

GEOL 10000 HYBRID
Introduction to Geology
Mondays 10:00 – 11:15 AM in 510 HN
Thursdays: asynchronous online meeting via Brightspace
Fall 2025

Instructor: Randy Rutberg
Office location: Hunter North room 1043 (10th floor)
Email (preferred means of contact): rrutberg@hunter.cuny.edu. In order for me to respond to your emails as efficiently as possible please adhere to the following instructions: (1) Include the course name and number in your subject line. (2) Include your entire name as it appears in CUNYfirst in your email (3) Email me from your @myhunter account. I try to answer all emails within 24 hours. Allow for a 48 hour delay on the weekends. Please be sure to write a complete email, including a salutation and a signature.
Office hours: Office hours will be Mondays and Thursdays from 1:30-2:30 PM and by appointment.
Office phone: 212 772 5326

Brief description/purpose of course:: This course will be of interest to any student who wants to learn more about the Earth as well as to those contemplating a major in Geography, Environmental Studies or a minor in Geology. The course will meet once per week in the assigned class room. The second weekly meeting will be a virtual meeting (explained further below). This course will cover the geophysical properties of the Earth, plate tectonics, earthquakes, volcanism, metamorphism, crustal deformation, geologic time, geological resources and natural and anthropogenic global change.

Under the Hunter Core Requirements this course satisfies D, Scientific World. This course also fulfills the Stage 2 group E of the General Education Requirement (GER). The main goals for this course are to:

- (1) Teach key foundational concepts about the Earth and the methodology of science.
- (2) Introduce you to a fascinating subject area that might influence your academic and career path.

Course Format: This course is a partial online (hybrid) course. The lecture will meet once per week (Mondays) in the class room and once per week as an asynchronous online meeting using Brightspace (BB). Approximately one half of the scheduled meeting times will be virtual classes. Virtual classes are scheduled on Thursdays. The online learning portion of the course is intended to provide students with structured materials including podcasts, homework questions and readings that are designed to enhance student learning. The virtual classes are primarily asynchronous. This means that you can complete the work at any time prior to the posted due dates. There will be a Brightspace folder on the Weekly Coursework module, labelled by date, that will contain a series of readings, videos and activities that must be completed on a weekly basis. All work assigned for the virtual class is due the Sunday immediately following the Thursday virtual class.

Technological requirements:

The readings, videos and homework assignments are best completed using a computer. Do not attempt to complete this course using your phone!

Textbooks: Essentials of Geology, 7th ed by Stephen Marshak

The textbook must include Smartwork, the Student Site and Guided Explorations. The cheapest option is to purchase the **ebook** directly from Norton for \$64.95. I recommend this. You will be able to purchase the book/ebook directly from our BB site. This is likely cheaper than the bookstore. Please contact me if you have any issue regarding purchase of the textbook.

This course will cover:

- How geologists apply the scientific method to arrive at major scientific breakthroughs including Plate Tectonic Theory.
- Methodologies employed by geoscientists to study the geophysical properties of the Earth
- Igneous processes and relationship to Plate Tectonics
- Metamorphic rocks, mechanisms of mountain building and related geologic structures and phenomena
- Sedimentary rocks, geologic time and a brief history of Earth
- Natural and anthropogenic global change

Expected Student Outcomes:

At the end of the course the successful student shall be able to:

Describe Plate Tectonic Theory and how it relates to the distribution of geologic phenomena and the geophysical properties of the Earth; recognize plate boundaries, associated rock types and relationship to Earth's resources.

Describe the common tools applied in geology

Describe geologic time and Earth history

Explain geologic evidence of climate change

Course Expectations

1. **Attendance:** You are expected to attend every live lecture and complete the associated assignments on a weekly basis.
2. **Readings:** You are expected to read the assigned chapters and readings in their entirety.
3. **Assignments:** All assignments are expected to be completed. I have scheduled the assignments on a weekly basis, ~2 per chapter. However, to give you maximum flexibility, the assignments will be accepted for up to 10 days after the due date with a 1% late penalty per day.

Course evaluation/grading:

Exams: This course will have three exams. Each exam will cover 4-5 topics. The first two exams will not be cumulative. The final exam will focus on the last third of the course but will also include the big ideas from the entire semester. Exam will be multiple choice. Exam questions will cover the material in live meetings, Voicethreads and textbook. Many questions will be based on questions asked in class and in homework questions. Review materials will be provided.

