

GLY4750L-08B7(14011) - Geologic Field Method

Syllabus (GLY4750L)

Field Methods Fall 2020

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Office Hours: TBA

NOTE: This course is intended ONLY for BS majors attending field camp in 2021. It is not suitable for BA majors or others outside the department.

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

Virtual Field Exercise: There will be a two week virtual field mapping exercise in November.

Covid-19 Notices:

1. This course is being offered as a hybrid class. Each week, one third of you will meet on campus to work on field skills. Most of our work will be outside, but in case of rain, the classroom notifications below are to be followed.

- You are required to wear approved face coverings at all times during class and within buildings. Following and enforcing these policies and requirements are all of our responsibility. Failure to do so will lead to a report to the Office of Student Conduct and Conflict Resolution.
- This course has been assigned a physical classroom with enough capacity to maintain physical distancing (6 feet between individuals) requirements. Please utilize designated seats and maintain appropriate spacing between students. Please do not move desks or stations.
- Sanitizing supplies are available in the classroom if you wish to wipe down your desks prior to sitting down and at the end of the class.
- Follow your instructor's guidance on how to enter and exit the classroom. Practice physical distancing to the extent possible when entering and exiting the classroom.
- If you are experiencing COVID-19 symptoms ([Click here for guidance from the CDC on](#)

[symptoms of coronavirus \(https://www.cdc.gov/coronavirus/2019-ncov/symptoms-testing/symptoms.html\)](https://www.cdc.gov/coronavirus/2019-ncov/symptoms-testing/symptoms.html)), please use the UF Health screening system and follow the instructions on whether you are able to attend class. **[Click here for UF Health guidance on what to do if you have been exposed to or are experiencing Covid-19 symptoms \(https://coronavirus.ufhealth.org/screen-test-protect/covid-19-exposure-and-symptoms-who-do-i-call-if/\)](https://coronavirus.ufhealth.org/screen-test-protect/covid-19-exposure-and-symptoms-who-do-i-call-if/)**.

- Course materials will be provided to you with an excused absence, and you will be given a reasonable amount of time to make up work. **[Find more information in the university attendance policies \(https://catalog.ufl.edu/UGRD/academic-regulations/attendance-policies/\)](https://catalog.ufl.edu/UGRD/academic-regulations/attendance-policies/)**.

2. Our class sessions may be audio-visually recorded for students in the class to refer back and for enrolled students who are unable to attend live. Students who participate with their camera engaged or utilize a profile image are agreeing to have their video or image recorded. If you are unwilling to consent to have your profile or video image recorded, be sure to keep your camera off and do not use a profile image. Likewise, students who un-mute during class and participate verbally are agreeing to have their voices recorded. If you are not willing to consent to have your voice recorded during class, you will need to keep your mute button activated and communicate exclusively using the "chat" feature, which allows students to type questions and comments live. The chat will not be recorded or shared. As in all courses, unauthorized recording and unauthorized sharing of recorded materials is prohibited.

Supplies Required:

Adobe Illustrator or CorelDraw (computer graphic arts packages, for details click [here](#)). **[Metal ruler \(https://media.officedepot.com/image/upload/b_rgb:FFFFFF,c_pad,dpr_1.0,f_auto,h_666,q_auto,w_500/c_pad,h_666,w_500/v1/products/323116/323116_p?pgw=1\)](https://media.officedepot.com/image/upload/b_rgb:FFFFFF,c_pad,dpr_1.0,f_auto,h_666,q_auto,w_500/c_pad,h_666,w_500/v1/products/323116/323116_p?pgw=1)**, **[geology field notebook \(https://encrypted-tbn0.gstatic.com/images?q=tbn%3AANd9GcQZ-mPeIEKn8SEfahJbrSq60w0allyGqbEbxsnOUyfno0O8j4fkaBxp2yP0PA&usqp=CAC\)](https://encrypted-tbn0.gstatic.com/images?q=tbn%3AANd9GcQZ-mPeIEKn8SEfahJbrSq60w0allyGqbEbxsnOUyfno0O8j4fkaBxp2yP0PA&usqp=CAC)** (yellow rite-in-the-rain suggested), protractor (**[full circle \(https://imgprod65.hobbylobby.com/sys-master/migrated/h9a/hcc/h00/8983059922974/216085_1%5B5%5D.jpg\)](https://imgprod65.hobbylobby.com/sys-master/migrated/h9a/hcc/h00/8983059922974/216085_1%5B5%5D.jpg)** works better than **[semi-circle \(https://orcforensics.com/wp-content/uploads/2018/07/Clear-Semi-Circle-Protractor-600x600.jpg\)](https://orcforensics.com/wp-content/uploads/2018/07/Clear-Semi-Circle-Protractor-600x600.jpg)**), colored pencils, brunton compass (on loan from department), GPS (on loan from department), calculator, tracing paper.

