

University of Oklahoma
College of Atmospheric & Geographic Sciences
School of Meteorology
METR 1111: Orientation to Professional Meteorology
Fall 2017

Instructor: Dr. Scott Salesky

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Office Hours: Tuesdays 10-11 am, Wednesday 1-2 pm, or by appointment

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Office Hours: Mondays, 3-4 pm

Learning Management System: canvas.ou.edu

Meeting Time & Location: Mondays, 4:00–5:30 pm, NWC 1313

Course Prerequisites: MATH 1503 (College Algebra) or higher.

Course Delivery: Traditional

Course Description: This course is a one-credit-hour course for students planning to (or who might) major in Meteorology. It is designed to introduce students to the School of Meteorology, to organizations in the National Weather Center, and to the profession of meteorology. The course will include lectures by the instructor, readings, and guest lectures by OU Meteorology faculty and National Weather Center personnel. While a first course in atmospheric science comes later in the curriculum (METR 2013), key concepts and tools in meteorology will be introduced during this class.

Learning Outcomes: After the successful completion of the course, the student will:

- 1) Be familiar with resources available to Meteorology students and career options/opportunities in the meteorology field.
- 2) Be able to identify key concepts and terminology in meteorology
- 3) Perform basic calculations and unit conversions with meteorological variables (wind vector components, pressure, temperature, moisture)
- 4) Interpret surface weather maps and upper-air charts
- 5) Assess atmospheric structure and stability using skew-T log-P diagrams
- 6) Demonstrate understanding of forces on an air parcel in the atmosphere

Required Textbook: Selected readings from R. Stull (2017), *Practical Meteorology: An Algebra-Based Survey of Atmospheric Science*. This is a free e-textbook that will be made available on Canvas, or from the author's website at goo.gl/PGzfkW. Other materials (e.g. PowerPoint slides) used in class will also be made available on Canvas.

Course Expectations:

You can expect me to:

- Be prepared, engage you in class, and to challenge you to think.
- Be available to assist you in your learning.
- Provide you timely feedback on course assignments and evaluations.
- Be available for office hours and to return emails in a timely fashion (24 hours).

I expect you to:

- Take responsibility for your own learning.
- Be on time and attend class regularly.
- Give myself and guest speakers your full, undivided attention.
- Refrain from use of electronic devices (cell phones, laptops, etc.) during class

Final Grade: The final grade for this course will be based on homework assignments (30%), quizzes (20%), and two in-class exams (25% each). The exams will cover key points from the lectures, homework problems, and presentations by the guest speakers.

NOTE: There will be no final exam during finals week.

Grades will be assigned as follows:

A: 90–100

B: 80–89

C: 70–79

D: 60–69

F: <60

Additional Support for Learning: The University of Oklahoma provides additional support to assist with your success in this course. The University College provides free tutoring through Action Tutoring (ou.edu/univcoll/action_tutoring). The Writing Center (ou.edu/writingcenter) provides assistance on writing and consultations to improve writing skills. The OU Meteorology Student Affairs Committee (SAC) also staffs a Help Desk for undergraduate students, which is located behind the OWL space on the first floor of the NWC. Currently the Help Desk is staffed from 5:00-7:00 pm on Mondays-Thursdays and 7:00-9:00 pm on Sundays.

Course Policies:

Use of Electronic Devices: Students are expected to refrain from the use of electronic devices (laptop computers, cell phones, etc.) while in the class. Be sure that your phone is set to silent mode or turned off and put away!

Make-up Policy: If a student misses an assignment for a legitimate, verifiable reason, the instructor will work with the student to provide an opportunity to make up the missed work.

Absences: Taking responsibility for your own learning includes regular class attendance and paying attention to the instructor and guest speakers. I will not take attendance

during class. However, failure to attend class will have a negative impact on your learning and on your grade. Note that we will have occasional quizzes in class that will account for 20% of your final grade.

Civility: All students are expected to treat each other and the instructor with respect. If a student's behavior or actions become disruptive to the class, they will be asked to leave class for the day.

Emergency Contact: In the event of family or medical emergencies, students can inform the instructor by email (salesky@ou.edu) or by phone (405-325-1738). Once the emergency has passed, the student can meet with the instructor to make arrangements to make up any missed work and to determine what steps would be beneficial to aid the student in continued success in the course.

Changes to the Syllabus: The instructor reserves the right to make changes in aspects of this syllabus if deemed necessary during the course.

University Policies:

Academic Integrity: All students are expected to conform to university-level standards of ethics, academic integrity, and academic honesty. By enrolling in this course, you agree to be bound by the University of Oklahoma Academic Integrity Code (integrity.ou.edu/students.html). Academic integrity includes (but is not limited to) avoiding cheating, properly attributing sources in written work (avoiding plagiarism), not using notes or textbooks when taking online quizzes (unless denoted as open notes), and doing your own work on assignments. This is important for both your academic career here at OU and for your own personal development, ethics, and future career. I expect you to be responsible for your own learning in this course, and to conduct yourself with the highest level of academic and personal integrity.

Religious Observance: It is the policy of the University to excuse the absences of students that results from religious observances and to reschedule examinations and additional coursework that may fall on religious holidays without penalty.

Reasonable Accommodation Policy:

Students requiring academic accommodation should contact the Disability Resource Center for assistance at 405-325-3852 or at drc@ou.edu. For more information, please see the Disability Resource Center Website (ou.edu/drc). Any student in this course who has a disability that may prevent him or her from fully demonstrating his or her abilities should contact me as soon as possible so we can discuss accommodations necessary to ensure full participation and to facilitate your educational opportunities.

Tentative Schedule:

Please note that this schedule is tentative and may change depending on how quickly we cover course material and the availability of our guest speakers. If needed, we will spend additional time on some topics and not cover everything listed here.

Week	Date	Topics	Readings
1	Aug. 21	Introduction	
2	Aug. 28	Atmospheric Structure	Stull §1.1–1.6
3	Sept. 4	NO CLASS	
4	Sept. 11	Weather Maps	Stull §9.1–9.3
5	Sept. 18	Weather Maps	
6	Sept. 25	Convection	Stull §5.6, 14.4
7	Oct. 2	Thunderstorms	Stull §14.1
8	Oct. 9	Exam #1	
9	Oct. 16	Skew-T Diagrams	Stull §5.1–5.5, 5.7
10	Oct. 23	Skew-T Diagrams	
11	Oct. 30	Rotation & Vorticity	Stull §10.9, 11.9
13	Nov. 6	Atmospheric Forces	Stull §10.1–10.3
14	Nov. 13	Balanced Flows	Stull §10.5
15	Nov. 20	Extratropical Cyclones	Stull §12.1–12.3, 13.1, (13.2)
16	Nov. 27	Radiation and Climate	Stull §21, pp. 793–812
16	Dec. 4	Exam #2	