

Syllabus for ATMS 103 – Introduction to Meteorology – Fall 2010

Date	Topic	Reading/Homework*
M 23 Aug 2010	Introduction	
W 25 Aug	The Earth's Atmosphere	Chapter 1
F 27 Aug	The Earth's Atmosphere	
M 30 Aug	The Earth's Atmosphere	
W 1 Sep	Warming the Earth and Atmosphere	Chapter 2
F 3 Sep	Warming the Earth and Atmosphere	
W 8 Sep	Warming the Earth and Atmosphere	
F 10 Sep	Air Temperature	Chapter 3
M 13 Sep	Air Temperature	
W 15 Sep	Air Temperature	
F 17 Sep	Air Temp.../Review session	
M 20 Sep	Exam I	Chapters 1 – 3
W 22 Sep	Humidity, Condensation, and Clouds	Chapter 4
F 24 Sep	Humidity, Condensation, and Clouds	
M 27 Sep	Humidity, Condensation, and Clouds	
W 29 Sep	Cloud Development and Precipitation	Chapter 5
F 1 Oct	Cloud Development and Precipitation	
M 4 Oct	Cloud Development and Precipitation	
W 6 Oct	Air Pressure and Winds	Chapter 6
F 8 Oct	Air Pressure and Winds	Weather Report Approval
W 13 Oct	Air Pressure and Winds	
F 15 Oct	Air Pressure and Winds/ Review	
M 18 Oct	Exam II	Chapters 4 – 6
W 20 Oct	Atmospheric Circulations	Chapter 7
F 22 Oct	Atmospheric Circulations	
M 25 Oct	Atmospheric Circulations	
W 27 Oct	Air Masses, etc.	Chapter 8
F 29 Oct	Air Masses, etc.	
M 1 Nov	Air Masses, etc.	
W 3 Nov	T-storms and Tornadoes	Chapter 10
F 5 Nov	T-storms and Tornadoes	
M 8 Nov	T-storms and Tornadoes	
W 10 Nov	T-storms and Tornadoes	
F 12 Nov	T-storms and Tornadoes/ Review	
M 15 Nov	Exam III	Chapters 7, 8, and 10
W 17 Nov	Hurricanes	Chapter 11
F 19 Nov	Hurricanes	
M 22 Nov	Make-up Exam	Chapters 1-8, 10, 11
M 29 Nov	Hurricanes	
W 1 Dec	Global Climate	Chapter 13
F 3 Dec	Global Climate	
M 6 Dec	Global Climate	Weather Report Due

*assignment shall be completed before class meets on this date

Description

A course designed for the major and non-major student who is interested in learning the basics of the structure of our atmosphere and how the structure changes over time. The goal of this particular section is to have all students want to become meteorology majors by the end of the semester. Yep, meteorology is that cool!!

Outline

The Earth's Atmosphere (text, Chapter 1)
Warming the Earth and Atmosphere (text, Chapter 2)
Air Temperature (text, Chapter 3)
Humidity, Condensation, and Clouds (text, Chapter 4)
Cloud Development and Precipitation (text, Chapter 5)
Air Pressure and Winds (text, Chapter 6)
Atmospheric Circulations (text, Chapter 7)
Air Masses, Fronts, and Middle-Latitude Cyclones (text, Chapter 8)
Thunderstorms and Tornadoes (text, Chapter 10)
Hurricanes (text, Chapter 11)
Global Climate (text, Chapter 13)

Grading

Weather Journal	5%
Weather Analysis and Forecast	5%
Quizzes	10%
Exam I	15%
Exam II	15%
Exam III	15%
Final Exam	20%
Weather Report	15%
Total	100%

92% < total score ≤ 100%	A
90% < total score ≤ 92%	A-
88% < total score ≤ 90%	B+
82% < total score ≤ 88%	B
80% < total score ≤ 82%	B-
78% < total score ≤ 80%	C+
72% < total score ≤ 78%	C
70% < total score ≤ 72%	C-
68% < total score ≤ 70%	D+
60% < total score ≤ 68%	D
total score ≤ 60%	F

Student Learning Outcomes

- understand information being communicated on standard weather maps
- learn how to make a basic weather forecast
- appreciate the complexity, interaction, and impact of our global weather patterns

Weather Journal

Each student will be required to contribute to a weather web log in which they describe ways that the weather has impacted their daily life. You can find the weather web log page at <http://atms103unca.blogspot.com/> where further instructions are given. Each student is required to make at least two entries a week (for a total of 30 entries *minimum*). These entries will be reviewed periodically by the instructor to confirm that each student is keeping current with the assignment, so the entries are not private. In order to receive full credit on the weather journal assignment, each student will need to make observations of weather impacts on their lives that are of a greater depth of analysis than simply writing “It was cold, so I put on a sweater.”

