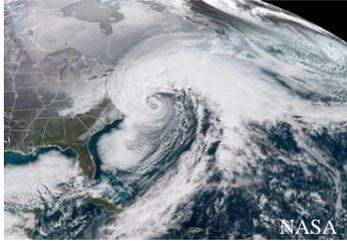


# ATMO.1410

## Weather and Climate



Semester, Year  
Days, Time, Location  
3 Units

### Course Description:

What makes a Nor'easter spin counterclockwise? Why is it faster to fly from LA to Boston than from Boston to LA? Speaking of LA, why is their air quality so bad? When was the last time Earth was this hot, and how much hotter might it get? Why are weather forecasts “always wrong”, and how far out can we *really* trust a forecast?

To answer these questions, we need to explore Earth’s atmosphere - the thin film of air that surrounds our planet. In this course we will examine the atmosphere’s composition, movement, and interaction with other Earth system components. Along the way, we’ll touch on some of its most interesting phenomena, including thunderstorms, hurricanes, jet streams, and clouds. By the end of the semester we will gain an appreciation for the atmosphere’s power and exceptional sensitivity.

### Student Expectations:

1. Students will treat each other respectfully.
2. Students will not use their cell phones during class unless an emergency arises.
3. Students will follow the university academic integrity policy. There is zero tolerance for cheating or plagiarism.  
<https://www.uml.edu/catalog/undergraduate/policies/academic-policies/academic-integrity.aspx>
4. Students are expected to attend class regularly, as regular attendance is one of the most important contributors to student success. However, students may occasionally need to miss class due to illness, emergency, or caring for a sick family member. In such cases, you are responsible for notifying me of your absences and working with me to arrange to make up any missed work. I will be very accommodating to students who are experiencing pandemic-related challenges, but you must communicate your requests with me regularly and with as much advance-notice as possible.

### Instructor Expectations:

1. I will begin and end class on time.
2. I will be available during all specified office hours (see below) and will do my best to accommodate individual office hour appointments if you cannot make the regularly scheduled office hour dates/times.

3. I will assign out of class work that adheres to the time expectations for a 3-unit course.
4. If I should need to miss class, I will communicate with you via Blackboard as soon as possible with clear instructions.

### Course Learning Objectives:

By the end of the semester, students will be able to:

1. Explain why and how our atmosphere moves using introductory physics principles.
2. Read and interpret weather maps.
3. Make their own weather forecasts based on a given set of “current weather conditions”. And be able to communicate why weather forecasts are challenging (and why meteorologists have a tough job 😊)
4. Differentiate between “natural” and anthropogenic climate change.
5. Separate climate change myth from fact

### Instructor:

Christopher Skinner

Olney Hall 301b

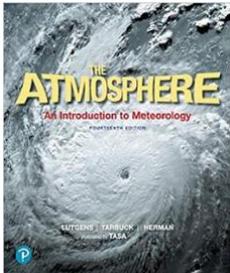
[christopher\\_skinner@uml.edu](mailto:christopher_skinner@uml.edu)

### Office Hours:

Office hours will be held in Olney Hall 301b on (days and time). Other times are available by appointment (please email me to schedule individual meeting times).

### Textbook:

*The Atmosphere: An Introduction to Meteorology* (14<sup>th</sup> Edition). Older versions of the textbook are okay to use.



### Blackboard:

Course announcements, readings, online quizzes, and recorded lectures will be posted on the course blackboard site. Please be sure your blackboard alerts are on.

### Assessment:

Grades will be based on:

- 20% Class presence/participation (attendance, surveys, group discussions)
- 20% Online Quizzes
- 20% Exam 1
- 20% Exam 2
- 20% Final Exam

### Exam Schedule:

Exam 1: Date

Exam 2: Date

Final Exam (cumulative): Date

### Online Quizzes:

Most weeks, students will complete an online quiz through the course Blackboard site. Quizzes will appear on the Blackboard site on Wednesday, and they must be completed by 11:59pm on the following Monday.

