

Syllabus for ATMS 103 – Introduction to Meteorology – Spring 2025

Date	Topic	Reading/Lecture*
T 14 Jan 2025	Introduction/ The Earth's Atmosphere	Chapter 1
R 16 Jan	The Earth's Atmosphere	
T 21 Jan	Warming the Earth and Atmosphere	Chapter 2
R 23 Jan	Warming the Earth and Atmosphere	
T 28 Jan	Air Temperature	Chapter 3
R 30 Jan	Air Temperature	
T 4 Feb	Exam I	Chapters 1 - 3
R 6 Feb	Humidity, Condensation, and Clouds	Chapter 4
T 11 Feb	Humidity, Condensation, and Clouds	
R 13 Feb	Cloud Development and Precipitation	Chapter 5
T 18 Feb	Cloud Development and Precipitation	
R 20 Feb	Cloud Development and Precipitation	
T 25 Feb	Air Pressure and Winds	Chapter 6
R 27 Feb	Air Pressure and Winds& Review	
T 4 Mar	Exam II	Chapters 4 - 6
R 6 Mar	Atmospheric Circulations	Chapter 7
T 18 Mar	Atmospheric Circulations	
R 20 Mar	Atmospheric Circulations	
T 25 Mar	Air Masses, Fronts, and Middle-Latitude Cyclones	Chapter 8
R 27 Mar	Air Masses, Fronts, and Middle-Latitude Cyclones	
T 1 Apr	Air Masses, Fronts, and Middle-Latitude Cyclones& Review	
R 3 Apr	Exam III	Chapters 7 - 8
T 8 Apr	Thunderstorms and Tornadoes	Chapter 10
R 10 Apr	Thunderstorms and Tornadoes	
T 15 Apr	El Reno tornado – May 2013	
R 17 Apr	Hurricanes	Chapter 11
T 22 Apr	<i>Spring Research Symposium</i>	<i>No classes</i>
R 24 Apr	Hurricanes	
T 29 Apr	Presentations	Final Project

*lecture viewing shall be completed **before** class meets on this date

Description

A course designed for the major and non-major student who is interested in learning the basics of the structure of our atmosphere and how the structure changes over time. Upon

completion of this class we will be able to teach friends and family about details of the weather and be equipped to make a weather forecast for any location in the U.S.

Outline

The Earth's Atmosphere (text, Chapter 1)
Warming the Earth and Atmosphere (text, Chapter 2)
Air Temperature (text, Chapter 3)
Humidity, Condensation, and Clouds (text, Chapter 4)
Cloud Development and Precipitation (text, Chapter 5)
Air Pressure and Winds (text, Chapter 6)
Atmospheric Circulations (text, Chapter 7)
Air Masses, Fronts, and Middle-Latitude Cyclones (text, Chapter 8)
Thunderstorms and Tornadoes (text, Chapter 10)
Hurricanes (text, Chapter 11)

Grading

Weather Journal	5%
Abuds	5%
Chapter Quizzes	10%
Class Projects	10%
Final Project	10%
Exam I	15%
Exam II	15%
Exam III	15%
Final Exam	15%
Total	100%

92% < total score ≤ 100%	A
90% < total score ≤ 92%	A-
88% < total score ≤ 90%	B+
82% < total score ≤ 88%	B
80% < total score ≤ 82%	B-
78% < total score ≤ 80%	C+
72% < total score ≤ 78%	C
70% < total score ≤ 72%	C-
68% < total score ≤ 70%	D+
60% < total score ≤ 68%	D
total score ≤ 60%	F

Student Learning Outcomes for ATMS 103

- understand information being communicated on standard weather maps
- develop a conceptual model of the atmosphere that allows for the analysis and prediction of weather
- create solutions to weather-related challenges as a group and as an individual
- demonstrate an appreciation for impacts of global weather patterns on society

Weather Journal

Each student will be required to contribute to a weather web log in which they describe ways that the weather has impacted their daily life. We can find the weather web log page at <http://atms103unca.blogspot.com/> where further instructions are given. Each student is required to make nearly two entries a week (for a total of **25 entries minimum**). These entries will be reviewed periodically by the instructor to confirm that each student is keeping current with the assignment, so the entries are not private. In order to receive full credit on the weather journal assignment (5%), we will need to make observations of weather impacts on our lives that are of a greater depth of analysis than simply writing “It was cold, so I put on a sweater.”

