

Spring 2014

PGEOG 130: Weather and Climate

Saturday Lecture and Lab session

Course Information:

Lectures – Saturday 9:10 -12:00 HN 1028

Lab - Saturday 1:10- 3:00 HN 1028

Contact Information:

Professor: Anita Erdos Shoup

Office: 1032 Hunter North, Geography Department

Office hours: by appointment

Email: ashoup@hunter.cuny.edu – I will respond to emails within 24 hours. Make sure that all email messages contain PGEOG130 in the subject line. Also, make sure that you always sign your email messages with both your first and last name so that I know who you are. I do not respond to unsigned email messages.

Course Materials:

Required Lecture textbook:

- *The Atmosphere: An Introduction to Meteorology*, 12th Edition
Lutgens and Tarbuck, Prentice Hall, 2013 ISBN-13: **978-0-321-75631-2**

Required Lab manual:

- *Weather & Climate Lab Manual PGEOG 130* - Students are required to have their lab manuals with them by the first lab session which will be on the first day of class on February 1st, 2013
Hunter College, Department of Geography
Prentice Hall, 2009. ISBN-10: 0558271170

Course Description and Objectives:

This course has a lecture and a lab component worth in total 4.0 credits (5 hours). The course satisfies the General Education Requirements GER 2/E (Natural Science). There are no prerequisites.

The course 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.

Expected Learning Outcomes:

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

1. Understand the scientific method and use it to solve problems in meteorology and climate studies.
2. Understand, explain and appreciate the interconnected nature of the Earth systems through effective oral and written communication.
3. Identify major geographic features (both physical and human) on map and globe.

4. Explain the **relationship between the Sun and the Earth and the Sun's planetary** impact on weather and climate.
5. Understand the interaction between the elements of the atmosphere, including
 - a. the **composition and the structure** of the atmosphere, and its distribution around the planet, including the basic **chemistry and physics** of atmospheric processes
 - b. the atmospheric and oceanic **circulation processes**, and
 - c. **fronts, storm systems and severe weather** with an emphasis on North America
6. Interpret methods of weather forecasting and be able to utilize weather forecasting tools and techniques, as well as interpret and create basic weather maps.
7. Understand 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

Preliminary Class Schedule:

Part 1:	Intro, Chapter 1- 3	>	Exam 1
Part 2:	Chapters 4 - 7	>	Exam 2
Part 3:	Chapters 8 - 11	>	Exam 3
Part 4:	Chapters 13 - 15	>	Exam 4

A more detailed schedule will be posted on the Blackboard site and is included below. Please check it often as the schedule can and will change depending on discussion times. Updates will be posted reflecting these changes.

Grading policy:

4 online Exams	-	50%
Weekly Laboratory Exercises	-	25%
Weekly Discussion forum activities	-	15%
8 Place name quizzes	-	5%
Weekly Pre-Lab quizzes	-	5%

There will be NO INCOMPLETES (with the exception of a death, serious illness, or work related issues such as travel. A notification is required for all exceptions) given as a final grade.

Based on your final score you will be assigned a letter grade based on the numerical standards that can be found in the Hunter College Undergraduate Catalogue 2013-2014 at <http://catalog.hunter.cuny.edu/content.php?catoid=18&navoid=2010>

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. Incompletes will be given only if students grade is at "C" or above at the time the IN is filed, and with evidence of a satisfactory reason otherwise students will receive a grade of WU. Students seeking IN must also complete a Contract to Resolve an Incomplete Grade by the end of the examination period.

Course Policies

Although attendance will not be graded, **attendance will be taken**. It is an integral part of the course. Missing lecture and/or lab classes will negatively impact your performance and there will be things discussed in class that are not in your textbook or lab manual. Labs must be completed before the next class session and lab

quizzes must be completed for the up-coming lab as well. Missing a lecture or lab class does not excuse you from completing and submitting the material that was assigned or that was due that day.

