



**Physical Science, Math & Engineering Division
Earth & Space Science Program - Dept. of Meteorology**

Logistical Information:

- **Course:** Weather & Climate Processes
- **Section Number:** MET 10.63Z (32554)
- **Instructor:** Dr. Bridget James
- **Term:** Winter 2026
- **Class Location:** <http://deanza.instructure.com>
- **Office Hours:** Wednesdays 2 - 4 pm (Canvas Messaging or Email)
- **E-mail:** jamesbridget@fhda.edu

Course Description:

Introduction to the principles of the sciences of meteorology and climatology, including the history of the sciences; origin, evolution, and structure of the atmosphere; major atmospheric variables that determine weather; global and local wind circulations; air masses and frontal systems; birth and development of extratropical and tropical cyclones and associated severe weather phenomena; weather map analysis and interpretation; objective techniques used by meteorologists to forecast weather; air pollution; atmospheric optics, global climate and the processes that produce climate change including "global warming."

Textbook & Materials Needed:

- Nugent, Alison, et al, 2020, Atmospheric Processes and Phenomenon, 1st Edition, Open Educational Resource:
<http://pressbooks-dev.oer.hawaii.edu/atmo/>
- Regular and reliable access to a **computer** with high-speed Internet. Use a smart phone or a tablet is at your own risk.

Assignment Points Distribution

Assignment	Points per Assignment	Total Points Possible	Grade Weight (%)
Best 10 out of 11 Discussions	30 points each	300 points	30%
Best 10 out of 11 Module Activities	50 points each	500 points	50%
Midterm Project	100 points each	100 points	10%
Final Exam	100 points each	100 points	10%

Total points for term		1000 points	100%
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NOTE: Be sure to check your grades and instructor feedback as soon as they are posted. Reviewing feedback promptly helps you make adjustments on later assignments while there is still time to do so.

Grading Scale

Grade	Points Needed	Grade	Points Needed
A+	1000-980	C+	799-780
A	979-920	C	779-700
B-	919-900	D+	699-680
B+	899-880	D	679-620
B	879-820	D-	619-600
B-	819-800	F	Below 600

Schedule of Topics:

Date	Assignment
Mon, 1/5 - Sun, 1/11	Module 0 - Orientation Module 1 - Introduction to Weather & Climate
Mon, 1/12 - Sun, 1/18	Module 2 - Heat & Temperature
Mon, 1/19* - Sun, 1/25	Module 3 - Humidity, Condensation, & Clouds
Mon, 1/26 - Sun, 2/1	Module 4 - Atmospheric Stability & Precipitation
Mon, 2/2 - Sun, 2/8	Module 5 - Air Pressure & Wind Midterm Project - Weathering the Future
Mon, 2/9 - Sun, 2/15**	Module 6 - Atmospheric Circulation and El Niño
Mon, 2/16** - Sun, 2/22	Module 7 - Air Masses & Weather Fronts
Mon, 2/23 - Sun, 3/1	Module 8 - Thunderstorms
Mon, 3/2 - Sun, 3/8	Module 9 - Hurricanes
Mon, 3/9 - Sun, 3/15	Module 10 - Climate Change, Part I
Mon, 3/16 - Sun, 3/22	Module 11 - Climate Change, Part II
Mon, 3/23 - Wed, 3/25	Final Exam

*Martin Luther King Jr Day falls on Monday, January 19th. Modules will still be open for those of you who would like to use this day to complete assignments.

**Presidents' Holiday falls between Friday, February 13th and Monday, February 16th. Modules will still be open for those of you who would like to use this break to complete assignments.

Student Learning Outcomes (SLOs):

- Analyze and explain the objective techniques used by synoptic meteorologists and climatologists to forecast our planet's weather and to predict future changes in our planet's climate.
- Assess and critique the impact of meteorology and climatology as sciences on local, national, and international economic, environmental, ethical, and political issues, including climate change.

About Asynchronous Online Courses:

The content covered between an in-person and an online course is the same, but some benefits and challenges must be considered when taking an asynchronous online course such as this one. Asynchronous online courses offer much more flexibility in completing course material than other course modalities. However, you must have good self-discipline in promptly completing these tasks. Remember that the due date should never be the “do” date. Completing assignments well before the deadline will go a long way toward your success in this course. Use a calendar to set aside “class time” to satisfy course requirements. If your work schedule changes week-to-week, schedule your “class time” immediately after your work schedule is set. This proactive approach will greatly enhance your success in the course.

About Online Office Hours:

The time listed as "online office hours" is time dedicated to you. We can discuss course assignments, topical interests, career choices, or anything else to help you succeed in this course or along a career path. Just send me an email to get the conversation started. I look forward to connecting with you!

