University of Florida
Department of Geography
GEO2242 – Extreme Weather
Fall 2025 Syllabus

Instructor Information:

Instructor: **Zainab Ali** - Zainabali@ufl.edu
Office Hours: Monday and Tuesday: 10:00 AM – 12:00 PM (EST) or by appointment
Office hours Location: Online on Zoom (Link is provided on Canvas)
Course format: Online (Asynchronous)

Course Description: This course will introduce students to the science of weather and climate and current scientific developments in areas such as extreme weather prediction, global climate change, and weather forecasting. This course aims to bring weather and climate alive through required readings, videos, and interactive activities. Weekly readings will be enhanced using multimedia products and supplementary activities, reinforcing concepts related to extreme climate and severe weather events.

Prerequisites: None.

Student Learning Outcomes:

- Identify, describe, and explain fundamental concepts and terminology in meteorology and climatology.
- Formulate hypotheses derived from studying physical processes in the atmosphere and climate systems.
- Apply logical reasoning skills to evaluate scientific data and arguments related to weather and climate.
- Communicate scientific knowledge and reasoning clearly and effectively, especially regarding the impacts of extreme weather on society.

General Education Objectives: This course is a physical science (P) subject area course in the UF General Education Program. Physical science courses provide instruction in the basic concepts, theories and terms of the scientific method in the context of the physical sciences. Courses focus on major scientific developments and their impacts on society, science and the environment, and the relevant processes that govern physical systems. Students will formulate testable hypotheses derived from the study of physical processes, apply logical reasoning skills through scientific criticism and argument, and apply techniques of discovery and critical thinking to evaluate outcomes of experiments. For more information: https://undergrad.aa.ufl.edu/general-education/gen-ed-program/subject-area-objectives/

Required Text: **'*The Atmosphere*' by Lutgens, Tarbuck and Tasa, 14th edition (e-book)**, ISBN: 9780134801100 eBook from Pearson. Available access to sign up for this text can be found by logging into the course on Canvas and accessing via the canvas page. This is a required e-text, and you must purchase it via UF All-Access (https://www.bsd.ufl.edu/allaccess). The estimated cost of the e-book and materials for the course is approximately $116.

Pearson Platform: Weekly reading assignments, quiz assessments, and homework assignments will be run through the eBook and the Pearson Mastering Meteorology platform, which is synced with the Canvas page, so you MUST obtain this as soon as possible. Supplementary activities are facilitated through Canvas. If you need help or run into any issues with the Pearson platform, you can connect with Pearson support here: https://support.pearson.com/getsupport/s/learners

Please review the information in Canvas on how to sign up and purchase this eBook and the Pearson access code via UF All-Access. Access to the eBook and Pearson registration instructions are available in Canvas.

Course Websites:

1. Canvas: https://elearning.ufl.edu/
2. Pearson Mastering Meteorology: https://www.pearson.com/en-us/higher-education/products-services/mylab-and-mastering-login.html

Course Activities and Graded Work:

Course organization: This course is structured into "Modules," with each module focusing on a specific chapter from the eBook. Each module includes three main assignments: a homework assignment, a mapping activity, and an end-of-module quiz. Additionally, some modules feature supplemental activities designed to further enhance your application and understanding of the material.

Readings and Homework: Each module has an assigned chapter reading with a related module homework. The goal of these homework assignments is to apply your understanding of the material, to reinforce concepts from the reading and videos, and to allow you to use your skills and knowledge in a relaxed online learning environment. You will need to read the chapter prior to completing the homework. There is a homework for each module, they are worth 100 points each, contain 10-20 questions, and will take roughly 1 to 1.5 hours (some are shorter). You have 3 attempts, and your best score is kept.

Mapping Activities: The mapping activities will introduce you to some basic geography and mapping concepts like layers and projections, etc. As well as applying critical thinking to different weather and geography topics and issues presented throughout the course. These will use 'MapMaster2.0' questions (where available), 'Thinking Spatially' questions (where available) and 'Encounter' questions like Encounter Meteorology/Physical Geography/Geosystems that use Google Earth Pro. MapMaster and Google Earth Pro are fully integrated into the Mastering online platform and built into the questions – they will pop up as another window. These

assignments are worth 100 points each, contain 4-8 questions and have 3 attempts where your top score counts. These have an estimated completion time that is less than the homework but will depend on individuals working with the online tools and if you need help in office hours, for example.

