

## **GEOGRAPHY 1900: EXTREME WEATHER AND CLIMATE**

Tuesdays and Thursdays 3:05 p.m. – 4:55 p.m., Spring 2025

LeFevre Hall 164 (call number 17223/17224)

4 credit hours

**Instructor:** Elizabeth Mazzocco

Office Hours: after class or by appointment

- CarmenZoom link for electronic appointments -- log in using your OSU credentials.
  - <https://osu.zoom.us/j/4791631129?pwd=dWNQQjBlakxWZUu1Y1FBRmlZINoUT09>
  - Password: 129920

Office: Hodges Reese Hall 2050 Cubicle 2 (next to conference room 2060)

E-Mail: mazzocco.7@osu.edu

**Textbook via CarmenBooks:** Ahrens & Henson, *Essentials of Meteorology, 9<sup>th</sup> Edition*; Cengage Learning; ISBN 9780357857557 (earlier editions are acceptable but page numbers, figures, and some topics and terms will differ)

The textbook and/or courseware for this course is being provided via CarmenBooks. Through CarmenBooks, students obtain publisher materials electronically through CarmenCanvas, saving them up to 80% per title. The fee for this material is included as part of tuition and is listed as *CarmenBooks eText Library* on your Statement of Account. In addition to cost-savings, materials provided through CarmenBooks are available immediately on or before the first day of class. There is no need to wait for financial aid or scholarship money to access your textbook(s).

Unless you choose to opt-out of the program, you do NOT need to purchase any additional materials for this course at the bookstore. You can access your textbook(s) from the CarmenBooks links in both the global CarmenCanvas menu and the navigation menu for this course.

For more information on the CarmenBooks program, [please visit the CarmenBooks website](#).

If you wish to opt out, you will see a button to do so when you launch the materials on your CarmenBooks shelf. You have until the second Friday of any session to opt-out, but the course materials are required and you will have to purchase them independently if you do so.

If you rely on assistive technology or need an accessibility accommodation for the digital materials provided via CarmenBooks, please contact the Alternative Media team in Student Life Disability Services at [slds-altmedia@osu.edu](mailto:slds-altmedia@osu.edu).

### **Course technology:**

- **Carmen:** Most course materials, including the syllabus and course calendar, lecture materials, assignments, textbook, grades, etc. are available on Carmen (<https://carmen.osu.edu/>). Course information/messages are sent regularly via Carmen and OSU email. (Download Outlook too.)
  - Set up notifications.
  - Download the app.
- **Microsoft Office 365:** All Ohio State students are now eligible for free Microsoft Office 365 ProPlus through Microsoft's Student Advantage program. Full instructions for downloading and installation can be found at [go.osu.edu/office365help](https://go.osu.edu/office365help).
- **CarmenZoom and Mediasite:** Any virtual meetings will take place via [CarmenZoom](#). Course materials may also occasionally utilize [Mediasite](#) and YouTube.

- **Calculator:** A basic calculator is suggested for homework exercises. Calculators will be provided for use during exams.
- **General technology help:** For help with your University password or email, Carmen, or other technology questions or requests, contact the Ohio State IT Service Desk. Standard support hours are available at [ocio.osu.edu/help/hours](http://ocio.osu.edu/help/hours), and support for urgent issues is available 24/7. Self-Service and Chat support: [ocio.osu.edu/help](http://ocio.osu.edu/help); Phone: 614-688-4357(HELP); Email: [servicedesk@osu.edu](mailto:servicedesk@osu.edu); TDD: 614-688-8743

**Course Description:** This course will serve as an introduction to the study of the atmosphere. The primary objective of this course is to provide students with a comprehensive understanding of the atmosphere and the processes that govern its behavior. This course also focuses on how the earth's surface, oceans, and humans interact with the atmosphere to produce extreme weather events and climate extremes and how these extremes affect people.

**Goals and Expected Learning Outcomes for Natural Science GE Course:** Natural Science coursework fosters students' understanding of the principles, theories, and methods of modern science, the relationship between science and technology, the implications of scientific discoveries, and the potential of science and technology to address problems of the contemporary world.

1. Students understand the basic facts, principles, theories and methods of modern science.
2. Students understand key events in the development of science and recognize that science is an evolving body of knowledge.
3. Students describe the inter-dependence of scientific and technological developments.
4. Students recognize social and philosophical implications of scientific discoveries and understand the potential of science and technology to address problems of the contemporary world.

Through lecture, in class demos, media clips, discussion, and assignments, students will be exposed to the major scientific principles and methodologies of meteorology and climatology. We will examine how atmospheric phenomena vary from location to location and the varying degrees to which different regions are equipped to handle severe weather and changing climates.