### Quiz Schedule

Quiz 1 due Monday, Date

Quiz 2 due Monday, Date

Quiz 3 due Monday, Date

Quiz 4 due Monday, Date

Quiz 5 due Monday, Date

Quiz 6 due Monday, Date

Quiz 7 due Monday, Date

Quiz 8 due Monday, Date

Quiz 9 due Monday, Date

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### Student Affairs Information and Services for Students

**Dean of Students' Office / Office of Student Affairs:** The primary responsibility of Student Affairs is the welfare of all students enrolled at UMass Lowell. We provide students with the resources and assistance for students to graduate as well rounded, active contributors to their communities. Please visit our website for links to the departments in the Division of Student Affairs. We are located on the 2<sup>nd</sup> floor of University Crossing.

- **Absence from class:** The Dean of Students Office does not provide "excused absences" for students; if you are absent for any reason you must speak with your professor directly. Students need to be aware, and follow, the absence policy listed on their syllabus.
- **Single Point of Contact:** If you are homeless or are in fear of becoming homeless, or if you are food insecure, and you want assistance, please come to the Dean of Students' Office located on the 2<sup>nd</sup> floor of University Crossing.
- **UMASS Lowell Navigators' Food Pantry:** Please visit the food pantry located in University Crossing, room 104 if you need assistance securing food; we are open Monday-Friday from 3pm-7pm. All you need is your student ID to access the food pantry; there is no charge for food, toiletries, or other resources we offer.
- **A word about conduct / behavior:** Students are expected to read and understand the syllabus given to them by their professor. The syllabus should outline the behavioral expectations of the professor, including but not limited to the use of electronics in the classroom, disruptive behavior, the absence policy, and information regarding academic integrity. Students should be familiar with the Student Code of Conduct found on the UMASS Lowell website under "Conduct

Code". Disruptive behavior in the classroom may be referred to the Office of Student Conduct.

**Veterans' Services:** UMass Lowell is committed to helping our military students take full advantage of all the educational benefits available through the federal and state governments. We welcome veterans, guardsmen, reservists and all active duty military students who are enrolled in undergraduate, graduate and continuing education degrees and/or certificate programs. Students are certified for benefits by our Veterans Benefits Administrators (VBA).

The Office of Veterans Services provides world-class service to our student veterans: UMass Lowell was named to Military Times "Best for Vets" 2014 College rankings, and is ranked among the top Military Friendly Schools in the nation by Victory Media, indicating the campus is among the top 20 percent for military students' experience. For complete information on the services and resources available please visit our website at: <https://www.uml.edu/student-services/Veterans/>

**Wellness Center** - Call 978-934-6800 to schedule an appointment with any of the Wellness Center Departments. While walk-in appointments are not available, the staff will schedule you in a timely manner. The Wellness Center is located on the 3<sup>rd</sup> floor of University Crossing.

- **Health Services:** As part of the Wellness Center, Health Services provides diagnosis and treatment of episodic illnesses such as headache, colds, sore throats, mono, nausea, vomiting, rashes, sprains, vaginitis and urinary tract infections, etc. We provide evaluation and treatment of minor injuries as well as gynecologic care, contraceptive management and counseling, diagnosis and treatment of sexually transmitted infections, health and wellness counseling, the administration of immunizations and laboratory work.
- **Health Education:** As part of the Wellness Center, Health Education & Promotion offers students a variety of resources for health information. Students may speak directly with their health care provider at the time of an appointment, or may contact one of our Health Educators for information. The health educators work collaboratively with students, faculty, staff and community organizations to provide a range of programs, materials and interactive activities covering topics such as alcohol and other drugs, stress, depression and anxiety, healthy relationships and sexual health, nutrition and disordered eating behaviors, and sleep. The HEP Department sponsors Peer-to-Peer Health Education groups: CAPE and Healthy HAWKS. Look for their programs offered throughout the year.
- **Counseling Services:** As part of the Wellness Center, Counseling Services at UMass Lowell provides mental health counseling, consultation and referrals to help students achieve personal and academic success. We also assist students in better understanding and coping with their feelings, relationships, and choices surrounding their academic success. If you visit our webpage you will find free and anonymous online screening tools that may provide you with useful information regarding your mental health.
- **Disability Services:** As part of the Wellness Center, the Disability Services staff promote diversity and inclusion at UMass Lowell by partnering with the campus community. We create equal access by removing barriers, promoting diversity, employing universal design and striving for inclusion. Visit our webpage for information, forms, and policies. Also, Disability Services supports software for **ALL** students. Read&Write Gold is literacy software that allows you to read on-screen text aloud, research and check written work, and create study guides. You can download the software from the IT Software webpage on the UML website: <https://www.uml.edu/IT/Services/Software/Read-Write-Gold.aspx>.

