GEOL 10000
Introduction to Geology
Classroom: 714 HW
Mondays and Thursdays 9:45 to 11:00
714 Hunter West

Fall 2016

Instructor: Randye Rutberg
Office location: Hunter North room 1041 (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: Mondays and Thursdays 11:15 p.m. to 12:15 p.m. 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 or Environmental Studies. The lecture meets twice per week for 1.25 hours. The lecture will cover the formation of the Earth, rocks and the rock cycle, plate tectonics, geophysical properties of the Earth, earthquakes, volcanism, the structure and formation of the sea floor and mountain building, all in the framework of vast geologic time.

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 GEOL 10000, this course satisfies one of the core requirements for the “new” geography major. For Psychology majors, the course, combined with GEOL 10100, satisfies one of the laboratory science requirements.

This course is a partial online (hybrid) course. The lecture portion will be partially online using Blackboard (BB) and an online homework system. Approximately one half of the scheduled meeting times will be virtual classes. The traditional lecture in the classroom will be on Thursdays (or days scheduled as Thursdays at Hunter). Virtual classes are scheduled on most Mondays. The online learning portion of the course is intended to provide students with structured materials including podcasts, animations and exercises that are designed to enhance student learning. Each virtual meeting will have the following components:

1. Podcast/videos that explain key concepts
2. Smartwork homework assignment to be completed online
3. Assigned reading from “A Literary Companion to Introductory Geology”
4. A discussion board/wiki where students post questions and insights about (3) to be discussed in the classroom setting

The traditional lecture portion of the class will enrich topics covered in the textbooks with additional examples and in depth discussions. You are expected to have read the assigned chapters before coming to class. Each traditional lecture will include:
1. Key concepts from the assigned textbook chapter
2. An interactive discussion of the assigned reading from “A literary companion to Introductory Geology”
3. Polling questions derived from the discussion

Required textbook(s): A textbook and associated online homework system, Smartwork, are required for this course. You can choose from the following two options. These options are only available at the Hunter College Bookstore or Shakespeare & Co. If you make your purchase through another vendor, Smartwork will not be included with the book and you will have to purchase it separately (http://books.wwnorton.com/books/978-0-393-92274-5/).

Smartwork is an online homework system. When you have purchased your book and are ready to register you will need to use the following Student Set Number: 16969

Marshak, Essentials of Geology, 4th edition + Free eBook and Online HW/Lab
978-0-393-91939-4
or
Marshak, Essentials of Geology, 4th edition eBook and Free Online HW/Lab
978-0-393-92255-4

Additional Assigned Reading: A literary companion to introductory geology, ed. by Randye Rutberg, preliminary edition, ISBN # 978-1-5165-0839-6. At present this book is available for pre-order only. You can do so by doing the following:

Step 1: Log on to https://students.universityreaders.com/store/.
Step 2: Create an account (you will need to select your home institution during this step) or log in if you have an existing account to purchase.
Step 3: Easy-to-follow instructions will guide you through the process of reserving your textbook or, if it is ready for purchase, the rest of the ordering process. Payment can be made by all major credit cards.

COURSE: GEOL 10000 | Introduction to Geology
INSTRUCTOR(S): Randye Rutberg

Optional polling: If you own a mobile device and would like to use the Reef polling system to facilitate class discussion you can do so by registering on the Reef system for a fee of ~$10. Download the mobile Reef app from the App Store or Google Play (see detailed instructions provided in a separate document).

Select the "create new account" option and follow the instructions. You can use a free two week trial account before committing to payment.

In this class you will learn:
• How scientists apply the scientific method to arrive at major scientific breakthroughs including the nebular hypothesis and Plate Tectonic Theory.
• Why Plate Tectonics is known as the unifying theory of geology.
• 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
Expected Student Outcomes:

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

- Discuss the process of science
- Describe Plate Tectonic Theory
- Describe the Rock Cycle
- Describe the scientific method and the common tools applied in geology
- Recall geophysical properties of the Earth
- Recognize rocks and geologic structures
- Discuss geologic time and Earth History
- Identify human impacts on climate

Course evaluation/grading: Students will be required to complete a series of weekly readings and exercises to be submitted through the Blackboard website. These assignments will count for 50% of the lecture grade. Late assignments will not be accepted. If you have extenuating circumstances that you feel justify the extension of a deadline, you must discuss the situation with me, in person, during office hours. One missed (or the lowest) assignment will be dropped. There will be three examinations (2 mid-terms and a final exam). The lowest grade of the two mid-term exams will be dropped. The final exam is mandatory and will not be dropped. I do not give make up exams, except in the most extenuating of circumstances. The remaining mid-term exam will count for 20% of the lecture grade. The final exam will count for 20% of the course grade.

