OXFORD COLLEGE

Geosciences 115 - Meteorology and Climatology

Spring 2003

Goals for the course: Geosciences 115 (Meteorology and Climatology) has been designed for either the environmental studies major or for a student who wants an interesting laboratory science course as part of their liberal arts education. As such, no prior background is assumed or necessary; just a desire to learn and an interest in the natural world. Meteorology and Climatology will give students an understanding of scientific investigation as it relates to our atmosphere. The students' observational skills will be considerably improved through the analysis of weather phenomena. Basic mathematical skills will be mastered through calculations of weather and climate parameters in the laboratory. Students will also gain an appreciation of the processes that create weather and how biomes relate to climates. These are concepts that they will be able to use outside of the classroom and in their future daily lives.

Course Announcements

Instructor: Dr. Stephen W. Henderson

Office: 106 Pierce Hall

Office Phone: (770) 784-8345

Office Hours: Monday and Wednesday (9:30 – 12:00), Tuesday (1:00 – 3:30), other times by appointment.

Text: Lutgens and Tarbuck, 1998, The Atmosphere, 8th edition

Lab Manual: Paul, 1996, Exercises in Meteorology, 2nd edition

Organization: The class will meet for lecture 3 times each week:
Monday, Wednesday, and Friday at 8:30. The laboratory section meets from 2:00 – 5:00 on Monday.

Attendance: All students are expected to attend all scheduled lecture and laboratory sessions. Attendance will be taken. No unexcused cuts are allowed in lab. Lab quizzes cannot be made up without a valid excuse. Students who have an absence in lab will have their final grade reduced 3 points per absence. A student who has four or fewer lecture cuts for the entire semester will receive the addition of two points to the final course average. There are no excused absences. Students having six or more lecture absences will have their final course grade reduced one point per absence starting with the sixth absence.

Honor Code: The Oxford College Honor Code applies to this course. If unsure whether or not how a particular assignment falls under the Honor Code, **ask** the professor prior to doing the assignment.

Grading System: Geosciences 115 will use the plus-minus grading system. The distribution of grades is as follows:

A	93-100	C+	77-79
A-	90-92	C	73-76
B+	87-89	C-	70-72
B	83-86	D+	67-69
B-	80-82	D	60-66
		F	59 and below

Evaluation: Lecture work will comprise 55% of your final average, lab will comprise 40% and class participation in the entire class is 5%. It is broken down as follows:

Highest two half-tests (Lowest half-test grade is dropped) Lecture half-test #1 on 1/31 Lecture half-test #2 on 3/5 Lecture half-tests #3 on 4/4	20%
Lecture Test on 2/19	15%
Final Exam on 5/7, 2-5	20%
Weekly Lab Quizzes (best 12 of 14)	20%
Lab Exam #1 on 2/24 in lab	10%
Lab Exam #2 on 4/21 in lab	10%
Class Participation	5%

Tentative Lecture Schedule and Reading Assignments:

Day	**Topic for the Week**	**Text Assignment for the Week**
W 1/15 F 1/17	Introduction to the Atmosphere	Chapter 1
W 1/22 F 1/24		
M 1/27 W 1/29 F 1/31	Heat and Temperature Lecture Half-test #1	Chapters 2 & 3

M 2/3	Atmospheric Optics	Chapter 16
W 2/5		
F 2/7	Moisture and Atmospheric Stability	Chapter 4
M 2/10		
W 2/12		
F 2/14	Condensation and Precipitation	Chapter 5
M 2/17		
W 2/19	Lecture Test	
F 2/21	Air Pressure and Winds	Chapter 6
M 2/24		
W 2/26		
F 2/28	Atmospheric Circulation	Chapter 7
M 3/3		
W 3/5	Lecture Half-test #2	
F 3/7		

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M 3/17	Air Masses	Chapter 8
W 3/19		
F 3/21	Weather Patterns	Chapter 9
M 3/24		
W 3/26		
F 3/28	Thunderstorms and Tornadoes	Chapter 10
M 3/31	Hurricanes	Chapter 11
W 4/2		
F 4/4	Lecture Half-Test #3	
M 4/7		
W 4/9		
F 4/11	Global Climate	Chapter 15
M 4/14	Global Climate	Chapter 15
W 4/16		
F 4/18		

M 4/21 W 4/23 F 4/25	Global Climate	Chapter 15
M 4/28	Global Climate	Chapter 15

Laboratory Schedule for Geosciences 115:

Meeting	Lab Day (Monday)	Ex. #	Title of Exercise	Quiz at Beginning of Lab	Quiz at End of Lab?
1	1/27	1 & 3	Introduction and Earth –Sun Relationships	Yes	Yes
2	2/3	5	Temperature	No	Yes
3	2/10	6	Air Pressure	Yes	Yes
4	2/17	7	Wind and the Global Circulation	Yes	Yes
5	2/24		LAB TEST #1		
6	3/3	10	Air Masses, Fronts, and Severe Storms	Yes	Yes
7	3/17	11	The Weather Map	Yes	Yes
8	3/31	12	Weather Analysis	No	Yes
9	4/7		Weather at Oxford, GA	No	No
10	4/14	13	Climate	Yes	Yes
11	4/21		LAB TEST #2		