Exam procedures: All exams are required. All exams will be multiple choice. There will be one online exam (not the final exam). If you have a technical difficulty with the exam, you will have a second opportunity to take and submit it. This option is only for technical issues. The second submission will be the submission that counts towards your grade.

Assignments: This course will have multiple assignments each week. These include:

1. Guided Learning homework assignment
2. A multiple choice homework assignment
3. Relevant readings from textbook and additional appropriate articles.

Policies

- 1) All homework must be turned in by the due date/time or late penalty will be applied.
- 2) Students are allowed to miss two assignments with no penalty.
- 3) If all assignments are completed students will receive additional points for the homework assignments portion of their grade.

Course Grading Summary:

Guided Learning Assignments	25%
Homework assignments	25%
Exams	50%

Opportunity for Extra Credit (up to 5 points will be added to your final grade, equivalent to a bump of 1/3 of a letter grade, i.e. going from a B to a B+). Extra Credit: Lead a presentation (5-10 minutes about a recent scientific discovery or phenomenon that relates to the course material. The presentation should be original and engaging. In order to obtain EC, you must obtain my approval of your topic prior to April 15.

About examinations and grades

- a) This course is designed so that if you attend class and complete all of the homework you will pass. Note that the exams count for 50% of the grade, so it is possible to pass the class even if you are a poor exam taker.
- b) Grades follow Hunter's grading system: <http://catalog.hunter.cuny.edu/content.php?catoid=15&navoid=1433>
- c) Examinations are multiple choice and will be timed.
- d) Make-up exams are ONLY available in extreme cases, and with medical (or other) forms that confirm the absence.
- e) I will automatically agree to the CR/NC option only if the conditions stated in the CR/NC form are satisfied: all course work has been completed and you earned grades such that you accumulate at least 50 points total in the course. Students on probation are not eligible for this option. Students must make an appointment to discuss this option with me at least one week before the final exam. Requests for CR/NC as a final grade will not be accepted during or after the final exam. <http://www.hunter.cuny.edu/advising/howto/file-credit-no-credit-cr-nc>. This includes both the CR/NC policy and a link to the form.

Classroom policies: I expect students to stay focused on the material during lectures. Please do not browse the internet during class. Please turn off cell phones. Do not wear earphones on neck or over ears.

Inclement Weather and other unknowns: If circumstances prevent me, the professor, from being able to access the internet, I will do my best to let you know in a timely manner. Please let me know if you experience circumstances that make completing the requirements challenging.

HELPFUL INFORMATION

My Teaching Philosophy: My goal in teaching is to help you learn the material and become responsible professionals. I also strive to share my enthusiasm for this subject and make this class an enjoyable one. My

approach to teaching involves conveying key information and concepts as well as encouraging discourse in the classroom. Your participation greatly enhances the classroom environment. I understand and respect individual differences in learning and do my best to promote learning in the classroom by working with individual differences rather than against them. At the same time, I wish to impart technical skills and a sense of responsibility by encouraging you to play the role of professionals in the classroom.

I expect you to put your best effort in this course. This involves participating in the in-class exercises, reading the assigned material, doing the homework and preparing for quizzes and exams.

My job is to help you succeed. Please see me as soon as you need help!

Lecture: I will spend part of the in class lecture time explaining the key concepts of geology.

Finally: It is important to start with good study habits. Consistency is the key. Forming study groups is extremely helpful. Make progress steadily as the material in this course cannot be understood the night before the exam. Concentrate on understanding rather than 'regurgitating'. Put out your best effort every day!

The following are useful tips to do well in this or any class:

Read the chapter for the class lecture before coming to class.

- Attend class, take notes and sketch the relevant diagrams.
- Review This will allow you to fill in the details still fresh in your memory, and prepare questions for the next time the class meets.
- Complete the work and meet the learning goals each week.
- Carefully study the diagrams you have made and those given in the virtual class.

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 the 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 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.

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)

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) of Colleen Barry (colleen.barr7@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.hunter.cuny.edu/diversityandcompliance/title-ix>

Preferred Gender Pronoun

All people have the right to be addressed and referred to in accordance with their personal identity. In this class, we will have the chance to indicate the name that we prefer to be called and, if we choose, to identify pronouns with which we would like to be addressed. I will do my best to address and refer to all students accordingly and support classmates in doing so as well."

