

De Anza College
Physical Science, Mathematics & Engineering Division
Meteorology 12, Introduction to Climate Change

Section(s):	47287, Spring 2026
Instructor:	Alicia T. Mullens (She/Her)
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Office Location	On-Campus: S48A Online (at https://fhda.zoom.us/j/6625783048)
Office Hours (on Zoom):	M/W 11:30-1:20pm T/Th By Appointment (i.e. let me know a time that works for you, and I'm happy to make it work!)*
Classroom:	Online (100% Asynchronous)
Prerequisites:	None (Some basic math skills may be helpful)

Introduction

This syllabus is like the “Terms of Service” that you agree to when you download iTunes or anything else off the internet. However, this is much shorter and I actually expect you to read it! Our first quiz will be heavily based off of it! Your continued enrollment is your agreement to abide by the terms and conditions outlined in this syllabus.

Course Description

Welcome to Climate Change at De Anza! Regardless of if a friend/counselor recommended this class to you, or you signed up because of RateMyProfessors, I'm really glad you're here! This course will cover all of the fundamental concepts behind the topic of Climate Change. This includes Global Warming, The Greenhouse Effect, Natural and Human-Caused Climate Change, Paleoclimatology, Climate Modeling, and Mitigation Strategies. We'll also cover areas of interest such as how current events relate to Climate Change, and the local impacts Climate Change.

Student Learning Outcomes

Upon successful completion of this course, students will be able to:

1. Distinguish Science from Pseudoscience
2. Assess the tools and procedures used by climate scientists to reconstruct earth's previous climate and to predict future climate shifts
3. Explain the terms and concepts of climate science and use those terms and concepts to communicate local and global issues of climate concern.

Course Website and Communication

Everything you will do on this class will be posted/submitted on the course's Canvas webpage. You are expected to log on to the course webpage at least two times a week. I will also make all communication (announcements/reminders/emails) through Canvas. Also note that it is your responsibility to stay on top of assignments and deadlines...

while I try my best to send out reminders often (at least on Monday and Wednesday), a lack of a reminder isn't a valid excuse for missing work (just like in the working world). Once I announce any assignment/deadline in class, any additional reminders (with the exception of necessary changes) are a courtesy.

Online Office Hours: I am regularly and diligently checking my email during the scheduled times above, and will have my zoom office open, and my office door open (unless there is inclement weather, in which case, I'll put up a sign asking you to knock).

Textbook and Course Materials:

1. **Textbook:** "Climate Change: Causes, Consequences, and Solutions" by Arnold J. Bloom (2018). The textbook is a **free** online resource, which can be accessed at: <https://indd.adobe.com/view/8f2ed4a1-a1b0-4f12-b5bb-5009bbbad0f3>
2. **Computer with access to the internet and browser that meets Canvas' system requirements** (Info: <http://www.deanza.edu/online-ed/students/>)
3. **Recommended: A webcam and access to a printer and scanner (you can get by without them, but they will make your life easier).**

Contacting Me

If you need to get a hold of me for any reason, please email me at mullensalicia@fhda.edu or through the Canvas Messenger. I check my email continuously during the office hours scheduled above, often during business hours, and less often at nights/weekends. **If, you do not hear from me within 24 hours (or by Monday if you message me over the weekend), please re-send your email. I can't stress this enough... I always try to respond to an email, but depending on when I get it, it might slip through a crack, so please re-send if you don't receive a response within 48 hours... To repeat, if you don't hear from me within 48 hours, please re-send your email... I've had students email once, not follow up for a month, and then say "I emailed you, but you never responded." I promise you I'm not trying to ghost you... I just get really busy at times... it's okay to bump your email up the list.**

Online Class: What's the Difference?

Because this is an online class, you are allowed to study/watch lectures/attempt assignments at your own leisure. However, online classes can be difficult, simply because they require more discipline than a traditional lecture. There are no meetings that you have to be present at... but you still need to be regularly involved in the class to succeed.

Assignments: This class will consist of a **10 modules**, and **the Final Exam**. Each module will consist of a discussion forum, a series of video lectures, reading assignments, an activity, and a quiz. Expect each module to take approximately 5 hours, not including time spent studying/preparing for the class. We will do one module each week. The module for each week will be posted no later than **12am the Saturday** of the week and

due by **11:59pm the following Friday**. In order to be prepared for the module quiz, I strongly recommend that you complete the module discussion and activity PRIOR to attempting the module quiz.