Grading:

See Canvas for Point Totals of each exercise and quizzes.

There will be quizzes on the geological time scale. The time scale is available in the files portion of canvas. These time scale quizzes will account for 5% of your grade (combined score on all quizzes, 70 points total). Each week, you will be required to know more of the time scale. As we say in geology, "No dates, no rates".

Mid-Term Exam=100 points

Final Exam- 150 points

*Note: The total number of points available in this class is **1247 points**. Thus, the two exams constitute about 20% of your total grade.*

Rubrics- How will I be graded?

There are basically 3 types of exercises/exams/quizzes in this course. The most complex grading comes from your map/cross-section work. In order to help you understand what we will be looking for. I have provided a detailed grading rubric in the first mapping File folder ([Assignment #4](#)). It is also very important for you to read/note the feedback we provide. That feedback will help you in subsequent assignments. Neatness is a must. I have provided examples in the assignment files for each type of exercise.

Scale/3-Point and Other Exercises: These are mostly quantitative exercises that require you to calculate the correct answers. In order to get full credit, you should show your work. For example, when converting units (meters to miles), show the equations with units. If the problem requires multiple steps to reach the correct answer, provide each step in a clear and logical manner ([see example](#)). For 3 point problems, follow the methods outlined in lecture (lectures will be posted online).

Weekly Schedule

Note: You will be assigned to Group 1, 2 or 3. Every third week, your group will meet with the instructor or the TA during normal class time to work on field techniques. Lectures will be recorded for those groups. Please note: All lectures will also be captioned. In addition, I will have some mini-lectures with 'how-to' explanations available to review as you are doing your homework.

Week 1 (September 2): Introduction to the course. *Introduction to each other.* 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. Scale exercises.

Week2 (September 9): [Group 1 on campus-Brunton and Pace work] More work with topographic maps. Production of Index maps, additional elevation cross-sections. Discussion on data analysis in geosciences.

Week 3 (Sept 16): [Group 2 on campus-Brunton and pace work] Meaning of strike and dip in geology. Solving 3-point problems to determine strike and dip. Quiz on geological time scale.

Week 4 (Sept 23): [Group 3 on campus-Brunton and pace work] 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. Interlude on the field

notebook and rock/mineral descriptions.

Week 5 (Sept 30): [Group 2 on campus-Jacobs staff] More work with simple geological maps and geological data analysis using excel.

Week 6 (Oct. 7): [Group 3 on campus-Jacobs staff] 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 7 (Oct 14): [Group 1 on campus-Jacobs Staff]: Stereonet basics including a description of the net and how to plot lines, planes and poles on the stereonet. Homework exercises for the stereonet.

Week 8 (Oct 21): [No on campus work] Exam 1- Topo maps, scale, geological time scale, 3 point problems, structural contours.

Week 9 (Oct 25): [Group 3 on campus-GPS and observation exercise] Handout of more complex geological maps (synforms and antiforms).

Week 10 (Nov 4): [Group 1 on campus-GPS and observation exercise]. Advanced stereonet work and introduction to Google Earth Pro (download Google Earth Pro before this lecture).

