

University of Oklahoma
College of Atmospheric and Geographic Sciences
School of Meteorology
METR 3334: Principles of Research & Communication in Meteorology
Spring 2022

Instructor: Dr. Ming Xue
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Teaching Assistant: Rachael Cross (rey@ou.edu)

Learning Management System: <https://canvas.ou.edu>

Course Meeting Time and Location: MTWR 3 - 3:50 pm, NWC 5600

Ming Xue Office Hours: Wed. 4-5pm, Fri. 1-2pm (NWC 2502 or via Zoom using the class zoom link).

Rachael Cross Wed. 10-11am. Meet her in NWC Atrium.

Final Exam: The class is grades based on projects and assignments. There is no final exam.

Mode of class

The mode of class is in-classroom lectures. According to the University policy as of January 18, 2022, the class can be in a hybrid mode where students with Covid exposure and infection can join via Zoom. The following is the Zoom information and will be used for both classes and office hour sessions. We will try to record all class sessions.

Zoom Meeting link and ID:

<https://oklahoma.zoom.us/j/92078376113?pwd=RnRNVUI4RUZMYmd0cW5zc1VvdUJkdz09>

Zoom Meeting ID: 920 7837 6113

Passcode: METR3334

Mask Policy: University mask policy found at <https://www.ou.edu/together/university-masking-policy> will be enforced. Everyone in the classroom is strongly encouraged, while some students will be required to wear masks. See detail in the policy which is likely to evolve through the semester as the Covid-19 situation evolves.

“From OU Website: Through January 31. For the first two weeks of the semester (through January 31) masking will be required in classroom settings. Beginning February 1, 2022, the Norman campus will revert to the Fall 2021 masking guidance, and encourages masking in the classroom and requires masking for a two-week quarantine period when a confirmed positive COVID-19 case in the class is identified.”

Course Prerequisite:

Grade of C or better in METR 1313, METR 2213, METR 2613, and MATH 2934 (or MATH 2443).

Course Description:

An introduction to and/or development of topical skills in computing, writing, and speaking. The course will be composed of short thematic projects on topics relevant to meteorology and the atmospheric

sciences. The professional skills gained reflect those needed by meteorologists in government, academia and the private sector. Required of all meteorology majors during their third year of residence.

Course Goals:

Upon completing this course, students will have basic skills in and knowledge of research and communication in meteorology.

Texts and Materials:

Required: "Eloquent Science: A Practical Guide to Becoming a Better Writer, Speaker and Scientist" 2nd Edition (2009) by David Schultz, 448pp. Published by American Meteorological Society.

Optional: " Schimel, J., 2011: Writing Science: How to Write Papers That Get Cited and Proposals That Get Funded Illustrated Edition" by Joshua Schimel. 221pp, Oxford University Press.

Learning Outcomes:

Upon completing this course, students should be able to:

1. Review the existing literature on a specific topic in the atmospheric sciences, including:
 - Using online databases and other tools to locate and evaluate the relevance of a specific study
 - Synthesizing and summarizing this research in written and oral forms
2. Use various methods of scientific writing for communication, including:
 - Literature review
 - Technical reporting (datasets, analysis methods, project design)
 - Research reports
3. Gather, read, and write data in common formats used in the atmospheric sciences
4. Use appropriate tools, techniques, and methods of visualization to analyze atmospheric datasets
5. Draw conclusions from research
6. Adequately credit the work of others and provide appropriate context for a research project
7. Create and present an effective oral presentation

Learning Activities

Lectures will often include group activities and interactive instructions involving personal computers, while reading assignments, preparation of presentations, and computer programming assignments will be completed primarily outside of class.

Final Grade:

Your final cumulative grade in this course will be a weighted average of the following assessments:

- | | | |
|---|------------|------------|
| • Scientific Writing (2 writing projects) | 30% | |
| • Research Projects (~3 programming projects and a few small assignments) | | 50% |
| • Oral Presentation (1- 2 presentations) | 20% | |

Percentage grades will correspond to letter grades as: **A** ($\geq 90\%$), **B** ($\geq 80\%$ and $< 90\%$), **C** ($\geq 70\%$ and $< 80\%$), **D** ($\geq 60\%$ and $< 70\%$), and **F** ($< 60\%$). Final grades may be rounded and/or curved to benefit the students at the instructor's discretion. For example, if there are natural breaks in the grade distribution that do not conform to the percentages listed above, the lower and/or upper bounds of the categories may be reduced, but this should not be expected.

Course Policies

Late turning in of Assignment

Late turning in of assignment by one day will result in deduction of 5% from the total value of that particular assignment. Additional 2% will be deducted every additional day of delay. The assignment will no longer be accepted more than 7 days beyond due date.

Absences

Students need to attend in-class lectures. Absence from class due to illness including Covid-19 infection or exposure, or other special reasons needs to obtain permission from the instructor via email before class. In that case, the student should attend class via zoom if condition allows.

University Policies

Academic Integrity

Cheating is strictly prohibited at the University of Oklahoma, because it devalues the degree you are working hard to get. As a member of the OU community it is your responsibility to protect your educational investment by knowing and following the rules. For specific definitions on what constitutes cheating, review the Student's Guide to Academic Integrity at http://integrity.ou.edu/students_guide.html.

