

PGEOG 13000 - Weather and Climate Syllabus

Spring 2017 - Mon/Wed – 5:35 to 6:50PM

Room 1036N

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(email MUST include "W&C" in subject heading)

Email to me MUST come from your Hunter email address

www.geography.hunter.cuny.edu/tbw

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Informed Registration Statement:

In this four credit/five hour course we will explore meteorology and climatology and how weather and climate affect us and nature. Topics will include weather forecasting, climate change and environmental issues relating to weather and climate. This is a lab science course and can be used to meet the Physical and Life Science category of the Hunter Common Core and the *GER 2E* General Education Requirement.

Weather and Climate Learning Objectives and Outcomes:

The student who successfully completes this course can:

For Lecture:

- Identify and define the scientific method.
- Describe and explain basic chemistry and physics of atmospheric processes.
- Analyze weather maps and develop basic weather forecasts.
- Apply the concept of feedback mechanisms to specific examples of climate change.
- Explain the role of each major influence on climate and examine the factors influencing temperature and precipitation patterns on Earth.
- Describe and explain how climate affects the biosphere.

For Lab:

- Explain how atmospheric parameters vary spatially
- Describe the atmospheric processes and how they affect us both short term and long term
- Describe and explain weather and climate issues such as: ozone depletion in the atmosphere, global climate change, weather forecasting accuracy, urban heat islands
- Explain the role of each major influence on climate and explain the factors influencing the temperature and precipitation patterns on Earth
- Explain how weather conditions differ spatially and will be able to interpret computer model output for future weather conditions and explain how predicted changes in one meteorological variable influences others
- Gather, analyze and interpret atmospheric data in lab reports and present the observations, measurements, interpretations and conclusions in formal laboratory write-ups

Grading System:

Midterm exam	25%
Final exam	30%
(3) Documentary Summaries	15%
(14) Lab Exercises	25%
(12) Pre-Lab Quizzes	5%

Required Text:

The Atmosphere: An Introduction to Meteorology, **13th edition**, Lutgens and Tarbuck, 2016. Pearson/Prentice Hall. ISBN 978-0-321-98462-3.

The 11th edition, or later, of the required text is acceptable (and less expensive).

You must be registered for a weekly lab. Lab schedules can be found at:

www.geography.hunter.cuny.edu/tbw/wc.labs.spring.2016/index.html

Required Course Lab Manual (You are required to have your lab manual for the first day of lab.) *Exercises for Weather and Climate*, by Greg Carbone, **9th Edition, Lab Manual.**

Do Not Purchase the Vitalsource/Coursesmart ebook. There are MAJOR formatting problems with it.

Shakespeare & Co. across the street from Hunter at 939 Lexington Avenue sells the text and lab manual.

Rules and Policies for Weather and Climate Lecture and Lab

Welcome to the Weather and Climate course! Charles Dudley Warner, a friend of Mark Twain, once remarked, "Everybody complains about the weather, but nobody *does* anything about it." In this course you won't learn how to control the weather but will learn about what happens in the atmosphere and why. There are a number of very important environmental issues related to the atmosphere and you will learn about them, too.

This is an introductory-level course that many students take to satisfy a science requirement. This course may be different from other 100-level courses you have taken in that later chapters of the textbook build on material learned in earlier chapters. So..... if you fall behind it is difficult to catch up. You should spend time every week studying the course material.

There's a lot of material to cover in the course and the textbook is packed with information. If you give equal importance to all material you'll be overwhelmed. A good guide is if I cover a subject in class it is important and you should pay close attention to it in the text. Lab exercises go into more detail about the most important concepts in the course so lab is very important.

There are a lot of rules for this course because there are a lot of students enrolled and this is not the only course I teach. To keep my sanity and to help yourself I ask you to read the entire syllabus and follow the rules and policies.

