

Metr 1014-010 -- Weather and Climate

Metr 1014 is an introduction to energy balance, temperature, atmospheric moisture, cloud formation, static stability, precipitation mechanisms, winds, mid-latitude and severe storms, weather forecasting and climate. The course is designed for students who are not scientists. However, it will use some algebra and geometry. Everyday experiences of weather and their impact on society will serve as a basis for discussion. The goal of the course is to provide an understanding of the physical mechanisms which drive the weather. Class weather briefings will be integrated into the lectures when exciting weather threatens. Laboratory work includes applications of class lecture material, work with weather maps and forecasting, with emphasis on using new technology such as the World Wide Web and computers for visualization.

Meets: TR 1:30 - 2:45 PM in SEC Rm. A235

Instructor: Dr. Michael Richman

Office: NWC 5640

Office Hours: **NWC 5646:** TR 10:30 - 11:30,

SEC 526: TR 2:45 – 3:15 and by appointment (for appointments, make 24 hours ahead)

How to reach me: Phone: 325-1853; Email: mrichman@ou.edu ← [preferred way to reach me]

Laboratory (Note: no laboratory the week of January 19th):

Sec	Day	Time	Bldg/room	Instructor	Office hours
011	M	1:30 PM - 3:20 PM	Sarkeys Energy Ctr / P0209	Mr. Shafer	M 3:30 - 4:30 (SEC 562)
012	M	3:30 PM - 5:20 PM	Sarkeys Energy Ctr / P0201	Ms. Silvis	TBA
013	T	6:30 PM - 8:20 PM	Sarkeys Energy Ctr / P0207	Mr. VanDenbroeke	T 12:45 - 1:30 & R 2:45 - 3:30 (SEC 562)
014	T	3:30 PM - 5:20 PM	Sarkeys Energy Ctr / P0203	Ms. Nallapareddy	TBA
015	R	3:30 PM - 5:20 PM	Sarkeys Energy Ctr / N0202A	Ms. Braun	TBA

Grading:	Percentage	Cumulative Percentage
Laboratory	20%	20%
Test 1	20% lowest	
Test 2	20% test score	
Test 3	20% dropped	60%
Homework	10%	70%
Comprehensive Final	25%	95%
Clickers and Class Participation	5%	100%

Mandatory Materials

1. Books:
 - Essentials of Meteorology (5th ed.) by C. Donald Ahrens
 - Explorations in Meteorology by Oklahoma Climate Survey
2. InterWrite PRS RF Personal Response System (aka “clicker”)
3. Calculator: Any calculator with scientific notation (needed for tests)

Expected reading:

Read chapter in Ahrens book **prior** to class.

Late Homework Policy:

Subtract 50% for days 1 – 7



Tentative syllabus

No class: 3/17; 3/19 (Spring Break)

Last class: 5/07

Final exam: 5/14 1:30 – 3:30 PM (SEC A235) – *comprehensive final*

Lecture Schedule

Date Material

1/20 T Introduction and Chapter 1: The Earth's Atmosphere
1/22 R Chapter 1
1/27 T Chapter 2: Warming the Earth and the Atmosphere
1/29 R Chapter 2
2/03 T Chapter 3: Air Temperature
2/05 R Chapter 3
2/10 T Chapter 4: Humidity, Condensation and Clouds
2/12 R Chapter 4
2/17 T **Test 1**
2/19 R Chapter 5: Cloud Development and Precipitation
2/24 T Chapter 5
2/26 R Chapter 6: Air Pressure and Winds
3/03 T Chapter 6
3/05 R Chapter 7: Atmospheric Circulations
3/10 T Chapter 7
3/12 R **Test 2**
3/24 T Chapter 8: Air Masses, Fronts and Mid-Latitude Cyclones
3/26 R Chapter 8
3/31 T Chapter 9: Weather Forecasting
4/02 R Chapter 10: Thunderstorms and Tornadoes
4/07 T Chapter 10
4/09 R Chapter 11: Hurricanes
4/14 T Chapter 11
4/16 R Chapter 12: Air Pollution
4/21 T **Test 3**
4/23 R Chapter 13: Global Climate
4/28 T Chapter 13
4/30 R Chapter 14: Climate Change
5/05 T Chapter 14
5/07 R Review Session for Final Exam
5/14 R **Comprehensive Final Exam**

Reasonable Accommodation Policy: “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 personally as soon as possible so we can discuss accommodations necessary to ensure full participation and facilitate your educational opportunities.” See <http://drc.ou.edu/content/view/16/> for more details.

Academic Misconduct Policy: “Each student should acquaint him or her self with the University’s codes, policies, and procedures involving academic misconduct, grievances, sexual and ethnic harassment, and discrimination based on physical handicap.” See <http://www.ou.edu/provost/pronew/content/integritymenu.html> for more details. The entire OU Academic Code can be found at <http://www.ou.edu/studentcode/OUStudentCode.pdf>