

GEOLOGY LAB (GEOL 0055)

Spring 2013, Thaw 203

This class provides a range of hands-on, practical skills that are useful to future geologists, environmentalists, and anyone who likes to explore nature. This class is a prerequisite to many courses in geology and is required for the Geology, Environmental Geology, and Environmental Studies majors.

Instructor: Dr. Charles E. Jones (cejones@pitt.edu, phone 624-6347)

Office Hours: Just stop by SRCC 503 or arrange an appointment by phone or e-mail.

TAs: Graduate: **Jeremy Deibert** (jpd52@pitt.edu). Office hours: **During class time.**

Office: SRCC 316. **Put labs in his mailbox in SRCC 201 by Friday 5 pm**

Undergrad: 1 pm: Garrett Blauch (gab48@pitt.edu)

1 pm: Josh Wagner (jjw55@pitt.edu)

3 pm: Ashley Albert (ala81@pitt.edu)

3 pm: Emily Muto (ecm36@pitt.edu)

In any e-mail messages to us, please indicate class and section.

All labs are due in the graduate TA's mailbox (SRCC Room 201) by Friday at 5 pm.

This gives you 3-4 days to complete the lab. If you know a lab is going to be late, get in touch with the TA **in advance** of the deadline to make appropriate arrangements. **Late labs handed in by the start of class on Tuesday of the following week will be penalized 20%. Labs handed in after old labs are handed back will not be accepted.** See next page for where lab materials will be located outside of class!

Text: Laboratory Manual for Physical Geology, 8th ed., 2013, by C.E. Jones and N.W. Jones, McGraw-Hill. **Beware: Used manuals are cheaper, but they are often missing pages that must be handed in!** Also, problem numbers and a few problems are different in the older editions.

Supplies: The labs are best completed using pencil, eraser, ruler, and calculator. Bring these items each week! **A hand lens** and the clear ruler-protractors are nice things to own. They are for sale in the University bookstore: **BUY THEM.** They are also cheap on Amazon.com: Just search for an SE Illuminated Loupe with LED Light - 20X.

List of Labs: Week 2: Ch. 1 Mineral Properties
Week 3: Ch. 2 Mineral Identification
Week 4: Ch. 6 Topographic Maps (skim U.S. Public Land Survey section and don't worry about magnetic declination)
Week 5: Ch. 3 Igneous Rocks, **Minerals Quiz** (Quizzes = 40% of grade!)
Week 6: Ch. 8 Streams and Humid Landscapes, **Topo Maps Quiz**
Week 7: Ch. 4 Sedimentary Rocks, **Igneous Rocks Quiz**
Week 8: Ch. 5 Metamorphic Rocks, **Sed Rocks Quiz**
Week 9: Ch. 7 Remote Sensing of Volcanic Hazards,
Week 10: Spring Break
Week 11: Ch. Groundwater, **Metamorphic Rocks Quiz**
Week 12: Ch. 13 Geologic Time and Chapt. 14, Geologic Structures
Week 13: **Sunday Mar. 24 Field Trip**
Ch. 15 Geologic Maps
Week 14: Ch. 17 Plate Tectonics
Week 15: Ch. 11 Sea Coasts, **Groundwater Quiz**
Week 16: Ch. 10 Glaciation, **Geologic Time and Structures Quiz**

Field Trip: There will be a **required** class field trip on **Sunday, Mar. 24th**. We will survey a number of geologic and environmental features in the Pittsburgh area. Attendance on the field trip counts the same number of points as an average lab. We'll ride on a yellow school bus, and you can either bring a lunch or by some from Chipotle Grill, Panera's, or McDonalds. We'll be back certainly by 5 pm, probably before 4 pm.

Grades: Grades will be based on labs and a series of lab quizzes:

Labs: 60%

Quizzes: 40%

Always hand in a lab, even if you are not done! A grade of "zero" really hurts your average. Even a half-finished lab (50%) hurts a lot less than a zero. Your grade will be based on the following scale: A = 90-100%; B = 80-90%; C = 70-80%; D = 60-70%; F = <60%. Letter grades are subdivided as follows, e.g., B- = 80.00 to 82.99%; B = 83.00 to 86.99, B+ = 87.00 to 89.99%. A curve has never been needed in this class.

Attendance: You should attend all lab sessions. If you miss one, the lab supplies for that week will be held in the **Undergraduate Resource Room (SRCC 219)** until the following Thursday. This gives you 3-4 days to complete the lab before it is late. Beyond a week, some labs will be impossible to make up. **Room combination: 3+4, 1+5**

Misc.: The lab is intended as a stand-alone class because it is not possible to coordinate this class with the several classes (GEOL 0040, GEOL 0800, GEOL 0820, and GEOL 0860) that serve as co-requisites.

The short readings that introduce each lab are designed to give you what you need to know to do the lab. **Be sure to do the readings BEFORE each lab!**

Each class will start with a short lecture that will highlight *some* of the more difficult topics that are essential to completing the lab. Past student surveys have yielded the following comments:

1. The lectures are too long. Give us more time to complete the lab in class.
2. The lectures are too short. Please take more time to explain.

We are shooting for the shortest possible lectures so that you have the maximum time to do the lab while we are in the room to answer any possible questions. Thus, for these short lectures to make sense to you, **you must do the reading before each class!** If you don't understand parts of the text, make notes in the margin and ask a question during or after the lecture! Do not be shy!

Many labs require some work outside of class. This is normal for science labs so please do not get bent out of shape.

Disabilities: If you think you may need extra accommodations, please talk to the instructor!

Cheating: You are expected to work through the bulk of each lab on your own. If you do the work, you learn the material. However, when something puzzles you, you are encouraged to consult with each other and the TAs as necessary in order to resolve the question. **Remember: You must ultimately do your own work, come to your own conclusions, and write up the labs yourself.** Copying answers to your lab is cheating and will be prosecuted as such.