

METR 2011 – Introduction to Meteorology I Laboratory

Syllabus: Spring 2012

Instructor: Jennifer (Jen) Newman

Office: NWC 5240

Office Hours: Monday and Wednesday, 3-4 pm, NWC 5240. Or by appointment.

E-mail: jennifer.newman@ou.edu

Section 011

M

4-6 pm

NWC 5720

Content:

This lab will complement but not necessarily follow the lecture material in METR 2013 directly. Special emphasis will be given to utilizing computational tools such as GEMPAK, MATLAB, and IDV to study the atmosphere.

The Official Description from the OU Catalog:

Reinforces the theoretical concepts provided in the counterpart lecture course Meteorology 2013, which introduces students to important phenomena and physical processes that occur in the earth's atmosphere. Through a series of laboratory exercises, students will learn the basic concepts and tools that are used to study atmospheric problems. Special emphasis will be placed on developing information technology and computational skills. The laboratory exercises target the topics covered in the lecture component.

Goals:

By the end of the semester, I hope all of the students will:

- 1) Be able to navigate weather graphic software and generate weather graphics.
- 2) Learn how to write and execute basic computer scripts.
- 3) Be able to write basic weather forecasts.
- 4) Learn how to manipulate formulas in order to answer questions.

Text:

Required – “Practical Guide to Linux Commands, Editors, and Shell Programming (2nd Edition)” – by Sobel, Mark G.

Recommended – “Linux in a Nutshell”, (5th edition) – by Seiver, Weber, Figgons, Love, and Robbins. O’Reilly Media Inc.

Other handouts as given.

Grading Scale:

90-100	A
80-89	B
70-79	C
60-69	D
0-59	F

(Tentative) Class Schedule:

Week	Topic	Forecasting City
Week 1: 1/30	Introductions/Syllabus and Conversions/Units/Dimensions	New Orleans, LA
Week 2: 2/6	Linux	New Orleans, LA
Week 3: 2/13	METAR	Providence, RI
Week 4: 2/20	Surface Map Contouring	Providence, RI
Week 5: 2/27	Radiation	Albuquerque, NM
Week 6: 3/5	Satellite Observations	Albuquerque, NM
Week 7: 3/12	Radar	Hilo, HI
Week 8: 3/19	NO LAB (Spring Break)	Hilo, HI
Week 9: 3/26	Atmospheric Moisture	TBA
Week 10: 4/2	Atmospheric Stability	TBA
Week 11: 4/9	Soundings	Wichita Falls, TX
Week 12: 4/16	Outdoor Measurements	Wichita Falls, TX
Week 13: 4/23	Severe Weather Parameters	Wichita Falls, TX
Week 14: 4/30	Winter Weather	

Grading:	13 Lab Assignments	60%
	12 Weekly Quizzes	20%
	12 Forecast Journals	20%

Lab Assignments: Lab assignments must be turned at the beginning of the next lab class. The only exceptions will be for extenuating circumstances (i.e. death in the family, hospitalization, etc.) when I am notified at least 24 hours in advance. **Lab assignments turned in late will be deducted 10% for every day past the due date. I will not accept labs that are more than a week late.**

Weekly Quizzes/Attendance: At the start of every lab, there will be a short 10-15 minute quiz covering the previous week's lab topics. If you need to miss a lab for extenuating circumstances, then talk to the lab instructor for making up lab work and quizzes. Unexcused labs will result in a 0% for quizzes.

Forecast Journal (starts 1/30): Every week you will be expected to compile an online weather journal and submit it on D2L. Its purpose is to engage you with the daily weather. You will come to realize many things about weather and additionally you will learn how disconnected most people, even meteorologists, are from the weather. For each week day (M-F), you will record observations for an assigned city onto a provided template. For one of the days during the week, you will produce a forecast for the upcoming 24-hour period. For whichever 24-hour period you forecast for, I want you to verify your forecast for that same location the following day. **Forecast journals are due at the end of every week by 11:59 pm on Sunday.**

Extra Credit: Forecast Challenge (starts 1/30): You are strongly encouraged to participate in the WxChallenge (<http://wxchallenge.com/>) hosted here at OU. This will give you an opportunity to begin honing your forecasting skills for many different parts of the U.S. If you beat the instructor in one or two forecast cities you will receive 2% extra credit onto your final grade. If you beat the instructor in three or four cities out of a possible five during the semester, then you will receive 5% extra credit onto your final grade. If you beat the instructor in all five cities, then we will discuss when the time comes.

Web Page: This course has a web page located at: <https://learn.ou.edu>. All grades and handouts will be posted on the class website.

Holidays: Spring Break: March 17-25

Academic Misconduct:

Academic misconduct is a serious breach of ethics since it potentially can harm those students who are honestly pursuing their studies. All instances of alleged academic misconduct will be thoroughly investigated and action taken under the official university policies. All students are expected to be familiar with and abide by the OU Academic Misconduct Code. Information on this code and other student policies is located at <http://studentconduct.ou.edu>.

You are allowed to work with fellow classmates on any and all lab assignments; however, each and every lab must be your *own* work with your *own* write-up. Any copying is strictly prohibited and will result in a zero on that assignment and the loss of any extra-credit opportunities for the entire semester. If this behavior continues, immediate action will be taken to report the student for academic misconduct.

Students with Disabilities:

"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 requested 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."