

GEOL 10100-07 - Introductory Geology Laboratory Syllabus

Mode of Instruction: HYBRID

Section #7: Tuesday and Friday: 11.10 am to 12.25 pm.

Hunter North, Room 1021

Fall 2021

Instructor: Dr. Shruti Philips

Office: HC North, Room 1032

Office Hours: *Tuesdays 1-2pm and by appointment on Zoom.*

E-mail: shruti.philips@hunter.cuny.edu (communications to me must have GEOL 101 in the subject line and you must sign your full name as it appears in CUNYFirst)

Companion website: <http://www.geo.hunter.cuny.edu/geology/>

Brief description/purpose of course:

GEOL 101, Introductory Geology Lab, is a hands-on laboratory science course. GEOL 101 assists you, in learning and expanding your understanding of the scale of the Earth and the forces that shape it with hands-on laboratory and field experiences. 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.

The objectives and goals of this course include:

- An understanding of the nature of science and the scientific method.
- The importance of thinking critically about scientific data.
- A basic understanding of the rocks and minerals that make up the earth and the ability to identify the most important types of rocks and minerals and how they are formed (the rock cycle).
- A basic understanding of plate tectonics.
- An understanding of the vastness of geologic time, the Principle of Uniformitarianism and how geologists assess the ages of geologic features.
- An understanding of the formation and distribution of natural resources and the costs and benefits of their extraction.

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

Learning Outcomes:

By the end of this course, students will be able to:

- Describe the key components of the scientific method.
- Describe and identify rocks and minerals based on detailed observations.
- Relate geologic processes and the distribution of rocks, minerals and geologic resources to the theory of Plate Tectonics.
- Interpret geologic cross sections with respect to geologic time and the rate of geologic processes.

Course Structure: This course will be taught in the **hybrid format** with a combination of 50% online and 50% in-person lectures. All online lectures will be conducted on **Fridays** and will be via Blackboard collaborate.

Required textbook:

- **Laboratory Manual in Physical Geology**, By AGI American Geological Institute, NAGT - National Association of Geoscience Teachers, Vincent Cronin, Dennis G. Tasa, Pearson, 12/e, 2021
ISBN-13: 9780135836972
<http://hunter.textbookx.com/institutional/index.php?action=browse#books/2764284/>
- Please make sure that you bring to each class the following items: a pen, No. 2 pencil(s), eraser, calculator, metric ruler, and colored pencils. All other lab materials will be supplied by your instructor.

Course evaluation/grading:

Assignments	Weighting
8 labs	40% (5% each)
3 practical exams	40%
Geology of New York Assignments	10%
Class participation	10%

While the exams are technically not cumulative, material covered in the latter part of the course is dependent on the material from the earlier part of the course. Do NOT miss an exam. Make-up exams will NOT be given except under the most extraordinary circumstances such as documented illness, documented death in the family, documented alien abduction, etc. Make up exams will be given at a mutually convenient time and while they will cover the same information as the original exam, the questions and/or practical materials will be different.

A final grade of IN (incomplete) is not normally given in this course except, again, under the most extraordinary and documented circumstances. You must contact me within 48 hours of the scheduled day/time of the final exam and complete a Contract to Resolve an Incomplete Grade. Otherwise, I will average your laboratory, exam, and attendance and participation grades and record what you have earned. To qualify for Credit/No Credit you must have completed **all nine laboratory exercises, taken the three exams, and have satisfactory attendance and participation.** Credit/No Credit forms will be accepted up to 15 minutes prior to the start time for the third exam. I will not accept a Credit/No Credit slip after the third exam is distributed. The Hunter College grading system will be used in this class and can be viewed in the latest undergraduate catalog available online at <http://catalog.hunter.cuny.edu/>.

As per CUNY, an **Unofficial Withdraw (WU)** is assigned to students who **attended a minimum of one class.** It is important to understand the definition of a WU and the difference between this grade and an F grade. The conditions for assigning the WU grade include:

1. A student's enrollment has been verified by the course instructor, and
2. The student has severed all ties with the course at any time before the final exam week and, consequently, has failed to complete enough course work -- as specified in the course syllabus -- to earn a letter grade, and
3. The student has not officially withdrawn from the course by completing the process for a W grade, or made arrangements to receive an INC.

