

GEOL 101 - Introductory Geology Laboratory Syllabus

Section 1L01: T, Th 1:30pm – 4:38pm
Fully Online*
Summer 2021
5/27/21 – 7/8/21

Instructor: Tom Carboni
Office: BlackBoard Collaborate
Office Hours: 1 hour a week. Times to be determined
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*This course will be fully online. Lectures will be held through blackboard collaborate.

Contact Policy: You may email me with any questions you have regarding the laboratory material. You must include GEOL 101 in the subject line and sign your full name as it appears in CUNYfirst. You can expect to have your email messages returned within 24 hours usually except over the weekend when you should expect a 36-48 hour reply window. If I do not respond within that time frame, feel free to forward the same email to me again.

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:

- interpret data by learning to read and create scientific graphs, test physical and quantitative models of isostasy and apply them to the Earth system
- define and discuss Plate Tectonic Theory
- identify the common minerals using basic tools of observation
- classify and identify igneous, sedimentary and metamorphic rocks

- apply the principles of relative and absolute dating to analyze the geologic history of an outcrop/region

Be aware that this is an intensive class due to the shortened session. Also, in my experience, online learning often involves more work for students since access to the instructor is limited. Please make sure you have the time to dedicate to the class and can keep up. There will be deadlines for assignments as I cannot accept a bunch at once later in the semester.

There are 8 labs to complete and only 6 weeks of class. This means we have to complete a lab or two every week. In a normal semester a typical lab is spread out over 3 - 4 classes or 10 -14 days. When you sign up for this class you are agreeing that you can handle the intensity of the required coursework. A third of the class time will be lecture while the other two-thirds will be reserved for working on the lab. After class you will be expected to complete the labs at home and submit them the next day at the beginning of class. Please be absolutely positive that you can make such a commitment before signing up and following through with the class.

Required textbook(s):

AGI/NAGT *Laboratory Manual in Physical Geology*, 10th ed. Richard M. Busch, ISBN-10: 0321944518; ISBN-13 9780321944511

Course evaluation/grading:

Assignments	Weighting
9 labs	45% (5% per lab)
3 exams	45% (15% per exam)
Participation	10%

The lab portion of this class is normally very hands on. However, due to the current pandemic and the hardships everyone may have faced or still are facing, we will be completing mostly paper labs which may involve some online excursions. The labs will still focus on the application of your knowledge but without the normal materials.

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.

Participation is a smaller but still significant part of your final course grade. Your participation will be evaluated by your participation in the discussion board. There will be a discussion board for each lab we discuss in class. There you may ask questions, post any related current event articles, post related pictures, etc. The more you immerse yourself in the course and the more you participate, the more interesting it will be and the higher the grade you'll receive.

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/>.

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 participation grades and record what you have earned.

To qualify for Credit/No Credit you must have completed **all 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.

As per CUNY policy, an **Unofficial Withdraw (WU)** is assigned to students who attended a minimum of one class and cease attendance at some point in the semester. 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.

Laboratory Preparation:

Come to class prepared. This means you are expected to have read the laboratory exercise listed for each class *prior* to the beginning of that class period and also have all materials printed out or have the book present in class. Laboratory exercises are complex, and if you do not read them before class you will have difficulty turning them in on time.

Lab Homework:

Some of the laboratory exercises will be completed after class hours. As outlined in the syllabus, you are required to complete one laboratory approximately every 1-2 classes in this intensive session, and since the laboratory exercises will count for 42% of your total course grade, it is important for you to do the assigned work.

For each lab you will type up an introduction and conclusion. You will submit this with your lab activities on blackboard.

Grading of your laboratory exercises will be based on the quality and accuracy of the observations, explanations, answers to questions and conclusions. I will grade you on a scale of 0 – 100. You will automatically lose points if your laboratory exercise is sloppy or if your answers lack clarity.

When are lab exercises due?

Lab exercises are due, in lab, at the beginning of your next class meeting – when you start the next lab (see tentative schedule below). **You will lose 10 points per day if the lab is late.** Submitting the lab after the start of class on the same day it is due is considered late as well and will be subjected to a small penalty. This policy will be strictly enforced. If you miss a class session, do not wait until the next meeting to hand in your lab assignment. If I am not available to accept your late lab, please send me pictures of each completed lab page showing me it is complete. This will “stop the clock.”

Tentative Schedule of Topics and Assignments

Week	Day	Date	Laboratory Assignment
1	Th	5 / 27	- Introduction to GEOL 101 and the Syllabus - Lab 1: Thinking Like a Geologist
2	Tu	6 / 1	- Lab 1 Due - Lab 2: Plate Tectonics and the Origin of Magma
	Th	6 / 3	- Lab 2 Due - Lab 16 - Earthquakes
3	Tu	6 / 8	- Lab 16 Due - Lab 3: Mineral Properties, Identification, and Uses
	Th	6 / 10	- Lab 3 Continued
4	Tu	6 / 15	- Lab 3 Due - Mineral Exam - Lab 4: Igneous Rocks and Volcanic Hazards
	Th	6 / 17	- Lab 4 Due - Lab 5: Igneous Rocks and Volcanic Hazards
5	Tu	6 / 22	- Lab 5 Due - Lab 6: Sedimentary Rocks, Processes, and Environments
	Th	6 / 24	- Lab 6 continued
6	Tu	6 / 29	- Lab 6 Due - Lab 7: Metamorphic Rocks, Processes, and Resources
	Th	7/1	- Lab 7 Due - Rock Exam - Lab 8: Dating of Rocks, Fossils, and Geologic Events. - Discuss Final Exam
7	Tu	7 / 6	- Lab 8 continued
	Th	7 / 8	- Lab 8 Due - Final Exam

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>