

Geology 10100: Introduction to Geology Lab

Spring 2020

Tu/Th, 4:10 to 5:25 PM and 7:00-8:15

HN 1021

Instructor: Dr. Faye F. Melas
Office: 1032 Hunter North (10th floor of the North Building)
Office hours: Tuesday and Thursday, 3:20-4:10 and 8:15 to 9:00 pm; or by appointment
E-mail: fmelas@hunter.cuny.edu

Lab Manual: *AGI Laboratory Manual in Physical Geology*, 11/E ed. Richard M. Busch, ISBN 9780134446608

In addition, all slides and materials used for class will be posted on Blackboard prior to the class, under “Course materials”. Students are required to print and read the materials prior to coming to class.

Course description: GEOL 10100, Introductory Geology Lab, is a hands-on laboratory science course. It involves a series of activities designed to enhance in-depth learning of select topics in geology. Students learn to identify select minerals and rocks, interpret maps, and understand earth processes through observation, measurement, and data analysis. This course will serve as an introduction to the earth sciences and will prepare you for further coursework in the Environmental Studies program. It will also give you a working knowledge and vocabulary to take other physical geography and geology courses. Moreover, it will introduce you to some of the cutting edge technologies used in the earth sciences, potentially drawing some of you into an earth science related career path. In general, there will be a 1:2 ratio between lecture and lab work over the course of each week.

***** This course will fulfill the Common Core Requirement for category C, Life and Physical Sciences.

Course Objectives: The objective of this course is to introduce students to the major Earth features, materials, structures and processes.

Upon successful completion of this course, the students will be able to:

- Demonstrate mastery of basic lab skills through the use of the scientific method
- Present observations, measurements, interpretations and conclusions in formal laboratory write-ups
- Identify select minerals and rocks
- Infer rock and mineral origin from examination of hand-specimens
- Recall “The Rock Cycle” and explain how it relates to tectonic processes which operate in the crust
- Recognize the basic concepts of plate tectonics and the evolution of the continents and ocean basins.

- Describe the development of the Geologic Time Scale and reproduce its chronological sequence with
- approximate dates for the Eras, Periods, and Epochs
- Explain the costs, benefits and consequences of the extraction of economically valuable earth resources
- Appreciate the geological world around them, and be able to discuss their geologic knowledge to others

Expected Learning Outcomes: Upon completion of the course, the students will have the following outcomes:

- Basic knowledge of geologic processes
- Identify and classify geologic materials such as minerals, rocks, landforms and geologic structures
- Perform basic types of geologic analysis, including maps, cross sections and stratigraphic correlations
- Visualize and comprehend 3-D geologic structures
- Prepare lab reports and oral presentations

Grading procedure for Introduction to Geology lab 10100

Course evaluation/grading:

Assignments	Weighting
8 labs	40% (5% each)
3 practical exams	30% (10% each)
Group Assignment provided)	20% (Instructions on the group assignment will be provided)
Participation	10%

***The University rules concerning grading will be strictly followed. The CUNY grading policy can be found at <http://catalog.hunter.cuny.edu/>

***Under no circumstances will a student be allowed "extra credit" to raise his/her grade.

Credit/no credit: You may file for CR/NC before the start of the final exam. Keep in mind that the Hunter College rules apply. For more information or to determine if you qualify for CR/NC, you may want to visit the following URL before you make your decision:

<http://www.hunter.cuny.edu/advising/how-to/file-credit-no-credit-cr-nc>

Incomplete Work in Course: Incompletes for this course are only given under the most extraordinary and documented circumstances. When **FOR VALID REASON (S)** you do not complete the work assigned in a course (including the final exam, papers, etc.) and in the view of the instructor still have a reasonable chance to pass the course, you will be given the grade of IN (incomplete). You must explain the reason to the instructor or, in the absence of the instructor, to the department chair and arrange a schedule for making up the missing course work. These steps must be taken as soon as possible and no later than the end of the second week of the following semester. You will then be given the opportunity to complete the course without penalty beyond previously established penalties for lateness. Students averaging "C" or above are eligible to request an incomplete grade.

Class participation: Class participation is a very important portion of your grade. Classroom discussions along with asking/answering questions during class, as well as before and after class, either via email or personally will be considered as part of your grade. In addition, you will be unable to do most of the labs without in class access to the materials—specimen trays are not available outside your normal class time. It is important to come to class prepared and be diligent in class in order to receive a good participation grade.

Classroom policies: There is no texting permitted in the classroom—turn your phones off. Earphones are not to be worn in the classroom. No electronic devices are allowed during exams.

Group Assignment: Each group (lab partners) will prepare a 5 minute oral and visual presentation for the class based on the Museum of Natural History field trip (TBA). Presentations can be made using PowerPoint or Prezi.

