

PGEOG 250 – Fall 2020
EARTH SYSTEMS SCIENCE I
LAB SECTION INFORMATION AND OBJECTIVES
Lab Instructor: Mr. Tom Carboni

CLASS SCHEDULE:

LABS: Section 1: Tuesday, 12:45 – 1:35, Online
 Section 2: Tuesday, 1:45 – 2:35, Online

MY CONTACT INFORMATION:

Office On Blackboard Collaborate
E-mail Thomas.Carboni72@myhunter.cuny.edu (*)
Office Hours: Tuesday 10-11am (*please kindly make an appointment*)

* **Note:** the best way to contact me is via email – (1) You must include the course name or number in your subject line (2) You must include your entire name in your email (3) I try to answer all emails within 24-36 hours. Allow for a 48 hour delay on the weekends.

COURSE OBJECTIVES

The three main objectives of this course are:

1. To introduce students to “systems thinking” in the context of the earth system. Systems-thinking is critical in all areas of study, and particularly in the fields of environmental studies and earth sciences.
2. To introduce students to quantitative analysis. In the lab portion of this course we will be introduced to some of the concepts necessary to study environmental systems in a quantitative fashion. Labs are meant to provide students with a number of identifiable skills that can be applied in other courses as well as in work environments.
3. To provide students with a sufficiently broad, yet integrated, understanding of the earth system to identify particular areas or sub-disciplines that they would like to pursue in more detail.

EXPECTED LEARNING OUTCOMES

1. Theory

At the end of the semester, students would be expected to have a basic understanding of

- the convincing observational data that are used by scientists to study global change
- the events in Earth’s history that illuminate how the Earth as a system responds to stress
- how to explore the way the Earth ‘works’ by studying processes active on Earth’s surface
- how these processes function together to determine and regulate Earth’s climate, the circulation of the atmosphere and ocean and the recycling of elements

2. Skills

At the end of the semester, students would be expected to have acquired basic quantitative skills that will allow them to

- use basic mathematical calculations to quantify physical processes under study
- understand the importance of data visualization and explain graphs and charts in detail

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- use basic computer software such as EXCEL to perform calculations and generate charts
- use basic functions in Matlab software to generate graphs and perform calculations.
- gain a basic appreciation of modeling environmental systems through the use of the STELLA software

Group work – is allowed for all labs except labs 1, 2, and 5. For these labs, discussions and consultations are allowed but the work **MUST** be individual. If students choose to work in groups, students must: (1) inform the professor which students are working together; and (2) hand in **INDIVIDUAL** lab reports, written in the student’s own words and style, unless otherwise stated in the lab instructions.

GRADES

Grades are based on lab exercises and classroom participation.

Lab portion	30%
Lecture portion	70%

Lab:

Lab exercises	90%
Classroom participation	10%

There are extra credit assignments for lab 6 (2.5%), and 8 (2.5%).

ASSIGNMENTS

Lab assignments are to be submitted on BlackBoard under “Lab Documents and Submission”. Email submission is generally NOT accepted. You are expected to type up your lab documents unless otherwise noted. You will need to name your assignments as follows:

Last name – first name – lab # e.g. Carboni_Tom_Lab1

Grades:

Please see the Hunter grading scale below for information on letter grades and their numerical equivalent ranges.

<https://ww2.hunter.cuny.edu/students/academic-planning/degree-requirements/construct-an-academic-plan/gpa-calculator/grading-scale/>

Tardiness in handing in assignments and labs:

Every student can submit one lab late (within a reasonable time scale, i.e. not more than 1 week). After that, lab grades will be penalized for lateness.

Classroom policies and Teaching Format:

ATTENDANCE

Labs will be taught mostly in a synchronous manner meaning they will take place live during your scheduled classtime. Only one unexcused absence is allowed from lab sessions. Each unexcused absence after the maximum allowable will result in a decrease of 5% from the student's final grade.

As with all courses at Hunter College:

Academic Dishonesty: Please be advised that 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.

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.

See the following report by the Hunter College Senate for more details:

<http://www.hunter.cuny.edu/senate/assets/Documents/Hunter%20College%20Policy%20on%20Academic%20Integrity.pdf>

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, in Room E1214B, to secure necessary academic accommodations. For information and assistance: (212)772-4857 or (212)650-3230.

PGEOG 250 – ESSI, Fall 2015: Lab SCHEDULE

LI = Low Impact

Week	Date	Thursday Lab Section 002
1	9/1	Lab 1. Introduction to EXCEL, Basic algebra review (LI)
2	9/8	Lab 2. Introduction to Matlab (LI)
3	9/15	Lab 3. Earth Radiation Balance
4	9/22	Lab 3 continued
5	9/29	Classes follow Monday Schedule
6	10/6	Lab 4. Daisyworld
7	10/13	Lab 4 continued
8	10/20	Lab 5. Geometric progressions and growth. Exponential and logarithmic functions
9	10/27	Lab 5 continued
10	11/3	Lab 6. Thermal Damping, response times, seasons
11	11/10	Lab 6 continued
12	11/17	Lab 7. Solving Problems in Earth Science
13	11/24	Lab 8. The Carbon Cycle
14	12/1	Lab 8 continued
15	12/8	Late Work Due
16	12/15	Finals Week