



## Spring '23 - GEOL 10000-02

### Introduction to Geology

Tue & Thu 5:30pm – 6:45pm



#### **Contact Information:**

**Instructor:** Professor Anita Erdős Forrester

**Office hours:** Tuesday 4:30-5:30, and by appointment

**Email:** You can reach me at [anita.forrester@hunter.cuny.edu](mailto:anita.forrester@hunter.cuny.edu) only – 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 (GEOL 100) 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 Monday through Friday. I do not check my emails on the weekend, so plan accordingly. Please be sure to write a complete email, including a salutation and a signature.

**Please note that** 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.

#### **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 or Environmental Studies. The lecture meets twice per week for 1hr and 15 minutes.



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). Combined with PGEOG13000, Weather and Climate laboratory or GEOL 10100, Geology Laboratory, this course satisfies the core requirements for the geography major. For Psychology majors, the course, combined with GEOL 10100, satisfies one of the

laboratory science requirements

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. (3) Create a learning community that is engaged in the study of Geology



### **Course Format:**

The course will meet as scheduled every Tuesday and Thursday from 5:30 – 6:45. Lecture attendance is not optional, attendance will be taken and there will be occasional in-class assignments as well that will be part of your participation grade.



Based on your lectures and textbooks, problems from the online Guided Explorations and/or Smartwork/other associated with required textbook will be assigned to be completed.

Additional lecture material may be posted via Bb to complement in-class live learning. Additional readings may also be distributed.

On March 2<sup>nd</sup>, and March 7<sup>th</sup>, class will be recorded as I will be attending a conference. Recording of the lecture will be posted online and will be available for you for until March 9<sup>th</sup>.

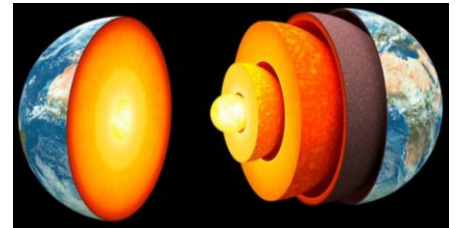
### **Technological requirements:**

While the course is in person, components of the course require the use of a computer. It will be very difficult to complete the work required for this course using a 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. I recommend this.



### **Course Description, Objectives and Expected Student Outcome:**

Introduction to Geology is the study of the physical aspects of our planet. The course will cover how the Earth formed and the continuous processes that impact its surface and our environment. This course gives you a solid foundation for learning more about the basic nature of our planet and if you wish to continue with further studies in geology, geography or environmental studies.

### **In this class, you will learn:**

- How scientists apply the scientific method to arrive at major scientific breakthroughs 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
- About the immensity of geologic time and the timescales and mechanisms of geologic processes
- The impact of geologic events on the evolution of humans.
- The impact of humans on the Earth System
- Natural and anthropogenic global change

### Expected Student Learning Outcomes:

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

1. 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.
2. Describe the common tools applied in geology
3. Describe geologic time and Earth history
4. Explain the causes and evidence for anthropogenic climate change in the context of the Earth System
5. Recognize that the impact of geologic/climate events on people is highly dependent on socioeconomic factors including: race, nationality and socioeconomic status.



### Course Expectations

1. **Attendance:** You are expected to attend every lecture and complete the associated questions.
2. **Readings:** You are expected to read the assigned chapters and readings in their entirety.
3. **Assignments:** All assignments are expected to be completed



### Course evaluation/grading:

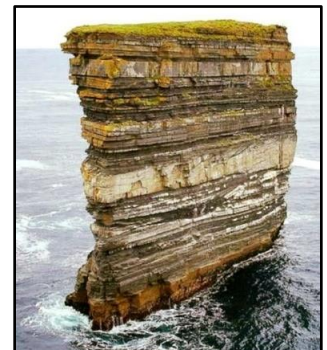
**Exams:** This course will have four exams. Each exam will cover 4-5 topics. Exams will not be cumulative. They will be multiple choice. Exam questions will cover the material in live meetings, any additional posted lecture videos and reading content and the text. Many questions will be based on questions asked in class and in homework questions.

**Exam procedures:** All exams are required. All exams will be completed on BB and will be multiple choice. 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:** There will be (Norton) Smart Work and Guided Explorations assignments each week that will be completed via Bb access of the Norton site.

