

PGEOG 130
Weather and Climate Lab
Spring 2022

Lab Section: 2L03

Room: 1028 N

Lab Hours: Thursdays 2:10 AM – 4:00 PM (In Person)

Lab Instructor: Natalie Monterrosa (Lecture – Prof. Thomas Carboni)

Email: nmonterrosa@hunter.cuny.edu

Office Hours: Wednesdays 12:00 PM – 1:00 PM (Rm 1032 N - In person)

We can schedule a Zoom meeting based on need/availability. We can schedule a Zoom meeting based on need/availability. Please send an email with the course # and Lab section in the subject line (also include your full name in the body of the email) and we can schedule time to meet. I will try to answer all emails within 24 hours, and within 48 hours on the weekends.

Required Materials

Greg Carbone, *Exercises for Weather and Climate, 9th ed.* Pearson, 2016 ISBN-10: 0134041364, ISBN-13: 9780134041360

You should have a hardcopy of the lab manual and bring it to every class. *The e-text is not recommended.* Please also bring a calculator!

Course Description

This is the lab section to an introductory course on weather and climate, focused on understanding the principles of meteorology and climatology, the atmosphere, different weather phenomena, weather analysis and characteristics of world climate and climatic change. Lab exercises are designed to further your understanding of these concepts by application and analysis. Please refer to Lecture syllabus for more information on learning objectives.

Learning Objectives

- Define the basic chemistry and physics of atmospheric processes.
- Explain the development of weather analysis and forecasts.
- Explain feedback mechanisms and distinguish between time scales of operation
- Discuss world climate distribution and how it relates to the general circulation of the atmosphere.

Attendance, Participation and Classroom Policies

Attendance is mandatory and is taken every class. Attendance required and is strongly encouraged at all lab sessions. Due to the ongoing COVID-19 pandemic, we must continue to adhere to all guidelines from CUNY. Please let me know if you have any questions or concerns. Class participation constitutes 20% of the final lab grade. All students are expected to abide by

the following policies when in lecture in order to provide a more respectful and productive learning environment.

- All cell phones must be silenced.
- Laptops are not permitted.
- Texting and other non-class related smart phone activities are not allowed. Students should quietly excuse themselves from the lecture if substantial external electronic communication is required.

Grading

Lab Exercises: 80%

Class Participation: 20%

Syllabus Change Policy

Except for changes that substantially affect implementation of the evaluation (grading) statement, this syllabus is a guide for the course and is subject to change with advance notice. Updates will be posted regularly on Blackboard.

Lab Policies

Lab exercises are due, in lab at the beginning of your next class meeting. If you miss a class session, you are still expected to complete the lab and hand it in on time. You have a one-week grace period to turn in any late labs before incurring a penalty. Any exceptions will be made on a case-by-case basis. Please let me know if you have any questions or concerns.

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 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.

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, or 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/1a/Policy-on-Sexual-Misconduct-12-1-14-with-links.pdf>

Weekly Lab Schedule (*subject to change)

Date	Lab # / Topic
2/3	Lab # 1A - Dimensions and Units, Latitude/Longitude, Isolines
2/10	Lab # 1 – Vertical Structure of the Atmosphere
2/17	Lab # 2 – Earth-Sun Geometry
2/24	Lab # 3 – Surface energy budget Lab # 4 – Global energy budget
3/3	Lab # 5 – Atmospheric Moisture
3/10	Lab # 6 – Saturation and Atmospheric stability
3/17	Review/Discussion
3/24	Lab # 9 – Weather Map Analysis
3/31	Lab # 10 – Mid-latitude Cyclones
4/7	Lab # 12 – Thunderstorms and Tornadoes
4/14	Lab #13 – Hurricanes
4/21	Spring Recess – No classes

4/28	Lab # 14 – Climate Controls
5/5	Lab # 16 – Climate Variability and Change
5/12	Lab # 17 – Simulating Climate Change
5/19	Finals Week – No lab scheduled

Lab #	Title	Questions to Answer
1nm	Units, Latitude and Longitude, Isolines	All but 4 and 11-13 in units lab
1	Vertical Structure of Atmosphere	1-22
2	Earth-Sun Geometry	1-6, 9-19
3 and 4	The Surface and Global Energy Budget	Lab 3: 1-15; Lab 4: 1-5,11-15
5	Atmospheric Moisture	10-29
6	Saturation and Atmospheric Stability	1-16, 18-25
9	Weather Map Analysis	1-9
10	Mid-Latitude Cyclones	1-17
12	Thunderstorms and Tornadoes	1-17
13	Hurricanes	1-17
14	Climate Controls	1-22
16	Climate Variability and Change	1-23
17	Simulating Climate Change	1-16

*nm stands for not in (the required) lab manual