Schedule of topics and readings: Below is a schedule of class meetings, topics and reading assignments. Please note that the readings and assignments are due on the dates indicated. A detailed schedule for readings, activities and assignments is given on the course BB page. The BB page is organized by date. Each class meeting date given on the syllabus has an associated folder that contains readings, additional materials and in some cases an assignment. It is imperative that you go through each folder and complete the work as scheduled on the syllabus so that you do not fall behind in the course. This course is carefully structured so that you learn the material efficiently. The professor reserves the right to change the schedule and/or assignments as necessary. Any such changes will be disseminated through Brightspace.

Lecture Schedule: Readings are from Essentials of Geology, 7th edition by Stephen Marshak unless otherwise noted. The professor may change the schedule during the semester if warranted.. SW refers to Smartwork homework assignments. All changes will be announced via BB. GL = Guided Learning, EOC = End of Chapter activity, MM= Multimedia activity, EOD= End of Interlude activity

Date	Day of Week	Subject	Required reading (from Marshak, 7 th ed)	Guided Learning	HW – Smartwork for the associated chapter
Jan. 27	Monday	Introduction to the Course Earth's formation and key characteristics	Chapter 1		
Jan 30	Thursday	Earth's formation and key characteristics	Chapter 1	GL – Planetary Geology	MM – Ch. 1
Feb. 3	Monday	Plate Tectonics	Chapter 2		
Feb. 6	Thursday	Plate Tectonics	Chapter 2	GL- Plate Tectonics	MM – Ch. 2
Feb. 10	Monday	Geophysical Properties of the Earth	Interlude D		
Feb. 13	Thursday	Plate Tectonics	Chapter 2	GL- None assigned	MM – Interlude D
Feb. 17	Monday	College closed			
Feb. 18 (Tues)	Monday at Hunter	Interludes A & C and Introduction to Rocks and Minerals	Interlude A and C, Intro to Rocks and Minerals, Chapter 3		MM- Interlude A, MM – Interlude C MM -Chapter 3
Feb 20	Thursday	Igneous Processes	Chapter 4	GL - Minerals	MM – Ch. 4
Feb. 24	Monday	EXAM	In Class		
February 27	Thursday	Volcanism	Chapter 5	GL Volcanic Hazards	MM – Ch. 5
March 3	Monday	Sedimentary Processes	Chapter 6 Interlude B		MM – Ch. 6 MM – Interlude B
March 6 (Thursday)	Wednesday at Hunter	No Classes			

March 10	Monday	Sedimentary Processes	Chapter 6 Interlude E		
March 13	Thursday	Sedimentary Processes	Chapter 6 Interlude E	GL- Erosion and Weathering	MM – Interlude E
Mar. 17	Monday	Metamorphic Processes	Chapter 7		
Mar. 20	Thursday	Metamorphic Processes	Chapter 7	GL- Metamorphism	MM – Chapter 7
Mar. 24	Monday	Mountain Building	Chapter 9		
Mar. 27	Thursday	Mountain Building	Chapter 9	GL- Structures	MM – Chapter 9
Mar. 31	Monday	No Classes Scheduled			
April 3	Thursday	Earthquakes	Chapter 8	GL- Earthquakes	MM – Chapter 8
April 7	Monday	Earthquakes	Chapter 8		
Apr. 10	Thursday	Exam 2 - online	Exam 2		
Apr. 14	Spring break				
Apr. 17	Spring break				
Apr. 21	Monday	Geologic Time	Chapter 10		
Apr. 24	Thursday	Geologic Time	Chapter 10	GL – Relative and Numerical Dating	MM – Chapter 10
Apr. 28	Monday	Earth's Biography	Chapter 11		
May 1	Thursday	Earth's Biography	Chapter 11		MM – Chapter 10
May 5	Monday	Energy resources	Chapter 12		
May 8	Thursday	Energy resources	Chapter 12	GL – None Assigned	MM – Chapter 12
May 12	Monday	Global Change in the Earth System	Chapter 18, Chapter 19		
May 15	Thursday	Global Change in the Earth System	Chapter 19	GL – Climate Change	MM – Chapter 18 & MM- Chapter 19 (NO LATE WORK ACCEPTED)
TBA	Final Exam				