INTRODUCTION TO METEOROLOGY
ATMS 103–004
FALL 2007

The science of meteorology explores the ever-changing atmosphere that affects all of our lives, from the mundane choice of what to wear to the devastating impacts of tornadoes and hurricanes. Over the next few months, you will develop an appreciation for the beauty and complexity displayed by the atmosphere every day. We'll begin by learning about the physical processes that govern our atmosphere, laying the groundwork necessary for a few death-and-destruction topics later in the semester. Before the year is out, you will be able to locate and interpret your own sources of weather information and not only understand the meteorologists on television, but explain to your friends and family the scientific principles behind current weather events. Ask lots of questions and enjoy!

PROFESSOR

Dr. Christopher Godfrey
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Phone: 828-232-5160
E-mail: cgodfrey at unca dot edu
Office hours: 3–4 p.m. Monday and Wednesday, 1:30–2:30 p.m. Tuesday, or by appointment as necessary

CLASS INFORMATION

Meeting times:	MWF 10:25–11:15 a.m.
Location:	Karpen Hall, room 34
Required text:	Ahrens, C. D., 2008: *Essentials of Meteorology*. 5th ed. Thomson Brooks/Cole, 485 pp. (ISBN: 0-495-11558-4)
Website:	http://facstaff.unca.edu/cgodfrey/courses/atms103/

- Class will start and end on time. Please arrive on time and stay for the entire class.
- This class satisfies a natural science requirement for ILS cluster #1 (CL1), "Globalization and Environmental Issues."

GETTING QUESTIONS ANSWERED

I will be in my office during scheduled office hours, but if at any other time you have a question and my office door is open, you are more than welcome to visit. Otherwise, e-mail is the best way to reach me. You may also schedule an appointment with me. Please don't hesitate to ask questions about class, other coursework, or the stresses of college life whenever the need arises.

PREREQUISITES

There are no prerequisites for this course, but I will present a few simple equations that you should be able to manipulate using techniques learned in your high school algebra class. Please see me if this sounds scary and we'll go from there.

IMPORTANT DATES

Friday, 28 September 2007	Exam I	In class
Friday, 2 November 2007	Exam II	In class
Monday, 10 December 2007	Final Exam	8:00 − 10:30 a.m.

COURSE SCHEDULE

With the exception of examination dates, this course schedule is approximate and subject to modifications.

Date	Topic	Reading	Homework
20 August	Geography, Describing the atmosphere	Chapter 1	Memorize U.S. States
22 August	Describing the atmosphere	Chapter 1	
24 August	Describing the atmosphere (States quiz)	Chapter 1	
27 August	Energy in the atmosphere	Chapter 2	#1 Assigned
29 August	Energy, Radiation	Chapter 2	
31 August	Radiation	Chapter 2	
3 September	**Labor Day – No class**		
5 September	Seasons	Chapter 2	
7 September	Water vapor in the atmosphere	Chapter 4	
10 September	Water vapor in the atmosphere	Chapter 4	#1 Due , #2 Assigned
12 September	Observations, Radar	pp. 134–137, 441–442	
14 September	Radar, Satellite	pp. 134–7, 240–3,293–4	
17 September	Atmospheric motion	Chapter 6	
19 September	Atmospheric motion	Chapter 6	
21 September	Atmospheric motion	Chapter 6	
24 September	Atmospheric motion	Chapter 6	#2 Due
26 September	Pressure systems, Stability	pp. 111–120	
28 September	**Exam I**		
1 October	Stability	pp. 111–120	
3 October	Air masses, Fronts	Chapter 8	
5 October	Fronts	Chapter 8	
8 October	**Fall break – No class**		
10 October	Fronts, Mid-latitude cyclones	Chapter 8	
12 October	Thunderstorms	pp. 263–266	#3 Assigned
15 October	Severe t-storms, Complexes, Supercells	pp. 266–274	
17 October	Supercells	pp. 266–274	
19 October	Watches, Warnings, and Advisories	pp. 236–237, 287	
22 October	Lightning	pp. 277–283	
24 October	Lightning, Hail	pp. 132–134	
26 October	Tornadoes	pp. 283–293	#3 Due
29 October	Tornadoes	pp. 283–293	
31 October	Tornadoes	pp. 283–293	
2 November	**Exam II**		
5 November	General circulation, El Niño	pp. 184–200	
7 November	Hurricanes	Chapter 23	
9 November	Hurricanes	Chapter 23	
12 November	Hurricanes	Chapter 23	#4 Assigned
14 November	Climate and climate change	Chapters 13 and 14	
16 November	Climate and climate change	Chapters 13 and 14	
19 November	Optical phenomena	Chapter 15	
21–23 November	**Thanksgiving – No class**		Eat turkey
26 November	Optical phenomena	Chapter 15	
28 November	Optical phenomena	Chapter 15	#4 Due
30 November	Review		
10 December	**Final Exam**	8:00 − 10:30 a.m.	

