Weather and Climate, AOS100 – Lecture 2, Spring 2005
Class Email Address: aos100ed@aos.wisc.edu
(Please direct all email correspondence to this address)

Instructor
Prof. Eric DeWeaver
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Phone: 265-5438
Office Hours: Thurs. 2:30 – 4:30pm

Teaching Assistant (TA)
Justin Bagley
805 AO & SS Bldg.
Phone: 262-0794
Office Hours: Tues. 11:00am – 1:00pm

Time and Location: MWF 9:55 Room AB20 Weeks Hall (Geology Bldg.)

Web page: www.aos.wisc.edu/~aos100ed

Grading
- Homework and Quizzes 20%
- First midterm 25%
- Second midterm 25%
- Final 30%

Homework Policy
Homework assignments will be due every 2 weeks or so. Homework is due at or before the beginning of class. Late homework will not be accepted!

Exam Schedule
- First midterm March 2 (Wed.) on weeks 1 – 6
- Second midterm April 11 (Mon.) on weeks 7 – 11
- Final May 13 (Fri.) on everything 12:25 – 2:25pm

Required Textbook: C. Donald Ahrens,
Meteorology Today: an Introduction to Weather, Climate, and the Environment (7th ed.)

Course Goals
This course attempts to bridge the gap between atmospheric science and our everyday experience of weather and climate. The first priority is to introduce and explain the basic physical laws governing atmospheric temperature, moisture, and winds. Then we’ll use those laws to explain a variety of phenomena happening on all spatial and temporal scales from short-term local weather to long-term global warming.

Prerequisites
This course requires a working knowledge of high school algebra and an enthusiasm for tackling difficult and interesting problems.

Honors Students
Honors students are required to do a term project, please contact me for details.
Course Outline

Note: This is a preliminary outline of topics, which may change over the course of the semester.

Week 1 (1/19 - 1/21): Introduction, weather and climate, atmospheric structure (Ch. 1).
Week 3 (1/31 - 2/04): Heat and energy, heat transfer, and the greenhouse effect (Ch. 2).
Week 4 (2/07 - 2/11): Temperature, seasonal and diurnal cycles, lapse rates (Ch. 3).
Week 5 (2/14 - 2/18): Humidity: water vapor in the atmosphere (Ch. 5).
Week 6 (2/21 - 2/25): Dew, fog, and clouds (Ch. 6)
Week 7 (2/28 - 3/04): Clouds and precipitation (Ch. 8).

First Midterm: Wednesday, March 2nd, on weeks 1 – 6

Week 8 (3/07 - 3/11): Stability and cloud development (Ch. 7)
Week 9 (3/14 - 3/18): ... stability, continued.

Spring Break! 3/21 - 3/25

Week 10 (3/28 - 4/01): Forces and atmospheric motion (Ch. 9).
Week 11 (4/04 - 4/08): small-scale wind systems (Ch. 10).
Week 12 (4/11 - 4/15): Air masses and fronts (Ch. 12).

Second Midterm: Monday, April 11th, on weeks 7 – 11

Week 13 (4/18 - 4/22): Midlatitude cyclones (Ch. 13).
Week 14 (4/25 - 4/29): Thunderstorms, tornados, and hurricanes (Ch. 15, 16).
Week 15 (5/02 - 5/06): Global-scale circulation (Ch. 11).

Final Exam: Friday, May 13, 12:25 – 2:25pm in room TBA, on everything
Student Survey, AOS100-2

Your name, printed: _________________________________

Your Signature: _________________________________

Student ID number: _________________________________

Email address:

Year (freshman, sophomore, etc.):

Major (or any majors you’re considering):

Reasons for taking the class: