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Office Hours
1-2 p.m. Mon-Thu
and by appointment

I encourage you to talk to me individually whenever you need to discuss your progress in the course or whenever you have a topic of special interest you want to discuss individually.

COURSE WEBSITE

memphis.instructure.com (Canvas)

COURSE TEXTBOOK

Required: *Understanding Weather and Climate*, 7th Edition, by Aguado and Burt

This textbook will be used in both lecture and in lab (i.e., there is not a separate lab textbook). You can purchase or rent either a hard copy of the textbook or a digital ebook in the bookstore. You do not need both.

ABOUT THE COURSE

This course surveys physical atmospheric processes and their geographic distributions. After going over the basics, which include: geographic distribution of radiation, moisture, pressure, and atmospheric circulation, we will explore how these processes interact with the global ocean and how they create weather systems and storms. The course also includes an introduction to Earth's various climates, how historical weather records and tree rings can be used to determine climates of the past, and an in-depth look at climate change.

GRADES

Your grade at the end of the semester is completely determined from the total number of points earned. These points come from 1) Packback participation, 2) your scores on the five quizzes, 3) your score on the comprehensive final exam, 4) your final grade in the required lab section, and 5) any earned extra credit. Final grades will be determined from percentage out of a total of 375 points.

Grade	Percentage	Grade	Percentage
A	90% +	C	70-79%
B	80-89%	D	60-69%
		F	< 60%

Packback Participation:

Participation is a requirement for this course, and the Packback platform will be used for in-class questions and online discussion about class topics, where you can be fearlessly curious and ask open-ended questions to build on top of the topics we are covering in class and relate them to real-world applications. For a brief introduction to Packback and why we are using it in class, watch this video: www.youtube.com/watch?v=OV7QmkrD68. There will be a weekly deadline for submissions to the online community on Fridays at 11:59 p.m. Central Time except the last week of class, which will have a deadline on Thursday. In order to receive full credit, you should submit the following per each deadline period:

- One open-ended question every week with a minimum curiosity score of 65 worth 6 points
- Two responses every week with a minimum curiosity score of 65 worth 2 points each
- Note: Half credit will be provided for questions and responses that do not meet the minimum curiosity score

The first assignment is due on 11 July 2025, so please get your account setup as soon as possible. An e-mail will be sent to your University of Memphis account from help@packback.co prompting you to finish registration. If you don't receive an email (be sure to check your spam), you may register by following the instructions below:

1. Click "Packback" within Canvas to access the community.
2. Follow the instructions on the screen to finish your registration.

Note: Please only access Packback through the link on Canvas. This way grades will sync correctly with Canvas.

Packback is free if you opted in to Tiger SmartStart. If you opted out of Tiger SmartStart, Packback will cost \$49.

If you have any questions or concerns about Packback throughout the semester, please read their FAQ at help.packback.co. If you need more help, contact their customer support team directly at help@packback.co.

Out of the 375 total points possible in this course, 50 of those points will come from your participation using Packback.

Quizzes:

There will be five quizzes worth 25 points each during this summer session. The first quiz will go online on Monday, 7 July 2025 and be due on Thursday, 10 July 2025. Quizzes will continue each week thereafter (i.e., be available on Monday and on Thursday). These quizzes will consist of multiple choice, true/false, and matching questions that come from both the book and lecture material that is being covered. All quizzes are open book/open note and will be completed on Canvas.

Quizzes can be made up, but you must have a legitimate, verifiable, and an unavoidable reason. Please note, the last day to complete a quiz is 8 August 2025.

Final Exam:

This class will contain one exam—a comprehensive final that will be worth 100 points. This exam will consist of multiple choice, true/false, and matching questions that come from both the book and lecture material. A study guide will be posted on the Canvas one week before the scheduled date of the exam to give you an idea of the material that will be covered. The exam is closed book and closed notes and will be taken in-class on 7 August 2025.

Like quizzes, the final exam can be made up, but you must have a legitimate, verifiable, and an unavoidable reason. If you know you are going to be absent, then please make arrangements for a makeup before the exam. The last day to makeup the final exam is only one day after it is administered in class—8 August 2025.

