



METR 1014: INTRODUCTION TO WEATHER & CLIMATE

Course Syllabus - Fall 2007



Class time: MWF 11:30 – 12:20 Room A235 SEC

Instructor: Dr. Susan Postawko, Associate Professor of Meteorology (spostawk@ou.edu)

Office: 414 SEC, phone 325-8870

Alternate Office: 5329 NWC, phone 325-1142

Office hours: 12:30-1:30 Mondays and Wednesdays in room 414 SEC, or by appointment

Course web page: Accessible via <https://learn.ou.edu> (log on using your 4+4)

Co-requisite: Lab section

Texts: *Essentials of Meteorology (4th Edition)* by C. Donald Ahrens,
Explorations in Meteorology: A Lab Manual

Course Grade Determination:

| | |
|--|-----|
| 2 in-class exams @ 20% each (no drops) | 40% |
| Assignments/pop quizzes | 10% |
| Comprehensive Final Exam | 25% |
| Lab Section Grade | 25% |
| Lab exercises: | 15% |
| Lab quizzes: | 10% |

Note: lab grade will be made up of scores from lab exercises PLUS scores from 3 quizzes over lab material. Lab quizzes will be given during LECTURE class at times to be determined (they will be announced at least 1 week prior to the quiz)

About this course:

Meteorology 1014 is a survey course of weather and climate for non-meteorology majors. In this class we will cover a wide variety of topics to help you gain an understanding of the science behind daily weather, climate and climate change, as well as current-events topics such as hurricanes, heat waves, and global warming.

It is NOT the aim of the course to make scientists out of all of you; but to help you gain a basic understanding of the atmosphere, and to develop critical thinking skills so that you can read and intelligently discuss newspaper and magazine articles related to weather and climate.

You are expected to come to class prepared to discuss the day's topic (from reading assignments from the required text). Although class attendance is not formally a part of your grade for this course, you will get much more out of the course, and have a much easier time with the material if you regularly attend class. In addition, there will be material presented in class that will not be in the textbooks, as well as occasional unannounced pop quizzes. Although I will make every effort to post material on the course web site, your comprehension of the material will be much greater if you are actually in class when it is presented.

When in class, please be considerate of your classmates by turning off cell phones and NOT engaging in lengthy discussions with your

neighbors. In a large class, this is very distracting to everyone around you (not to mention rude).

If you are having problems with the course material, I strongly urge you to come and talk to me sooner rather than later. I can't do anything if you wait until the last week of classes to come and talk to me about problems you've been having all semester. There is no extra credit work for this class!

Remember that education is a two-way street – I can only present the material and facilitate discussion, but you must bring to class an intellectual curiosity and a willingness to learn. In order to get the most out of any class, you **MUST** take an active role in your own education!

About the labs:

The labs associated with this class are designed to both enhance your understanding of lecture material, as well as to introduce some material that we simply don't have time to cover in lecture. As such, the labs don't always coincide exactly with what is going on in lecture.

Although there are several lab sections associated with this class, **PLEASE** don't play "musical lab periods". That is, unless you have permission in advance from the Teaching Assistant(s), please only attend the lab section that you are enrolled in. The lab rooms have very limited seating capacity, and at this time every lab section is full.

The lab section will make up 25% of your final grade for this class. Of this, 15% will come from your lab exercises, and 10% will come from quizzes over lab material. Although the Teaching Assistants will make up the questions on these lab quizzes, the quizzes will be administered during the lecture time. There are no make-ups of these quizzes, except in dire circumstances (as defined by me). You will typically have about 1 week's notice prior to a lab quiz.

Your Teaching Assistant will have more information for you when you attend your first lab.

IMPORTANT POLICIES:

Reasonable Accommodation: The University of Oklahoma is committed to providing reasonable accommodation for all students with disabilities. Students with disabilities who require accommodation in this course are requested to speak with me as early in the semester as possible. Students with disabilities **must** be registered with the Office of Disability Services prior to receiving accommodations in this course. The Office of Disability Services is located in Goddard Health Center, Suite 166, phone 325-3852 or TDD only 325-4173.

Academic Misconduct: All provisions of the Norman Campus Academic Misconduct Code shall apply in cases of academic dishonesty. Any violation of the Academic Misconduct Code will result in your removal from this course, and a grade of F will be recorded for the course. Academic misconduct is defined as "any act that improperly affects the evaluation of a student's academic performance or achievement." At the University of Oklahoma, academic integrity is expected from each student. Misconduct such as plagiarism, fabrication, and fraud, as well as attempting to commit such acts or assisting others in doing so, will not be tolerated. Students are responsible for knowing the OU Academic Conduct Code, which can be found at <http://www.ou.edu/studentcode> and <http://www.ou.edu/provost/integrity>



Tentative schedule (subject to change)

| Date | Topic | Text Chapter | Lab |
|---|---|---------------------------|---|
| WEEK 1 | Intro to class/course expectations | | |
| | Origin of Earth/origin of atmosphere | Chapter 1 | |
| WEEK 2 | Structure of Earth's atmosphere | Chapter 1 | #1 North American Geography |
| | Energy and energy balance | Chapter 2 | |
| WEEK 3 <i>No classes on Monday, Sept. 3rd</i> | Solar energy | Chapter 2 & class notes | #2 The Earth-Atmosphere System |
| | Air temperature | Chapter 3 | |
| WEEK 4 | The water cycle/moisture | Chapter 4 | #3 Radiation and Energy Transfer |
| | Clouds and fog | | |
| WEEK 5 | Monday, Sept. 17 - EXAM 1 | Chapters 1-4 | #4 Daily Temperature Cycle |
| | Stability & cloud development | Chapter 5 | |
| WEEK 6 <i>Friday - Lab Quiz 1 over labs 1-4</i> | Stability | Chapter 5 | #5 Atmospheric Moisture |
| | Precipitation | | |
| WEEK 7 <i>No classes on Friday, Oct. 5</i> | Atmospheric pressure | Chapter 6 | #9 Soundings and Stability |
| | Atmospheric forces | | |
| WEEK 8 | Local Winds | Chapter 7 | #7 Surface map Analysis |
| | Global circulation | | |
| WEEK 9 | Wind Power | Class notes | #10 Upper Air Analysis |
| | El Niño-Southern Oscillation | Chapter 7 | |
| WEEK 10 | Monday, Oct. 22 - EXAM 2 | Chapters 5-7 | #6 Air Masses and Fronts |
| | Air masses | Chapter 8 | |
| WEEK 11 <i>Friday – Lab Quiz 2 over labs 5-7, 9</i> | Fronts | Chapter 8 | #11 Thunderstorms and Their Environments |
| | Mid-latitude cyclones | | |
| WEEK 12 | Thunderstorms | Chapter 10 | #12 Severe Thunderstorms |
| | Tornadoes | Chapter 10 | |
| WEEK 13 <i>No classes on Friday, Nov. 16</i> | Hurricanes | Chapter 11 | #13 Hurricane Tracks & Forecasts |
| WEEK 14 | Stratospheric ozone THANKSGIVING HOLIDAY NOVEMBER 21-25 | Chapter 12 | NO LABS |
| WEEK 15 <i>Friday – Lab Quiz 3 over labs 10-13</i> | Tropospheric ozone | Chapter 12 | #14 Weather Forecasting: Precipitation Type |
| | Climate change | Chapter 14 | |
| WEEK 16 | Climate change | Chapter 14 | NO LABS |
| FINAL EXAM | Friday, December 14 1:30 – 3:30 pm Room A235 SEC | Comprehensive Exam | |