

### Syllabus for ATMS 103 – Introduction to Meteorology – Spring 2023

Date	Topic	Reading/Lecture*
M 9 Jan 2023	Introduction/ The Earth's Atmosphere	Chapter 1
W 11 Jan	The Earth's Atmosphere	
M 16 Jan	<i>Martin Luther King, Jr. Day</i>	<i>classes canceled</i>
W 18 Jan	Warming the Earth and Atmosphere	Chapter 2
M 23 Jan	Warming the Earth and Atmosphere	
W 25 Jan	Air Temperature	Chapter 3
M 30 Jan	Air Temperature	
W 1 Feb	<b>Exam I</b>	<b>Chapters 1 - 3</b>
M 6 Feb	Humidity, Condensation, and Clouds	Chapter 4
W 8 Feb	Humidity, Condensation, and Clouds	
M 13 Feb	Cloud Development and Precipitation	Chapter 5
W 15 Feb	Cloud Development and Precipitation	
M 20 Feb	Cloud Development and Precipitation	
W 22 Feb	Air Pressure and Winds	Chapter 6
M 27 Feb	Air Pressure and Winds & Review	
W 1 Mar	<b>Exam II</b>	<b>Chapters 4 - 6</b>
M 13 Mar	Atmospheric Circulations	Chapter 7
W 15 Mar	Atmospheric Circulations	
M 20 Mar	Atmospheric Circulations	
W 22 Mar	Air Masses, Fronts, and Middle-Latitude Cyclones	Chapter 8
M 27 Mar	Air Masses, Fronts, and Middle-Latitude Cyclones	
W 29 Mar	Air Masses, Fronts, and Middle-Latitude Cyclones & Review	
M 3 Apr	<b>Exam III</b>	<b>Chapters 7 - 8</b>
W 5 Apr	Thunderstorms and Tornadoes	Chapter 10
M 10 Apr	Thunderstorms and Tornadoes	
W 12 Apr	El Reno tornado – May 2013	
M 17 Apr	Hurricanes	Chapter 11
W 19 Apr	Hurricanes	
M 24 Apr	Presentations	<b>Final Project</b>

\*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%
<b>Total</b>	<b>100%</b>

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 at the very beginning of each 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 *at the conclusion of each 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 Abud. 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.

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## **Instructor**

Doug Miller  
232-5158

[http://www.atms.unca.edu/dmiller/  
dmiller@unca.edu](http://www.atms.unca.edu/dmiller/dmiller@unca.edu)

## **Textbook**

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

**(continued)**

### **Office of Academic Accessibility**

UNC-Asheville values the diversity of our student body as a strength and a critical component of our dynamic community. Students with disabilities or temporary injuries/conditions may require accommodations due to barriers in the structure of facilities, course design, technology used for curricular purposes, or other campus resources.

Students who experience a barrier to full access to this class should let the professor know, and/or make an appointment to meet with the Office of Academic Accessibility as soon as possible. To make an appointment, call 828.232.5050; email [academicaccess@unca.edu](mailto:academicaccess@unca.edu); use this link <https://uncaoaintake.youcanbook.me/>; or drop by the Academic Accessibility Office, room 005 in the One Stop suite (lower level of Ramsey Library). Learn more about the process of registering, and the services available through the Office of Academic Accessibility here: <https://oaa.unca.edu/>

While students may disclose disability at any point in the semester, students who receive Letters of Accommodation are strongly encouraged to request, obtain and present these to their professors as early in the semester as possible so that accommodations can be made in a timely manner. It is the student's responsibility to follow this process each semester.

### **Sexual Harassment and Misconduct**

All members of the University community are expected to engage in conduct that contributes to the culture of integrity and honor upon which the University of North Carolina at Asheville is grounded. Acts of sexual misconduct, sexual harassment, dating violence, domestic violence and stalking jeopardize the health and welfare of our campus community and the larger community as a whole and will not be tolerated. The University has established procedures for preventing and investigating allegations of sexual misconduct, sexual harassment, dating violence, domestic violence and stalking that are compliant with Title IX federal regulations. To learn more about these procedures or to report an incident of sexual misconduct, go to [titleix.unca.edu](http://titleix.unca.edu). Students may also report incidents to an instructor, faculty or staff member, who are required by law to notify the Title IX Office.

### **Academic Alerts**

Faculty at UNCA are encouraged to use the university's Academic Alert system to communicate with students about their progress in courses. Academic Alerts can reflect that a student's performance is satisfactory at the time the alert is submitted, or they can indicate concerns (e.g., academic difficulty, attendance problems, or other concerns). Professors use the alert system because they are invested in student success and want to encourage open conversations about how students can improve their learning, and students who respond to alerts quickly are consistently more likely to earn credit for the course. Please note, professors of 100-level courses are required to submit at least one alert about each student on or before the seventh week of classes.

When a faculty member submits an alert that expresses a concern, the student receives an email from Academic Advising notifying them of the alert and subsequent registration

hold on their account. To clear the hold, the student must complete a short Google Response Form included in the alert e-mail; the results will be shared with their instructor and advising staff. Instructors may also request to meet with the student to discuss the alert.

Questions about the Academic Alert system can be directed to Anne Marie Roberts ([amrober1@unca.edu](mailto:amrober1@unca.edu)) in OneStop Advising and Learning Support.

### **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](http://writingcenter.unca.edu) and clicking on "Schedule an Appointment," or drop in during open hours Monday-Friday.

### **Academic Integrity**

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, cheating, or use of unauthorized materials or assistance is academic dishonesty. A person who knowingly assists another in academic dishonesty is likewise guilty of dishonesty. A student committing a first offense of dishonesty will receive a failing grade or a grade of zero for the assignment or test. A student committing a second offense of dishonesty will receive a failing grade in the course and be reported to the Senior Director of Student Success.

In all situations where a student has been disciplined for academic dishonesty, the instructor must submit a brief statement of the case to the Senior Director of Student Success with a copy to the student. The Senior Director maintains records of academic dishonesty incidents and notifies the instructor when a student is found to have multiple offenses. Depending upon the severity and/or repetition of the offense, the Senior Director and/or instructor may recommend that the Provost impose an additional penalty, such as cancellation of graduation with honors, cancellation of scholarships, or dismissal from the university. If the Provost decides that additional penalties are warranted, the student will be notified in writing.

If a student feels that he or she has been unjustly accused of academic dishonesty, the student has ten (10) class days from the date of the instructor's written notification to the student to respond in writing. This response is to be sent to both the instructor and the Senior Director of Student Success. The instructor should then meet with the student to discuss the charges within five (5) class days. If needed, the student may then contact the Senior Director for assistance in identifying options for possible resolution. If needed, the Faculty Conciliator will be contacted to mediate and/or convene the Academic Appeals Board.