Weather Analysis and Forecast

During each **Monday** and **Friday** lecture, a student team (pair) will be required to give a weather discussion/forecast as well as an evaluation of the previous weather discussion/forecast. One team member (designated AV) will discuss the “Current Weather” and “Today’s National Forecast” maps posted at <http://www.hpc.ncep.noaa.gov/> and verify the forecast given at the previous lecture. The other team member on **Monday** (designated FC) will discuss the forecast looking at the “HPC Day 5 SFC PROG (valid 12Z Friday)” and the “Days 4-5 QPF (valid 12Z Thursday through 12Z Friday)” maps posted at the same web site for a **Monday** lecture period. The **Friday** lecture FC person will be looking at the “HPC Day 4 SFC PROG (valid 12Z Monday)” and the “DAY 3 QPF (valid 12Z Sunday through 12Z Monday)” maps.

The instructor will assign the day when each student will be responsible for being the AV or FC team member. If a student is unable to give the weather brief on the day assigned, inform the instructor and he will trade the assigned date with another student in the class. Failure to give a weather brief on the assigned day or failure to make an attempt to trade the assigned weather brief date with another will result in loss of *all* the Weather Analysis and Forecast percentage points (5% of the Final Course Grade).

Quizzes

Quizzes will be given unannounced once a week throughout the semester to encourage course participation and attendance. The quizzes will be defined either as individual or group quizzes. When a quiz is designated for a *group*, each individual within the group will receive an identical grade.

Exam I, II, and III

The mid-term exams (I, II, and III) will be primarily testing new material introduced since the previous exam or since the start of the semester.

Final Exam

The final exam is a *comprehensive* exam in which all the material contained in the entire course is testable.

Weather Report

Each student will be required to write a report of six typed double-spaced pages, minimum, in which they describe how the weather had an influence on a particular historical event and how the event may have changed if the weather had been significantly different. In order to receive full credit, you must cite and record three references used in the research of this paper (Wikipedia does **not** qualify as a source). The organization of the paper must start with an *Introduction* section in which the event is described, an *Analysis* section in which the impact of the weather upon the event is clearly described, and an *Extrapolation* section in which the writer describes how the event might have unfolded had the weather been the opposite of what had actually occurred. The subject matter of the weather report must meet the approval of the instructor on or before **8 October 2010**. The final report is due on **6 December 2010**.

Assignment/Quiz/Exam Policy

Assignments are to be handed in before the start of lecture on the date they are due. Assignments handed in after the start of lecture are considered late until 4:30 pm on the date they are due and will have an automatic 10% deduction from their final score. Assignments handed in after 4:30 pm on the date they are due will receive no credit.

Quizzes and Exams are written tests and will be taken on the date they are scheduled, unless circumstances (e.g. medical or loss in the family) warrant. Make-up quizzes for special circumstances will occur at a mutually agreed upon time outside of the usual class meeting time. The make-up exam will take place on **Monday, November 22, 2010** during the usual class meeting time.

The lowest quiz score for each individual will be *dropped* from the total quiz score tabulation.

Instructor

Doug Miller
232-5158

[http://facstaff.unca.edu/dmiller/
dmiller@unca.edu](http://facstaff.unca.edu/dmiller/dmiller@unca.edu)

Textbook

“Essentials of Meteorology An Invitation to the Atmosphere” by C. Donald Ahrens (fifth edition; “up, up, and away in my beautiful balloon...”)

Disabilities

Contact Prof. Miller early in the course if you have a disability that requires special accommodations.

Academic Integrity

Cheating or plagiarism results in a failed assignment, quiz, or exam on the first infraction. A second infraction results in course failure and a report to the UNCA administration. See <http://www.unca.edu/catalog/academicregs.html> under “Student Responsibilities” for a refresher on the UNCA policy.