Labs:

ESCI 1010 is a four-hour course where a part of your grade comes from the lab. Therefore, enrollment in a lab section is required. You will receive one final grade for the entire course (i.e., lecture + lab combined). Lab sections are graded independently from the lecture by the graduate teaching assistant covering that lab. Out of the 375 total points possible in this course, 100 of those points will come from your grade in the lab. For example, if you received a 92% in the lab, then 92 points will be added to your final point total in the lecture, and the resulting value will be your final grade.

Extra Credit:

I often find extra credit to be a valuable resource, and points added to your final point total can be earned by going to the course website, clicking whichever link under the “Extra Credit” in the “Assignments” section interests you the most, and writing a brief one-page summary over the material. These links will become available on 14 July 2025 and will encompass current events in weather and climate. Each summary is worth 10 points, and you may do up to two. Please turn in your summary typed (double spaced using 12-point font or lower). You may upload these summaries to Canvas. Once assigned, extra credit can be turned in at any time through 8 August 2025.

Attendance:

This is not a web course, and it will move very fast. Attendance is crucial and there is a very strong relationship between regular attendance and class performance. I will upload notes that highlight the key information in each chapter to Canvas, but I will not upload video lectures or PowerPoints. Lectures will also go beyond the textbook and include the use of real-time data to illustrate key concepts that will help you understand the material and apply it in the lab.

Regular attendance is expected, and I will memorize your names and faces. Please do not come to class if you are sick. Such absences are excused as are other commitments you have to the university (e.g., sports). But do let me know that you will be absent, so the excused absence gets recorded. I will use the attendance record to give the benefit of doubt to borderline grade situations. Having more than five unexcused absences though will be considered excessive and result in your final grade dropping a full letter grade.

STUDENT CONDUCT

Academic Dishonesty:

Cheating, plagiarism, or any other form of academic dishonesty will not be tolerated. Cases of academic dishonesty will be dealt with in accordance with the policies set forth in the University’s Code of Student Rights and Responsibilities available at www.memphis.edu/osa/pdfs/csrr.pdf. It is your

responsibility to understand these policies. A lack of understanding is not an adequate defense against a charge of academic dishonesty.

Cell Phones, Laptops, Tablets:

The use of cell phones, laptops, or tablet computers for purposes other than note taking is not allowed during class. Flagrant violation of this policy will result in you being dismissed from class.

STUDENTS WITH DISABILITIES

Any student who may need class or test accommodation based on the impact of a disability will need to contact Student Disability Services (SDS) at 110 Wilder Tower, 901-678-2880, www.memphis.edu/drs/. SDS coordinates accommodations for students with documented disabilities. A registration form is available on their website.

COURSE SCHEDULE

Note: There is always a chance that this schedule could change. Any changes will be announced in class and updated in this syllabus on the course website.

<u>Date</u>	<u>Topic</u>
7 July	Introduction Chapter 1 – Composition and Structure of the Atmosphere
8 July	Chapter 2 – Solar Radiation and the Seasons Chapter 3 – Energy Balance and Temperature
9 July	Chapter 4 – Atmospheric Pressure and Wind
10 July	<i>Quiz 1 Due</i> Chapter 5 – Atmospheric Moisture
14 July	Chapter 6 – Cloud Development and Forms
15 July	Chapter 7 – Precipitation Processes
16 July	Chapter 8 – Atmospheric Circulation
17 July	<i>Quiz 2 Due</i> Chapter 9 – Air Masses and Fronts
21 July	Chapter 10 – Midlatitude Cyclones
22 July	Chapter 10 – Winter Storms
23 July	Chapter 11 – Thunderstorms and Tornadoes
24 July	<i>Quiz 3 Due</i> Chapter 11 – Thunderstorms and Tornadoes

28 July	Chapter 12 – Tropical Systems
29 July	Chapter 13 – Weather Analysis and Forecasting
30 July	Chapter 14 – Air Pollution and Urban Heat Islands
31 July	<i>Quiz 4 Due</i> Chapter 15 – Earth's Climates
4 August	Chapter 16 – Climate Change
5 August	Chapter 16 – Climate Change
6 August	Review for Comprehensive Final Exam
7 August	<i>Quiz 5 Due</i> <i>Comprehensive Final Exam</i>

***Note: Friday, 8 August 2025 is the last day to makeup a missed exam, complete a late quiz or any extra credit.**