Course Grading Summary:

- Homework assignments: 50%
- Exam I: 12.5%
- Exam II: 12.5%
- Exam III: 25%

About examinations and grades

a) Grades follow Hunter’s grading system: [http://catalog.hunter.cuny.edu/content.php?catoid=15&navoid=1433](http://catalog.hunter.cuny.edu/content.php?catoid=15&navoid=1433)
b) 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.
c) Make-up exams are ONLY available in extreme cases, and with medical (or other) forms that confirm the absence. If you miss an exam and have a D or F average in the course at that point, you fail the course irrespective of the reason you missed it.
d) 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.

Classroom policies: You are expected to have read the reading listed for each face-to-face class day before class on that date. There is no texting permitted in the classroom. Earphones are not to be worn in the classroom (either on ears or around neck). Laptops are only permitted in the front row. I strongly suggest that you do not use a lap top in class but rather take notes by hand. You are responsible for doing all online assignments in a timely fashion, i.e. within the week or unit they are assigned. Please remember that access to the internet occasionally fails to work for many reasons beyond your or my control. I reserve the right to alter or add topics and assignments as needed.
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.

Inclement Weather and other unknowns: If circumstances prevent me, the professor, from reaching campus on a class day I will notify the entire class using your hunter e-mail account. On snowy days, please check your e-mail an hour or so before our scheduled class time.

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 class room. 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, editing when necessary until they are clear and correct, and preparing for quizzes and exams.

Lecture: I will spend part of the lecture time explaining the key concepts of geology. You are expected to devote time outside the classroom to understand the concepts, review questions given at the end of chapters in the textbook, or questions that I may ask in class. I expect that lectures will give you a clear idea of what is expected in quizzes and exams. (Note: as a general rule of thumb for a college level course, you are expected to spend three hours outside the classroom for each hour in the class room.)

Finally: It is important to start with good study habits. Consistency is the key. Forming study groups is extremely helpful. Use my time and any resource available to you throughout the semester. 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:

- 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.

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.

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 and are to be submitted via Smartwork. 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.

