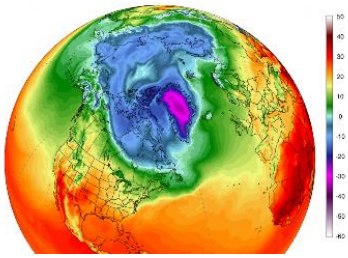
Fall 2022
Pgeog 13000 sec 02
Weather and Climate

Lecture Tuesdays & Thursdays 5:30pm - 6:45pm
HW 511

Lab sections 2L01, 2L02, 2L03 & 2L04
See below

Lecture Instructor: Professor Anita Erdős Forrester
Office: 1032 HN
Office hours: via Zoom on Fridays from 11:30 -12:30, and after class on Thursdays, or by appointment
Email: **af2835@hunter.cuny.edu** - I will respond to emails within 24 hours during the week. If I don't respond, feel free to email me a 2nd time. You must use your hunter email for communications and sign with the name that appears on CUNYFirst. However, if your preferred name is different than what appears there please let me know so I can make a note of it.



Your lab section and instructor:

Section 2L01	Monday	5:00 pm - 6:50pm	K. Parker
Section 2L02	Tuesday	9:30 am - 11:20pm	N. Monterossa
Section 2L03	Tuesday	11:30 am - 1:20pm	D. Reimer
Section 2L04	Wednesday	5:00 pm - 6:50pm	K. Parker

Course Materials:
Textbook: Lutgens & Tarbuck, The Atmosphere: An Introduction to Meteorology, 14/E; Prentice Hall. Look around and find the best option for your budget and needs. The book is available as a new or used physical copy, a digital copy, as well as a rental. Get it early to get the best price but you will need a book.
Older editions (11th ed or later) are also fine but keep in mind that some of the data, especially as it refers to climate change, and some variable gas concentrations might be different than what we are working with (but this shouldn't be an issue if you take notes).
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
For the lab manual you can also chose to order the digital copy of the book – I would stay away from rentals or used copies as I have had students mention that there were lab pages missing. We cannot provide you with copies of the missing labs. Make sure that you have access to the manual on the first day of your lab session. If you order a digital copy of the manual you may have some print formatting issues. There is copy of the manual on reserve in the Hunter Library if you want to make copies of the pages.

Informed registration statement:
In this 4-credit course we will explore the fundamentals of meteorology and the Earth's climate. Topics will include the physics of the atmosphere, interactions between the atmosphere and the oceans, climate change and environmental issues relating to weather and climate. This is an applied science course that has a lab component (hands-on work), therefore it can be used to meet the GER2E General Education Requirement as well as to meet the Physical and Life Science category of the Hunter Common Core.

Course description and learning objectives: This course will describe the basic principles and elements that shape and determine the Earth's weather and climate. The course will begin with a discussion of the Earth System, with particular emphasis on the atmosphere. Next, we will discuss the energy that drives all we observe in the atmosphere. The first part of the course will concentrate on describing in some detail the elements that are common to weather and climate: temperature, pressure, moisture, clouds and winds. The second part of the course will, then, concentrate on how all those elements, working together or by combinations, determine the general circulation patterns in the atmosphere and oceans, weather patterns and our climate. Finally, we concentrate on air pollution and the changing climate and in this context; we will discuss some current issues, such as the potential impact that humans have on climate and climate change.

Expected learning outcomes:
The student who successfully completes this course will be able to

1. recognize the methodologies employed by natural scientists,
2. describe the basic elements that determine weather patterns and climate features of Earth,
3. describe the basic chemistry and physics of atmospheric processes.
4. discuss the basic concepts related to earth's climate, and what is known about recent climatic changes
5. recognize the complexity of the Earth's climate system, its weather and the many ways our lives are affected (and affect!) our environment.

- You will find all of the lecture materials you will need organized into weekly folders based on our course schedule (see at the end of this syllabus and on Blackboard). In the folders you will find:
    - Link to our zoom office hours on Fridays
    - Pdf of the week's lecture and lab notes – you can print these out for review
    - A "News and Videos" section with content relevant articles, videos, tutorials, virtual field trips that we use in class or that can supplement the week's topic as well as any "breaking news" when it comes to Weather and Climate and the Earth Sciences
    - Any other links and materials you might need for the lecture.
- Don't worry, I will post announcements and short reminder videos and will go over what you need to do at the beginning of each week.
- You will have a separate Bb shell for your lab – make sure that you are checking both the lecture and the lab Bb pages for the course.
- I will go over how to be successful in the course, and you are welcome to stop by and ask for tips both from me and/or your lab instructor.

Grading policy:

Exams (3)	60%	Class work	5%
Lab Manual & online lab exercises	30%	Participation (for lecture and lab)	5%

Exams: Exams will be a mix of multiple choice, true/false and fill-in-the-blank and short answer questions covering materials from the lecture including material from the textbook, in-class discussion, additional readings and assignments. If you miss an exam for a satisfactory and documentable reason you must contact me **within 48 hours** of the missed exam deadline to schedule a make-up at a mutually convenient time. After that the grade will be automatically a zero.

