

## Geology 110 | Physical Geology Laboratory | Fall 2012

**Instructor:** Kevin Miller  
**Office:** CSS3241  
**Office Hours:** Thursday 4-5pm  
**E-mail:** [kjmiller944@gmail.com](mailto:kjmiller944@gmail.com)  
**Class time:** 9am-12pm (section 0501) in GEOL 2106  
**Class website:** <http://www.geol.umd.edu/GEOL110>

Supplies you will need for the lab:

The text Laboratory Manual in Physical Geology (9<sup>th</sup> edition), a calculator that can do log functions and a pencil.

### CLASS GOALS

1. Have fun exploring the Earth's materials, structure, and evolution.
2. Physically experience and learn geology through interactive laboratory exercises.
3. Connect geologic concepts back to real world events that affect our daily lives.

### COURSE OVERVIEW

Geology is everywhere! It is the foundation for the ground we walk and live on, it controls the type of plants that grow, and even the locations of mountains, valleys, and rivers.

Have you ever wondered what the ground beneath your feet is made of? How to read a seismogram? How streams evolve over time? What the difference is between a rock and a mineral? What society uses the Earth's materials for? How to use topographic maps in hiking expeditions? How mountains are built? How geologic hazards are mitigated?

We will address these questions and more throughout the semester by completing interactive laboratory exercises. By the end of this course you will be able to 1) Identify common rocks and minerals, 2) Explain major topics in the Earth Sciences and their relationship to society. Topics include: rock and mineral identification, stream evolution, geologic time, structural geology, topographic map navigation, seismogram analysis, and geologic hazards.

## COURSE FORMAT

- **Quizzes:** With the exception of the first lab of the semester, each lab will begin with a brief quiz that will cover:
  - 1) material from last week's lab, and
  - 2) material from the preparatory reading for that week's lab exercise.
- **Introductory Information:** Following quiz collection, the TA will give a brief introduction to the day's lab exercise.
- **The Lab Exercise:** After the explanation is over, you will receive a handout that you will then complete, working with your lab partners. Working together in the lab is encouraged, but each student is responsible for their own work. Quizzes and tests must be completed independently – that is, no help *from* or help *to* anyone else. With the lab activities, however, you will benefit from interacting with your fellow students. The handout is due at the end of the lab period.
- **Clean-Up:** When you are finished, please clean up your area, and put away any materials that you have used. It is essential to leave the lab as clean as, or cleaner than, it was when you arrived.
- **Homework:** At the end of each lab session, you will be assigned reading that is to be completed before the next lab. The next week's quiz will draw heavily from this homework reading.
- **ELMS (Blackboard):** Lecture material, study guides, and additional resources are available on both the course website and ELMS and will be updated weekly. Check the discussion board to explore the geology in your life initiative!
- **Accessibility and Accommodations for Students with Disabilities:** If you have a documented disability, you should contact Disability Support Services 0126 Shoemaker Hall. Each semester students with documented disabilities should apply to DSS for accommodation request forms that you can provide to your instructors as proof of your eligibility for accommodations. The rules for eligibility and the types of accommodations a student may request can be reviewed on the DSS web site at [http://www.counseling.umd.edu/DSS/receiving\\_serv.html](http://www.counseling.umd.edu/DSS/receiving_serv.html). If you have a documented disability and wish to discuss academic accommodations, please contact your TA as soon as possible.
- **Religious Observances:** The University System of Maryland policy provides that students should not be penalized because of observances of their religious beliefs. Students shall be given an opportunity, whenever feasible, to make up within a reasonable time any academic assignment that is missed due to individual participation in religious observances. It is the responsibility of the student to inform the instructor of any intended absences for religious observances in advance. Notice should be provided as soon as possible **but no later than the end of the schedule adjustment period (by 4:30 pm on September 12, 2012)**.
- **Integrity:** The University of Maryland has a nationally recognized Code of Academic Integrity, administered by the Student Honor Council. This Code sets standards for

academic integrity at Maryland for all undergraduate and graduate students. As a student you are responsible for upholding these standards for this course. It is very important for you to be aware of the consequences of cheating, fabrication, facilitation, and plagiarism. For more information on the Code of Academic Integrity or the Student Honor Council, please visit <http://www.studenthonorcouncil.umd.edu/whatis.html>. The University of Maryland is one of a small number of universities with a student-administered Honors Code and an Honors Pledge, available on the web at <http://www.jpo.umd.edu/aca/honorpledge.html>. The code prohibits students from cheating on exams, plagiarizing papers, submitting the same paper for credit in two courses without authorization, buying papers, submitting fraudulent documents, and forging signatures. The University Senate encourages instructors to ask students to write the following signed statement on each examination or assignment: "I pledge on my honor that I have not given or received any unauthorized assistance on this examination (or assignment)."