Lecture Schedule

<table>
<thead>
<tr>
<th>Date</th>
<th>Meeting Type</th>
<th>Material</th>
<th>Reading</th>
<th>Assignments</th>
<th>Due (9:45 AM on given date)</th>
<th>Literary Companion reading, chapter</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Th, 8/25</td>
<td>In class meeting, 714 HW</td>
<td>Introduction to Geology</td>
<td>Chap. 1</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>2 M, 8/29</td>
<td>Virtual class, see BB</td>
<td>Cosmology and the Birth of the Earth/Impact Events</td>
<td>Chap. 1</td>
<td>SW Chap. 1</td>
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<td></td>
</tr>
<tr>
<td>3 Th, 9/1</td>
<td>In class meeting, 714 HW</td>
<td>Cosmology and the Birth of the Earth/Impact Events</td>
<td>Chap. 1</td>
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<tr>
<td>9/5</td>
<td>No classes, Labor Day</td>
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<tr>
<td>4 Th, 9/8</td>
<td>In class meeting, 714 HW</td>
<td>Plate Tectonics</td>
<td>Chap. 2</td>
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<tr>
<td>5 M, 9/12</td>
<td>Virtual class</td>
<td>Plate Tectonics</td>
<td>Chap. 2</td>
<td>SW Chap. 2</td>
<td>TBA</td>
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</tr>
<tr>
<td>6 Th, 9/15</td>
<td>In class meeting, 714 HW</td>
<td>Plate Tectonics</td>
<td>Chap. 2</td>
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<tr>
<td>7 M, 9/19</td>
<td>Virtual class, see BB folder</td>
<td>Intro to the Rock Cycle: Magma and Igneous Processes</td>
<td>Chap. 4</td>
<td>SW Chap. 4</td>
<td>TBA</td>
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</tr>
<tr>
<td>8 Th, 9/22</td>
<td>In class meeting, 714 HW</td>
<td>Intro to the Rock Cycle: Magma and Igneous Processes</td>
<td>Chap. 4</td>
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<tr>
<td>9 M, 9/26</td>
<td>Virtual class, see BB folder</td>
<td>Volcanism</td>
<td>Chap. 5</td>
<td>SW Chap. 5</td>
<td>9/29 TBA</td>
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<tr>
<td>10 Th, 9/29</td>
<td>In class meeting, 714 HW</td>
<td>Volcanism</td>
<td>Chap. 5</td>
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<tr>
<td>11 T, 10/6</td>
<td>(on a Monday schedule)</td>
<td>Virtual class</td>
<td>Intro to Sedimentary Rocks</td>
<td>Chap. 6</td>
<td>SW Chap. 6</td>
<td>10/13 TBA</td>
</tr>
<tr>
<td>12 Th, 10/13</td>
<td>EXAM I In class, 714 HW</td>
<td>Chap. 1,2,4,5,6, and rock cycle</td>
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<tr>
<td>13 M, 10/17</td>
<td>Virtual class</td>
<td>Sedimentary Rocks</td>
<td>Chap. 6</td>
<td>SW Chap. 6</td>
<td>10/17 TBA</td>
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<tr>
<td>14 Th, 10/20</td>
<td>In class meeting, 714 HW</td>
<td>Sedimentary Rocks</td>
<td>Chap. 6</td>
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<tr>
<td>15 M, 10/24</td>
<td>Virtual class, see BB folder</td>
<td>Metamorphism</td>
<td>Chap. 7</td>
<td>SW Chap. 7</td>
<td>10/27 TBA</td>
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<tr>
<td>Date</td>
<td>Meeting Type</td>
<td>Material</td>
<td>Reading</td>
<td>Assignments</td>
<td>Due (9:45 AM on given date)</td>
<td>Literary Companion reading, chapter</td>
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<td>16</td>
<td>Th, 10/27</td>
<td>In class meeting, 714 HW</td>
<td>Metamorphism</td>
<td>Chap. 7</td>
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<tr>
<td>17</td>
<td>M, 10/31</td>
<td>Virtual class, see BB folder for materials</td>
<td>Earthquakes</td>
<td>Chap. 8</td>
<td>SW Chap. 8</td>
<td>11/13</td>
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<td>18</td>
<td>Th, 11/3</td>
<td>In class meeting, 714 HW</td>
<td>Earthquakes</td>
<td>Chap. 8</td>
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<tr>
<td>19</td>
<td>M, 11/7</td>
<td>Virtual class, see BB folder for materials</td>
<td>Geophysical Properties of the Earth and Crustal Deformation</td>
<td>Chap. 9, Interlude D</td>
<td>SW Chap. 9</td>
<td>11/10</td>
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<tr>
<td>20</td>
<td>Th, 11/10</td>
<td>In class meeting, 714 HW</td>
<td>Geophysical Properties of the Earth and Crustal Deformation</td>
<td>Chap. 9, Interlude D</td>
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<tr>
<td>21</td>
<td>M, 11/14</td>
<td>Virtual class, see BB folder for materials</td>
<td>Deep Time</td>
<td>Chap. 10</td>
<td>SW Chap. 10</td>
<td>11/17</td>
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<tr>
<td>22</td>
<td>Th, 11/17</td>
<td>EXAM II</td>
<td>Chap. 6,7,8,9,10</td>
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<tr>
<td>23</td>
<td>M, 11/21</td>
<td>Virtual class, see BB folder for materials</td>
<td>Deep Time and Quick Biography of the Earth</td>
<td>Chap. 10 &amp; 11</td>
<td>SW Chap. 11</td>
<td>11/23 (note due Wednesday)</td>
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<td>24</td>
<td>M, 11/28</td>
<td>Virtual class, see BB folder for materials</td>
<td>Energy Resources</td>
<td>Chap. 12</td>
<td>SW Chap. 12</td>
<td>12/1</td>
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<td>Th, 12/1</td>
<td>In class meeting, 714 HW</td>
<td>Energy Resources</td>
<td>Chap. 12</td>
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<tr>
<td>26</td>
<td>M, 12/5</td>
<td>Virtual class, see BB folder for materials</td>
<td>Energy Resources</td>
<td>Chap. 12</td>
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<td>27</td>
<td>Th, 12/8</td>
<td>In class meeting, 714 HW</td>
<td>Global Change</td>
<td>Chap. 19</td>
<td>SW Chap 13</td>
<td>12/12</td>
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<td>28</td>
<td>M, 12/12</td>
<td>In class meeting, 714 HW</td>
<td>Global Change</td>
<td>Chap. 19</td>
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<tr>
<td>Th, 12/15</td>
<td>EXAM III</td>
<td>In class, 714 HW</td>
<td>11:30 AM to 1:30 PM – Chap. 10,11,12,19</td>
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