In addition to Module Activities, Module Quizzes and Exams, 100 points of your grade are determined by weekly participation in that's week's Module Discussion forum. In order to get full credit for participation, you must make two posts a week (one by Wednesday and one by Friday) of the following:

1. **Ask a content-related question onto the discussion board**
2. **Answer someone else's question on the discussion board**
3. **Post something course related that you just came across (an article, story, or weather event that you just experience), with an explanation.**
4. **Any of the 3 items above must be at least 50 words in length and have substance to them (I won't count posts such as "cool story!" or "that's awesome!" towards your participation requirement).**

A rubric for Module Discussion Posts is available in Appendix B of this Syllabus.

A Word of Warning: While you are free to work on the modules at your leisure, I strongly urge you to **not wait until the last minute to submit a module activity**. If anything causes you to submit any module activity after the deadline, regardless of reason, you will still be assessed a late penalty. Also, you are completely responsible for making sure that your work is submitted properly. **PLEASE READ: Since you signed up for an online class, it is assumed that you are completing your course work at home, in the United States, with a high speed internet connection and access to Canvas and Zoom.**

Getting off to a good start: Because it often takes a little time to get accustomed to online classes, nothing is due until the conclusion of the 2nd week of class (Friday, April 17th, 2026). However, I still expect you to begin working on class material as soon as the quarter begins. For census purposes, I must drop anyone who hasn't logged on or completed any work by 11:59pm on Sunday, April 19th. I cannot not make exceptions to this policy (I've had students do absolutely nothing in the first two weeks of the course, get dropped, and then come to me begging to be let back in... unfortunately I'm not allowed to do that, so please make sure you do something prior to April 19th)!

Attendance/Punctuality: You are expected to log in to the course website **at least twice per week**, and that is the bare minimum. You will be dropped from the course if you fail to log on for the first time by Sunday, April 19th, you fail to log on at least once each week, or if you fail to turn in at least one module activity in a two-week period.

Regardless, if you choose drop the course, it is your responsibility to do so. If you fail to drop before the deadline, I will have to award you a grade, most likely an FW.

Issues/Grievances: While I try my best to make this class a positive learning environment, there is always the chance that either something I or someone else in class does might not sit well with you; if that is the case, I am more than happy to hear any grievances brought to me both in private and respectfully (while I'm happy to discuss any complaints or grievances, I refuse to be addressed in a disrespectful and unprofessional manner). I've found that 99.9% of any issues that arise are easily settled (and to everyone's satisfaction) by a brief (and respectful) conversation. Pet Peeve: Saying something is "unfair" is not the way to solve your problem...

Assignments and Grading

Module Discussion (10 @ 10 points each)...	100 pts
Module Activities (10 @ 10 points each)...	100 pts
Module Quizzes (10 @ 10 points each)...	100 pts
Lifestyle Project...	100 pts
Final Exam...	100 pts
Total...	500 pts

Grading Scale:

>90%=A, 88-89.9%=A- 80-87.9%=B, 78-79.9%=B- 65-77.9%=C, 55-64.9%=D, < 55%=F

Note: I reserve the right to adjust this scale, but only to benefit you.

Grading Criteria and Discussion Forum Policies: A general criteria for how I will grade your work and the policies for the discussion forums are available as Appendix A and Appendix B of this syllabus.

Late/Makeup Policy: I'm piloting something a colleague of mine has done in the past this quarter... For every module, I will make an automatic one-week extension available. Here's how it will work:

- **One week:** The extension gives you an extra week to complete an assignment from the published due-date.
- **It's automatic:** you do not need to request it, just utilize it.
- **No late penalties:** The assignment will show as "late" on Canvas, but I will not assess any late penalties.
- **Doesn't apply to the Final Exam:** I cannot offer this for the final because the term ends right after the final is due.

Sounds pretty good, huh? But there is one HUGE catch:

- **No other extensions, makeups, or anything like that will be granted, regardless of reason!!! I will be STRICTLY adhering to this. You are still expected to turn in work by the published deadline, and should only be using the automatic extensions in the event of an emergency... if you choose to use them otherwise, that's your prerogative, BUT I will not be granting any other extensions!**

Extra Credit: I will sprinkle some extra credit throughout the course, and will also drop your lowest module activity, module quiz, and module discussion. I know a less than perfect score can trigger anxiety, so I want to assure you that I bake plenty of forgiveness

into the grade... getting that coveted A won't be too difficult, as long as you remain engaged in the class.

Incomplete Contracts: With the exception of very special circumstances (where what you missed is small and can easily be made up), I'm no longer honoring requests for incompletes. This is because students I have arranged incomplete contracts with in the past have never been able to complete the missed work. If you are in a situation where something catastrophic happens in the last few weeks of the class, consider applying for an Excused Withdrawal (EW) grade. If the required work to complete the class is something small, such as making up the final exam (something that I can easily arrange), I can consider arranging an incomplete.

