GEOL-10000
Introduction to Geology
Monday and Thursday 9.45- 11.00 am
Hunter West, Room 714
Fall 2018

Instructor: Dr. Shruti Philips
Office: HC North, Room 1032
Office Hours: *Monday and Thursday 12.30 to 1.00 pm. or by appointment*
E-mail: shruti.philips@hunter.cuny.edu (communications to me must have GEOL-100 in the subject line and you must sign your full name as it appears in CUNYFirst)

Introduction:

Introduction to Geology is the study of planet Earth. It includes the study of Earth's materials, the inner workings of the planet and the origin and changes of surface features. In this course you will learn about **how** and **when** the Earth formed, how it continues to evolve, **what** it is made up of, the large-scale processes that shape it and how we know, what we know about its workings. We will answer these questions by describing how the various components of the earth system interact to create all that we see around us. You will discover how to protect against natural hazards, where to find Earth's resources, and how to predict what its future may bring.

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.

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).

There are no prerequisites for this course. This course may serve as an excellent foundation for other geology/earth science courses such as *GEOL-102 Historical Geology, GEOL-180 Oceanography, GEOL-205 Environmental Geology and GEOL-280 Marine Geology*.

The main goals for this course are to:

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

Basic material covered in the course includes:

- Earth's place in the Universe.
- Classification and identification of minerals
- Igneous, sedimentary and metamorphic rocks.
- Volcanic and plutonic processes.
- Earthquakes and the Earth's interior.
- Plate tectonics, crustal deformation and mountain building.
- Relative and Absolute dating of rocks and geologic events.

This course is designed to produce the following **learning outcomes**:
At the end of the course the successful student will be able to:

- Define and describe Plate Tectonic Theory and how it relates to the distribution of geologic phenomena
- Explain mineral formation, properties, and methods of identification
- Describe the Rock Cycle and how each type of rock forms
- Recognize geologic structures
- Discuss geologic time and Earth history

Required Textbook:
Marshak, S., ***Essentials of Geology***, 5th Ed., Norton Publishing ISBN: 978-0393263398. You can access the digital products that accompany your textbook here: https://digital.wwnorton.com/essgeo5

Suggested Reading (Highly Recommended):
Rutberg, R., and Philips S., ***A Literary Companion to Geology***, 1st Ed., 2018, Cognella Academic Publishing ISBN: 978-1-5165-0840-2.
This book is available at the reserve desk of the Hunter College library. If you wish to purchase this book, you may do so here: **https://store.cognella.com/81793-1B-008**

Required Digital Technology:
Top Hat student response system
Refer to the link here to enroll: https://app.tophat.com/register/
The join code for this course is **175929.**

The pricing for Top Hat is $26 for a single semester, $38 for a full year, and $75 for a lifetime subscription. Once you pay for a membership you are entitled to use TopHat for as many courses as you need. There are a variety of courses at Hunter College that use this technology. Consider whether any of your current or future courses will use this technology before you decide which option to purchase.

For resources and support, the Top Hat support page can be found here: https://support.tophat.com/s/

Assessment and Grading Policy: There will be **two midterm exams** given during the semester and a **final exam** at the end of the semester. The lower of the two midterm grades will be dropped (If you miss one midterm for any reason, there will be **no makeup** but the other midterm grade will be counted as your midterm grade). If you are absent for both midterm exams, you must submit a medical note which documents the reason for the absence before a make-up exam is given. Exams will not be cumulative. Exams are based on lecture, and text material.

Grades follow the Hunter College grading system:
http://catalog.hunter.cuny.edu/content.php?catoid=15&navoid=1433
Examinations are 1 hour and 15 minutes for the mid-term and 2 hours for the final exam and must be turned in promptly. If you arrive late, you lose that time.
The exam dates are given on the calendar portion of the syllabus. You must bring at least one **#2 pencil and eraser** to the exams and they will be multiple-choice tests.

Attendance:
You are expected to come to every class meeting and take detailed notes. Attendance will be taken via Top Hat. Students are urged to attend ***all*** classes. ***There is a direct correlation between good grades and***

good attendance. All students are responsible for work covered in their absence and must be sure to obtain any hand-out material.

Participation: Real time questions will be asked and answered using Top Hat, an online student response system that can be used via phone, tablet or computer. Participation will count for 20% of the course grade. You will receive credit for class participation via Top Hat.

