

**WEATHER & CLIMATE - PGEOG 13000 - SPRING 2022**  
**LECTURE: TUESDAY/FRIDAY 2:10 PM - 3:35 PM**  
**HUNTER WEST ROOM 615**

**LAB SCHEDULE & INSTRUCTORS CONTACT INFORMATION**

1L01	M	11:10 - 1:00 pm	Cloè Mueller (cloe.mueller09@myhunter.cuny.edu)
1L02	Th	11:10 - 1:00 pm	Natalie Monterrosa (nsammy2709@gmail.com)
1L03	W	10:10 - 12:00 noon	Natalie Monterrosa (nsammy2709@gmail.com)
1L04	T	11:10 - 1:00 pm	Dana Reimer (dreimer@hunter.cuny.edu)
1L05	W	2:10 - 4:00 pm	Erin Friedman (erinfri@gmail.com)
1L06	M	9:10 - 11:00 am	Cloè Mueller (cloe.mueller09@myhunter.cuny.edu)

**CONTACT INFORMATION**

**Professor:** Haydee Salmun  
**Email address:** hsalmun@hunter.cuny.edu (\*)  
**Telephone:** 212-772-5224  
**Office:** Department of Geography and Environmental Science, Room 1035  
**Office Hours:** Tuesday: 4:00 pm – 5:00 pm; *zoom, by appointment*  
Friday: 1:00 – 2:00 pm, *in person @Hunter North, Room 1035.*

**\*Note:** The best way to contact me is through your **Hunter College @myhunter** email – (1) You must include the course number or name in your subject line, (2) you must sign your full name as it appears in CUNYfirst. I try to answer all emails within 24 hours during the week and 48 hours on the weekend.

**DIVERSITY & INCLUSION**

I am committed to fostering an intellectual environment that is enriched and enhanced by diversity in all dimensions, including race, ethnicity and national origins, gender and gender identity, sexuality, class and religion. I am especially committed to increasing the representation of those populations that have been historically excluded from participation in U.S. higher education in STEM fields. It is my hope that we can work together and collectively move closer to accomplish that objective.

*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.*

**INFORMED REGISTRATION STATEMENT**

In this 4-credit course we will explore meteorology and climatology. Topics will include weather forecasting, 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, LEARNING OBJECTIVES, & OUTCOMES**

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, as well as our weather patterns. 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.

The student who successfully completes this course can:

- recognize the methodologies employed by natural scientists.
- discuss the nature of scientific inquiry and recognize examples of hypotheses formulation and testing as well as the development of some significant scientific theories.
- define the basic chemistry and physics of atmospheric processes.
- explain the development of weather analysis and forecasts.
- identify past changes in climate and how they may provide insight into the present and future states of the planet.
- 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.

### **RECOMMENDED TEXTBOOK**

*The Atmosphere: An Introduction to Meteorology*, 14th edition, Lutgens, Tarbuck, Herman, Tasa. ISBN-13: 9780134758589 ([13<sup>th</sup>, 12<sup>th</sup> or 11<sup>th</sup> Editions are acceptable](#)).

### **REQUIRED COURSE LAB MANUAL**

Exercises for Weather and Climate, by Greg Carbone, 9<sup>th</sup> Edition; ISBN-13: 97801340041360

**NOTE: eBook Version is not recommended, plagued with printing limitations**

**\*\* You must have your lab manual for the first day of lab \*\***

### **GRADING METHOD AND SCALE**

Grades will be based on class participation, homework assignments, two mid-term exams, and one final exam. A detailed description of the Hunter College Grading System may be found at <https://ww2.hunter.cuny.edu/students/academic-planning/degree-requirements/construct-an-academic-plan/gpa-calculator/grading-scale>. An itemized breakdown of the final grading rubric is provided below:

- Class participation: 10%
- Lab Work: 30%
- Mid-term exam I: 20%
- Mid-term exam II: 20%
- Final exam: 20%

**Class Participation** will be assessed through a series of short assignments called “Thought Questions” (TQs), which will be based on varying topics related to Weather & Climate. These

are meant as low impact assignments and are designed to encourage students to engage with publicly available data.

### **EXAM GUIDELINES AND POLICIES**

Exams will be based on assigned textbook readings, journal articles, materials covered in class, and case studies. Dates are **CLEARLY** posted on the Course Calendar and Content.

Examinations are 1 hour and 15 minutes for the mid-term and 2 hours for the final exam. No electronic devices or reference materials will be permitted on the desk during exams unless specified. Make-up exams are **ONLY** available in extreme cases, and with medical (or other) forms that confirm the absence.

Exams are designed to evaluate a student's ability to master content, integrate themes and concepts among the different topics covered in the class, understand the usefulness and limitations of scientific data for studying processes, and apply logical arguments to support perspectives.

### **CR/NCR POLICY**

The CR/NCR option will be honored only if the conditions stated on the CR/NCR form are satisfied: all course work has been completed and you earned grades such that you accumulated at least 50 points total in the course. Students on probation are ineligible. For more information about Hunter College's policy on CR/NCR go to:

<http://www.hunter.cuny.edu/advising/howto/credit-no-credit-cr-nc>.

### **PARTICIPATION AND CLASSROOM POLICIES**

Class participation constitutes 10% of the final grade. Attendance required and is strongly encouraged at all lectures because students who do not attend lecture cannot participate in class discussions. 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.

### **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.

***About the lab component of this course: Review carefully the syllabus provided by your lab instructor and keep in mind the general laboratory policies:***

Lab exercises are due in lab at the beginning of your next class meeting. Late lab exercises will have their grade reduced 20% for each day received late unless you have a valid excuse that can be documented. This policy will be strictly enforced. If you miss a class session, you are still expected to do the weeks work and hand the lab in on time, do not wait until the next meeting. Please ask your lab instructor about how they would like you to hand in any late labs.

