Field Methods in the Earth Sciences
GEO 311
Fall 2014
Friday’s 1-4 p.m. or thereabouts
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Purpose
Geology differs from many branches of science in that field research is important. Although techniques for studying the Earth have become more sophisticated and laboratory research is critical to the success of many projects, the field provides our primary data. At the end of this course you will be competent at doing fieldwork in a variety of settings. You will improve your powers of observation, become familiar with making geologic maps and geologic cross sections, logging drill core, measuring stratigraphic sections, and conducting a geophysical survey. This course will focus on both traditional geologic fieldwork, as well as applied geological skills used in geotechnical fields. In this course you’ll learn how to use programs to manage and plot field data. We will produce digital maps and overview posters of the study sites. The skills and the savvy that you acquire in this course will be useful in more ways than you know.

The Plan

Week 1
Friday, Aug 29th
Introduction & Purpose, Messages from Space- GPS Making a Friend of the Brunton Compass

Week 2
Friday, Sept. 5th
North Anna Project- Trip #1

Week 3
Friday, Sept. 12th
NO CLASS Department Field Trip

Week 4
Friday, Sept. 19th
North Anna Project- Trip #2

Week 5
Friday-Saturday, Sept. 26- 27th
Piney River Project- Trip #1

Week 6
Friday, Oct. 3rd
Catching Up Indoors

Week 7
Friday, Oct. 10th
NO CLASS Beginning of Fall Break

Week 8
Friday, Oct. 17th
Catching Up Indoors

Week 9
Friday, Oct. 24th
North Anna Project- Trip #3

Week 10
Saturday, Nov. 1st
Piney River Project- Trip #2

Week 11
Saturday, Nov. 8th
Piney River Project- Trip #3

Week 12
Friday, Nov. 14th
Catching Up Indoors
Week 13  
Friday, Nov. 21st  
Petersburg Field Trip

Week 14  
NO CLASS  
Thanksgiving Break

Week 15  
Friday, Dec. 5th  
POSTER SESSION- Project Wrap Up

Grading
1st Lab  
5%  
North Anna Project  
20%  
Group Poster  
20%
Field Notes & Maps  
25%  
Piney River Project  
20%  
Attitude  
5%
Petersburg Trip  
5%

Readings
There is no assigned textbook for this course; however there will be a number of reading assignments. Reading assignments will be posted to Blackboard. Assignments should be read for comprehension and before the trips in which the material will be discussed.

Required Supplies
field book  
mechanical pencils  
fine-tipped permanent ink pens  
belts
ruler  
colored pencils (12 pk)  
field pack (w/ safety kit)  
warm-clothes
protractor  
small pencil sharpener  
sturdy walking shoes  
raingear

Other Very Helpful Equipment
10x hand lens  
rock hammer (hardrock hammer)