Week	Day	Date	Essentials of Meteorology, 9th Ed.	Topic(s)
1	Tuesday	7-Jan	Course introduction	Course introduction
	Thursday	9-Jan	Chapters 1 & 2	Structure of the atmosphere; Temperature Conversion
2	Tuesday	14-Jan	Chapter 2	Energy & energy transfer
	Thursday	16-Jan	Chapter 2	Radiation & energy budget
3	Tuesday	21-Jan	Chapter 2	Seasons
	Thursday	23-Jan	Chapter 3	Temperature & daily temperature variation
4	Tuesday	28-Jan	Chapter 3	Global temperature patterns

	Thursday	30-Jan		<b>Review for Exam 1</b>
5	Tuesday	4-Feb		<b>EXAM 1</b>
	Thursday	6-Feb	Chapter 4	Humidity
6	Tuesday	11-Feb	Chapter 4	Clouds & fog
	Thursday	13-Feb	Chapter 5	Lapse rates
7	Tuesday	18-Feb	Chapter 5	Atmospheric stability
	Thursday	20-Feb	Chapter 5	Precipitation
8	Tuesday	25-Feb		<b>EXAM 2</b>
	Thursday	27-Feb	Chapter 6	Pressure gradient
9	Tuesday	4-Mar	Chapter 6	Basic wind types
	Thursday	6-Mar	Chapter 7	Global circulation
10	Tuesday	11-Mar		<b>No class -- Spring Break</b>
	Thursday	13-Mar		<b>No class -- Spring Break</b>
11	Tuesday	18-Mar	Chapter 7	Regional wind systems
	Thursday	20-Mar	Chapter 8	Air masses & fronts
12	Tuesday	25-Mar	Chapter 8	Midlatitude cyclones
	Thursday	27-Mar		<b>EXAM 3</b>
13	Tuesday	1-Apr	Chapter 9	Station models
	Thursday	3-Apr	Chapter 9	Forecasting
14	Tuesday	8-Apr	Chapter 10	Thunderstorms

	Thursday	10-Apr	Chapter 10	Tornadoes
15	Tuesday	15-Apr	Chapter 11	Tropical cyclones
	Thursday	17-Apr	Chapters 12 & 13	Climate & climate change
Finals	Tuesday	29-Apr		<b>Final Exam, 3:00-4:45pm</b>

**Student Evaluation:**

Homework exercises, in-class exercises, & quizzes	305 points
3 Midterm Exams	75 points
Final Exam	50 points
<b>Total</b>	<b>430 points</b>

The exams are multiple-choice and are based on all course materials including lecture, graded and ungraded work, and the textbook. Make-up examinations will only be given in exceptional circumstances **with supporting documentation** at the instructor’s discretion. Make-up exams may differ from the original version. **Late assignments and quizzes will be penalized 2% per day.** Exit questions are short questions related to the day’s lecture. The lowest 5 exit question grades are dropped. Because of this, students may not make up missed exit questions. No assignments will be accepted after the final exam begins.

Grading scale: A: 93% or more; A-: 90-92%; B+: 87-89%; B: 83-86%; B-: 80-82%; C+: 77-79%; C: 73-76%; C-: 70-72%; D+: 67-69%; D: 60-66%; E 0-59%

**Academic Misconduct:** Academic integrity is essential to maintaining an environment that fosters excellence in teaching, research, and other educational and scholarly activities. Thus, The Ohio State University and the Committee on Academic Misconduct (COAM) expect that all students have read and understand the university’s [Code of Student Conduct](#), and that all students will complete all academic and scholarly assignments with fairness and honesty. Students must recognize that failure to follow the rules and guidelines established in the university’s *Code of Student Conduct* and this syllabus may constitute “Academic Misconduct.”

The Ohio State University’s *Code of Student Conduct* (Section 3335-23-04) defines academic misconduct as: “Any activity that tends to compromise the academic integrity of the university or subvert the educational process.” Examples of academic misconduct include (but are not limited to) plagiarism, collusion (unauthorized collaboration), copying the work of another student, and possession of unauthorized materials during an examination. Ignorance of the university’s *Code of Student Conduct* is never considered an excuse for academic misconduct, so I recommend that you review the *Code of Student Conduct* and, specifically, the sections dealing with academic misconduct. Additional details:

- **Quizzes and exams:** You must complete the quizzes and exams yourself, without any external help or communication.
- **Written assignments:** Your written assignments, including discussion posts, should be your own original work. Beware of information found on the internet; it’s not always reliable.

- **Reusing past work:** In general, you are prohibited in university courses from turning in work from a past class to your current class, even if you modify it. This includes both your past work as well as other students'.
- **Collaboration and informal peer-review:** The course includes many opportunities for informal collaboration with your classmates. While study groups are encouraged, remember that using someone else's answers on any graded quiz or assignment is not permitted. If you're unsure about a particular situation, please feel free just to ask ahead of time.

