Structural Geology Lab – GLY4400 lab   Spring 2011

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Office Hours: MTWF 10:40am - 11:45am or by appointment anytime

Purpose & Goal:
This lab is designed to develop field and problem solving skills and techniques that are applied to structural and tectonic geologic problems. You will learn how to make detailed structural observations and descriptions of rocks on multiple scales. You will also learn how to use tools (such as a Brunton compass, GPS unit, a stereonet, etc.) to interpret and construct geologic maps and cross-sections, take field measurements, and solve 3-D problems. This is the first time that you are expected to think about the geologic environment in 3-dimensions, and it is important that you grasp this idea.

Lab Text:
Basic Methods of Structural Geology by Marshak and Mitra, 1st edition, 1998 (M&M).
Supplementary text and handouts will be provided as necessary.

Materials Needed:
  – Brunton and GPS (these will be checked out from me)
  – Field Notebook
  – Protractor and Ruler
  – Graphing and Tracing or Velum Paper
  – Colored Pencils
  – Stereonet (we will make these together later in the course)

Grading: This lab accounts for 30% of your total Structure course grade, and is made up of:
Lab Exercises = 75%
Quizzes = 5%
Final = 20%

Attendance and Expectations:
Attendance is essential ... this is a lab. Please be on time, we will go out and do things around campus on certain days, so I will not be able to wait for you if you're tardy. Always plan on being in lab for the entire ~2 hours, and always bring the required materials. Labs are due before our next meeting, it is your responsibility to get completed assignments to me. Labs may be handed to me in person, in the box on my door, or in my mailbox, so long as I receive them on time. If you fail to do so it will be 5% off for the first day and 10% every day after (weekends count), and will not be accepted more than 1 week late. Please use pencil for your labs, straight edges for drawing lines, and protractors for angles.

Tell me in advance if you know you need to miss class. Stop by my office at least a day before, or you can send me an email with a legitimate reason why and how long you will be out for.
If you have any questions about a lab please feel free to come see me at office hours or anytime you catch me in my office.

Turn your phone ringers off during class!

Quizzes:
Quizzes will be given throughout the lab semester. Quizzes will be short and will be announced at least one week in advance. Quizzes will cover material taught in the lab portion, and will be specific to certain topics.

Final Lab Exam:
The lab final exam will be cumulative. It will be held during the last week of lab and will cover all aspects and tools used during the lab.

Academic Honesty:
You are responsible for following the university policy on academic honesty (found at www.dso.ufl.edu/sccr)   and failure to do so will result in a ZERO for the course.

Students with Disabilities:
Students are responsible for contacting the Disability Resource Center (found at www.dso.ufl.edu/drc) and obtaining the appropriate paperwork. The student should then contact the TA prior to the second lab session with the appropriate documentation so that accommodations can be made.

Lab Schedule (subject to change):

Jan 06	Brunton compasses and Topographic Maps intro (M&M Ch1)
Jan 13	Contour Mapping and 3 Point Problems (M&M Ch2,3)
Jan 20	GPS intro, Hawthorne Trail Project instructions
Jan 27	Stress and rock mechanics (M&M Ch10)
Feb 03	Strain analysis in 2-D (M&M Ch15)
Feb 10	Stereonets 1 (M&M Ch5)
Feb 17	Stereonets 2 (M&M Ch6) **(Cross-Section 1 Due)**
Feb 24	Stereonets 3 (M&M Ch8)
Mar 03	Folds and Maps (M&M Ch11)
Mar 10	Spring Break - **NO LAB!**
Mar 17	Faults and Maps (focal mechanisms) (M&M Ch11) **(Cross-Section 2 Due)**
Mar 24	Appalachian Geology overview and Field Trip Prep
Mar 25 - Mar 28	**Field Methods Field Trip**
Mar 31	Complex Geologic Maps and Metamorphic Terranes
Apr 07	Microscopic Structures and Kinematic Indicators **(Cross-Section 3 Due)**
Apr 14	Final Lab Practical Exam