (212) 650-8431, email: skidder@ccny.cuny.edu

Office hours: Wednesdays 11:00-12:00 or by appointment. Also feel free to stop by any time.

Grading: There will be three exams which will be equally weighted at 15% each. The third exam will be given during finals week. No exam grades will be dropped. No makeups will be offered for missed exams except under compelling, documented circumstances.

The remainder of the grade will be calculated as follows:

Average of lab reports	25%
Field trip report	15%
Quizzes/homework	15%

Quizzes: There will be some quizzes from time to time covering key concepts. In class quizzes will not be graded but you will receive credit for taking the quiz. The quiz material is considered essential course material and will reappear on exams and labs. If you are not present for a quiz you will not receive points for the quiz. Note that quizzes often take place at the beginning of class, so BE ON TIME. There may also be graded quizzes on blackboard based on the readings.

Electronic Devices: Cell phones must be turned off during lectures. The instructor reserves the right to crush any phones that go off in class as a demonstration of deformation principles. During exams, all electronic devices, except your calculator, when needed, must be silenced and unused.

Laboratories: Labs begin the first week of the course with a review of selected material from EAS 106. Attendance in the labs is mandatory. If you must miss a lab for reasons beyond your control, inform the instructor and arrange to do the lab independently with the help of other students in the class. **If you miss more than 3 laboratory sessions you will receive a grade of WU.** When the weather improves, some labs will be held outdoors.

Field Trip: This course has a **REQUIRED** weekend field trip. Please make arrangements with work and family. Prof. Kidder will write a letter to your boss if necessary. The field trip will involve taking data on rock structures near Catskill, New York. The exact date of the field trip has not been set, but will probably be immediately before or after spring recess (either April 15-17 or May 6-8). The field trip will start at lab time on the Friday of the trip. We will drive to the field site in a CCNY bus or vans, take data on Saturday and on Sunday morning, and return to the college Sunday evening. If the weather is truly awful, the field trip may be postponed but usually this is not necessary. Total cost is expected to be between \$80 and \$140 depending on your choice of food and room accommodations. Data taken during the field trip will be used for later lab sessions. **Anyone who does not attend will receive a WU in the course.**

Graduate Credits: Graduate students are expected to master the course material and will assist the professor by helping answer questions and explain concepts during the laboratory sessions. They should familiarize themselves with laboratory material prior to the laboratory (material will be available in class Wednesday for the next lab). Graduate students will additionally envision and carry out a project, and present their results to the class in a presentation at the end of the class. The project must have some relevance to structural geology, but can otherwise be of any type (e.g. researching the structural geology of a place, making a clay model of some deformed feature, investigating structural aspects of their thesis project, etc.).

Getting Help: Questions during lecture are encouraged. If you are lost, please ask; you are probably not the only one. For more extensive help with course content, you are encouraged to see Prof. Kidder, either by appointment or during office hours.

Academic Integrity: The CCNY policy on academic integrity will be followed in this course. A document describing this policy can be found through the CCNY website: <http://www.cuny.cuny.edu/about/integrity.cfm>. All students must read the details regarding plagiarism and cheating in order to be familiar with the rules of the college. Cases where academic integrity is compromised will be prosecuted according to these rules.