**If I suspect that a student has committed academic misconduct in this course, I am obligated by university rules to report my suspicions to the Committee on Academic Misconduct.** If COAM determines that you have violated the university's *Code of Student Conduct* (i.e., committed academic misconduct), the sanctions for the misconduct could include a failing grade in this course and suspension or dismissal from the university.

If you have any questions about the above policy or what constitutes academic misconduct in this course, please contact me.

**Center for Student Success, Office of Retention & Student Success Initiatives:** The staff in the Office of Retention and Student Success Initiatives are committed to ensuring all students have the necessary supports, both inside and outside of the classroom, to fully realize their academic and personal potential at Ohio State Newark. Whether you are seeking help with time management, study skills, and other academic-related topics, or needing support with navigating personal challenges, you can utilize our Academic Success Coaches for support. An Academic Success Coach can work with you to create an individualized academic success plan that fits your unique needs. You can schedule an appointment with any of the Academic Success Coaches at: Remote appt - [go.osu.edu/RSSlremote](https://go.osu.edu/RSSlremote) or In-person appt - [go.osu.edu/RSSlinperson](https://go.osu.edu/RSSlinperson).

Additionally, the office provides Student Success Workshops throughout the semester on a variety of topics including: time management, test-taking strategies, note-taking, goal setting, financial and personal wellness, navigating your future career, and utilization of campus resources. These workshops are interactive and engaging, allowing you the opportunity to participate, ask questions, and collaborate with peers. To view a current schedule of these workshops, please visit [go.osu.edu/studentssuccessworkshops](https://go.osu.edu/studentssuccessworkshops).

At any time, you are welcome to contact the office by phone at 740-755-7881, text 740-675-0665, or email at [nwk-retention@osu.edu](mailto:nwk-retention@osu.edu) and the staff would be happy to assist you. There are also various resources and helpful information available anytime on their website at [newark.osu.edu/success](https://newark.osu.edu/success). In addition, students are encouraged to take advantage of the academic and personal support services offered on campus, which are listed at <https://newark.osu.edu/current-students>.

**Disability Statement:** Any student who needs accommodations due to any type of disability must first register with Student Life Disability Services (SL-DS). Please call Student Life at 740-755-7768 or stop by Warner Center 226 to discuss procedures for getting accommodations. After accommodations are authorized, you will receive an Access Letter to share with your professors to help with the conversation about your needs. You do not need to disclose your disability to faculty. Although accommodations may be authorized any time in a term, it is to your best interest to disclose your needs during the first week of class.

**COVID accommodations:** The university strives to make all learning experiences as accessible as possible. Students seeking to request COVID-related accommodations may do so through the university's request process, managed by Student Life Disability Services. If you anticipate or experience academic barriers based on your disability (including mental health, chronic, or temporary medical conditions), please let me know immediately so that we can privately discuss options. To establish reasonable accommodations, I may request that you register with Student Life Disability Services. After registration, make arrangements with me as soon as possible to discuss your accommodations so that they may be implemented in a timely fashion.

Contact: [nwk-studentlifedisabilityservices@osu.edu](mailto:nwk-studentlifedisabilityservices@osu.edu); 740-755-7768; Warner Center, Suite 226  
<https://slds.osu.edu/covid-19-info/covid-related-accommodation-requests/>

**Accommodations for religious observances:** It is Ohio State's policy to reasonably accommodate the sincerely held religious beliefs and practices of all students. The policy permits a student to be absent for up to three days each academic semester for reasons of faith or religious or spiritual belief. Students planning to use religious beliefs or practices accommodations for course requirements must inform the instructor in writing no later than 14 days after the course begins. The instructor is then responsible for scheduling an alternative time and date for the course requirement, which may be before or after the original time and date of the course requirement. These alternative accommodations will remain confidential. It is the student's responsibility to ensure that all course assignments are completed.

**Keys to Success:**

- Attend class. (Be on time!)
- You are responsible for any material missed due to an absence. Notify me of an absence BEFORE class! And see me after for any missed activities, etc.
- Take notes; the PowerPoint slides do not contain all of the information needed, and organizing the material in your own words helps you to process the information.
- Use the study guides provided.
- Seek help as soon as you have any questions or concerns. I am available via email, text, phone, video chat, and in person. Take advantage of this.
- Keep up with the reading and homework assignments. We'll move through A LOT of material.
- Take every chance you have to earn all of the credit you can. Many of the assignments allow multiple attempts. (The last attempt is the assigned grade.)

**The fine print:**

I reserve the right to correct any erroneous information on the syllabus and supporting documents (e.g. the course calendar) as well as change the dates of the exams as needed.