

**Logistical Information:**

<b>Course</b>	Weather & Climate Processes – Spring 2023 MET 10.64Z (CRN 42780)
<b>Instructor</b>	Bridget James
<b>Class Location</b>	Canvas: <a href="http://instructure.deanza.com">http://instructure.deanza.com</a>
<b>Office Hours</b>	Thursdays 3:00 – 5:00 pm (Canvas or Immediate email replies)
<b>Email</b>	<a href="mailto:jamesbridget@fhda.edu">jamesbridget@fhda.edu</a>

**Textbook & Materials Needed:**

- Nugent, Alison, et al, 2020, Atmospheric Processes and Phenomenon, 1<sup>st</sup> Edition, Open Educational Resource: <http://pressbooks-dev.oer.hawaii.edu/atmo/>
- Regular and reliable access to a computer with reliable high-speed Internet

**Course Description:**

Introduction to the principles of the sciences of meteorology and climatology including: 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 extra tropical 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."

**About Online Courses:**

There is no difference in the content covered between an in-person course and an online course, but there are benefits and challenges that need to be kept in mind when taking an asynchronous online course such as this one. Asynchronous online courses offer much more flexibility in completion of course material than other course modalities. However, you will need to have good self-discipline in completing these tasks in a timely manner. Keep in mind that the due date should never be the “do” date. Complete assignments well before the deadline as that will go a long way towards your success in this course. Use a calendar (ideally the first week of class) to set aside “class time” to complete course requirements. If your work schedule changes week-to-week, schedule your “class time” immediately after your work schedule is set.

**Modules:**

A module is a specific and discrete learning segment that leads to the understanding of a given topic in preparation for the final exam in this course. Modules will be assigned by topic on Canvas. All modules will include the following tasks to complete: 1.) Listening to lecture(s) and completing the assigned textbook reading; 2.) Completing the Module Activity; 3.) Participating in the Discussion. For instructions on how to complete the above tasks, please read the instructions for each task below.

**Lectures:**

Lectures will be presented online as Power Point presentations converted into a format that can be watched and listened to on YouTube ©. A link to each lecture will be provided. It will be expected that you take notes while listening to the lecture, much like a traditional course. A benefit to a recorded lecture is you can re-listen to any topic at any time. 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 or posted in the online forum to get feedback from your fellow students (or both).

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, spend the time to study the concepts learned in the lecture for mastery on the upcoming exam. Notes do not need to be turned in to me. Please keep those for studying purposes.

**Discussions (50 points each, 250 points total, 25% of your grade):**

There will be 6 discussion assignments this semester. More details of what will be expected of you can be found by reading the discussion instructions on the Canvas Home page. Please read the instructions on the assignment for further details on what is expected of you. Note that once a discussion board closes, that engagement opportunity is gone, so discussion posts cannot be accepted late for any reason. However, I drop the lowest discussion assignment score from your final grade.

Some important notes:

- This is a peer-led discussion. You need to be aware of what you can reply to (hopefully everything!) and what you cannot reply to (off-topic, duplicate topic, etc.). You will be graded on knowing the difference.
- You are being graded on how you engage your peers on the topic of Earth Sciences. Whether you start a topic or reply to one is irrelevant to your grade, as both actions equally provide good engagement with your peers.
- Never start a new topic that another student has already started. Instead, always reply to the student who started the topic first. Not only does that indicate good engagement, but it is also respectful to the original person who posted the topic first.
- Biology-focused (i.e., life of the planet) posts are considered off-topic in the discussion and won't count for credit. It is expected that you understand the basic difference between the "Earth Sciences" and the "Biological Sciences" when coming into this course. You will be graded on this while participating in the discussion. See discussion instructions for additional details.
- It is important that you write out your posts on a different document (Word, Google Doc, etc.) and then copy and paste it into Canvas so that if the internet or Canvas has issues posting your work, you do not end up losing that work due to that glitch.
- It is your responsibility to verify that your post actually posted onto the discussion board AND that it posted in the correct place on the discussion board before leaving Canvas.
- There is a presumption and expectation that all work submitted is above board and honest. However, realize that grades for forum participation (and other assignments) can be retroactively changed to a zero at any time during the semester if plagiarism, cheating and/or dishonesty of any kind is discovered after a grade has been assigned. Other disciplinary action is also likely. See the section titled "Policy on Academic Dishonesty" below for details.

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

There will be 11 module activities this semester. Module activities are formative assessments that are 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 introduce important topics in the lecture and can be both problem solving and/or review questions based on the lecture, module activity 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 of time (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.