If you missed an exam for a satisfactory and documented reason you must contact me **within two days** of the missed exam deadline to schedule a make-up at a mutually convenient time. After that the grade will automatically become a zero.

Classroom Electronics Policy:

The use of electronic dictionaries will be permitted during lectures and labs only. All other personal electronics, such as phones, ipods, etc. must be silenced and put away or turned off before coming into the classroom. You will be reminded of the policy once; after that you will be asked to leave the classroom. You may use a laptop/tablet/iPad **strictly for taking notes pertaining to PGEOG 130** and I may ask you to show them to me at the end of class. If it becomes a distraction to you and/or the people around you, I will ask you to shut it off.

Blackboard:

Make sure that your Blackboard account is active and that you know how to use it. I regularly will use BB to remind you of course related work, send out assignments, reminders and emails. A portion of the classwork will also be Blackboard based (ex. exams, quizzes, discussion, etc). I will not be responsible for work that you miss because emails bounce back or you didn't check Blackboard.

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.

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. Make sure to check Blackboard regularly.

Important Dates :

February 1 st , Saturday	First day of classes
February 28 th , Friday	Exam 1 due by the end of the day - Intro lecture and Chapters 1-3
March 28 th , Friday	Exam 2 due by the end of the day - Chapters 4-7
April 11 th , Friday	Exam 3 due by the end of the day - Chapters 8-11
April 19 th , Saturday	Spring Break – No classes
April 24 th , Saturday	Last day to drop course with a grade of W
May 17 th , Saturday	Exam 4 – due by Noon – Chapters 13-15

Preliminary Lecture Schedule		
1	1-Feb	Introduction to the course
2	8-Feb	Chapter 1: Introduction to the Atmosphere
3	15-Feb	Chapter 2: Heating Earth's Surface and Atmosphere
4	22-Feb	Chapter 3: Temperature
5	1-Mar	Chapter 4: Moisture and Atmospheric Stability
6	8-Mar	Chapter 5: Forms of Condensation and Precipitation
7	15-Mar	Chapter 6: Air Pressure and Winds
8	22-Mar	Chapter 7: Circulation of the Atmosphere
9	29-Mar	Chapter 8: Air Masses; Chapter 9: Mid-Latitude Cyclones
10	5-Apr	Chapter 10 & 11: Tornadoes & Hurricanes
11	12-Apr	Chapter 13: Air Pollution
	19-Apr	Spring Recess
12	26-Apr	Chapter 15: World Climates
13	3-May	Chapter 14: The Changing Climate
14	10-May	Chapter 14: The Changing Climate
15	17-May	Exam 4 due by noon

Preliminary Lab Schedule		
1	1-Feb	Lab 1: Dimensions and Units (questions 1-15) and Earth Measures (questions 1-5)
2	8-Feb	Lab 1: Location (Part I, questions 1-2; Part II, questions 1-4), Time (Part I, questions 1-4, Part II, question 1), and Isolines (all questions)
3	15-Feb	Lab 2: Vertical Structure of the Atmosphere (questions 1-18)
4	22-Feb	Lab 3: Earth-Sun Geometry (questions 1-6, 9, 10-18)
5	1-Mar	Lab 4: The Surface Energy Budget (questions 1-13)
6	8-Mar	Lab 5: Atmospheric Moisture (questions 10-23)
7	15-Mar	Lab 6: Saturation and Atmospheric Stability (questions 1-16, 18-23)
8	22-Mar	Lab 6: Saturation and Atmospheric Stability continued (questions 1-16, 18-23)
9	29-Mar	Lab 7: Weather Map Analysis (questions 1-3, 5-7)
10	5-Apr	Lab 8: Mid-Latitude Cyclones (questions 1-17)
11	12-Apr	Lab 9: Weather Forecasting (all questions)
	19-Apr	Spring Recess
12	26-Apr	Lab 9: Weather Forecasting, continued (all questions)
13	3-May	Lab 10: Climate Variability and Change (questions 1-23)
14	10-May	Lab 10: Climate Variability and Change, continued (questions 1-23)