Grading:

Midterm Exam:	40%	
Final Exam:	40%	
Class participation	20%	(Top Hat)
Extra Credit	8%	(A literary Companion to Geology)

- If you **miss the final exam** a makeup will be given only if you inform me within 72 hours of the day/time of the final exam **and** present me with checkable documentary evidence of the reason for your absence--a doctor's note, a bill from the hospital, a note from the funeral home etc. For an **IN** to be awarded you must contact me about making up the exam and fill out the *'Contract to Resolve an Incomplete Grade'* form **within 72 hours** of the day/time of the final exam. An unresolved IN becomes an FIN at the end of the following semester.
- **CR-NCR** grades will be assigned based on the rules outlined on the CR/NCR form and must be submitted no later than 15 minutes before the beginning of the final exam.
- 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.

Extra Credit: For Extra Credit you may submit answers **to two discussion questions** from each of **any 8 chapters** from 'A Literary Companion to Geology' (i.e. a total of 16 questions). This is worth **8%** and will be added to of your overall grade. This assignment is due no later than **Dec 3rd 2018**.

Tips for getting good grades: ***The more time you put in, the better your grade will be.***

- Attend class and take detailed notes.
- Read the assigned material in the text (or other) before coming to class.
- Re-write your 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.
- Test yourself by answering the questions in the book and in class.
- Carefully study the diagrams and charts in the book and in the lectures.

Blackboard: Please note that course documents, hand-out sheets, and useful links will be posted on Blackboard. Announcements and other information will also be posted from time to time, so please check

the site regularly. Important: Students should check their Hunter e-mail messages regularly for messages from the instructor!

Classroom Etiquette: There is no texting permitted in the classroom. Earphones are not to be worn in the classroom (either on ears or around necks). Conversation during class and walking in and out of the room is disruptive and must be kept to a minimum. Please keep eating and drinking to a minimum and discard all trash in garbage or recycling bins. Your cooperation will be appreciated by the instructor and your fellow students.

Cell Phone Policy: Out of respect for preserving a positive learning environment, all cell phones, beepers, and other portable noise-making devices must be SILENCED for the duration of the class period.

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

Tentative Lecture Syllabus for Fall 2018

Dates	Topic	Essential of Geology Chap.	Suggested Reading-LC
M 8/27	**INTRODUCTION:** What is Geology?	**Prelude**	Ch-1, 14
Th 8/30	The Earth in Context	**1**	Ch-2
W 9/5	Origins		Ch-3
Th 9/6	**The way the Earth works: Plate Tectonics**	**2**	Ch-4
Th 9/13	Plate Tectonics		
M 9/17	Plate Tectonics		Ch-5
Th 9/20	**Minerals**	**3**	
M 9/24	Minerals		
Th 9/27	Magma and Igneous Rocks	**4**	Ch-5
M 10/1	Magma and Igneous Rocks		
Th 10/4	Volcanic Eruptions	**5**	
Th 10/11	**Midterm-1**	**1,2,3,4,5**	
M 10/15	**Sediments and soils**	**Interlude B**	
Th 10/18	**Sedimentary Rocks**	**6**	Ch-6
M 10/22	Sedimentary Environments		
Th 10/25	**Metamorphic Rocks**	**7**	
M 10/ 29	Metamorphic Rocks		Ch-11
Th 11/1	Rock Cycle	**Interlude C**	
M 11/5	**Crustal Deformation**	**9**	Ch-9
Th 11/8	Mountain Building	**9**	Ch-8
M 11/12	**Midterm-2**	**B,C, 6,7, 9**	
Th 11/15	**Earthquakes**	**8**	Ch-7
M 11/19	**Seeing inside the Earth**	**Interlude D**	
M 11/26	Seismic study of Earth's interior		
Th 11/29	Fossils and Evolution	**Interlude E**	
***M 12/3**	**Geologic Time**: Relative Dating	**10**	
Th 12/6	Geologic Time: Absolute Dating	**10**	
M 12/10	A Biography of Earth	**11**	Ch-10
TBA	**FINAL EXAM**	**D, E, 8,10,11**	

LC: Literary Companion to Geology
*The Extra Credit Homework is due by this date.