

GGY 230 INTRODUCTION TO WEATHER & CLIMATE

FALL 2009

Lecture 11:00-11:50 MWF, 100 Morton Hall

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Instructor: Dr. Douglas W. Gamble

Office: DeLoach Hall 126, 962-3778

Office Hours: 10-11 MWF, 11-12, 4-5 TR
or by appointment.



COURSE DESCRIPTION: Examination of general climatic characteristics through space and time, especially as influenced by controls upon temperature, wind and moisture distributions, and by planetary, regional, and local atmospheric disturbances.

COURSE GOALS:

1. Instill in students an understanding of the fundamental principles of climatology and meteorology. As a result, a student that completes this class will understand daily weather forecasts, components of the global climate system, and basic human interaction with the atmosphere. The student is not expected to be an expert on all aspects of weather and climate.
2. Teach students how to apply scientific principles in order to better understand their surrounding physical environment. Accordingly, exercises and tests will not focus solely upon memorization of facts but also include questions/problems in which students must apply concepts learned in lecture in order to reach a correct solution.
3. Involve students in exercises that require quantitative and graphical analysis skills.

MATERIALS:

- Lutgens and Tarbuck, 2010. *The Atmosphere: An Introduction to Meteorology*. Upper Saddle River, NJ: Prentice Hall (11th Edition).
- Gamble, D., 2008. *Exercises in Weather and Climate: A Lecture Supplement*. Des Moines, IA: Kendall Hunt, pp. 89 (Second Edition). **YOU SHOULD NOT BUY THIS BOOK USED.** You will be tearing pages out and handing them in throughout the semester. The lecture supplement you purchase should have all pages and no writing from a previous owner.
- Four 8.5" x 11" Scantron sheets and number two pencils for tests.

Dates

Topic

Readings

Aug. 19-21	Introduction, How to Do Well, The Atmosphere	Chapter 1
Aug. 24-28	Heating Earth's Surface and Atmosphere	Chapter 2
Sep. 31-4	Temperature	Chapter 3
Sep. 7-11	LABOR DAY , Moisture and Atmospheric Stability	Chapter 4
Sep. 14-18	Moisture and Atmospheric Stability	Chapter 4
Sep. 21-25	Forms of Condensation and Precipitation	Chapter 5
Sep. 28-2	Air Pressure and Winds	Chapter 6
Oct. 5-9	FALL VACATION , Circulation of the Atmosphere	Chapter 7
Oct. 12-16	Air Masses and Weather Patterns	Chapter 8, 9
Oct. 19-23	NO CLASS OCT 21 , Thunderstorms and Tornadoes	Chapter 10
Oct. 26-30	NO CLASS OCT 30 , Hurricane	Chapter 11
Nov. 2-6	Weather Forecasting	Chapter 12
Nov. 9-13	Air Pollution	Chapter 13
Nov. 16-20	Climate Change	Chapter 14
Nov. 23-27	THANKSGIVING VACATION	
Dec. 30-2	World Climates	Chapter 15

EXAM and GRADES

Exam 1: September 18, 2009

Exam 2: October 16, 2009

Exam 3: November 13, 2009

Final Exam: December 9, 2009 11:30-2:30

Final Grade Weight/Proportions: Individual Exercises 10% (total for 10-12 exercises), Exams 90% (average of best 3 exam scores). *Four exams are scheduled for the semester. Each student will be allowed to drop their lowest exam grade. The exam grade will be calculated as an average of the three highest exam scores.*

Grading Scale: A >94, A- 93-90, B+89-87, B 86-84, B- 83-80, C+79-77, C 76-74, C- 73-70, D+ 69-67, D 66-64, D- 63-60, F >60.

CLASS FORMAT AND ASSESSMENT

This class will meet three times a week for 50 minutes. Typically, Monday and Wednesday periods will be reserved for lectures. Lectures are designed to guide the student through the class and textbook material. Outlines of the lecture material will be posted on the course web page. Students are encouraged to print out these outlines and bring them to class.

