

Syllabus

Synoptic Meteorology Laboratory - METR 4424

Course Description:

The purpose of this lecture/laboratory course is to gain an understanding of the observed behavior of the atmosphere through the application of basic theoretical principles. Concepts will be developed for studying atmospheric circulations, particularly extra-tropical cyclones and anticyclones. Laboratory work will include the development of diagnostic techniques suitable for a better understanding of the current weather and will use modern technological tools. Students will be expected to explain theoretical concepts in an oral and written format. They also will be expected to demonstrate mastery in understanding various physical processes that impact weather analysis and forecasting, surface and upper air analysis, fronts and wave cyclones, satellite meteorology, sounding analysis, thermodynamic diagrams, cross sections, forecasting, NCEP models, MOS, radar meteorology, and severe spring and winter weather.

Meeting Times and Location: Monday, Tuesday and Wednesday from 2:00 - 2:50 pm; Thursday 2:00 – 3:50
NWC 5600

Course Professor: Jeffrey Basara, Ph.D.
Address: School of Meteorology, NWC 5238
Telephone Number: (405) 325-1760
E-mail Address: jbasara@ou.edu
Office Hours: TBD and/or by appointment.

Course Teaching Assistant: Alexander Booth
Address: School of Meteorology, NWC 5110
Office Hours: TBD

Required Texts and Readings: *Midlatitude Synoptic Meteorology: Dynamics, analysis, and forecasting* by Gary Lackmann.

Course Grade Determination:

In-class quizzes (8-15, lowest dropped):	40%
In-class laboratory work (10-12 total):	40%
Semester Project:	15%
WxChallenge Competition:	5%

Enrollment: Prerequisite - A grade of C or better in METR 3123 and 3223, or permission of the instructor. See also the knowledge expectations at http://som.ou.edu/content/pdf/ke_4424.pdf.

Guaranteed Course Grades:

100 - 93.0	A
< 93.0 – 83.0	B
< 83.0 – 70.0	C
< 70.0 – 60.0	D
< 60.0	F

An excuse for missing a quiz must be provided to the instructor ***before*** the quiz begins. Make-up quizzes will be determined at the instructor's discretion.

Reasonable Accommodation:

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 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 405/325-3852 or TDD only 405/325-4173.

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 so doing, will not be tolerated. Students are responsible for knowing the OU Academic Code, which can be found at <http://www.ou.edu/studentcode> and <http://www.ou.edu/provost/integrity>.

METR 4424 In-Class Policies:

Students must maintain regular attendance and are expected to participate in all class discussions. To eliminate distractions to the instructor and/or fellow students, all cell phone devices must be silent during in-class meeting times and may not be used except in an emergency – texting is ***NOT*** allowed. Laptop computers are permissible (and encouraged) but ***MUST*** be used for course related activities. As such, applications and activities including, but not limited to chat, Facebook, Twitter, etc. are ***NOT*** allowed without the consent of the instructor.

GUIDING PRINCIPLES METR 4424

1. Students will be challenged to explain physical principles
 - In English
 - On your feet and speaking with authority
 - Goal => Tie together all of your experiences in the SoM program
2. Course knowledge assessment
 - Quizzes will be “open-ended” with *narrative English answers required*
 - Some quizzes will be announced ... some will NOT.
 - Compete with fellow students at OU and beyond in the WxChallenge
 - An end-of-semester case study will be assigned to teams of 2-3 students
 - Students will be asked to self-appraise their teammates on the special case study project
3. Semester project case studies — *familiarity with the computer resources is essential*
4. => **If you need to see me, MAKE AN APPOINTMENT WITH ME!!**
5. METR 4424 will be:
 - ***A lot of material, a lot of work***
 - What you put into the course is related to what you get out of the course
 - Not a perfect course, but it is critical for tying together the theoretical with the practical — students get to judge
 - A course to practice ‘thinking on your feet’ — the foundation of your “*License to Learn*”

EXCELLENCE CAN BE ATTAINED IF YOU:

- Care more than others think is wise
- Risk more than others think is safe
- Dream more than others think is practical
- Expect more than others think is possible