Additionally, Disability Services reviews and approves students' requests for accommodation based

upon the recommendation of the student's provider. Please see "Accommodations," below, for more information.

**Accommodations:** University of Massachusetts Lowell is committed to serving all students without regard to disability status or religion, and in accordance with regulations and policy. Students may request accommodations based on disability or religion. Students are not required to provide specific information to their faculty members about the reasons for their requests. Please note that not all requests for accommodation can be granted. The law allows the University to consider input regarding the technical / content requirements for courses in making its determination. Accommodation requests for medical reasons should be directed to Disability Services, [disability@uml.edu](mailto:disability@uml.edu).

- Students with known disabilities are encouraged to register prior to the start of their first semester. Once accommodation(s) are approved, students should inform their faculty members of those accommodations as soon as possible. To protect privacy, students may prefer to speak with their faculty members privately during office hours or after class.
- If a syllabus requires that a healthcare provider's note be given to a faculty member to excuse a medical absence from a class or scheduled exam date, the healthcare provider's note does not need to indicate the nature of the medical condition.
- If you believe you may miss classes due to a disability, and are registered with Disability Services, please contact the staff to discuss your options.
- Requests for accommodation for religious reasons should be directed to Equal Opportunity and Outreach at 978-934-3565, Wannalancit Mills, Suite 301.

**UMASS Lowell Police Department:** The UMass Lowell Police Department is a full service police department with 30 sworn officers. We operate 24 hours a day, 365 days a year, providing patrol, investigation, specialized and emergency response, as well as crime prevention and educational services. Please dial 978-934-4911 in case of emergency; for non-emergencies dial 978-934-2398. The UMLPD is located in the "B" Building of University Crossing on the 1<sup>st</sup> floor.

**Title IX Reporting Requirements:** UMass Lowell is committed to fostering a welcoming, respectful and safe environment. We believe that all the members of the UMass Lowell community are responsible for ensuring that our campus is free from discrimination. In accordance with Title IX, UMass Lowell is required to investigate incidents of sex discrimination that occur on our campus. Faculty who become aware of an incident of sexual harassment or sexual violence, including rape, sexual assault, relationship violence, or stalking, are required to notify UMass Lowell's Title IX Coordinator. The purpose of this disclosure is to inform students of the University's obligations under Title IX and the reporting responsibility of faculty. For more information about how to file a complaint, your rights and your reporting options available at UMass Lowell, including confidential and anonymous reporting options, please visit <https://www.uml.edu/diversity/equity.aspx> and <https://www.uml.edu/prevent>.

**UMASS Lowell Prevent Website:** Community members will find information about resources, support services, the Student Conduct Process for Title IX violations, and other information at [www.uml.edu/prevent](http://www.uml.edu/prevent). In addition, information on reporting incidents of sexual violence, dating violence, domestic violence, stalking, harassment, and bullying can be found here.

**Sensitive Course Content:** Some courses may include content and discussion which address sensitive topics that may be disturbing to some students. Topics may include, for example, trauma,

depression, anxiety, sex or gender-based violence or abuse, addiction, mental health concerns, relationship problems, suicide, violent and abusive behaviors, sexual situations, racism, war, catastrophes, or genocide. Participating in class discussions, reading course materials, and completing course assignments may remind you of experiences that you, a friend, or family member may have experienced. Although you are not expected to share personal information in class, classroom discussion of these topics may be unavoidable. Please take the time to care for yourself. You may wish to speak with a staff member of Counseling Services, discussed above. Also, feel free to privately ask the faculty member beforehand about topics listed in the course syllabus. In some but not all cases, faculty may be able to privately arrange for you to complete alternate assignments which allow you to fulfill the requirements of the course without active engagement in some of the sensitive topics. *Please note that faculty are not required to make these arrangements.*