Dropping

I will drop you if:

- You miss more than one complete module
-or-
- You fail to log on at least once a week for two consecutive weeks.

Otherwise, if you choose to drop the class, you must do so on your own.

The Deadline to Drop this class with a W is Friday, May 29th

Other Policies

Disabilities: If you need any accommodation due to a disability (note taker, etc.), please don't hesitate to let me know and I'll be happy to help! All accommodations will need to be made through Disability Support Programs and Services (DSPS), which is located at RSS-141, or online at <https://www.deanza.edu/dsps/>.

Academic Integrity: I will NOT tolerate cheating or plagiarism of any kind! **This includes copying stuff off the internet, or submitting work under a phony name to get "answers" prior to making an actual submission!** While you're allowed (actually, encouraged) to work together) on assignments, you must turn in your own work, and in your own words! The first offense results in a grade of "0" on the assignment and a stern warning. Any subsequent offense results in a report filed with the college.

Final Grade Changes: At the end of every term, almost without fail, at least one or two students approach me to ask for additional work/some leeway with their grade to earn a higher grade. While I appreciate the gravity that grades can have, I need to both be fair to the rest of the class (I don't think other students would appreciate it if I just bumped another student's grade without merit, or gave them extra work without making it available to the rest of the class) and maintain my own academic integrity (i.e. I can get in trouble for awarding grades that were not earned), so I must deny all requests for a higher grade, except in instances where I made a mistake. However, I am more than happy to help you earn a good grade if you reach out to me for help before the end of the term. There will also be plenty of extra credit during the course.

TL;DR: Engage in the class, try your best, turn in your work on time, don't cheat/copy off of others/submit identical written work, and reach out whenever you need help and I promise you that I won't let you fail this class! Everything else is just details (still read them because I will adhere to them, but the gist is above)!

Important dates/deadlines:

Deadline to Add: 4/18

Deadline to Drop with Refund: 4/19

Deadline to Drop with a W: 5/29

Course Schedule

Week	Topics, Readings, Assignments, Deadlines
1	Module 0: Course Introductions, Due 4/17
2	Module 1: Context of Climate Change, Due 4/17
3	Module 2: History of Earth's Climate, Due 4/24
4	Module 3: Heat and Energy, Due 5/1
5	Module 4: The Greenhouse Effect and Seasons, Due 5/8
6	Module 5: The Carbon Cycle, and how We're Screwing it up, Due 5/15
7	Module 6: Natural Climate Changes, Due 5/22
8	Module 7: Climate Feedbacks, Consequences, and Future Predictions, Due 5/29
9	Module 8: Energy, and Carbon Footprint, Due 6/5
10	Module 9: Transportation Alternatives, Due 6/12
11	Module 10: Climate Perceptions and Policies, Due 6/19
12	Makeup Module: Climate Change in the Bay Area, Due 6/26 <i>Final Exam Opens on 6/22 and due 6/26</i>

NOTE: This schedule is tentative and Subject to Change for any reason

Appendix A

Grading Rubric: While each assignment/exam/activity is different, I always use the following guidelines when I award points (I don't "take points off," I award points):

The maximum number of points are awarded for work that is:

1. Clearly written and answers the question.
2. Detailed and thorough, leaving no doubt that you understand the material.
3. Submitted following directions and is on time.
4. Accurate (aka your answer is correct)

A reduction in the number of points awarded (aka "points taken off") happens when:

1. You don't put your name on the assignment (5 points for an exam, 1 point for all other assignments).
2. You don't show your work... *Always show your work and provide evidence.*
3. You don't follow directions, or you don't answer the question.
4. You don't explain your answer: Whenever I say "list and explain/describe," an explanation or description is required in order to earn maximum credit.
5. You include irrelevant/incorrect information. There is such as thing as saying too much (I call this "throwing everything onto your paper and expecting credit for what sticks").
6. Using an unverified or inappropriate source (i.e. Wikipedia, Quora, etc).
7. The work is copied from a source and not put in your own words. A quote or "blurb" is okay, but when the majority of your answer isn't actually your work, it's not fair to award you points for someone else's work. When the work is copied from another student or a source without proper credit given, this also becomes an academic dishonesty issue (see my policy on academic dishonesty).
8. The submitted work is poorly written or unclear. Always proofread your work!
9. The work is submitted late, or missed due to unexcused absences.

