

Updated on February 2, 2022

PGEOG 13000- Weather and Climate Lab Section 1L05
Spring 2022 (In Person)
Wednesday 2:10pm - 4:00pm, 1028HN

Instructor Dr. Erin Friedman
Email erinfri@gmail.com (check regularly) or esfriedm@hunter.cuny.edu (check once/day)
Office 1032 HN, Department of Geography and Environmental Science
Office hours by appointment (Zoom meeting)

Email Policy

The best way to contact me is through email. (1) Please use PGEOG 130 1L05 Weather and Climate Lab in the subject line and sign your full name to any email message. (2) Please use your @myhunter email for all communications. I will try to respond your email within 24 hours. Please allow for a delay over weekends and holidays.

Textbooks

Required Lab manual

Exercises for Weather & Climate 9/E

Greg Carbone, University of South Carolina; ISBN-13: 978-0-13-404136-0; Prentice Hall 2016

- **Do not purchase earlier or used editions.** Used editions will be missing sections, and several of the labs have significantly changed for this edition. Make sure that you have access to the manual on the first day of class. Do Not Purchase the VitalSource/Coursesmart ebook for the lab text. There have been MAJOR formatting problems with it.
- The lab text is on reserve in the library (Call Number: **QC981 .C34 2016**). You can photocopy and use this as long as there is no writing in it. If it is missing pages you are still responsible for the work.

Course Description and Objectives

This is the lab section of the PGEOG 13000 course which has both a lecture and a lab component worth in total 4.0 credits (5 hours). The course fulfills the Hunter Common Core section C. Life and Physical Sciences and the General Education Requirements GER 2/E (Natural Science). There are no prerequisites.

The course (both lecture and lab) provides an introduction to meteorology and atmospheric sciences. It includes the structure and composition of the atmosphere and the elements that affect it, such as pressure, humidity and temperature. It examines the development of a variety of weather phenomenon, such as cloud formation, fronts, storm systems and severe weather, and reviews basic weather forecasting and analysis techniques. The course explores short and long- term climate processes and their impact on the environment and people. The course demonstrates how different regions of the world have been and will be impacted by climate change in the past, present and future. This is a laboratory science course and the concepts covered in lecture will be demonstrated with hands-on and technology-based activities using a variety of exercises, observations and experiments. In the labs we will be using mathematical formulas and calculations. You are expected to have at least a basic understanding of mathematics through algebra.

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Each session will begin with a PowerPoint presentation of background content for the lab (which will also be uploaded to Blackboard to its own folder). I will give general instructions and details for questions. Please try to read the lab beforehand, so you can be prepared to come to class with any questions. These questions can also help your fellow classmates!

Expected Learning Outcomes

Upon completion of the course the student will be able to:

1. Describe, explain and appreciate the interconnected nature of the Earth systems through effective oral and written communication.
2. Identify major geographic features (both physical and human) on map and globe.
3. Explain the relationship between the Sun and the Earth and the Sun's planetary impact on weather and climate.
4. Recognize the interaction between the elements of the atmosphere, including
 - a. the composition and the structure of the atmosphere;
 - b. the atmospheric and oceanic circulation processes, and fronts, storm systems and severe weather;
 - c. interpret methods of weather forecasting and create basic weather maps.
5. Distinguish, analyze and evaluate climate processes and how they relate to the past, present and future climate and their impact on biogeography, including
 - a. current technology and science in predicting meteorological outcomes
 - b. natural and anthropogenic climate change
 - c. the impact created by shifts in climate zones

Assignment Submission

- Labs must be submitted through Blackboard. A folder will be created for lab submissions.
- Please submit the lab as a digital file (Word doc or PDF) and follow the question list in the lab itself. If submitting as Word doc, those questions that require a drawing on maps or graphs, photograph the necessary page and submit it with the assignment (make sure it is clear to read).
- For math equations in Word, write out using the four basic symbols in Word, [+ - x /] Exponents, if relevant, can be shown with a carat [$4^3 = 64$, i.e., four to the third power = 64].
- Write your full name on all submissions and submit as one file!
- Name your lab file following this format: Lastname_firstname_labnumber
- You can work together on labs, but there must be separate submissions.
- **You will have one week to complete each lab. The labs must be submitted by 11:59PM of the date indicated on the schedule. Labs not submitted in a timely manner will receive a grade of zero.**
- No late labs will be accepted, unless you have a documented excuse or contacted the professor **prior** to the assignment due date, and you received written permission to submit your assignment at a later date.

Grading

- Your lab grade will be composed of the lab manual work (Out of 100 points) and makes up 30% of your Weather and Climate grade.

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- Your lab grade will be posted to blackboard with a graded PDF of your document including comment(s) on any corrections.

