## GEO 510 Earth History Laboratory: Fall 2020 Syllabus

### Thursday 7:00-8:00 pm, Online via Zoom

GEO 510 Earth History Laboratory. 2 hours, 1 credit. Study of important rocks and fossils, correlation and dating methods, interpretation of stratigraphic sections, case study reconstruction of geologic history.

### Instructor

Prof. Heather Sloan  
Office Hours: W & Th 5:00-6:00 pm, or by appointment  
Office Location: Online via Zoom or Telephone  
Telephone: 845-751-9115, Email: [heather.sloan@lehman.cuny.edu](mailto:heather.sloan@lehman.cuny.edu) (The best way to reach me is by email.)

### Academic Objectives

Laboratory exercises are designed to enhance student mastery of concepts presented in the corequisite lecture course, GEO 502, through application and practice and to help students develop quantitative literacy skills, scientific graphic visualization skills, and critical thinking skills as well as skills associated specifically with analysis and interpretation of geologic data. Students successfully completing the course will:

- Demonstrate understanding of major concepts of the Earth system, its components and materials through application of those concepts to specific problems.
- Demonstrate the ability to identify important fossils and interpret paleo-environmental conditions based on those identifications.
- Demonstrate the ability to analyze and correlate stratigraphic sections drawn from the geologic record and interpret the geological history they represent.
- Demonstrate development of quantitative literacy skills by successfully performing data manipulation; and correctly computing a variety of simple to moderately difficult calculations.
- Demonstrate development of scientific graphic visualization skills by correctly interpreting maps, stratigraphic cross sections, graphs, illustrations, and images; and successfully generating graphs from data table, cross sections from maps, and maps from a variety of data types and information sources.
- Demonstrate development of critical thinking skills by successfully analyzing a variety of quantitative and logic problems; successfully applying concepts from the corequisite lecture course, GEO 510; correctly interpreting numeric data and qualitative textural and visual information from a variety of sources; successfully synthesizing this information and presenting it in written (lab reports) and graphic (maps, cross sections, illustrations) formats.
- Demonstrate development of skills specifically associated with geologic data and interpretation by correctly identifying minerals, rocks, and fossils; successfully applying correlation and dating techniques; correctly interpreting and generating maps and cross sections.
Required Text

You are required to download and print the labs from the course Blackboard site. Once you have completed the labs on paper either in advance or during the Zoom lab session, you can fill in the answers on the Lab Answer sheet you will find on Blackboard.

Course Requirements and Grading

Course Requirements: You must complete all scheduled labs. You will be expected to turn in the labs at the end of each lab session in which they are completed; some labs will take more than one class to complete.

Lab Materials: Colored pencils, Ruler, Eraser, Scissors, and Calculator

Grade Calculation

Grades for individual exams and labs will be calculated on a point-percentage basis with no letter grade assigned. In other words, if you get 15 points on a 20-point lab, 15/20=75%.

Your course grades will be calculated on a curve derived from the cumulative scores on all tests and assignments for everyone in the class. Because we won’t have all these scores until after the final, I won’t be able to tell you what grade you’re going to get ahead of time. I will be happy to discuss your work with you and your standing in the class anytime.

Course Policies

ABSOLUTELY NO CELL PHONES, beepers, or other electronic gadgets are permitted in class – that includes recharging. Visible cell phones will result in the subtraction of 1 point per sighting from your participation grade. It is not acceptable to leave during class to receive or make calls. Repeated cell phone use will result in your being asked to leave the class for the day. The only possible exception to this digital exclusion is a laptop computer or tablet – but ONLY for note taking, or the use of a cell phone as a calculator. If you are found reading email or surfing a web topic not related to the course, you will be asked to put it away the first time and to leave if it happens again.

Attendance Policy

Attendance to class is required. If you cannot avoid missing a lab or do not complete a lab, there is a Lab Make Up session scheduled at the end of the semester. Because some labs require the use of samples, you must tell me ahead of time which lab you will be working on so that I can have the samples ready for you.

No food is permitted in class. Drinks are ok as long as no containers are left behind.