Abuds

Each student is paired with an accountability buddy (Abud), rotating buddies several times throughout the semester. We’ll work together on a lecture quiz on the day of the start of a new chapter (no lecture quiz make-ups) to encourage each of us to have thoroughly read the chapter before diving into the class projects. Each person will occasionally be evaluated on their contribution to Abuds lecture quizzes and projects.

Chapter Quizzes

Quizzes will be given weekly once *per chapter* throughout the semester to encourage course participation and attendance. The quizzes will be defined either as individual or group quizzes. When a quiz is designated for a *group*, each individual within the group will receive an identical grade.

Class Projects

ATMS 103 is a flipped-lecture hybrid classroom experience. We will cover key concepts (briefly) during lecture in class, but we’ll also have access outside of the classroom to a copy of recorded lectures covering the entire material of each chapter. Once a week we will work on homework via class projects individually and with our Abuds. Responses to the challenge projects will be turned in **once a week** and reviewed in preparation for the chapter quizzes and mid-term and final exams.

We can receive improved credit on our individual responses to project questions if we include a reflective narrative for each of the difficult questions. Our reflective narrative must cover what we [1] learned and [2] didn’t understand on a particularly challenging project question. We will use these narratives to help guide discussion during lectures and during review sessions before each mid-term. Please be as specific as possible in the reflective narratives.

Demonstrated improvement over consecutive mid-terms can add an extra 5 points credit to the later mid-term score for each Abuds teammate. We cannot receive improved credit on projects if we have not individually completed the project before addressing the reflective narrative during class time. Also, we cannot receive improved credit for a class project if we are absent from class, unless the absence is excused. It is important that we come to class every day fully prepared by having read the required chapters of the course textbook.

Final Project

At the end of the semester, there are three options for a final project; [1] weather analysis and forecast, [2] weather impacts on society, and [3] taking a deeper dive on an aspect of weather or climate. Option #1; we will partner with a teammate being responsible for presenting a five-minute weather briefing in which we discuss the current weather conditions (weather analysis) and create a weather forecast for a location in the United States. Option #2; we will work individually to research and make a five-minute presentation on how weather impacts society (e.g., historical outcomes influenced significantly by the weather). Option #3; we will work individually to research and make a five-minute presentation that goes in greater depth on the description of a weather or climate topic covered in ATMS 103 (e.g., lightning). Details on each of the final project options will be provided in early April.

Exam I, II, and III

The mid-term exams (I, II, and III) will be primarily testing new material introduced since the previous exam or since the start of the semester.

Final Exam

The final exam is a *comprehensive* exam in which all the material contained in the entire course is testable.

Assignment/Quiz/Exam Policy

Reading assignments and lecture-listening are to be completed before the start of lecture on the date they are due. Quizzes and Exams are written tests and will be taken on the date they are scheduled, unless circumstances (e.g. medical or loss in the family) warrant. Make-up chapter quizzes for special circumstances will occur at a mutually agreed upon time outside of the usual class meeting time. The lowest chapter quiz score for each individual will be *dropped* from the total quiz score tabulation.

24-h Life Token

Recognizing that the challenges of life can force their way upon the work of our classes, each student has one 'life token' that allows one class project to be turned in 24-h after it is due. The hope is that life will go smoothly this semester, and nobody will have a need to redeem their life token.