Some suggestions include but are not limited to:

- A) Highlights of a specific exhibit
- B) Exhibit you liked most and why
- C) Short guide to a specific exhibit

A list of AMNH exhibits will be distributed along with an explanation of what is expected.

Keep in mind that each partner expected to contribute equally to the project.

All students in a group will receive the same grade.

Hunter College policy on Academic integrity:

Hunter College regards acts of academic dishonesty (e.g., plagiarism, cheating on examinations, obtaining unfair advantage, and falsification of records and official documents) as serious offenses against the values of intellectual honesty. The college is committed to enforcing CUNY Policy on Academic Integrity and will pursue cases of academic dishonesty according to the Hunter College Academic Integrity Procedures.

ADA Policy:

In compliance with the American Disability Act of 1990 (ADA) and with Section 504 of the Rehabilitation Act of 1973, Hunter College is committed to ensuring educational parity and accommodations for all students with documented disabilities and/or medical conditions. It is recommended that all students with documented disabilities (Emotional, Medical, Physical, and/or Learning) consult the Office of Accessibility, located in Room E1214B, to secure necessary academic accommodations. For further information and assistance, please call: (212) 772- 4857 or (212) 650-3230.

Hunter College Policy on Sexual Misconduct

In compliance with the CUNY Policy on Sexual Misconduct, Hunter College affirms the prohibition of any sexual misconduct, which includes sexual violence, sexual harassment, and gender-based harassment retaliation against students, employees, or visitors, as well as certain intimate relationship. Students who have experienced any form of sexual violence on or off campus (including CUNY-sponsored trips and events) are entitled to the rights outlined in the Bill of Rights for Hunter College.

- a. Sexual Violence: Students are strongly encouraged to immediately report the incident by calling 911, contacting NYPD Special Victims Division Hotline (646-610-7272) or their local police precinct, or contacting the College's Public Safety Office (212-772-4444)
- b. All Other Forms of Sexual Misconduct: Students are also encouraged to contact the College's Title IX Campus Coordinator, Dean John Rose (jtrose@hunter.cuny.edu or 212-650-3262) or Colleen Barry (colleen.barry@hunter.cuny.edu or 212-772-4534) and seek complimentary services through the Counseling and Wellness Services Office, Hunter East 1123.

CUNY Policy on Sexual Misconduct Link:

<http://www.cuny.edu/about/administration/offices/la/Policy-on-Sexual-Misconduct-12-1-14-with-links.pdf>

Continue to next page for course schedule.

Course Schedule, Topic Outline and Exams

Date(s)	Topic/Activity
1/28	Introduction, materials/responsibilities, seating/lab partners
1/30	Lab 1: Observing and Measuring Earth Materials and Processes
2/4	Lab 2: , Plate Tectonics and the Origin of Magma
2/6	Lab 2: , Plate Tectonics and the Origin of Magma
2/11	Lab 2: , Plate Tectonics and the Origin of Magma
2/13	Lab 2: , Plate Tectonics and the Origin of Magma
2/18	Lab 2: , Plate Tectonics and the Origin of Magma
2/20	Lab 3: Mineral Properties, Uses, and Identification
2/25	Lab 3: Mineral Properties, Uses, and Identification
2/27	Lab 3: Mineral Properties, Uses, and Identification
3/3	Lab 3: Mineral Properties, Uses, and Identification
3/5	Lab 3: Mineral Properties, Uses, and Identification
3/10	Mineral practical (Exam 1)
3/12	Lab 4, Rock-Forming Processes and the Rock Cycle
3/17	Lab 5, Igneous Rocks and Volcanic Hazards
3/19	Lab 5, Igneous Rocks and Volcanic Hazards
3/24	Lab 6, Sedimentary Rocks, Processes, and Environments
3/26	Lab 6, Sedimentary Rocks, Processes, and Environments
3/31	Lab 6, Sedimentary Rocks, Processes, and Environments
4/2	Lab 7, Metamorphic Rocks, Process, and Resources
4/7	No Classes (Wednesday Schedule)
4/8-4/16	Spring Recess
4/21	Rock ID review
4/23	Rock practical (Exam 2)
4/28	Lab 8 – Dating of Rocks, Fossils and Geologic Events
4/30	Lab 8 – Dating of Rocks, Fossils and Geologic Events
5/5	Lab 8 – Dating of Rocks, Fossils and Geologic Events

5/7	Lab 8 – Dating of Rocks, Fossils and Geologic Events
5/12	GROUP PRESENTATIONS
5/14	GROUP PRESENTATIONS
TBD	Final Exam (Exam 3)

** This schedule may be altered slightly during the course of the semester.