Lecture attendance is required and I will take attendance. If you miss more than three lectures you will not be eligible for the course grade curve at the end of the semester. In addition, your final grade will be reduced 2% for each unexcused absence beyond three (3) class absences.

I am available for questions before, during and after lecture, either publicly or privately. Ask me questions! There's no such thing as a dumb question in this class. Public questions are good because there are probably other students with the same or similar question.

Lab attendance is required and it is important you are in your seat at the time your lab begins. There will be a pre-lab quiz during the first ten minutes of every lab on the material covered in that day's lab exercise. You must come to lab prepared by reading the entire lab prior to your scheduled lab period. If you don't understand the lab material you should read the textbook chapter concerning that lab and refer to your lecture notes about the subject. I will cover lab subjects in lecture before the lab.

If you arrive to lab any time during the first ten minutes, you may work on the pre-lab quiz but all quizzes must be turned in at the ten minute mark. No one may take a pre-lab quiz at any time other than the first ten minutes of the lab period. During the pre-lab quiz you will submit completed labs from the previous week. Labs submitted after the first ten minutes of the lab period are considered late. After the pre-lab quiz your lab instructor will lecture for 15-45 minutes, depending on the subject. Since you will have received a lecture about the lab material in the lecture portion of the course this lecture will be a summary of the important points and your lecture instructor will point out some of the lab's pitfalls. After the lab instructor's lecture you will work on the lab. You may work on the lab with others **BUT** your work must be your own and we look closely at answers that are word-for-word the same on two or more labs. This is plagiarism and will not be tolerated. All work must be in your own words. You are not required to complete labs during the lab period. Labs are due at the beginning of the next lab meeting and so you have at least a week to complete labs. Therefore, your lab grades should be consistently in the A/B range. If not, you are not putting in the necessary effort.

Late labs will have the grade reduced 20 points for each DAY it is late unless you have a valid excuse that can be documented. This rule will be strictly enforced.

Photocopied, emailed and/or faxed labs are not permitted. You may make a blank copy of a lab and then fill in the answers showing your work and calculations. Lab answers must be neat and you must show all math calculations and use proper units of measurement to receive credit for an answer. If your lab instructor cannot read your answers, your answers will be marked wrong. If an answer cannot neatly fit in the space provided, use a separate lined sheet of paper for your answers. Make sure your answers are properly numbered.

As said earlier, lab attendance is mandatory. **Your overall lab grade will be reduced by 5% for each unexcused absence beyond one absence.** Expect to spend the entire one hour and fifty minutes in lab. If you leave early and then have questions you lose the right to ask your lab instructor for extra help.

For students who are also parents: If the choice is missing lecture or bringing your child to class..... bring them! If they become unruly I can usually help.....

There is a lot of information posted on the course web site. Read it first before asking questions.

Exams are multiple-choice and require you to fill in those little circles with a number 2 pencil. Don't forget an eraser. We do not bring pencils to exams. If you have never filled out a Hunter College Scantron form used on exams, request a blank form from your professor and practice filling it out properly before the exam day. **If you incorrectly fill out a Scantron form, 20**

points will be deducted from your exam grade because I will have to manually grade your exam.

If you must carry on a conversation, leave the room. Talking during lectures or videos is distracting to others. Be considerate. If you forgot to put your cell phone on vibrate and it rings, it's not the end of the world. But..... if you must answer it, leave the room.

Clean up after yourself. Don't leave your empty water bottles, coffee cups, etc.

You are responsible for learning the names of both your lecture and lab instructors. You will be required to write in the name of your lab instructor on exams and quizzes so they are graded properly. Failure to do so correctly will result in your quiz not being graded and you will receive a zero for that quiz.

"I'm not good at math!" Calculations involve basic arithmetic and algebra learned in secondary school which should not be a problem. Basic function calculators are acceptable in lab but never allowed in exams. The first lab of the semester will include calculations similar to later labs. If you have difficulty with the math in the first lab you have 4-5 weeks in which to review/remember your high school math and come up to speed.