Blackboard

Make sure that your Blackboard account is active and that you know how to use it. I will use it for uploading course related work (e.g., powerpoint), sending reminders and to view your lab submissions. Please email me as soon as you know that you can't find something. I will not be responsible for work that you miss because you did not check your @myhunter email account or Blackboard. If you have any questions regarding Blackboard or any other tech questions – I recommend that you first reach out to me because I might be able to easily solve the issue. You can also contact the student helpdesk via phone at (212) 650-3624 or email at studenthelpdesk@hunter.cuny.edu. Please make sure that you have access to your Hunter email (check regularly) and your CUNYfirst account by the first day of classes.

Course Date	Lab due by	Lab assignments
2-Feb	8-Feb	Pre-lab exercises (A, C, E)- posted on Bb
9-Feb	15-Feb	Lab 1: Vertical Structure of the Atmosphere
16-Feb	22-Feb	Lab 2: Earth-Sun Geometry
23-Feb	1-Mar	Lab 3: The Surface Energy Budget <u>and</u> Lab 4: The Global Energy Budget
2-Mar	8-Mar	Lab 5: Atmospheric Moisture
9-Mar	15-Mar	Lab 6: Saturation and Atmospheric Stability
16-Mar	-----	NO CLASS on March 16, 2022
23-Mar	29-Mar	Lab 9: Weather Map Analysis
30-Mar	5-Apr	Lab 10: Mid-Latitude Cyclones
6-Apr	12-Apr	Lab 12: Thunderstorms and Tornadoes
13-Apr	19-Apr	Lab 13: Hurricanes
20-Apr	-----	NO CLASS—SPRING BREAK APRIL 20, 2022
27-Apr	3-May	Lab 14: Climate Controls
4-May	10-May	Lab 16: Climate Variability and Change
11-May	16-May*	Lab 17: Simulating climate change

***Notice lab 17 is due on Monday, May 16. This is to give you enough time to have the lab completed for your final.**

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Course Policies

During our time together in class, we have joined a community and need to take care of each other, treat each other with respect, and protect each other's physical and mental health. This means we must all follow some basic rules to protect ourselves and others.

Note: As we all know, Covid likes to surprise us, which means we need to be prepared to move to remote learning at all times. If we switch to an online format (Zoom), I will update you as soon as possible. Therefore, you should check your Blackboard and Hunter email regularly!

Classroom Expectations

Wear a mask that always covers the nose and mouth, sitting in assigned seating and staying away from class if you feel unwell.

Wearing masks also means that **we cannot eat in classrooms**. If you must drink (water, coffee, tea, etc.) during our class meetings, please keep to a minimum.

Attendance

Regular attendance matters as there will be things discussed and reviewed “in class” that are not in your text or lab book. **However**, to protect our campus community from the risk of Covid spread, **do not come to class if you are exhibiting even mild cold- or flu-like symptoms**, including but not limited to a fever, sore throat, or runny nose. **If you get sick at any time during the semester, please e-mail me to let me know**. In addition, **if you have Covid or suspect you have Covid**, you need to self-report to Hunter College designated Campus COVID Liaison, Galia Galansky: (galia.galansky@hunter.cuny.edu).

If you are feeling unwell and/or test positive for Covid, do not come to class. If you test positive, you should quarantine for five days, but if are well enough and would like to attend class remotely, please email me and we will see if it's possible to arrange for you to Zoom into the class or for me to record our class. *I cannot promise to provide remote options*, but I will do my best, given the challenging conditions we all face.

Most importantly, you are not required to share personal information with me. You are required to keep me informed if you are missing class and to let me know how you will attempt to stay in tune with your learning and commitment to our class.

Seating Assignment

For COVID-19 contact tracing, each student will sit in the same assigned seat for the entire semester. Each seat is assigned a number and the I will keep a record of it. If you forget, please let the me know and I will tell you your seat number.

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.

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Special Note: In fall of 2021 Hunter adopted a new Pass/No Credit (P/NC) policy. However, this new policy still requires that you satisfy the requirement for completing all required work. This includes all lab assignments and lecture exams. At the end of the semester if you want to request P/NC and you have failed to submit a laboratory exercise you will NOT be eligible for a grade of P/NC grade. The following website gives you the details on how and when to apply for P/NC. <https://hunter.cuny.edu/students/registration/registration-for-classes/credit-no-credit/>

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 Harassment

In compliance with the CUNY Policy on Sexual Misconduct, Hunter College reaffirms 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 relationships. 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.

1. 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, or contacting the College's Public Safety Office (212-772-4444).
2. 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.

Syllabus Policy

Except for changes that substantially affect grading, this syllabus is a guide for the course and is subject to change with advance notice. These changes will be announced in class and through Blackboard announcements. Therefore, please make sure to check Blackboard regularly!