Accommodating All Abilities

Lehman College is committed to providing access to all programs and curricula to all students. Students who may need classroom accommodations are encouraged to register with the Office of Student Disability Services. For more information, please contact the Office of Student Disability Services, Shuster Hall Room 238 and Telephone 718-960-8441.

The Academic Center for Excellence (ACE) and the Science Learning Center (SLC)
The Academic Center for Excellence (ACE) and the Science Learning Center (SLC) are two of the tutoring centers on campus. The ACE provides appointment-based and drop-in tutoring in the humanities, social
sciences, and writing, as well as general writing and academic skills workshops. The SLC provides drop-in tutoring for natural science courses. To obtain more information about the ACE and the SLC, please visit their website at http://www.lehman.edu/issp, or please call the ACE at 718-960-8175, and the SLC at 718-960-7707.

**Academic Integrity**

It is your responsibility to read and understand the Academic Integrity Policy that can be found in full in the Undergraduate Bulletin. Violations of the Academic Integrity Policy will not be tolerated. At the very least violations of academic integrity will result in a grade of F or no credit for the assignment or exam in question and may result in more serious consequences.

You are expected to work with a partner or in a group, but if I find that you are copying answers without comprehension, you will receive a score of 0 for that lab.

**In the Classroom**

Please help to maintain an atmosphere of acceptance, respect, and engagement in the classroom. You are expected to take responsibility for your learning – after all, no one else can learn for you. Your active engagement in lab activities is essential to your success in this course.

Please arrive on time and be ready to participate at the start of class. If you cannot avoid being a few minutes late, please enter quietly, causing as little disturbance as possible.

Please ask questions during class.

**Bad Weather**

If bad weather prevents me from getting to campus even though classes have not been canceled, we will meet online on Blackboard. If the weather looks bad I will post an announcement on Blackboard by 9am only if I will not be coming in. No announcement means we will meet as usual. If I cannot get to campus or if classes are canceled, check the Blackboard for the **required** assignment for that day. We will not skip any scheduled material.

If the bad weather results in no internet service up here in the woods, I will try to notify you ahead of time and we will make arrangements to cover any scheduled material.
Please Note: This schedule is subject to minor change. This lab has never been offered online before. Adjustments will have to be made to the labs if a better online alternative can be found during the semester, it will be substituted for one of the labs listed below. This means being more flexible than usual with our schedule. Your patience and persistence are appreciated.

<table>
<thead>
<tr>
<th>Date</th>
<th>Lab</th>
</tr>
</thead>
<tbody>
<tr>
<td>27 Aug</td>
<td>Lab 1: Geologic Time and Dating</td>
</tr>
<tr>
<td>3 Sept</td>
<td>Lab 2: Stratigraphic Correlation Part 1</td>
</tr>
<tr>
<td>10 Sept</td>
<td>Lab 3: Stratigraphic Correlation Part 2</td>
</tr>
<tr>
<td>18 Sept</td>
<td>Lab 4: Relative Dating with Stratigraphy</td>
</tr>
<tr>
<td>24 Sept</td>
<td>Lab 5: Relative Dating with Fossils</td>
</tr>
<tr>
<td>1 Oct</td>
<td>Lab 6: Fossil Identification</td>
</tr>
<tr>
<td>8 Oct</td>
<td>Lab 7: Fossils and Past Environment 1</td>
</tr>
<tr>
<td>15 Oct</td>
<td>Lab 8: Fossils and Depositional Environment</td>
</tr>
<tr>
<td>22 Oct</td>
<td>Lab 9: Fossil-Stratigraphic Interpretation</td>
</tr>
<tr>
<td>29 Oct</td>
<td>Lab 10: TBD</td>
</tr>
<tr>
<td>5 Nov</td>
<td>Lab 11: Paleogeographic Reconstruction Part 1</td>
</tr>
<tr>
<td>12 Nov</td>
<td>Lab 11: Paleogeographic Reconstruction Part 2</td>
</tr>
<tr>
<td>19 Nov</td>
<td>Lab 11: Paleogeographic Reconstruction Part 3</td>
</tr>
<tr>
<td>26 Nov</td>
<td>No Class - Holiday</td>
</tr>
<tr>
<td>3 Dec</td>
<td>Make Up Lab</td>
</tr>
</tbody>
</table>