- **Course Evaluations:** The system ([www.courseevalum.umd.edu](http://www.courseevalum.umd.edu)) will open for students to complete their Fall 2012 course evaluations near the end of the semester. You will be alerted about these dates and provided more information closer to that time, and students will be alerted via their official University e-mail account. Students who complete evaluations for all of their courses in the previous semester (excluding summer), can access the posted results via Testudo's CourseEvalUM Reporting link for any course on campus that has at least a 70% response rate. You can find more information, including periodic updates, at the [IRPA course evaluation website](#). The expectation is that all students will complete these. This is YOUR chance to anonymously evaluate this class: please use this opportunity!
- **Absences:** Lab attendance is imperative, as it is profoundly difficult to make up missed lab exercises or quizzes. In light of this and recognizing that extenuating circumstances requiring absence are sometimes unavoidable, our policy is automatically to drop your lowest lab exercise and quiz score. If you know that you are going to be absent more than once, please notify the instructor in advance. If this is impossible, contact the instructor as soon as possible afterwards. Absolutely no provision will be attempted for make-up work if you do not contact the instructor and **schedule** a makeup **within one week** of missing a lab. If logistically possible we will try to arrange make-ups for students whose absences resulted from legitimate extenuating circumstances, but we offer no guarantees. Students **must provide documentation** from university officials in order to make up a lab. Unfortunately there are no make-up quizzes -- therefore it is essential to be on time to the lab.
- **Cell Phones:** All cell phones, PDA's, iPhones, etc. are prohibited during your scheduled lab time. They must be turned off, put away and out of sight. This will be strictly enforced and no exceptions will be made.
- **Addition Information:** If you have additional questions or concerns as the semester progresses, please feel free to contact your instructor or the coordinating TA, Kevin Miller at [kjmiller944@gmail.com](mailto:kjmiller944@gmail.com).

## GRADING

- 50% weekly lab exercises (12 exercises – lowest score dropped)
- 30% quizzes (11 quizzes – lowest score dropped)
- 20% final examination
- 5% extra credit

Grade cut-offs

A+ = 100-96.66	B+ = 90-86.66	C+ = 80-76.66	D+ = 70-66.66	F = <60
A = 96.66-93.33	B = 86.66-83.33	C = 76.66-73.33	D = 66.66-63.33	
A- = 93.33-90	B- = 83.33-80	C- = 73.33-70	D- = 60-63.33	

Week of:	Topic:	Quizzes:
1/21-1/25	No Lab	
1/31	Intro - Physical geology in your life	
2/7	Stream Lab Pre-reading material - Complete Stream Pre-Lab	Pre-lab due will count as Quiz # 1
2/14	Mineral Properties Pre-reading material - Pages 57-78	Quiz # 2
2/21	Igneous Rocks Pre-reading material - Pages 89-95 and 103-116	Quiz # 3
2/28	Sedimentary Rocks Pre-reading material - Pages 127-139	Quiz # 4
3/7	Metamorphic Rocks Pre-reading material - Pages 155-166	Quiz # 5
3/14	Rocks in your life – a campus tour Pre-reading material - Rev. Minerals and Rocks	Quiz # 6
3/21	<b>Spring Break!</b>	
3/28	Geologic Time Pre-reading material - Pages 175-185	Quiz # 7
4/4	Topographic Maps Pre-reading material - Pages 195-216	Quiz # 8
4/11	Structural geology Pre-reading material - Pages 227-238	Quiz # 9
4/18	Seismology and Geophysics Pre-reading material - Pages 349-354	Quiz # 10
4/25	Flood Hazards Pre-reading material - Pages 317-339 and 249-272	Quiz # 11
5/2	<b>FINAL EXAM</b>	Extra credit due <b>before</b> start of final exam or earlier – No exceptions!