My official office hours are Wednesdays and Thursdays from 2-4 pm. During that time, I check my email often and usually reply within about 10 minutes, answering messages in the order they arrive. You're also welcome to email me anytime outside of office hours. I often respond quickly, but depending on my schedule it might be later in the day or the following morning. I usually step away from email on Fridays and Saturdays, since those tend to be the quietest days, so you may not hear from me until Sunday. You can see my full communication plan on Canvas anytime. It is linked there within every module.

Modules:

A module is a specific and discrete learning segment that leads to understanding a given topic in preparation for the final exam in this course. Modules will be assigned by topic on Canvas,

which include 1.) Lectures; 2.) Reading; 3.) Module Activities. In addition to Module tasks, there will be Peer Discussion assignments, a Midterm Project, and a Final Exam for this course. Please read the instructions below for the details of each of these tasks.

Lectures:

Lectures will be presented online as PowerPoint presentations converted into a format that can be watched and listened to on YouTube ©. A link to each lecture will be provided. Like a traditional course, you will be expected to take notes while listening to the lecture. A benefit to a recorded lecture is that you can re-listen to any topic anytime. Any questions you may have during the lecture should also be written down immediately in your notebook. Sometimes, those questions answer themselves further in the lecture. What isn't answered should be e-mailed to me. Missing lectures can severely impact your ability to learn the course material, leading to a poor grade. Exam questions almost always come directly from lectures, so be sure to discipline yourself to listen and take notes. Then, study the concepts learned in the lecture for the upcoming exam. Notes do not need to be submitted. Please keep those for reviewing purposes.

Peer Discussions (30 points each, 300 points total, 30% of your grade):

There will be eleven peer discussion assignments this term. The lowest scored Peer Discussion will be dropped from your final grade in the course. For this assignment, you are being graded on how well you are **engaging your peers** on a selection of current events chosen by your instructor within the Earth Sciences. The Initial Post will be due no later than **Thursdays** and the Peer Reply will be due no later than **Sundays** each week a discussion is open. Last-minute submissions before a deadline are always at your own risk. Posting well before the deadline removes this risk. There are other important parameters to the discussion assignment that you will need to be aware of **so be sure to refer to the assignment instructions on Canvas for detailed expectations, requirements, and grading rubric.**

Important warning: Leaving the discussion board too soon after hitting the "Submit" button may prevent your work from posting. It will be your responsibility to confirm that your post has posted onto the discussion board before leaving Canvas so you do not lose credit for your work.

Module Activities (50 points each, 500 total points, 50% of your grade):

There will be eleven module activities this term. The lowest scored module activity will be dropped from your final grade in the course. Module activities are individual formative assessments completed after reading the associated textbook chapter(s) and listening to the lecture within the modules. Module Activities are due on the date/time stated within the instructions of each assignment. These assignments are designed to help you understand important topics in the lecture. They can be both problem-solving and/or review questions based on the lecture and/or films watched. You will turn in these activities online on Canvas. Emailed assignments are not accepted for any reason. Each activity will have submission instructions.

If you have an urgent situation where you cannot submit an activity during its submission period, you **may** be granted a short grace period (at the instructors discretion) so that you may still complete the assignment without penalty. See the assignment on Canvas for details.

Midterm Project - Weathering the Future (100 points and 10% of your grade)

For this project, you will be watching the 53 minute film "Weathering the Future" from NOVA and answering the associated questions basing the answers you choose directly from the film. This assignment will give you a good overview of extreme weather in the United States, looking particularly at longer heat waves, more intense rainstorms, megafires, and droughts. Since this is a film produced for the general public, no weather or climate background is needed to complete this assignment. It will be due on **Sunday, February 8th, 2026**, but you can complete the project at any time before its due date (recommended).

If you have an urgent situation where you cannot submit the Midterm Project during its submission period, you may be granted a grace period (at the instructors discretion) of one week so that you may still complete the assignment without penalty. See the assignment on Canvas for details.

Final Exam (100 points, 10% of your grade):

There will be one online (timed) cumulative final exam that will have 50 multiple-choice questions worth 2 points each. **The final exam will be administered online from Monday, March 23rd, starting at 8 am to Wednesday, March 25th, ending at 11:59 pm.** You can take this 60-minute exam anytime during this submission period, but you may only take the exam one time. Be sure to take the exam as early as possible in the exam period so a last-minute emergency does not get in the way of these valuable points. **Make-up exams are not offered for any reason, including emergencies.**

You may use notes while you take the exam, but because the exam is timed once you start it, you should master the subjects you are being tested on before attempting the exam so that you can finish in plenty of time. I highly recommend having only a small index card worth of notes nearby. Spending time going through the Internet, the textbook, or any other source for answers while taking the exam does not indicate comprehension of the subject, so this online exam must be timed to prevent heavy reliance on such sources. Much like a classroom exam, once you submit your answers, the answers will not be available immediately. Once the exam period ends, scores will be released within 48 hours unless otherwise note.