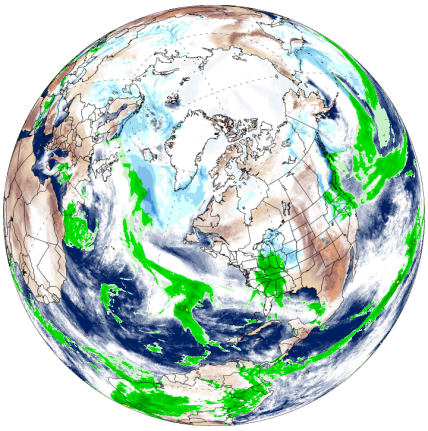
Class work: We will have some in-class activities and assignments during class as well as additional classwork regarding some of the materials that we cover.

Blackboard:

Make sure that your Blackboard account is active and that you know how to use it. We will use BB extensively in this course so please make sure that you familiar with the application before the course begins. I will use it for course related work, send out assignments, reminders and emails. There will be classwork and assignments that are Blackboard-based (your labs, quizzes, discussion, etc.) and it will be the delivery method for short online lecture snippets, videos, discussions, and office hours. We will go over these in our first class session – but please email me as soon as you find that you can't find something or don't know how to get to an activity. I will not be responsible for work that you miss because you do not check your @myhunter email account or you didn't check BlackBoard.

This is the tentative schedule as of August 22nd, 2022 and is subject to change. Except for changes that substantially affect implementation of the grading statement, this syllabus is a guide for the course and is subject to change with advance notice. Any changes made to the schedule will be announced in class and an updated schedule will be posted to Blackboard.

Incomplete Policy:



There will be NO INCOMPLETES (with the exception of a death, serious illness, or work related issues such as travel). Incompletes must be requested in writing prior to the last class session (unless of an unforeseen emergency as outlined above) and will be given only if student's grade is at "C" or above at the time the IN is filed, and with evidence of a satisfactory reason. At the time you request an IN you must also complete a Contract to Resolve an Incomplete Grade (form available at the college) and get my signature. Otherwise, I will average your existing grades based on the course grading rubric and record the grade you have earned. To receive a CR/NC you must have completed all the course requirements (exams, quizzes, etc.) and have requested the CR/NC option prior to beginning the final exam. Based on your final score you will be assigned as a letter grade based on the numerical standards that can be found in the Hunter College Undergraduate Catalogue at http://catalog.hunter.cuny.edu/

Course Policies

Attendance is an integral part of the course. Missing lecture or lab will negatively impact your performance as there will be things discussed and reviewed in class that are not in your textbook. While there will be no point or grade deductions based on attendance, you can not expect to learn and understand the material if

you do not attend the classes. Participation is a very important part of your final course grade. It can include anything from asking questions and participating in class discussions during the lecture, lab, via email, before, and/or after class, as well as logging in to the course's Blackboard page.

Any work assigned must be completed before the next class session begins whether you are in class or not. Missing a lecture class does not excuse you from completing and submitting an assignment that was assigned or that was due that day.

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.

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.

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.

Preliminary Lecture Schedule (as of 08-22-22)

	Date	Lecture schedule	Notes
1	25-Aug	Intro to the course, begin Chapter 1	
2	30-Aug	Chapter 1: Intro to the Atmosphere	
3	1-Sep	Chapter 2: Heating Earth's Surface and Atmosphere	
4	6-Sep	Chapter 2: Heating Earth's Surface and Atmosphere	
5	8-Sep	Chapter 3: Temperature	
6	13-Sep	Chapter 3: Temperature	
7	15-Sep	Chapter 4: Moisture and Atmospheric Stability	
8	20-Sep	Chapter 4: Moisture and Atmospheric Stability	
9	22-Sep	Chapter 4: Moisture and Atmospheric Stability	
x	27-Sep	Hunter is closed on 9/27	No class
x	29-Sep	9/29 is Monday's schedule	No class - MONDAY
x	4-Oct	Hunter is closed on 10/04	No class
10	6-Oct	Chapter 5: Forms of Condensation and Precipitation	
11	11-Oct	Exam 1 (Chapters 1-5)	EXAM
12	13-Oct	Chapter 6: Air Pressure and Winds	
13	18-Oct	Chapter 6: Air Pressure and Winds	
14	20-Oct	Chapter 7: Circulation of the Atmosphere	
15	25-Oct	Chapter 7: Circulation of the Atmosphere	
16	27-Oct	Chapter 7: Circulation of the Atmosphere	
17	1-Nov	Chapter 8: Air Masses	
18	3-Nov	Chapter 9: Mid-Latitude Cyclone	
19	8-Nov	Exam 2 (Chapters 6-9)	EXAM
20	10-Nov	Chapter 10: Tornadoes	
21	15-Nov	Chapter 11: Hurricanes	
22	17-Nov	Chapter 13: Air Pollution	
23	22-Nov	Chapter 15: World Climates	
x	24-Nov	Hunter is closed on 11/24	No class
24	29-Nov	Chapter 15: World Climates	
25	1-Dec	Chapter 14: The Changing Climate	
26	6-Dec	Chapter 14: The Changing Climate	
27	8-Dec	Chapter 14: The Changing Climate	
28	13-Dec	Wrap-up	Final Exam TBA
	Finals	Final exam (Chapters 10,11,13-15) TBA	