The Friday class period will be reserved for a combination of lecture and assistance/review of lecture supplement exercises. For these classes lecture will be 20-30 minutes and the last 20-30 minutes will be reserved for students to work on or ask questions about exercises. The exercises are to be handed in by the end of this Friday class period. You will receive credit for each completed and handed in in-class assignment. If a student does not hand in the assignment at the end of the class period, they will receive a zero. **No late work will be accepted unless the student provides a legitimate excuse. The lowest exercise credit will be dropped at the end of the semester. The grade for exercises (10% of total grade) will be determined with the remaining exercise credits.**

Exams for this class are multiple-choice format. A total of four will be given throughout the semester and each usually consists of 50 to 60 multiple-choice questions that cover the material associated with four textbook chapters. The final exam will be cumulative. The specifics of the cumulative portion will be discussed after the third exam. Each student will be allowed to drop

their lowest test score and the three remaining exam scores will be averaged for the exam grade. **Makeup tests will not be given to students that miss a test. If you miss a test you will receive a grade of zero. I will strictly adhere to this policy throughout the semester.**

HOW TO DO WELL IN CLASS

- 1) **Attend class.** The instructor will not take daily attendance. It is your decision as to whether or not to attend class. However, I have found in my ten plus years of teaching that poor attendance = poor grades. In addition, if you ask me for help, I have less sympathy and I am less likely to extend assistance if chronic absence is obvious.
- 2) **Bring your textbook to class and highlight or write notes in the margins.** You spent good money on your textbook and it is yours, it is not on loan. You may do anything you wish to it, including write in it. Students that bring the text to class are better able to understand diagrams presented in class and do not waste time writing down definitions in their notes.
- 3) **Listen before you take notes.** All too often students spend an entire lecture mindlessly copying everything the professor states. The objective of taking notes is to jot down important information that will help you study at a later date, not create an additional textbook. Listen to what the professor has to say, decide what is important then write abbreviated notes and use the textbook or other materials to fill in details at a later date. If lecture is moving at too quick of a pace, raise your hand and ask the lecturer to slow down.
- 4) **Determine what the professor wants you to learn.** More often than not, the professor does not expect you to know everything on the subject or in a textbook. Talk to the professor to decide what your study strategy should be and focus on important topics to increase your studying efficiency.
- 5) **Decide on the level of knowledge expected by the professor.** The type of knowledge that professors want you to acquire in their classes is not all the same. In general, the higher the level of the class, the higher or more involved the level of knowledge the professor requires.
- 6) **Study through active learning.** Different types of learning exist and students must decide their own most appropriate learning style. One type of learning that has received much positive praise recently is active learning. Active learning is when the student becomes actively involved in the course. Examples of active learning are field activities, laboratory activities, videos, discussions, and group work. However, given the rise in enrollment in universities and growth of classroom size, it can be difficult for the professor to manage such activities. The result is a lecture-based course where the only activity for students is to listen and take notes. If you are having difficulty with class material, seek active learning opportunities. Ask professors for exercises, form a study group, or complete study questions in the textbook. I design lectures to end so that you have 5 minutes at the end of class to ask me questions one on one, take advantage of this time.

IMPORTANT REMINDERS

- 1) All students are responsible for announcements in class regarding changes or modifications of class schedule or grading policies.
- 2) Academic dishonesty will not be tolerated and when discovered dealt with in accordance to University Policy as outlined in the Student Handbook.
- 3) Unexcused absences for exercises or exams will result in a grade of zero.
- 4) Chronic absences will have a negative effect upon your grade.
- 5) Disruptive behavior, in particular talking during the lecture or when other students ask questions, will not be tolerated. If disruptive behavior occurs the instructor will ask the students involved to stop. After such a request, continued and excessive disruptive behavior will be reported to

the Office of the Dean of Students.

- 6) UNCW practices a zero-tolerance policy for violence and harassment of any kind. For emergencies contact UNCW CARE at 962-2273, Campus Police at 962-3184, or Wilmington Police at 911. For University or community resources visit <http://uncw.edu/wrc/crisis.htm>.