

## SYLLABUS: METR 2023 INTRO-METEOROLOGY II

**CLASS TIME: MWF 9:00-9:50am**  
**CLASS ROOM: NWC 1350**

**INSTRUCTOR: Dr. Kevin Kloesel, Associate Dean, College of Atmospheric and Geographic Sciences**  
**OFFICE: NWC Suite 1102**      **OFFICE HOURS: TBD**      **FACEBOOK: Kevin Kloesel**  
**PHONE: 325-3298**      **EMAIL: [longhorn@ou.edu](mailto:longhorn@ou.edu)**

**GRADER: Christopher Schwarz, [cmschwarz@ou.edu](mailto:cmschwarz@ou.edu), 325-3051, NWC 5110**

**COURSE WEB SITE:** Accessible via <http://learn.ou.edu> (log in with 4+4)

**REQUIRED TEXT:** Meteorology Today, by Ahrens. 8<sup>th</sup> Edition  
Meteorology for Scientists & Engineers, by Stull. 2<sup>nd</sup> Edition

**READING LIST:** Excerpts to be provided from Wallace and Hobbs, Holton, Bluestein, McIlveen, Bosart and Bluestein, etc.

### **COURSE GRADE DETERMINATION:**

		<u>Scale:</u>
2 In-Class Exams at 20% each (no drops)	40%	A ≥ 90%
Final Exam (Thurs May 14, 8-10am)	20%	B ≥ 80%
Term Paper	20%	C ≥ 70%
Homework Assignments	20%	F ≤ 69%

**ENROLLMENT:** Prerequisite: Grade of C or better in Mathematics 2423, PHYS 2514, METR 2013, METR 2011, CS 1313; Co-requisite: METR 2021, Mathematics 2433, Physics 2524.

**COURSE GOAL:** Introduces students to important phenomena and physical processes that occur in earth's atmosphere, focusing on atmospheric dynamics, wind systems of different origin and scale, and thunderstorms. The course also touches on boundary layer meteorology, air pollution, forecasting, and climate change. Students will be expected to explain basic physical theoretical concepts in an oral and written format.

### **IMPORTANT POLICIES:**

#### ***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 [www.ou.edu/provost/integrity](http://www.ou.edu/provost/integrity).

## Term Paper

Each student will be required to write a term paper on a topic to be mutually determined by the student and instructor. The paper will be due on Friday, May, 1. Assignments associated with the Term Paper will include an abstract, an outline, an extended outline, and the paper itself. These assignments will combine to comprise 20% of the course grade. Papers will be read and graded by a select group of National Weather Center researchers and forecasters.

## Tentative Weekly Schedule

Week 1 January 21 – 23	Setting Goals, Removing Phobias, Newton
Week 2 January 26 – 28 – 30	Forces I (Frames of Reference, Real v Apparent)
Week 3 February 2 – 4 – 6	Forces II (Generating wind)
Week 4 February 9 – 11 – 13	Geostrophic, Gradient and Cyclostrophic Flows
Week 5 February 16 – 18 – 20	General Circulation and Global Wind Systems
<b>Week 6 February 23 – 25 – 27</b>	<b>Exam Week – Exam I – Friday Feb 27</b>
Week 7 March 2 – 4 – 6	Divergence, Convergence, Vorticity
Week 8 March 9 – 11 – 13	Mid Latitude Cyclones
<i>Week 9 March 16 – 18 – 20</i>	<i>Spring Break</i>
<i>Week 10 March 23 – 25 – 27</i>	<i>Term Paper Work</i>
Week 11 March 30, April 1 – 3	Air Masses and Fronts
Week 12 April 6 – 8 – 10	Weather forecasting
Week 13 April 13 – 15 – 17	Mesoscale Weather Systems
<b>Week 14 April 20 – 22 – 24</b>	<b>Exam Week – Exam II – Friday Apr 24</b>
Week 15 April 27 – 29, May 1	Boundary Layer, Small-Scale and Local Systems ( <b>Paper Due</b> )
Week 16 May 4 – 6 – 8	Global Climate, Climate Change
<b>Week 17 May 14</b>	<b>Comprehensive Final Exam (8am-10am)</b>