Classroom policies:

There is no texting permitted in the classroom—turn your phones off. Earphones are not to be worn in the classroom either on ears or around your neck. No electronic devices are allowed during exams. No food or drink is allowed in the laboratory. Samples and equipment must be handled gently.

Laboratory Preparation:

Come to class prepared. I expect you to have read the laboratory exercise listed for each class *prior* to the beginning of that class period. Laboratory exercises are complex, and if you do not read them before class you will have difficulty turning them in on time.

- You will complete the **lab exercises** in the lab manual for each lab and submit it via Blackboard (as a word document). A link will be available in each module for you to submit your lab exercise.
- Grading of your laboratory exercises will be based on the quality and accuracy of the observations, explanations, answers to questions and conclusions. The grading of your laboratory exercises will be as follows: **5=excellent, 4=good, 3=fair, 2=poor, 1=terrible, 0=not handed in.**
- Each laboratory exercise will include the following sections: **an introduction, charts and tables that you will fill in on the appropriate pages of your lab manual, answers to the questions posed in the AGI Laboratory Manual, Results/Discussion and a conclusion.** You must include the relevant figures, charts, graphs, etc., that a given question and/or answer refers to.
- The introductions and conclusions of your labs must be in your own words. You may work with other students at your table, but each of you must turn in your own work.
- Answer all questions in full sentences. **DO NOT RECOPY THE QUESTION.** Rather, answer the question so that the question is implicit in the answer. For instance, if the question is “What color is the rock on table A?” your answer might be “The color of the rock on table A is gray.” An unacceptable answer would be “gray.” Use proper grammar and spelling. If you aren’t sure of the spelling use a dictionary. A very convenient online dictionary can be found at www.m-w.com.

Tentative Syllabus for Fall 2021: The color-shaded dates are online lectures that will be on Blackboard Collaborate

Dates	Laboratory Assignment
F 8/27	Introduction to AGI lab manual, materials, and methods
T 8/31	Lab 1- Filling your Geoscience Toolbox
F 9/10	Lab-1
T 9/14	<i>Lab 1 due</i> ; Lab 2- Plate Tectonics
F 9/17	Lab-2
T 9/21	Lab-2
F 9/24	<i>Lab 2 due</i> ; Lab 3, Mineral Identification
T 9/28	<i>Lab-3</i>
F 10/1	Lab-3
T 10/5	Lab-3 Review of minerals
F 10/8	Lab-3 Review of minerals
T 10/12	<i>Lab-3 due</i> ; Mineral Practical test
F 10/15	Lab 4 The Rock Cycle
T 10/19	<i>Lab-4 due</i> ; Lab-5 Igneous Rocks and Processes
F 10/22	Lab-5
T 10/26	<i>Lab-5 due</i> Lab 6-Sedimentary Rocks
F 10/29	Lab-6
T 11/2	Lab-6
F 11/5	Lab-6 Sedimentary Environments
T 11/9	<i>Lab 6 due</i> ; Lab 7- Metamorphic Rocks, Process, and Resources
F 11/12	Lab 7
T 11/16	*Central Park Field Trip
F 11/19	<i>Lab 7 due</i> ; Rock review
T 11/23	Rock review
T 11/30	Rock Practical test
F 12/3	Lab-8– Dating of Rocks and Geologic Events
T 12/7	Lab-8
F 12/10	<i>Lab 8 and Geology of New York assignments due</i>
TBA	Geologic Timescale test

*This field trip to Central Park is dependent upon the weather. You will be expected to meet the class at a predetermined location from which we will walk and examine various surface features of the landscape. More information will be provided in the week before the field trip.

Hunter College statement 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. Plagiarism, dishonesty, or cheating in any portion of the work required for this course will be punished to the full extent allowed according to Hunter College regulations.

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 AccessABILITY, 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, on 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>