

Syllabus (GLY4750L)
Field Methods Fall 2015

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Office Hours: TBA

Text: None required, materials will be handed out in class.

Field Trip: Sept 25-29 (Friday through Tuesday). See me if you require a note for your other classes (Note: All Geology course instructors are aware of the trip).

Supplies Required:

Adobe Illustrator or CorelDraw (computer graphic arts packages). Metal ruler, geology field notebook (yellow rite-in-the-rain suggested), protractor (full circle works better than semi-circle), colored pencils, brunton compass (on loan from department), GPS (on loan from department), calculator, tracing paper.

Grading:

Quizzes (25%) as follows:

- (1) Weekly quiz on the Geological Time Scale (5% of total so each quiz is relatively small amount of your grade)
- (2) Quiz on rock identification and description (5%)
- (3) Quiz on topographic maps (5%)
- (4) Quiz on geological maps (5%)
- (5) Quiz on stereonet (5%)

Projects and Assignments (60%): Late projects lose 15% of their value each day they are late

Final Examination (15%)

Weekly Schedule

Week 1 (August 24; Meert gone, Katusin teach): Introduction to the course. Review supply requirements. Begin on topographic maps and discuss scale, legend information, latitude, longitude, magnetic north versus true north, contour rules, rule of V's, vertical exaggeration, elevation cross-sections.

Week2 (August 31): More work with topographic maps. Production of Index maps, additional elevation cross-sections. Measure pace outdoors, hand out Brunton and GPS. Introduction to the Brunton compass and how to use for sighting and back-sighting. Outdoor Brunton and pace exercise. Quiz on geological time scale.

Week 3 (Sept 7): Labor Day no class.

Week 4 (Sept 14): Brunton work with inclinometer. Meaning of strike and dip in geology. Measurement of strike and dip exercise, measurement of height using inclinometer and pace. Section measurement using Jacobs staff. Quiz on topographic maps and geological time scale.

Week 5 (Sept 21): Simple geological maps with monoclonal dips and the use of structural contours in geology. The difference between and structural contour and a topographic contour. In-class exercise on structural contours. Quiz on geological time scale. Field Methods trip introduction and plans. Interlude on the field notebook and rock/mineral descriptions.

Week 6 (Sept 28): Field Trip

Week 7 (Oct 5): Review of Bowen's Reaction Series and Goldich stability series. Review of common sedimentary structures encountered in the field. Quiz on geological time scale. Continuation of Geological maps and scale. Simple geological histories.

Week 8 (Oct 12): Geological maps. More complexity including the use of structural contours to complete a geological map. More in class work on these maps. Stereonet basics including a description of the net and how to plot lines, planes and poles on the stereonet. Homework exercises for the stereonet. (field trip 11-15).

Week 9 (Oct 19: Meert gone; Katusin teach): Geological maps continued.

Week 10 (Oct 26): Handout of more complex geological maps to work on. Advanced stereonet work

Week 11 (Nov 2): GSA Meeting No Class.

Week 12 (Nov 9): Last structural contour map. Correlation of sedimentary sequences and construction of stratigraphic sections. Practice correlation between Grand Canyon, Zion Canyon and Bryce Canyon. Quiz on stereonets and geological time scale.

Week 13 (Nov 16): Use of real geological maps to produce cross-sections and write up geological histories of the region. Go over geological map symbols and how to use them. In class work on cross-section and geological history write-ups. Quiz on geological time scale.

Week 14: (Nov 23): More complex geological maps, cross-sections and geological histories. Plotting structural data from the maps onto stereonets. In class exercises. Report writing and summary of findings. Use of a real geological map and representative samples to prepare a "Report of Geological Investigations". Report due final week of classes.

Week 15: (Nov 30; Meert gone; Katusin teach). Final lab exam, stereonet, geological maps and cross-sections, rock identification.

Week 16: (Dec 6) All final projects due.

Academic Honesty

We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honesty and integrity. On all work submitted for credit by students at the university, the following pledge is either required or implied:

"On my honor, I have neither given nor received unauthorized aid in doing this assignment."

Grading Scale (based on 100%)

A: >92%

A-: 89-91.9%

B+: 86-88.9%

B: 83-85.9%

B-: 79-82.9%

C+: 76-78.9%

C: 73-75.9%

C-: 69-72.9%

D+: 66-68.9%

D: 63-65.9%

D-: 59-62.9%

F: <59%