Here is how you are supported during the term:

- Lowest Module Activity score is dropped from your final grade
- Lowest Peer Discussion score is dropped from your final grade
- A short grace period on Module Activities
 - When available and with permission from instructor

What cannot be supported in this course:

- Reopening closed assignments
- Extra Credit
- Negotiating a higher final grade in the course

Accessibility Accommodations:

Students with disabilities who need reasonable accommodations are encouraged to contact the instructor and/or DSS. Disability Support Services (DSS) will facilitate the reasonable accommodations process. DSS is located in SCS 41 and can be reached by telephone (Voice 408-864-8753/TTY 408-864-8748).

Important note about travel:

It is assumed that you are completing this course at home in the U.S. and have excellent Internet access for the entire semester. If you need to travel, whether inside or outside the U.S., it will be your responsibility to ensure you have access to the course and all its assignments. All assignments, including exams, cannot be extended for you because you choose or need to travel for any extended period during the term, even if that reason is out of your control. It's important to note that many countries outside of the U.S. block the use of YouTube and the ability to watch U.S. documentaries. If you plan on traveling to a country with these limitations, dropping this course and taking it during a term you will not be traveling is best. Also, please note that all dates and times given in this course are in Pacific Time unless otherwise noted.

Important note on attendance:

If you have yet to log into the course on Canvas within 48 hours of the start of instruction, I reserve the right to drop you from the course. I also reserve the right to drop any student who has yet to log into the course website and/or complete any assignments by the end of the first week. However, it is always the student's responsibility to drop a course they are no longer attending. **The drop deadline for Winter 2026 is Sunday, January 18th, 2026, and the last day to drop with a "W" on your record is Friday, February 27th, 2026.**

Course Intellectual Property:

Students may not post any course materials to any third-party sites or post any recordings, screenshots, audio, or chat transcripts in any setting outside of this class. Violations are subject to disciplinary action. In addition, students may not capture audio, photos, or video from class sessions on their own devices without the explicit permission of the instructor and everyone present, unless part of a DSS-authorized accommodation.

Artificial Intelligence (AI) Policy:

You are welcome to use AI tools as a thought partner in your learning process, much like you would use a study group, writing center, or other resources. If you directly quote or closely paraphrase AI-generated text, you must cite the tool and share the part of the text that was AI generated. AI-generated words do not count towards the required word count in peer discussion

assignments. Only **your own words** count toward that total. Also, AI tools can make mistakes, and is truly capable of making up scenarios that are simply untrue. You are responsible for the accuracy and integrity of all work submitted. Always be very careful what you put your name next to.

Policy on Academic Dishonesty:

There is a presumption and expectation that all work submitted is above board and honest. Any instances of cheating, deceit, fabrication, forgery, plagiarism, unauthorized altering of records or submitting false documents, unauthorized collaboration, unauthorized submission of work previously given credit, or other forms of academic misconduct will be assigned a grade penalty, likely an F or a grade of zero. Failing one or more assignments or examinations for reasons of academic integrity violations may result in a final class grade of F. Students may not withdraw from classes in which they have committed academic misconduct. Consequences for violations of academic integrity may exceed an F on the assignment, examination, or class as determined by the Academic Integrity Review Committee. For more information on academic dishonesty, please see the college catalog.

Members of our academic community have a responsibility to develop an awareness of academic integrity, to cultivate skills to realize honesty in academic and community work, and to sustain actively academic honor as a core value of our community. Students are expected to engage in behaviors that reflect well upon the college. In addition to attending to one's own actions, the Standards for Student Conduct require that students who witness academic dishonesty notify their faculty/instructor, dean, or the Vice President of Instruction. Supporting academic integrity enhances the reputation of the college and the value attributed to degrees awarded.

Statement on Sexual Violence

De Anza College is committed to maintaining a safe and caring college environment. The college has established policies and procedures regarding sexual misconduct, harassment, and assault. A college website has also been developed which provides you with important information about sexual misconduct and sexual assault:

<https://www.deanza.edu/titleix/index.html>

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- Assess and critique the impact of meteorology and climatology as sciences on local, national and international economic, environmental, ethical and political issues including climate change.

Office Hours:

W 2:00 PM - 4:00 PM
TH 2:00 PM - 4:00 PM

Canvas,Email
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