METR 2011 – Introduction to Meteorology I Laboratory
Syllabus: Fall 2010

Instructor: Kevin Haghi
Office: NWC 5110   **Phone**: None
Office Hours: Will be discussed in class
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Section 012	W	3:45-5:45 pm	NWC 5720
Section 021	R	1:30-3:30 pm	NWC 5720

Content: This lab will complement but not necessarily follow the lecture material in 2013 directly. Special emphasis will be given to utilizing computational tools such as GEMPAK and shell scripting to study the atmosphere. Other tools such as IDV may be covered as well.

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) Identify weather phenomena from observations.
3) Learn how to manipulate formulae in order to answer questions.
4) Develop a routine for reading, identifying and forecasting weather.
5) Achieve success in higher forms of thinking beyond "understanding."

Text: *Required* – "Linux in a Nutshell", (5th edition) – by Seiver, Weber, Figgons, Love, and Robbins. O'Reilly Media Inc.
   Recommended – "Practical Guide to Linux Commands, Editors, and Shell Programming (2nd Edition)" – by Sobel, Mark G.

   Other handouts as given

Grading Scale: 90-100   A
                       80-89   B
                       70-79   C
                       60-69   D
                       00-59   F

The grading scale is the standard grading scale. An 89.9 is a B, a 79.9 is a C, etc. This doesn't mean that your ability to demonstrate personal growth will be secondary to policy. If a student shows growth in an area where struggle has occurred, some exceptions are made in terms of grade. This means that you will be highly encouraged to put your best work forward.

Grading: 14 Lab assignments   80%
                     Pop Quizzes   10%
                     Forecast Journal   10%

Lab Assignments: Lab assignments must be submitted on learn.ou.edu by the beginning of class via the dropbox or onto your personal website before 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.

Pop Quizzes/Attendance: I do not believe that college should have mandatory attendance. This is your education and you are the only one who is personally responsible for your success. However, not coming to class means that you will miss the opportunity for pop quiz points. Therefore, it is to your advantage to attend every lab. Additionally, each lab throughout the semester will be building on material and concepts covered in previous labs.

Forecast Journal: 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. As part of your daily online journal, you should include:

1) Date
2) Location (not important. Pick a place that interests you.)
3) Website/Location where you are garnering your information
4) Current Conditions (Temperature, Pressure, Humidity, Cloud Cover, Weather type)
5) One interesting feature (Sharp temperature gradient, large high pressure, etc)

For one of the days during the week, I want you to produce a forecast for the upcoming 24-hour period. For whatever 24-hour period you forecast for, I want you to journal that same location the following day in order to compare your forecast to the results. In your forecast, you should include:

1) Date
2) Location
3) Website/Location where you are garnering your information
4) Current Conditions (as above)
5) Forecast Conditions (Temperature, Pressure, Humidity, Weather type)
6) Synopsis- I want you to convey your forecast to me in written form. Make sure you write at least a paragraph, but try to keep it concise.

Forecast Challenge: You are strongly encouraged to participate in the WXChallenge. To add a little incentive: if you participate regularly (i.e. submit forecasts rather than relying on consensus modeling 5 out of 6 days a week), throughout the entire semester, your lowest lab score will be dropped. Also, if throughout the entire semester you are able to beat consensus in the final standings for each of the cities, you will be awarded a 5% bonus to your final grade.

WEB PAGE: This course has a web page located at: https://learn.ou.edu . All grades will be posted on this class website and if you have any questions about what has been posted contact me immediately.

Students' expectations of the Teacher:
Although college is tilted towards the student to rise to expectations, there are some things that you should come to expect:

1) All homework assignments to be returned the following lab with an appropriate grade assigned.
2) Me to be available during my office hours without an appointment.
3) To reach me outside of my office hours via email 9am-5pm M-F. If I receive an email from you, expect that it will be answered within 1 business day. Questions asked over the weekend will be answered the following Monday.
4) Me to forget your name at some point. My weakest cognitive skill is name recognition.
5) A serious environment laced with sarcasm.
6) To be treated equal, but perceived as unequal. I will undoubtedly (and unintentionally) seem to give special attention to one or more students, so if you have a question or need help, please feel free to stand up for your right for equality! If this is uncomfortable for you, send me an email and I will make arrangements.
7) To laugh and have fun! If you are not laughing enough, you are not learning enough. I believe students learn best when they are laughing because laughing releases endorphins and endorphins make you happy.

(Tentative) Class Schedule:
Week 1: Conversions/ Units/Dimensions Lab
       2: Surface Observations- Linux and Metar Decoding
       3: Surface Contouring
       4: Build your own HTML homepage
       5: Radiation Lab
       6: Satellite Observations
       7: Rainfall Calculations
       8: Atmosphere Moisture
       9: Atmospheric Stability and Cloud Formation
      10: Upper-Air Maps
      11: Introduction to IDV
      12: Radar Lab
      13: Skew-T by hand/ Skew-T through GEMPAK
      14: Winter Weather Case Study

Holidays: Labor day- September 6
            Thanksgiving- November 24-28

Honors Section only: All homework and lab assignments will be similar to the traditional section. However, honors students will be expected to answer additional questions on homework assignments. These questions will typically require you to synthesize concepts and push you to think beyond the bounds of the assignment. Though these questions will be required for the honors section, traditional students should not feel restricted to avoid these questions; although questions by traditional students will not be graded, feedback will be given.

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. It is in your best interest to do the work.

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."