

**METR 2603 (Sec. 900) – Severe and Unusual Weather**  
**TR 6:00-7:15pm (SEC A235)**  
**Syllabus: Spring 2008**

**Instructor:** Mr. Brad Illston  
**Office:** SEC 562                      **Time:** T/Th 4:00-6:00 pm              **Phone:** 325-2469  
                  NWC 2908                      **Time:** By appointment                      **Phone:** 325-5445  
**Email:**                      illston@ou.edu

**Content:** Severe and Unusual Weather is a non-majors course that serves as a General Education Core II Natural Science Elective (non-lab). It is designed to provide students with an in-depth look at the physical and societal aspects of severe and unusual weather. Specific topics to be covered include thunderstorms, squall lines, hail, lightning, tornadoes, microbursts, hurricanes, observational systems and procedures, remote sensing tools, severe weather forecasting, El Nino and La Nina, severe weather climatology, blizzards and ice storms, lake-effect snow storms, and weather impacts on industry and society.

**The Official Description from the OU catalog:** *METR 2603-Severe and Unusual Weather:* Provide non-majors and majors a detailed descriptive account of the physical processes important in the formation of various severe and unusual weather phenomena including: thunderstorms, tornadoes, hail storms, lightning, hurricanes, mid-latitude snowstorms, lake effect snows, atmospheric optical effects, and global climate change.

**Lectures:** Each lecture will consist of a Power Point presentation of material with references to associated reading material from the textbook. Lecture “outline” slides will be made public via the website in PDF format before class for printing and note taking. These outline slides will have omitted material that will be “filled in” by those who attend class.

**Text:** *Required* – “Severe and Hazardous Weather” (2<sup>nd</sup> Edition) - by Rauber, Walsh and Charlevoix. Kendall/Hunt Publishing.  
*Additional* - Other handouts as given by instructor and/or posted to the website.

**Web Pages:** This course has a web page located at: <https://learn.ou.edu>. This website will have links to other websites that students may find useful in their understanding of course material, outline slides of upcoming lectures, and other pertinent information. You will also be able to view your grades in the course from this website and if you have any questions about what has been posted contact the instructor immediately to correct any mistakes. The textbook also has a website: <http://severewx.atmos.uiuc.edu/>. Some of the material from this website will be used as a supplement for the class. Use this website to gain further insight into some topics. On each page there are links at the bottom that are also useful to the curious student to go beyond the material taught in this class.

<b>Grading:</b>	4 Quizzes	50 pts ea.	200 pts
	4 Homework Assignments	50 pts ea.	200 pts
	4 Exams	150 pts ea.	<u>600 pts</u>
			1000 pts

**Grading Scale:**

900-1000	A
800-899	B
700-799	C
600-699	D
< 600	F

**Quizzes:** Throughout the semester, four quizzes will be given at the end of class. These quizzes will test your knowledge of material from the course and will have questions similar to homework and exams. They will not (usually) be scheduled and missed quizzes cannot be made up without extenuating circumstances (i.e. death in the family, hospitalization, etc.).

**Homework Assignments:** Four homework assignments will be assigned to cover material from lectures, handouts, and the textbook. You will have at least one week to complete homework assignments and they will be due the class period before the exam covering the same material. Since answer keys will be made available after the class of the due date (to be used as a study aid for the exams), late homework assignments will not be accepted.

**Exams:** Each of the four exams will cover material from the material from lectures, handouts, and the textbook. Exams must be taken on the scheduled date. The only exceptions will be for extenuating circumstances (i.e. death in the family, hospitalization, etc.) when the instructor is notified at least 24 hours in advance. The last exam (Exam 4) will be the final exam for the course, but will be non-comprehensive and only cover the final section's material.

**Extra Credit:** For those students looking for extra credit, there will be plenty of opportunities. Exams and quizzes typically have an extra credit question or two. In addition to those, there are 3 larger extra credit assignments/tasks that can be done. Details of the three extra credit assignments are below. All extra credit assignments are completely voluntary and are due no later than April 23<sup>rd</sup>.

*Forecast Contest (50 pts):* Learning about weather conditions in other states than Oklahoma is vital to a student's overall understanding of meteorology. Those students who participate in the WxChallenge forecasting competition and enter at least 30 forecasts will receive full extra credit. Additional extra credit will be awarded based on performance, but active participation is all that is needed to earn the full points. For more information on the WxChallenge, visit <http://wxchallenge.com>. The deadline for signing up for the Spring semester is January 23<sup>rd</sup> and there is a \$3 entry fee for the competition.

*Twister (25 pts):* As with many movies made in Hollywood, there are aspects of motion pictures that are true and aspects that are glorified for the silver screen. Write a short narrative (3-5 pages, 12 point font, double spaced) discussing the movie *Twister* and what meteorological aspects of the movie were real and what aspects were not based on science.

*Surface Observing Networks (25 pts):* Aside from Doppler radar, the National Weather Service considers surface observational networks their critical source of data for making forecasts and warnings during severe weather. Write a short narrative (3-5 pages, 12 point font, double spaced) discussing the surface observation networks in Oklahoma (e.g. Oklahoma Mesonet, Oklahoma Micronet, ASOS, etc.), their similarities and differences, and use at least 3 peer review publications as sources.

**Tentative (subject to change) Schedule:**

Week 1 :	Jan. 20	
	Jan. 22	
Week 2:	Jan. 27	Quiz 1
	Jan. 29	
Week 3:	Feb. 3	
	Feb. 5	
Week 4:	Feb. 10	Homework 1 Due
	Feb. 12	Exam 1
Week 5:	Feb. 17	
	Feb. 19	
Week 6:	Feb. 24	
	Feb. 26	
Week 7:	Mar. 3	
	Mar. 5	
Week 8:	Mar. 10	Homework 2 Due
	Mar. 12	Exam 2
Week 9:	Mar. 17	Spring Break – No class
	Mar. 19	Spring Break – No class
Week 10:	Mar. 24	
	Mar. 26	
Week 11:	Mar. 31	
	Apr. 2	
Week 12:	Apr. 7	Homework 3 Due
	Apr. 9	Exam 3
Week 13:	Apr. 14	
	Apr. 16	
Week 14:	Apr. 21	
	Apr. 23	
Week 15:	Apr. 28	Homework 4 Due
	Apr. 30	Exam 4 (Non-comprehensive Final)

**Attendance:** Although attendance will not be taken, you are expected to attend every lecture. The material learned in one class is connected to other material learned in the class on other days, so it is to your advantage to attend every lecture. Quizzes will be unannounced (for the most part) and cannot be made up, so attending class will be beneficial to 20% of your grade. Additionally, online lecture notes cover most, but not all material in the course. The remaining material will be covered in class (see Lectures section).

**Disclaimers:** 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.

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.