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

For this assignment, you will be watching the first hour of the two-hour film “Decoding the Weather Machine” from NOVA and answering the associated questions. This part of the film will give you a good overview of what climate change is and what meteorologists, geologists and climate scientists are uncovering on this very important topic. This will be important background as you move through the last half of the course. Since this is a film produced for the general public, no background in climate change is needed to complete this assignment. It will be due on **Sunday, May 14<sup>th</sup>, 2023, at 11:59 pm**, but you can complete the assignment at any time before its due date (recommended). The assignment is located within Module 5 on the main course page.

### **Final Exam (150 points and 15% of your grade):**

There will be one online final exam that will have 50 multiple-choice questions worth 3 points each. **The final exam will be administered online on Monday, June 26<sup>th</sup>, 2023 and available to take between 8 am and 11:59 pm.** You can choose to take the exam anytime during the exam period, but you may only take the exam one time. **Make-up exams are not offered for any reason, including emergencies.** Be sure to take the exam as early in the day as possible so a last-minute emergency does not get in the way of these valuable points.

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. Do not spend time going through the Internet, the textbook or any other involved source for answers while taking the exam. Not only is that not an indication of subject mastery, but the exam is also timed to prevent heavy reliance of such sources. Much like a classroom exam, once you submit your answers, scores will not be available immediately. Once the exam period ends, an announcement will be made regarding the release of grades.

### **Grading**

Best 5 out of 6 Discussions (50 pts each)	25% (250 points)
Best 10 out of 11 Activities (50 pts each)	50% (500 points)
Decoding the Weather Machine (100 pts)	10% (100 points)
Final Exam (150 points)	15% (150 points)
Total Points for course	1000 points

A: 920-1000	C: 720-779
A-: 900-919	C-: 700-719
B+: 880-899	D+: 680-699
B: 820-879	D: 620-679
B-: 800-819	D-: 619-600
C+: 780-799	F: Below 600

### **Important note on final grades and extra credit:**

Grades are non-negotiable and individual extra credit is not assigned in this course. NO EXCEPTIONS. Once a final grade has been determined, I cannot change it unless there is a calculation error. Borderline grades are always carefully considered before issuing a final grade. If I did not bump you up to the next grade level, you can be assured the decision was made carefully and a request to change it will not be considered. 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:**

A student who displays inappropriate conduct, including cheating and plagiarism, may be subject to disciplinary action. At minimum, as student will receive a “zero” for the assignment in question and will be reported to the College for further action. Cheating and plagiarism includes (but is not

limited to) copying and pasting content in any of the discussions as if it were your own words. For more information on academic dishonesty, please see the college catalog.

**Important note on attendance:**

If you have not logged 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 not logged into the course website and/or completed any assignments for two weeks at any time during the term. However, it is always the student's responsibility to drop a course they are no longer attending. **The drop deadline for Spring 2023 is Sunday, April 23<sup>rd</sup>, 2023, and the last day to drop with a "W" on your record is Friday, June 2<sup>nd</sup>, 2023.**

**Important note about travel:**

It is assumed that you are completing this course at home within the U.S. and that you have excellent Internet access for the entire term. If you need to travel, whether inside or outside the U.S., it will be your responsibility to make sure you have access to the course and all of its assignments. All assignments, including exams, will not 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 travelling to a country that has these limitations, it's best to drop or withdrawal this course and take it during a semester that you will not be travelling. Also, please note that all dates and times given in this course are in Pacific Time unless otherwise noted.

**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>

**Course Schedule:**

Module 1: Introduction to Weather & Climate, Mon, 4/10 – Sun, 4/16

Module 2: Heat & Temperature, Mon, 4/17 – Sun, 4/23

Module 3: Humidity, Condensation and Clouds: Mon, 4/24 – Sun, 4/30

Module 4: Atmospheric Stability & Precipitation, Mon, 5/1 – Sun, 5/7

Module 5: Air Pressure & Wind, Mon, 5/8 – Sun, 5/14

**MIDTERM PROJECT DUE: Decoding the Weather Machine, Sun, 5/14**

**Due at same time as the Module 5 Assignments. See syllabus above for details.**

Module 6: Atmospheric Circulation, Mon, 5/15 – Sun, 5/21

Module 7: Air Masses & Weather Fronts, Mon, 5/22 – Sun, 5/28\*

Module 8: Thunderstorms, Mon, 5/29 – Sun, 6/4\*

Module 9: Hurricanes, Mon, 6/5 – Sun, 6/11

Module 10: Climate Change, Mon, 6/12 – Sun, 6/18

Module 11: Climate Change II, Mon, 6/19 – Sun, 6/25 – NO GRACE PERIOD

**FINAL EXAM: MONDAY, JUNE 26<sup>TH</sup>, 2023 (Open between 8 am and 11:59 pm)**

\*Memorial Day holiday falls between Saturday, May 27<sup>th</sup> and Monday, May 29<sup>th</sup>. However, Modules 7 and 8 will remain open for those of you who would like to use the holiday to complete these modules.

**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:**

TH    03:00 PM    05:00 PM    Email,Canvas