I will share any other details regarding a specific assignment prior to attempting/submitting that assignment. Please note that whenever I grade an assignment, I approach it from an "I know nothing" standpoint, meaning that your job on every assignment in this course is to teach me the material (you know 90% of what you can teach). A lower number of points are awarded when there are holes in your explanation, major details are left out, or the information is inaccurate.

Appendix B: Discussion Forum Guidelines

Module Forums: Each module will include a discussion forum. Here, you can post questions that you have about course material, answer other student's questions, post anything interesting (weather related) that you come across, or just engage in general discussion about the course. You are expected to participate in this forum by making 11 posts throughout the quarter (One for each module, worth 5 points each) and 11 responses throughout the quarter (One for each module, worth 5 points each). **Please note that you must make at least one post and one reply per module... You can't wait until the final module forum, make 22 posts and get full credit!** Your posts will be graded using the following rubric:

Grading Rubric:

- 5pts: Post was made by 11:59pm Wednesday of the week the module is due, and is at least 50 words in length. Post either asks a question related to the corresponding module or shares/describes something interesting (any sources are cited) and weather related. The post is thoughtful, well written, and is of substantial meaning to the discussion as a whole. The post doesn't just regurgitate course material, but expresses your understanding and reflection of the material.
- 3pts: Post was made after Wednesday, post was made on the last day the forum was open, or post was less than 50 words in length. Post neither asks a content/course related question, nor describes any links/content shared (author just posts a link with no description or explanation). The post is overly short (just a few words) or full of "fluff" with little, if any substance. The post may just regurgitate course material without adding any reflection or understanding to the forum.
- 0pts: Post is either plagiarized, not related to weather/climate in any way, or is non-existent.

Reply/Comment Rubric:

- 5pts: Reply/Comment was made by 11:59pm Friday night of the week the module is due. Comment is based primarily on course material and facts or personal experience rather than opinion, and any criticism of the response of the original author is constructive and helpful.
- 3pt: Comment is largely opinion based and draws from little, if any, course material or personal experience –or- comment is overly critical of original author.
- 0pts: Comment either attacks original author, provides no meaningful response (like, "cool, man"), is plagiarized, or non-existent.

Note: While opinions or personal experience are welcome (and encouraged) in the forum, I will not tolerate disrespect, foul language, or personal attacks (geared towards myself or other students) of any kind. Any student who trolls, insults, publicly airs grievances (forums are not the place to complain about losing a point on an assignment), or uses the forums in an inappropriate manner will be subject to disciplinary action (either a reduction in grade, banning from the forums altogether, dropped from the class). Keep all posts tactful and related to the course.

TL;DR: Your first post is due by 11:59pm the Wednesday the module is due, and your reply to another post is due by 11:59pm that Friday. Each post must be at least 50 words long and contributes to the overall discussion. Failure to follow these guidelines will result in a reduction of points awarded.

Syllabus Addendum on use of Artificial Intelligence (AI) – Spring 2026

Artificial Intelligence (AI) use in learning is a relatively new and rapidly changing topic in higher education, and one that requires careful consideration from both me (your instructor) and you (my students). At the request of several students, I've adopted a restricted policy on AI using language provided by the De Anza College Academic Senate which I feel best balances the usefulness of AI in this class with the need for original student-generated work:

“Policy on the Use of Artificial Intelligence (AI)

The limited use of generative Artificial Intelligence (AI) is permitted to help you with your research, but it IS NOT permitted as an end result. All use of AI must be cited. I may also ask you to write a reflection on why and how you used AI and what you learned from doing so. If you turn in work that uses AI beyond these parameters, it will be considered a violation of De Anza College's Academic Integrity Policy as outlined in the College Catalog here: https://www.deanza.edu/policies/academic_integrity.html“

In short, while I allow you to use AI to help you research/study, the work that you turn in at the end of the day must be YOURS and YOURS ALONE. Turning in AI-generated work, especially work that hasn't been adopted/proofread/made your own, and trying to pass it off as your own will be considered a violation of the my academic honesty policy, along with De Anza's Academic Integrity Policy. My hope is that there will be minimal opportunities to use AI dishonestly in this course, but there may/will be times where using AI for dishonest purposes is tempting, and so I want to stop it before it becomes an issue.

Student Learning Outcome(s):

- Distinguish Science from Pseudoscience.
- Assess the tools and procedures used by climate scientists to reconstruct earth's previous climate and to predict future climate shifts.
- Explain the terms and concepts of climate science and use those terms and concepts to communicate local and global issues of climate concern.

Office Hours:

M,W 11:30 AM - 1:20 PM

T,TH 7:00 AM - 10:00 PM

S48A

Zoom,Canvas