Instructor

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Textbook

“Essentials of Meteorology An Invitation to the Atmosphere” by C. Donald Ahrens and Robert Henson (eighth edition)

(continued)

Office of Accessibility & Academic Accommodations

UNC Asheville is committed to providing an inclusive experience, accessible learning environments and equal opportunity to individuals with disabilities in accordance with the Americans with Disabilities Act (ADA) and Section 504 of the Rehabilitation Act.

If you are a student experiencing barriers to access or full participation in this course on the basis of a disability, contact the Office of Accessibility to apply for reasonable accommodations and discuss available resources. You may contact the Office of Accessibility at academicaccess@unca.edu or 828-251-6292.

Students are responsible for discussing their Letter of Accommodations (LOA) with their faculty. Students and faculty are encouraged to discuss the LOA as early in the semester as possible to allow for extended access to accommodations. However, students may disclose a disability at any point in the semester. Accommodations are not retroactive and are activated when the LOA is discussed.

Sexual Harassment and Misconduct

UNC Asheville is dedicated to cultivating and maintaining a safe, respectful, and inclusive environment, free from harassment and discrimination. We strive to ensure that all have equal access to the educational and employment opportunities the University provides. If you or someone you know has been affected by sexual or gender-based harassment, including sexual assault, dating or domestic violence, or stalking, please know that help and support are available. UNC Asheville strongly encourages all members of the community to take action, seek support, and report incidents of sexual harassment to the Title IX Office. You may contact the Title IX Office or Heather Lindkvist, the Title IX Coordinator, directly at 828.232.5658 or at titleix@unca.edu or learn more by visiting titleix.unca.edu.

As a faculty member, I am a “responsible employee” and private resource. This means that if you share any information or discuss an incident with me regarding sexual or gender-based harassment, I must disclose this information to the Title IX Coordinator. Our goal is to ensure you are aware of the range of options available to you and have access to the resources you may need.

If you wish to speak with a confidential resource, contact University Health and Counseling Services at 828.251.6520. Off-campus confidential resources include Our Voice (24-Hour Hotline at 828.255.7576) and Helpmate (24-Hour Hotline at 828.254.0516).

Academic Alerts

Faculty at UNC Asheville have access to an Academic Alert system. The purpose of this system is to communicate with students about their progress in courses. Alerts can indicate concerns (e.g., academic difficulty, attendance problems) or reflect on the good work you’re doing. Professors use the Alert system because they are invested in student success and want to encourage open conversations about how students can improve their performance. When a faculty member submits an alert that expresses a concern, the

student receives an email from Academic Advising notifying them of the alert. If a student receives three or more alerts, they will need to meet with a Student Success Specialist in the Academic Success Center. The instructor may also request to meet with the student to discuss the alert. It is in the student's best interest to address the alert quickly, as students who do so are more likely to earn credit for the course. Questions about the Academic Alert system can be directed to Anne Marie Roberts (amrober1@unca.edu) in the Academic Success Center.

University Writing Center

The University Writing Center (UWC) supports writers in one-on-one sessions lasting 10 to 45 minutes. Consultants can help writers organize ideas, document sources, and revise prose. If you visit the UWC, bring a copy of your assignment, any writing or notes you may have, and the sources you are working with. Make an appointment by visiting writingcenter.unca.edu and clicking on "Schedule an Appointment," or drop in during open hours Monday-Friday.

Academic Honesty

The university's policy on academic honesty states that "As a community of scholars dedicated to learning and the pursuit of knowledge UNC Asheville relies on the honesty and academic integrity of all the members of its community. Any act of plagiarism or cheating is academic dishonesty. A person who knowingly assists another in cheating is likewise guilty of cheating. According to the instructor's view of the gravity of the offense, a student may be punished by a failing grade or a grade of zero for the assignment or test, or a failing grade in the course. If it seems warranted, the instructor may also recommend to the Provost dismissal or other serious university sanction." I expect that you will exercise integrity in all quizzes, exams, and written assignments. Please email me or pop in during student hours if you have additional questions or need clarification on any point.