## **ADDITIONAL HELPFUL INFORMATION**

**My Teaching Philosophy:** My goal in teaching is to help students in becoming confident and responsible professionals and to make this experience an enjoyable one. My approach to teaching involves being a facilitator in the learning process as opposed to being the authoritarian lecturer at the front of the room with a “one-way information transfer” style. I understand and respect individual differences in learning and do my best to promote learning in the classroom by working with individual differences rather than against them. At the same time, I wish to impart technical skills and a sense of responsibility by encouraging students to play the role of professionals in the classroom.

I expect students to put their best effort into this course. This involves participating in the in-class exercises, reading the assigned material, working out in-class assignments and preparing for exams.

**Lecture:** I will spend part of the lecture time explaining the key concepts of weather and climate and devote time to class discussion. You are expected to devote time outside the classroom to understand the concepts and review questions. I expect that lectures and discussion will help you be ready for exams.

**Finally:** It is important to start with a good study habit. Consistency is the key. Forming study groups is extremely helpful. Use my office hours and any other resource available to you throughout the semester. Make progress steadily as the material in this course cannot be understood the night before the exam. Concentrate on understanding rather than ‘regurgitating’. Put out your best effort every day.

The following are useful tips to do well in this or any class:

- Attend class and take detailed notes.
- Actively participate in class discussions.
- Read the assigned material in the course textbook (or another textbook) *before* coming to class.
- Re-write your notes as soon as possible after class. This will allow you to fill in the details still fresh in your memory, and prepare questions for the next time the class meets.
- Test yourself by answering the questions in the book and in class.
- Carefully study the diagrams and charts in the book and in the lectures.

## **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 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 MISCONDUCT**

In compliance with the CUNY Policy on Sexual Misconduct, Hunter College affirms the prohibition of any sexual misconduct, which includes sexual violence, sexual harassment, and gender-biased harassment retaliation against student, employees, or visitors, as well as certain intimate relationship. 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 strongly encouraged to contact the College's Title IX Campus Coordinator, Dean Jean Rose ([jtrose@hunter.cuny.edu](mailto:jtrose@hunter.cuny.edu) or 212-650-3262) or Colleen Barry ([colleen.barry@hunter.cuny.edu](mailto:colleen.barry@hunter.cuny.edu) or 212-772-4534) and seek complementary services through the Counseling and Wellness services Office, Hunter East 1123.

CUNY Policy on Sexual Misconduct Link:

<http://www.cuny.edu/about/administration/offices/la/policy-on-sexual-misconduct-12-1-14-with-link.pdf>

**\*\* A tentative schedule of classes, topics and reading assignments is provided below and will be updated on BlackBoard as needed \*\***

**Note**: Check the academic calendar for other important dates such as withdrawal dates and tuition refund as well as the final exam schedule:

<http://www.hunter.cuny.edu/onestop/calendars>

## COURSE CALENDAR AND CONTENT

**\*\*\* TENTATIVE SCHEDULE \*\*\***

Week #	Date	Topic of Lecture and Corresponding Chapter
1	Fri 1/28	Syllabus and Ch 1 – Introduction to the Atmosphere
2	Tu 2/1	No class today – Class Cancelled by Professor
	Fri 2/4	Ch 1 – Introduction to the Atmosphere Ch 2 – Heating Earth’s Surface and Atmosphere
3	Tu 2/8	Ch 2 – Heating Earth’s Surface and Atmosphere
	Fri 2/11	No class at Hunter today
4	Tu 2/15	Ch 3 – Temperature
	Fri 2/18	Ch 3 - Temperature
5	Tu 2/22	Ch 4 – Moisture and Atmospheric Stability
	Fri 2/25	Ch 4 – Moisture and Atmospheric Stability
6	Tu 3/1	Ch 5 – Forms of Condensation and Precipitation
	Fri 3/4	Ch 5 – Forms of Condensation and Precipitation
7	Tu 3/8	Ch 6 – Air Pressure and Winds
	Fri 3/11	Ch 6 – Air Pressure and Winds Ch 7 – Circulation of the Atmosphere
8	Tu 3/15	<b>Exam 1 – Ch 1 – 5</b>
	Fri 3/18	Ch 7 – Circulation of the Atmosphere
9	Tu 3/22	Ch 7 – Circulation of the Atmosphere Ch 8 – Air Masses
	Fri 3/25	Ch 9 – Mid Latitude Cyclones
10	Tu 3/29	Ch 9 – Mid Latitude Cyclones
	Fri 4/1	Ch 10 – Thunderstorms and Tornadoes
11	Tu 4/5	Ch 10 – Thunderstorms and Tornadoes
	Fri 4/8	Ch 11 - Hurricanes
12	Tu 4/12	<b>Exam 2 – Ch 6 – 11</b>
	Fri 4/15	<b>Spring Recess – No classes scheduled</b>
13	Tu 4/19	<b>Spring Recess – No classes scheduled</b>
	Fri 4/22	<b>Spring Recess – No classes scheduled</b>
14	Tu 4/26	Ch 11 – Hurricanes Ch 12 – Weather Forecasting and Analysis
	Fri 4/29	Ch 12 – Weather Forecasting and Analysis
15	Tu 5/3	Ch 14 – Climate Change
	Fri 5/6	Ch 14 – Climate Change
16	Tu 5/10	Ch 15 – World Climates
	Fri 5/13	Ch 13 – Air Pollution
17	Tu 5/17	Ch 13 – Air Pollution
<b>Final Exam Date – Tuesday 5/24</b>		