Week 11 (Nov 11): [Group 2 on campus-GPS and observation exercise] San Ysidro, NM google Earth Project. Quiz on stereonet and geological time scale.

Week 12 (Nov 18): Continuation of Google Earth Pro San Ysidro Project. Quiz on stereonet and geological time scale.

Week 14: (Nov 25): Thanksgiving, No class.

Week 15 (Dec 2): FINAL EXAM PART 1. Geological Map and Cross Section

Week 16 (Dec 9): FINAL EXAM PART 2. Scales, Topo Sheet, Time Scale, Stereonets, 3 point problems

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."

Please note: This is especially relevant when dealing with online/hybrid course. As we work together to learn in these unique circumstances, it is important that you do your own work. This course is preparing you to act as a licensed professional geologist. As a PG, you will be legally responsible for the work you do and may be required to testify in court that the work is yours and yours alone. This includes giving proper credit to any research/work/product that is not your own.

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%

Accommodations: Please let me know at the beginning of the semester if you have any special accommodations required for this class. We will make sure to assist you. You should also contact UF's DRC for special accommodations. Just click on this [link \(https://disability.ufl.edu/\)](https://disability.ufl.edu/).

Final Word: This course is to help prepare you to work as a professional geologist. The course is rigorous, time consuming and graded very thoroughly. We spend a lot of time grading assignments and commenting on your work. Please take the time to read our comments and avoid repeating the mistake. Because this is a prep course for the capstone, you must receive a grade of "C" or higher to be able to register for GLY4790 Summer Field Camp

Note: Netiquette For this online course

SAFETY

Remember that your password is the only thing protecting you from pranks or more serious harm.

- Don't share your password with anyone .
- Change your password if you think someone else might know it.
- Always log out when you are finished using the system.

GENERAL (for any course/professional communication)

When communicating online, you should always:

- Treat your instructor and classmates with respect in email or any other
- Always use your professors' proper title: or Prof., or if in doubt use Mr. or Ms.

- Unless specifically invited, don't refer to your instructor by first name
- Use clear and concise language
- Remember that all college level communication should have correct spelling and grammar (this includes discussion boards).
- Avoid slang terms such as "wassup?" and texting abbreviations such as "u" instead of "you."
- Use standard fonts such as Ariel, Calibri or Times new Roman and use a size 10 or 12 font
- Avoid using the caps lock feature AS IT CAN BE INTERPRETED AS YELLING
- Avoid the use of slang
- Be cautious when using humor or sarcasm as tone is sometimes lost in an email or discussion post and your message might be taken seriously or sound rude
- Be careful with personal information (both yours and other's).
- Do not send confidential information via e-mail.

Zoom Lectures

- Turn off your sound when someone else is speaking
- Do your best to have a quiet and arranged workspace. For this class, you will need a larger desk or table to do in class work.
- Please leave your camera on unless you need to leave the room for some important reason (fire, bathroom or other emergency). Zoom affords a certain privacy, but your instructor deserves your attention and respect.
- Avoid making goofy faces or remarks.
- If the instructor poses a question, get involved. Answer and ask questions just as you would in person.
- Be on time. Avoid using the private chat button or distracting others during the class.

Email Netiquette

When you send an email to your instructor, teaching assistant, or classmates, you should:

- Use a descriptive subject
- Be specific and brief
- Avoid attachments unless you are sure your recipients can open
- Avoid HTML in favor of plain
- Sign your message with your name and return e-mail
- Think before you send the e-mail to more than one Does everyone really need to see your message?
- Be sure you REALLY want everyone to receive your response when you click, "reply "
- Be sure that the message author intended for the information to be passed along before you click





the “forward”











Discussion Board Etiquette







When posting on the Discussion Board in your online class, you should:

- Make posts that are on topic and within the scope of the course material.
- Take your posts seriously and review and edit your posts before sending.
- Be as brief as possible while still making a thorough comment.
- Always give proper credit when referencing or quoting another source.
- Be sure to read all messages in a thread before replying.
- Don't repeat someone else's post without adding something of your own to it.
- Avoid short, generic replies such as, “I agree.” You should include why you agree or add to the previous point.
- Always be respectful of others' opinions even when they differ from your own.
- When you disagree with someone, you should express your differing opinion in a respectful, non-critical way.
- Do not make personal or insulting remarks.
- Be open-minded.