EVALUATION

There will be two preliminary exams and a comprehensive final exam to assess your progress through the semester. The preliminary exams will take place during regular class meeting times. Four problem sets will strengthen your skills and reinforce the lecture material and will be due two weeks (or a little more for assignment #4) after you

receive the assignment. Five to ten unannounced quizzes will be given during the class period at irregular intervals throughout the semester. Though attendance is not explicitly required, these quizzes will serve as a measure of attendance and will also provide you and me with some feedback. Since life happens, I will drop the lowest two quiz grades.

There will be no opportunities for make-up quizzes or exams. Exams must be taken on the scheduled date. If you miss the class, you miss the grade. The *only* exceptions to this rule are: (1) serious medical condition (illness or injury) of you or an immediate family member; (2) University excused absence; (3) jury duty; or (4) military orders. Only in such instances will an exam or another quiz be dropped or rescheduled depending on your best interests, but *only if I am notified at least 24 hours in advance*. Except under the circumstances described above, **homework is due 45 minutes after the end of class** on the date listed in the syllabus. This should allow you to run home and get your completed assignment if you forgot it! I will accept homework up to 24 hours late (noon the following day) for a 50% late penalty. *Homework more than 24 hours late will not be graded*. In the event of an unforeseen circumstance that causes you to miss an exam, quiz, or homework due date, *you must notify me by phone or e-mail within 24 hours of the event*. Appropriate documentation must accompany any excused absence from an exam or quiz and should be attached to a late homework assignment.

GRADING

Preliminary Exams	30%	
Quizzes	20%	Lowest two grades dropped
Homework Assignments	35%	
Final Exam	15%	

I reserve the option to curve the final grades upward at my discretion. However, you are guaranteed *at least* the following based on your final score before applying any curve:

A	≥92.0%	C	72.0–77.9%
A-	90.0–91.9%	C-	70.0–71.9%
B+	88.0–89.9%	D+	68.0–69.9%
B	82.0–87.9%	D	60.0–67.9%
B-	80.0–81.9%	F	<60.0
C+	78.0–79.9%		

Final grades are not negotiable. If you see a problem with a quiz, exam, or homework grade, you may plead your case no later than 14 days from the date I return the assignment to the class. I do make mistakes (occasionally)! Under no circumstances will your grade be *lower* if you see me with a question.

ACADEMIC INTEGRITY

Since the point of this or any class is to learn, you may collaborate on homework assignments, but *you absolutely must make sure that you hand in your own work*. Copying your friend's answers will not only be obvious to me, but will result in both of you sharing the credit for that answer. For example, if you do a fantastic job on the homework assignment and then let three of your friends copy *any part of it*, you will each receive a maximum grade of 25% for the assignment. Any collaboration on exams and quizzes is simply cheating. I have zero tolerance for academic misconduct and will deal with the problem by immediately filing charges through the regular University channels.

NOTES

Students with disabilities who require accommodations in this course are requested to speak with the professor as early in the semester as possible. Students with disabilities must be registered with the Disability Services Office prior to receiving accommodations in this course. The Disability Services Office is located in Lipinksy Hall, room 107, phone 828-232-5050.