All email messages about this course should include W&C in the subject line, and be signed with your full name as it appears in CUNYfirst. You must email me from your Hunter email address and read email from that address regularly.

Laptop, Notebook and other Computers in Class.

I ask you generally not to use laptops/notebooks, etc., in class. If you need or strongly prefer a laptop for taking notes or accessing readings in class for any reason, please come talk with me, and I am happy to make that work. I'll just ask you to commit to using the laptop only for class-related work.

There are a few reasons why I don't want laptops in class:

- If you have your laptop/notebook open it's almost impossible not to look at email or surf the internet and multitasking is a distraction and there are studies that indicate multitasking has a negative impact on learning.
- You're probably bothering the people around you and negatively impacting their learning environment. A study published in 2013 found that not only did the multitasking student in a classroom do worse on exams on the material, so did their peers who could see the computer. In other words, the off-task laptop use distracted not just the laptop user but also the group of students behind the laptop user.
- I like student participation in lecture. If you are on a laptop, your peers and I are often looking at the back of your computer screen and the top of your head, rather than all of us making eye contact with each other. Learning happens best in a classroom when everyone is actively engaged with one another in the exchange of information.
- Several studies have shown that students who manually write notes have better retention of the material.

Other Rules and Policies:

- **CAN I DO SOMETHING FOR EXTRA CREDIT? LIKE A PAPER?**
No. No extra credit is given. Whatever effort you would put into an extra credit assignment, put into completing the labs and studying for exams and quizzes.
- **PROBLEMS.**
If a problem develops during the semester relating to this course DO NOT LET THE PROBLEM BECOME SERIOUS BEFORE DISCUSSING IT WITH YOUR INSTRUCTOR. It is better to talk early-on so we can attempt to find a solution. All conversations are in strict confidence.
- *Students requiring special consideration during exams must make arrangements with the Office of AccessABILITY and tell your instructor of the arrangements.*

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.

Plagiarism and Cheating (Important, read carefully)

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 ADA Compliance Statement:

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 E1124 to secure necessary academic accommodations. For further information and assistance please call (212- 772-4857)/TTY (212- 650- 3230).

Exam-Related Rules

- **ELECTRONIC DEVICES**
Cell Phones, programmable calculators, calculators, PDAs, IPODs (or any such electronic device) and/or ear phones of any kind are prohibited from all exams. They must be turned off and put away. Violators will be required to leave the exam, a grade of zero will be recorded and disciplinary action will be initiated through the Dean of Students.
- **WRITE NEATLY**
You must fill in all of the required information neatly and correctly on exam question and answer sheets. If you don't, points will be deducted from your exam grade.
- **PENCILS**
Exams use answer sheets where you darken the correct circle with a number 2 pencil that you provide (along with an eraser). Bring your own sharpened pencils. None will be provided.
- **DO YOU EXEMPT GRADUATING SENIORS FROM THE FINAL EXAM?**
No.