End of Module Quizzes: To summarize the module and test your general knowledge and comprehension of that module's topics, there is a quiz. These are worth 100 points each, consist of 50 questions, and 1 attempt of 60 minutes. The quizzes are closed-book. You will need to read chapter and complete the HW assignments to do well in the quizzes. If you have extenuating circumstances where you need another attempt, or disability accommodations (discussed below) where you need extra time, etc., please communicate this in advance. Additionally, the number of modules and assignments (including the quizzes) are created in such a way that one bad grade or missed assignment will not heavily impact your final grade in the course.

Supplemental Activities: Supplemental activities provide additional opportunities to engage with the course material and enhance your understanding of key topics. These activities are worth 10 points each and may include short exercises, discussion prompts, or exploratory tasks. They are generally quick to complete and focus on reinforcing concepts from the module. While supplemental activities are not as heavily weighted as other assignments, they can help improve your overall grade and provide valuable practice. Please note that these activities are open-book and can be completed at your own pace within the module's timeline. If you have any questions or need accommodation for completing these activities, please communicate this in advance.

Final Exam: There will be a comprehensive final exam for this course. The final is a closed-book exam. The final exam is not proctored. The exam will test your comprehension and understanding of the material from the entire course. Module assignments and activities will make up most of your overall grade. The final exam will be worth 10% of your grade in the course. The final exam will be a comprehensive exam and will cover all material in the course. There will be 10 questions from each module for 140 questions. You will have 2 hours to complete the final exam. If you have any questions or need accommodation for completing these activities, please communicate this in advance.

Grading Scale and GPA Equivalent:

<table>
<tr><th>Assignment Type</th><th>Points</th><th>Percentage of Final Grade</th></tr>
<tr><td>Introduction to Mastering Geography</td><td>Complete/Incomplete</td><td rowspan="2">0%</td></tr>
<tr><td>Module eBook Chapter Readings</td><td>Complete/Incomplete</td></tr>
<tr><td>Module Homework</td><td rowspan="3">100 points each</td><td rowspan="3">80%</td></tr>
<tr><td>Module Mapping Activity</td></tr>
<tr><td>End of Module Quiz</td></tr>
<tr><td>Supplemental activities</td><td>10 points each</td><td>10%</td></tr>
<tr><td>Final Exam</td><td>525 points</td><td>10%</td></tr>
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Grading Scheme: All grades will be available for you to see on Canvas and will be updated weekly. It is your responsibility to know how well you are doing in the class.

93-100% = A	**73-76.9% = C**
90-92.9% = A-	**70-72.9% = C-**
87-89.9% = B+	**67-69.9% = D+**
83-86.9% = B	**63-66.9% =D**
80-82.9% = B-	**60-62.9% = D-**
77-79.9% = C+	**< 60% = E (Fail)**

Note: A grade of C- is not a qualifying grade for major, minor, Gen Ed, or College Basic distribution credit. For further information on UF's Grading Policy, see:
https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx#hgrades

http://www.isis.ufl.edu/minusgrades.html

Assignment Schedule: Assignment due dates can be found on Canvas.

Week	Reading Due (Monday)	Homework Due (Wednesday)	Quiz Due (Friday)
	Topics		
1	Module 1: Introduction to the Atmosphere		
2	Module 2: Heating Earth's Surface and Atmosphere		
3	Module 3: Temperature		
4	Module 4: Moisture and Atmospheric Stability		
5	Module 5: Forms of Condensation and Precipitation		
6	Module 6: Air Pressure and Winds		
7	Module 7: Circulation of the Atmosphere		
	Module 8: Air Masses		
9	Module 9: Midlatitude Cyclones		
10	**Fall break: November 24 – 29 (No assignments due)**		
11	Module 10: Thunderstorms and Tornadoes		
12	Module 11: Hurricanes		
13	Module 12: Weather Analysis and Forecasting		
14	Module 13: The Changing Climate		
15	Module 14: World Climates		
Final Exam: Wednesday, December 10, 2025			

Important dates (no class): **September 1:** Labor Day, **Homecoming:** October 17 – 18, **November 11:** Veterans Day, **November 24 - 29:** Thanksgiving Break, and **December 4 - 5:** Reading Days

University Policies:

This course complies with all UF academic policies. For information on those polices and for resources for students, please visit: https://syllabus.ufl.edu/syllabus-policy/uf-syllabus-policy-links/

Course Policies:

Canvas: Important announcements and updates will be regularly posted to the course Canvas website, so be sure to check Canvas frequently. To ensure that you do not miss anything, please make sure that your Canvas profile is set to receive notifications.

