

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

Logistical Information:

Course	MET 10.50Z (CRN 21569) – Weather & Climate Processes – Fall 2023
Instructor	Bridget James
Class Location	Canvas: https://deanza.instructure.com
Office Hours	Wednesdays 2 pm – 4 pm (Instant Email Replies or Canvas Messages)
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 reliable high-speed Internet.

Grading:

Best 5 out of 6 Discussions (60 pts each)	30% (300 points)
Best 10 out of 11 Activities (50 pts each)	50% (500 points)
Midterm Project (100 points)	10% (100 points)
Final Exam (100 points)	10% (100 points)
Total Points for course	1000 points

FINAL GRADES			
Grade	Points Needed	Grade	Points Needed
A	920-1000	C	720-779
B+	880-899	D+	680-699
B	820-879	D	620-679
B-	800-819	D-	600-619
C+	780-799	F	BELOW 600

About 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. For a 5-unit lecture course, it is expected by the State of California and De Anza College that you complete 5-hours per week on course material, not including additional personal study time. 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.

About Online Office Hours:

The time listed as "online office hours" is time dedicated to you. I will reply to your email or Canvas message within a few minutes during this time. We can discuss course assignments, topical interests, career choices focused on the planet we call home, or anything else to help you with your success in this course. Just send me an email to get the conversation started. Also, feel free to email me anytime outside of office hours. Outside of office hours, you will hear back from me within a few hours. Note that evening emails may not be responded to until the next day, and weekend emails may not be responded to until Monday afternoon due to other work or personal obligations.

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 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.

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

There will be eleven module activities this semester. Module activities are assessments completed after reading the associated chapter within your textbook and listening to the lecture within the modules assigned that week. 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 a situation where you cannot submit an activity by its due date, I will accept most activities late without penalty, but only for a specified period (see activity instructions for details). Once that period (the grace period) has passed, I will not accept the activity for any reason, including emergencies. However, the lowest activity score will be dropped from your final grade, making this entire assignment worth 500 points.

Discussions (60 points each, 300 points total, 30% of your grade):

This assignment allows you to choose topics in this course that you wish to expand on or introduce to the class that is focused on the Earth Sciences! You can choose to expand on any of the lecture topics for this course further than what I covered in the lecture. You can choose to introduce topics we do not cover in this course directly. You can also simply talk about the breaking news on the many natural disasters we sadly have across the globe. The only caveat is that you focus on the science of the planet itself and NOT the life on it (which is better suited for a biology course). There will be six discussion assignments this term. The lowest-scored discussion assignment will be dropped from your final grade in the course.

You are being graded on how well you are engaging your peers on the topic of Earth Sciences, and there are parameters to that engagement you will need to be aware of:

- Since you are being graded on how you engage your peers, a private message to me with your post content does not engage your peers, so you cannot receive a grade that way.
- All posts need to be focused on Earth Sciences, which is the science of the Earth/Atmosphere/Ocean itself, not the life on it. You are expected to understand the difference when participating in the discussion.
- You are responsible for protecting your work by writing your discussion post on a different document (Word, Google Docs, etc.) and then copying and pasting it into Canvas. Your work will then be safe if the Internet or Canvas has issues posting.
- It is your responsibility to verify that your post was posted on the discussion board and in the correct place BEFORE leaving Canvas.

Please read the instructions for this assignment on Canvas for further details on what is expected. To complete the Module 1 Activity assignment, it will be expected that you have read the Discussion Assignment Instructions on the Canvas "Home" page in addition to the syllabus.

Midterm Project - Decoding the Weather Machine (100 points and 10% of your grade)

For this project, you will watch the first hour of the film "Decoding the Weather Machine" and answer the associated questions. This will give you a good overview of climate change and what meteorologists, geologists, and climate scientists are uncovering on this critical topic. Since this film is produced for the general public, no background in climate change is needed to complete this assignment. It will be due on **Sunday, October 29th, 2023, at 11:59 pm**, but you can complete the project at any time before its due date (recommended).

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 on Monday, December 11th, 2023, starting at 8 am.** There will also be a grace period for this exam that will firmly end at 5 pm on Thursday, December 14th, 2023. You can take this 70-minute exam anytime on Monday, December 11th, after 8 am, 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 is not 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 noted.

Important note on final grades and extra credit:

- Grades are non-negotiable. No exceptions.
- Extra credit is never assigned in this course. No exceptions.
- Incompletes are never assigned in this course. No exceptions.
- Assignments will not be "re-opened" once a grace period has passed for any reason. No exceptions.
- Requests to raise a letter grade are never considered for any reason. No exceptions.

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).

Policy on Academic Dishonesty:

There is a presumption and expectation that all work submitted is above board and honest. If cheating or plagiarism is discovered on any assignment in this course, a student will receive a "zero" at minimum when grades are released or retroactively if discovered after grades are released. The college will also be notified for further action. For more information on academic dishonesty, please see the college catalog.

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 semester, 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 Fall 2023 is Sunday, October 8th, 2023, and the last day to drop with a "W" on your record is Friday, November 17th, 2023.**

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>

Module Topics and Tentative Schedule (See Canvas Course for Assignments)

Introduction to Weather & Climate (Mon, 9/25 - Sun, 10/1)
Heat & Temperature (Mon, 10/2 - Sun, 10/8)
Humidity, Condensation, & Clouds (Mon, 10/9 - Sun, 10/15)
Atmospheric Stability & Precipitation (Mon, 10/16 - Sun, 10/22)
Air Pressure & Wind (Mon, 10/23 - Sun, 10/29)
Atmospheric Circulation (Mon, 10/30 - Sun, 11/5)
Air Masses & Weather Fronts (Mon, 11/6 - Sun, 11/12)
Thunderstorms (Mon, 11/13 - Sun, 11/19)
Hurricanes (Mon, 11/20 - Sun, 11/26)
Climate Change, Part I (Mon, 11/27 - Sun, 12/3)
Climate Change, Part II (Mon, 12/4 - Sun, 12/10)

Student Learning Outcome(s):

- 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.

Office Hours:

W 02:00 PM 04:00 PM Canvas,Email

TH02:00 PM 04:00 PM Canvas,Email