Course Summary:

Date	Details	
Tue Sep 1, 2020	 Syllabus quiz https://ufl.instructure.com/courses/404396/assignments/4303920	due by 11:59pm
Wed Sep 2, 2020	 Assignment #1 Topographic maps, scale and vertical exaggeration https://ufl.instructure.com/courses/404396/assignments/4303571	due by 11:59pm
	 Pre-Class Planning Assignment https://ufl.instructure.com/courses/404396/assignments/4318621	due by 11:59pm
Wed Sep 16, 2020	 Geological Time Scale Quiz #1 https://ufl.instructure.com/courses/404396/assignments/4305430	due by 3:20pm

Date	Details	
Wed Sep 23, 2020	 Bray California Topo Assignment #2 (https://ufl.instructure.com/courses/404396/assignments/4304455)	due by 11:59pm
Wed Sep 30, 2020	 Practical Exercise #1- Groups 1, 2 and 3 (https://ufl.instructure.com/courses/404396/assignments/4305412)	due by 11:59pm
Wed Sep 23, 2020	 Assignment # 3: 3 Point Problems (https://ufl.instructure.com/courses/404396/assignments/4308542)	due by 11:59pm
Wed Sep 30, 2020	 Assignment #4: Faults & Coal Seam Tracing (3 point Problem) (https://ufl.instructure.com/courses/404396/assignments/4309583)	due by 11:59pm
Wed Oct 7, 2020	 Geological Time Scale Quiz #2 (https://ufl.instructure.com/courses/404396/assignments/4310035)	due by 3:20pm
Wed Oct 7, 2020	 Assignment #5- Complete the Map, more work with structure contours and 3 point problems (https://ufl.instructure.com/courses/404396/assignments/4309744)	due by 11:59pm
Wed Oct 14, 2020	 Assignment #6- More Complexities Unconformities, faults and more (https://ufl.instructure.com/courses/404396/assignments/4309917)	due by 11:59pm
Wed Oct 21, 2020	 Exam 1 (https://ufl.instructure.com/courses/404396/assignments/4303917)	due by 5:15pm
Wed Oct 21, 2020	 Assignment #7- Introduction to Stereonets (https://ufl.instructure.com/courses/404396/assignments/4310031)	due by 11:59pm
Wed Oct 21, 2020	 Practical Exercise #2- Groups 1, 2 and 3 (https://ufl.instructure.com/courses/404396/assignments/4307999)	due by 11:59pm

Date	Details	
Wed Nov 4, 2020	 Assignment #8- Complex Structures Antiforms and Synforms (https://ufl.instructure.com/courses/404396/assignments/4310032)	due by 11:59pm
Wed Nov 11, 2020	 Assignment #9- Advanced Stereonet work and use of Computer Stereonet program (https://ufl.instructure.com/courses/404396/assignments/4310398)	due by 11:59pm
Wed Nov 18, 2020	 Stereonet and Geological Time Scale Quiz (https://ufl.instructure.com/courses/404396/assignments/4310489)	due by 3:50pm
Wed Dec 2, 2020	 Final Exam Part 1 (https://ufl.instructure.com/courses/404396/assignments/4303919)	due by 5:30pm
Wed Dec 2, 2020	 San Ysidro Map and Cross-Section (https://ufl.instructure.com/courses/404396/assignments/4310522)	due by 11:59pm
Wed Dec 9, 2020	 Final Exam Part 2- 3 point problems etc. (https://ufl.instructure.com/courses/404396/assignments/4310919)	due by 5:30pm