Email Accounts: It is UF policy that you use your GatorLink account or Canvas when emailing your instructors; we will not answer emails sent from other accounts (e.g., personal Gmail, etc.).

Submitting Assignments: All assignments must be submitted electronically via Canvas and Pearson unless otherwise noted. Emailed or paper submissions for Canvas assignments will not be accepted. You are responsible for ensuring that all your work is uploaded correctly and completely by the deadline. Corrupted files will be treated as missing work (= 0 grade) until they are re-uploaded correctly and late penalties will apply if your resubmission is past the deadline. So, please always double-check your files right after you upload them. If you experience technical problems when submitting your work in Canvas, contact the UF Computing Help Desk for assistance: https://helpdesk.ufl.edu.

Late/Make-up Work Policy: All assignments and quizzes must be submitted by the due date and time indicated on Canvas. If a student misses a deadline or anticipates missing a deadline, they are responsible for requesting a make-up or an extension; otherwise, they will receive a zero. Late work will be eligible for full credit, with no points deducted. Students are responsible for completing any work or assignments missed. Students are expected to contact the instructor about extensions or makeup work as soon as possible.

Disputing a Grade: If you wish to dispute a grade for any assignment, you must contact the instructor in writing within two business days (48 hours) after the assignment has been graded. In your message, you must include a specific explanation for why you think the grade is incorrect and how you think it should be changed. An instructor will then arrange a meeting with you to discuss the issue and determine whether or not to the grade should be changed. The grade assigned following this meeting will be final.

Artificial Intelligence & Large Language Model (LLM) use policy: Generative AI can be used in this course at specified times with proper attribution. In this course, students can use generative AI tools (such as ChatGPT or Adobe Firefly) to complete specific assignments, given instructor guidance and permission, so long as the use of generative AI tools is properly disclosed through in-text citations, quotations, and references. Please refer to the style manual that aligns with your discipline for specific guidelines for attribution. Note that any use of generative AI must be both responsible and ethical. This means that students using generative AI are required to comply with all privacy laws and research requirements to protect data and must have appropriate permissions to enter data into a generative AI tool. Students should clarify any questions on whether data or information may be entered into a generative AI tool with the instructor.

Course Drop: If you decide to drop the course for any reason, you must request to do so through the appropriate channels by the appropriate date. Failing to do so will result in a failing (E) grade for the course. For planning purposes, it is helpful for you to communicate with me if you may need to drop the class.

Attendance policy: In this online course, attendance is not formally taken. However, active participation and engagement are expected. If you need to make up an exam or assignment due to unforeseen circumstances, please reach out to the instructor to coordinate alternative arrangements. For more information on the UF attendance policy visit: https://catalog.ufl.edu/UGRD/academic-regulations/attendance-policies/

Course evaluations: Students are invited to provide professional and respectful feedback on the quality of instruction in this course by completing course evaluations online via GatorEvals. Guidance on how to give feedback in a professional and respectful manner is available at https://gatorevals.aa.ufl.edu/students/. Students will be notified when the evaluation period opens and can complete evaluations through the email they receive from GatorEvals or in their Canvas course menu under GatorEvals, or via https://ufl.bluera.com/ufl/. Summaries of course evaluation results are available to students at https://gatorevals.aa.ufl.edu/public-results/.

Accommodations: Students requesting accommodation for disabilities must first register with the Dean of Students Office (https://disability.ufl.edu/). The Dean of Students Office will provide documentation to the student who must then provide this documentation to the instructor when requesting accommodation. You must submit this documentation prior to submitting assignments or taking the quizzes or exams. Accommodations are not retroactive; therefore, students should contact the office as soon as possible in the term for which they are seeking accommodation.

Academic Honesty: UF students are bound by The Honor Pledge which states "We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honor and integrity by abiding by the Honor Code. On all work submitted for credit by students at the University of Florida, the following pledge is either required or implied: "On my honor, I have neither given nor received unauthorized aid in doing this assignment." The Conduct Code specifies a number of behaviors that are in violation of this code and the possible sanctions. Academic honesty and integrity are fundamental values of the University community. Students should ensure they understand the UF Student Honor Code at https://sccr.dso.ufl.edu/policies/student-honor-code-student-conduct-code/.

Netiquette & Communication Courtesy: All class members are expected to follow the rules of common courtesy in all email messages, Zoom meetings, threaded discussions, and chats.

This syllabus represents current plans and objectives. As we go through the semester, those plans may need to change to enhance the class learning opportunity. Such changes, communicated clearly, are not unusual and should be expected.