



Syllabus

METR 2603-001: Severe & Unusual Weather, Fall 2012

Class Schedule: MWF 9:30–10:20am, Adams Hall 359

Instructor: Dr. Daphne LaDue

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Office Hours: By appointment. Call or email to schedule.

Grader: Mr. Derek Stratman

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. You will learn about properties of the atmosphere, meteorological measurements, numerical weather prediction, and more, while learning about severe and unusual weather phenomenon, such as: drought, thunderstorms, tornadoes, hail, lightning, climate/global change, hurricanes, midlatitude snowstorms, lake effect snow. There are several other topics in the book we could choose to cover (see Assignment #2 and the online discussion board).

Course Objectives: At the conclusion of this course, you should:

- Be able to do physical calculations using SI units.
- Correctly identify several meteorological phenomena and understand their underlying physical processes.
- Be able to analyze and discuss meteorological events scientifically.
- Find and understand weather information from the web and other resources.
- Understand your personal risk from severe and unusual weather.
- Understand the societal impacts of severe and unusual weather.

Required Textbook: Rauber, Robert M., John E. Walsh, and Donna J. Charlevoix. *Severe and Hazardous Weather: An Introduction to High-Impact Meteorology* (4th ed.), Kendall/Hunt, 2012.

Supplemental Web Material:

- Course documents and grades will be disseminated through the OU online course management system, Desire2Learn (D2L): <http://learn.ou.edu>.
- The publisher maintains a website with a great deal of additional material. Use the code in the front cover of your book to access the online material.

Structure of the Course: There are some important things to know about how this class will be taught:

1. We are going to use elements of what's called a flipped classroom (<http://youtu.be/ojiebVw800g>). For many subjects, video snippets of lectures will be posted online. You will be expected to use those *outside* of class, and look at them at least once *before* the class in which we use the material. For the class meetings, we will then use our time together to process the information and apply it. It is your job to make sure you understand the things we do in class. If you actively participate you should be well prepared for exams.

2. We are going to mimic how you might approach learning a new topic in real life. If you were interested in learning about tornadoes, would you start by learning about basic properties of the atmosphere? Probably not, but you would quickly realize you need to understand some properties of the atmosphere in order to understand tornadoes. Here is an analogy: in most classes you build your knowledge brick by brick, from the ground (the basics) up. What we will do is start with the brick wall, and deconstruct it in order to understand it. Our society is technologically advanced, having reaped the benefits of our advancements and understanding of science topics (among other things). This strategy will not only help you build some effective learning strategies, it will also help you develop skills to keep up with our rapidly advancing world.

3. You will take ownership of your learning. You will help determine what aspects of our topics we spend time covering in class, as opposed to things you learn on your own. This process begins right away with Assignment #2. Take time with that assignment to be sure we use our classroom time wisely!

Special Course Activities:

1. Peer Review: We will mock the peer review process that scientific papers go through before they are published. With first-hand experience, you will better appreciate a key process of science.

2. Team Teaching: I will seek volunteer groups of three to teach particular portions of chapters. This is because a) you learn more deeply when you know you have to teach someone else, b) you sometimes learn best from your peers, c) it is an opportunity for reflection upon—and creativity in—how to facilitate learning. You will better understand your own learning strategies.

3. Team Answers: Similar to #2, but shorter. I will ask teams of three (that I assign) to come forward to solve a problem or conduct a demonstration.

Grading:

Exams (3)	30% --- 30% exams
Team answers (in-class work)	20%
Team teaching	20% --- 40% group work
Peer review exercise	10%
Assignments	20% --- 30% individual work

Grading Scale:

A	100 – 90%
B	89 – 80 %
C	79 – 70 %
D	69 – 60 %
F	< 60%

Exams: Exam dates will be announced at least one week ahead. Target dates are: end of September, end of October, and the final exam. No make-up exams or quizzes will be given. The only exceptions to missing more than one exam or quiz without significantly impacting your grade will be: (1) serious medical condition (illness or injury) of you or an immediate family member; (2) University excused absence; (3) jury duty; (4) religious observance; or (5) military orders. Only in such instances will an exam or quiz be rescheduled, depending on the best interests of the student. Appropriate documentation *must* accompany any excused absence from an exam or quiz.

Assignments: Assignments must be turned in by the beginning of class on the assigned due date. The only possible exceptions are the same as those for exams. An assignment that is up to 24 hours late will only receive half credit. An assignment that is more than 24 hours late will receive a score of 0. Remember, you can turn assignments in early!

Attendance: You are expected to attend every class session. Daily in-class activities are a key portion of your class grade. The material learned in one class is connected to other material learned in the class on other days. We will be deepening our understanding of concepts throughout the semester.

Absence for Religious Observance: It is the policy of the University to excuse absences of students that result from religious observances and to provide without penalty for the rescheduling of examinations and additional required class work

that may fall on religious holidays. Notify Dr. LaDue as soon as possible if you plan to observe a religious holiday in order to make appropriate arrangements for class work or rescheduling of examinations.

Please be aware that unless specifically stated otherwise, **all students are expected to complete their course work independently, without collaboration.** While you may assist each other in *working* on class exercises, you are expected to *arrive* at your solutions independently. Significant similarities between solutions may be taken as evidence of improper collaboration. See section on Academic Integrity.

Student Privacy: I am committed to keeping all your personal information and grades private in accordance with the Federal Educational Rights and Privacy Act (FERPA). As such, I will not share information on your performance in this class with any third party (including parents and academic counselors) without written permission from you, the student. If you wish for me to share your class grades and other information with a third party, send me a written notice designating the third party (by name) and what information I may (and may not!) share with them.

Academic Integrity: Academic misconduct **will not be tolerated** in this course. All students are instructed to read the official University student's guide to academic integrity at http://integrity.ou.edu/students_guide.html. All alleged instances of academic misconduct will be investigated and, if substantiated, appropriate admonitions will be imposed. Students have the right to appeal such admonitions; see the various resources under the Student tab at <http://integrity.ou.edu> for further information.

Disability Policy: 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.

This syllabus is subject to adjustment if necessary.