

METR 2013 Fall 2012 - Syllabus

TR 11:30-12:45 pm in NWC 1313

Dr. Kevin Kloesel email: longhorn@ou.edu

office: NWC 2901 (OCS) ; phone: 325-2998

Office Hours: TBD, by appointment, or whenever the door is open/check with Jenny!

Grader: Stephen Castleberry email: stephen.g.castleberry-1@ou.edu

NWC XXXX office hours: TR 2:00-4:00 pm

Prerequisite: MATH 1823 (C or better);

Co-requisites: METR 2011 (lab), MATH 2423, PHYS 2514 or 1205.

Course Objectives: Introduction to physical meteorology including the composition and vertical structure of the atmosphere, temperature, heat transfer, solar and terrestrial radiation, radiative balance, seasonal and daily temperatures variations, atmospheric moisture, heat and moisture indices, cloud formation and cloud types, atmospheric stability, cloud microphysics, weather radar and precipitation systems. The topics will be covered as time permits.

Required Texts for the Lectures: **Meteorology Today: An Introduction to Weather, Climate, and the Environment**. 8th edition or newer; C. Donald Ahrens. Descriptive text emphasizing concepts and terminology.

Meteorology for Scientists and Engineers. 2nd edition or newer; Roland B. Stull. Mathematically based text for understanding derivations and applying concepts, but weak on motivation.

If you are really interested in developing your expertise: **Atmospheric Science: An Introductory Survey**. J. Wallace and P. Hobbs is a great text for the mathematically inclined. It will be used in later courses as well.

The lectures will be a blend of material from many sources, especially the texts listed above. I will also make every effort to sync our section with Dr. Biggerstaff's section next door!

Grading Rubric:

3 mid-terms	20% each	=	60%
Homework		=	15 %
Final exam (required and comprehensive)		=	25%

The standard grade scale (90% or better is an A, 80% or better is a B, 70% or better is a C will apply)

For planning purposes:

1st EXAM – 18 Sept; 2nd EXAM — 18 Oct; 3rd EXAM— 15 Nov;

FINAL EXAM — 13 December 10:30-12:30 pm NWC 1313

INSTRUCTOR NOTES:

All materials provided to you in this class are protected by copyright. That means that you may not disburse or seek materials related to this class from people outside this class.

I will have to travel several times during the semester for professional activities. Lectures may be provided by either the TA, a guest lecturer, or by Dr. Biggerstaff in a combined class format on the days I am not available. We will also be hosting Dr. Biggerstaff's class when he is on travel. As a last resort, formal class activities may be provided on-line.

SOCIAL MEDIA:

I am an avid social media user and plan to use these media to provide helpful hints, study aides, as well as noteworthy weather events that may occur (like info about the upcoming Hurricane Isaac) on a fairly regular basis. This is an experiment, and I will look forward to your evaluation of this component of the course.

Facebook Group: Cloudy with a Chance of Walking the Planck

Join here: <https://www.facebook.com/groups/263000380478310/>

Twitter Feed: @Tweaching2013

Follow here: <https://twitter.com/Tweaching2013>

THE LEGAL STUFF

1) The University of Oklahoma is committed to providing reasonable accommodation for all students with disabilities. Students with disabilities who require accommodations in this course are required to speak with the professor 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 405/325-3852 or TDD only 405/325-4173.

2) Academic integrity policy website information: Details regarding academic integrity can be found at the following website: studentconduct.ou.edu. Anyone found, or suspected of, having violated university academic conduct will be punished to the maximum extent allowable.

METR 2013 is the first physics and calculus-based meteorology course that you take. The School has prescribed a set of *Knowledge Expectations* that students should obtain from this course. We will cover almost all those topics, which requires moving at a rapid pace. A grade of C or better grade is required to advance to the next course in the curriculum. Many sophomore students consider this material challenging. Indeed, 20-30% of the students in this course find themselves unable to advance to the next class at the end of the semester. However, the School has no quota or limits on advancement. We hope that each student is successful in mastering the material and encourage students to be proactive in seeking outside tutelage as necessary. A student-run help desk is available for meteorology classes through the Student Affairs Committee. In addition, your Teaching Assistant will hold regular office hours and can offer specific guidance related to assignments given in this class.