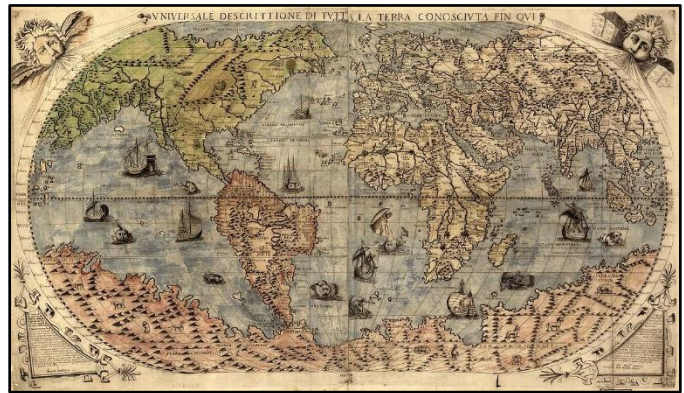
### **Policies:**

- 1) All homework must be turned in by the due date/time.
- 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:

Exams (4)	40%
Guided Learning	10%
Smart Work	40%
In-class and homework assignments	10%



## About examinations and grades

- 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 40% of the grade, so it is possible to pass the class even if you are a poor exam taker.
- Grades follow Hunter's grading system  
<http://catalog.hunter.cuny.edu/content.php?catoid=15&navoid=1433>
- Examinations are multiple choice and will be timed.
- 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. 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.

f. <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.

**Inclement Weather and other unknowns:** If circumstances prevent me, the professor, from being able to get to class, I will do my best to let you know in a timely manner and in those instances, we will move our class to an online setting. Please let me know if you experience circumstances that make completing the requirements challenging.

## Helpful information:

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 and take detailed notes. Sketch the relevant diagrams.
- Re-write your lecture notes as soon as possible after class. 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 class.
- It is important to start with a good study habit. 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'.



**Syllabus Policy:** The professor may change the schedule during the semester if warranted. There will be two classes that are scheduled as asynchronous on March 2<sup>nd</sup> and 7<sup>th</sup> – please make a note of it. If there are any unusual circumstances that we cannot meet, I may hold the class via zoom – in those cases, lecture will be recorded for those who cannot attend. All changes will be announced via BB. Except for changes that substantially affect grading, this syllabus is a guide for the course and is subject to change with advance notice.



<b>Geology 100</b>			
	<b>Week of</b>	<b>Lecture schedule</b>	<b>Textbook</b>
1	26-Jan	Introduction; The Earth in Context	Chapter 1
2	31-Jan	The Earth in Context	
3	2-Feb	The way the Earth works: Plate Tectonics	Chapter 2
4	7-Feb	The way the Earth works: Plate Tectonics	
5	9-Feb	Patterns in nature: Minerals	Chapter 3
6	14-Feb	Exam 1	
7	16-Feb	Up from the Inferno: Magma and Igneous Rocks	Chapter 4
8	21-Feb	Up from the Inferno: Magma and Igneous Rocks	
9	23-Feb	The wrath of Vulcan: Volcanic Eruptions	Chapter 5
10	28-Feb	A Surface Veneer: Sediments and Soil	Interlude B
11	2-Mar	Pages of the Earth's Past: Sedimentary Rocks	Chapter 6
12	7-Mar	Metamorphism: A Process of Change	Chapter 7
13	9-Mar	Exam 2	
14	14-Mar	A Violent Pulse: Earthquakes	Chapter 8
15	16-Mar	A Violent Pulse: Earthquakes	
16	21-Mar	Memories of Past Life - Fossils and Evolution	Interlude E
17	23-Mar	Deep time: How old is old	Chapter 10
18	28-Mar	Deep time: How old is old	
19	30-Mar	Biography of the Earth	Chapter 11
20	4-Apr	Biography of the Earth	
x	6-Apr	Spring Break	
	11-Apr	Spring Break	
	13-Apr	Spring Break	
21	18-Apr	Riches in Rocks: Energy and Mineral resources	Chapter 12
22	20-Apr	Riches in Rocks: Energy and Mineral resources	Chapter 12
23	25-Apr	Exam 3	
24	27-Apr	Streams and Floods: The Geology of Running Water	Chapter 14
25	2-May	A Hidden reserve: Groundwater	Chapter 16
26	4-May	Amazing Ice: Glaciers and Ice Ages	Chapter 18
27	9-May	Global Change in the Earth System	Chapter 19
28	11-May	Global Change in the Earth System	Chapter 19

### Hunter Policies

**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.

**CUNY Policy on Sexual Misconduct Link:**

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

**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.