To be successful in this class, all work on exams and quizzes must be yours and yours alone. You may not receive outside help. On examinations and quizzes you will never be permitted to use your notes, textbooks, calculators, or any other study aids. Should you see someone else engaging in this behavior, I encourage you to report it to myself or directly to the Office of Academic Integrity Programs. That student is devaluing not only their degree, but yours, too. Be aware that it is my professional obligation to report academic misconduct, which I will not hesitate to do. Sanctions for academic misconduct can include expulsion from the University and an F in this course, so don't cheat. It's simply not worth it.

Religious Observance

It is the policy of the University to excuse the absences of students that result from religious observances and to reschedule examinations and additional required classwork that may fall on religious holidays, without penalty.

Reasonable Accommodation Policy

The University of Oklahoma will reasonably accommodate otherwise qualified individuals with a disability unless such accommodation would pose an undue hardship or would result in a fundamental alteration in the nature of the service, program, or activity or in undue financial or administrative burdens. The term reasonable accommodation is used in its general sense in this policy to apply to employees, students, and visitors.

Reasonable accommodation may include, but is not limited to:

- (1) Making existing facilities readily accessible and usable by individuals with disabilities;*
- (2) Job restructuring;*
- (3) Part-time or modified work schedules;*
- (4) Reassignment to a vacant position if qualified;*

- (5) *Acquisition or modification of equipment or devices;*
- (6) *Adjustment or modification of examinations, training materials, or policies;*
- (7) *Providing qualified readers or interpreters; or*
- (8) *Modifying policies, practices, and procedures.*

*Students 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 **Disability Resource Center** (www.ou.edu/drc) prior to receiving accommodations in this course. The DRC is located in University Community Center, 730 College Ave, phone 405/325-3852.*

Title IX Resources and Reporting Requirement

For any concerns regarding gender-based discrimination, sexual harassment, sexual assault, dating/domestic violence, or stalking, the University offers a variety of resources. To learn more or to report an incident, please contact the Sexual Misconduct Office at 405/325-2215 (8 to 5, M-F) or smo@ou.edu. Incidents can also be reported confidentially to OU Advocates at 405/615-0013 (phones are answered 24 hours a day, 7 days a week). Also, please be advised that a professor/GA/TA is required to report instances of sexual harassment, sexual assault, or discrimination to the Sexual Misconduct Office. Inquiries regarding non-discrimination policies may be directed to: Bobby J. Mason, University Equal Opportunity Officer and Title IX Coordinator at 405/325-3546 or bjm@ou.edu. For more information, visit <http://www.ou.edu/eoo.html>.

Adjustments for Pregnancy/Childbirth Related Issues

Should you need modifications or adjustments to your course requirements because of documented pregnancy-related or childbirth-related issues, please contact your professor or the Disability Resource Center at 405/325-3852 as soon as possible. Also, see <http://www.ou.edu/eoo/faqs/pregnancy-faqs.html> for answers to commonly asked questions.

Final Exam Preparation Period

Pre-finals week will be defined as the seven calendar days before the first day of finals. Faculty may cover new course material throughout this week. For specific provisions of the policy please refer to OU's Final Exam Preparation Period policy (<https://apps.hr.ou.edu/FacultyHandbook#4.10>).

Emergency Protocol

During an emergency, there are official university [procedures](#) that will maximize your safety.

Severe Weather: If you receive an OU Alert to seek refuge or hear a tornado siren that signals severe weather 1. *LOOK* for severe weather refuge location maps located inside most OU buildings near the entrances 2. *SEEK* refuge inside a building. Do not leave one building to seek shelter in another building that you deem safer. If outside, get into the nearest building. 3. *GO* to the building's severe weather refuge location. If you do not know where that is, go to the lowest level possible and seek refuge in an innermost room. Avoid outside doors and windows. 4. *GET IN, GET DOWN, COVER UP*. 5. *WAIT* for official notice to resume normal activities.

[Link to Severe Weather Refuge Areas](#) , [Severe Weather Preparedness - Video](#)

Armed Subject/Campus Intruder: If you receive an OU Alert to shelter-in-place due to an active shooter or armed intruder situation or you hear what you perceive to be gunshots:

1. *GET OUT:* If you believe you can get out of the area WITHOUT encountering the armed individual, move quickly towards the nearest building exit, move away from the building, and

call 911. 2. *HIDE OUT*: If you cannot flee, move to an area that can be locked or barricaded, turn off lights, silence devices, spread out, and formulate a plan of attack if the shooter enters the room. 3. *TAKE OUT*: As a last resort fight to defend yourself.

For more information, visit <http://www.ou.edu/emergencypreparedness.html>

[Shots Fired on Campus Procedure - Video](#)

Fire Alarm/General Emergency: If you receive an OU Alert that there is danger inside or near the building, or the fire alarm inside the building activates: 1. *LEAVE* the building. Do not use the elevators. 2. *KNOW* at least two building exits 3. *ASSIST* those that may need help 4. *PROCEED* to the emergency assembly area 5 *ONCE safely outside, NOTIFY first responders of anyone that may still be inside building due to mobility issues.* 6. *.WAIT* for official notice before attempting to re-enter the building.

[OU Fire Safety on Campus](#)