- **WHAT IS THE FORMAT OF THE EXAMS?**
Exams consist of multiple choice and other short answer questions.
- **WHAT IS THE BEST WAY TO PREPARE FOR THE EXAMS?**
The exams will emphasize vocabulary and concepts. Therefore, pay particular attention to words or bold or italicized terms in the textbook . Do the same for words or terms that are emphasized during lectures. Pay close attention to graphs, charts and pictures. Study with two or more people. If you can explain it to another, you know it well.
- **IF ENGLISH IS NOT MY NATIVE LANGUAGE, MAY I USE A FOREIGN-LANGUAGE-ENGLISH DICTIONARY DURING THE EXAMS?**
There is no official school policy that answers this question. Nevertheless, the Dean of Students has advised NOT to allow students to use a dictionary. The rationale is that students who take this course should have passed the Developmental English requirements (if required to do so) and, therefore, have no need for a dictionary. If you need help with a word or two during an exam, raise your hand and someone will come to help you.
- **PLACE NAME QUIZZES**
Make up *place name quizzes* are not given for any reason.
- **ARRIVING LATE FOR AN EXAM**
Once the first student has completed the exam and left the room no late comers will be admitted to the exam. All late comers admitted to the exam must return their exam at the end of the scheduled exam time. No additional time will be allowed.
- A valid Hunter College ID is required to take exams. You will be required to show your ID at exam time.
- The grade of IN (incomplete) will be given in only the most extraordinary and documentable circumstances and only at the request of the student within 48 hours of the date and time of the course final exam. At the time of the request you, the student, must also complete a Contract to Resolve an Incomplete Grade in consultation with me, your instructor. We will agree on what needs to be completed and when it will be due and, if you meet the mutually agreed upon conditions, your course grade will be recomputed and a new grade, if appropriate, will be submitted. I will allow only one semester in which you can resolve the IN/FIN. After that time no request will be considered. The contract form is available in the Department of Geography office, HN 1006, during normal business hours.
- To receive a CR/NC you must have completed all the course requirements (exams including the final exam, quizzes, labs, etc.) and have requested the CR/NC option no later than the last scheduled lecture. If you choose this option, then all grades at or above 70% will be assigned CR and at or below 69.9% will be assigned NC, unless you choose the assign D option for grades between 60 and 69.9.
- **Credit/No Credit Grading System Rules**
Credit/No Credit forms may not be submitted at the final exam. You may submit CR/NC forms at one of the last two lectures of the semester.

**Video or audio recording of lecture or any lab is prohibited
unless permission of the instructor is obtained.**

Jan	30	M	Introduction and review of syllabus/Chapter 1 – Documentary: <i>Earth The Climate Wars - Episode 1: The Battle Begins</i>
Feb	1	W	Chapter 1 - Intro to the Atmosphere
	6	M	Chapter 2 - Heating Earth's Surface & Atmosphere
	8	W	Chapter 2 - Heating Earth's Surface & Atmosphere
	13	M	No Class
	15	W	Chapter 2 - Heating Earth's Surface & Atmosphere
	20	M	No Class
	22	W	Chapter 3 – Temperature
	27	M	Chapter 4 - Moisture & Atmospheric Stability
Mar	1	W	Chapter 5 - Condensation & Precipitation
	6	M	Catch-up day
	8	W	Chapter 6 - Air Pressure & Winds
	13	M	Chapter 7 - Circulation of the Atmosphere
	15	W	Chapter 8 - Air Masses
	20	M	Chapter 9 - Weather Patterns
	22	W	Chapter 9 - Weather Patterns
	27	M	Chapter 10 - Thunderstorms & Tornadoes
	29	W	Chapter 10 - Thunderstorms & Tornadoes
Apr	3	M	Midterm Exam Chapters 1-7, Labs 1-6
	5	W	Chapter 11 – Hurricanes
	10	M	Spring Recess
	12	W	Spring Recess
	17	M	Spring Recess
	19	W	Chapter 12 – Weather Forecasting
	20	Th	Monday Schedule - Chapter 13: Air Pollution
	24	M	Chapter 13: Air Pollution
	26	W	Chapter 15 - World Climates & Vegetation
May	1	M	Chapter 15 - World Climates & Vegetation
	3	W	Chapter 15 - World Climates & Vegetation
	8	M	Chapter 15 - World Climates & Vegetation
	10	W	Chapter 14 - Climate Change
	15	M	Chapter 14 - Climate Change
	17	W	Chapter 14 - Climate Change
			Last Day to Submit CR/NC Forms
May	24	W	Final Exam: Chapters 8-11, 13-15, labs 9-16 *Note earlier start to exam (5:20pm – 7:20pm) There are no make-up exams or rescheduling of the final exam. <u>CR/NC forms will not be accepted at the final exam.</u>