

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

<b>Section(s):</b>	42787 Spring 2023
<b>Instructor:</b>	Alicia T. Mullens (Pronouns: She/Her)
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<b>Office Location</b>	On Campus: S48A (Mon/Wed) Online (at <a href="https://cccconfer.zoom.us/j/6625783048">https://cccconfer.zoom.us/j/6625783048</a> )
<b>Office Hours:</b>	M/W (in S48A) 11:30-12:20pm T/Th (on Zoom) 3:30-4:20pm, and by Appointment (i.e. let me know a time that works for you, and I'm happy to make it work!)*
<b>Class Days/Time:</b>	Mon/Wed 10:30-11:20am AND 3 hours online (independent)
<b>Classroom:</b>	S42 (Yes, on campus!)
<b>Prerequisites:</b>	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 need for this course (Syllabus, Assignments, Lectures, etc.) can be found on the course page which can be accessed through Canvas. I will also make all communication (announcements/reminders, emails, etc) through the Canvas webpage. Please enable your Canvas settings to receive notification when an announcement is posted.

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, 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.

## 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, you can email me directly at [mullensalicia@fhda.edu](mailto:mullensalicia@fhda.edu), or via the messenger on Canvas. I check my email often during business hours, less often at nights/weekends (please don't feel discouraged if I don't immediately reply to an email sent at 2:30am). **If, you do not hear from me within 24 hours (48 hours on the weekend), please re-send your email.**

## In the Classroom/Class Rules

### How this class is going to work:

**This is a HYBRID class, meaning that a part of the class takes place in a traditional face-to-face setting while the other part takes place online. PLEASE NOTE... this is NOT just a two hour a week class... if you think that and act accordingly, you will not succeed! This is also not just an online class either... you are REQUIRED to attend on-campus sessions.**

### So here's the breakdown:

- Face-to-face sessions (10:30-11:20 Monday and Wednesday) will be devoted to in-class activities, discussions, problem solving sessions, and field activities (yes, we'll go outside, weather permitting). There will be very little lecture during these

sessions (not because I don't like to talk). Every class session will involve some kind of thing that you'll have to turn in.

- Online sessions (the remaining three hours of the week) will be devoted entirely to video “lectures” and course content. Each week will contain a series of pre-recorded lecture videos that you will be required to watch. Expect to spend about 1.5-2 hours watching the videos and a third hour reviewing or going back over video material that you need clarity on. You will be able to rewatch, rewind, slow down (or speed up) the videos as you see fit. Each week's videos will come with a review sheet that you are expected to fill out while you are watching the videos and reviewing the content. You will be allowed to use these review sheets on quizzes and midterms, so make sure you fill them out well and ask me if there is something you couldn't find.
  - Each week will include a quiz that covers the lectures and review sheets. These quizzes are required and will make up 100 points of your course grade. However, you will be allowed to make unlimited attempts on each quiz (but be forewarned, the questions are shuffled from a master question bank that I've created, so you won't get the same ten questions every time).
  - We will also have a midterm on Weeks 4 and 8, covering the lecture videos from the previous several weeks. These midterms will happen on campus, but will be open note/book (but closed technology!). Both midterms will be worth 50 points each, making 100 points.

**The “conduct” stuff:** We are all adults (those taking this class through middle college or any high school partnership program, I still see you as an adult), so I will treat you as adults and I expect you to do the same. This means being respectful to one another and to myself. If I find you acting disrespectful towards anyone or me, I will ask you to leave. Also note that racism, sexism, homophobia, transphobia, classism, intolerance of another's socioeconomic, religious, political, or philosophical status won't be tolerated. As of the writing of this syllabus, there will be 51 people in our classroom, meaning that there will be 51 diverse perspectives... I expect us all to be respectful to one another.

**Cell phones:** I get it... we're all addicted to these damn things, myself included. But this class is only 50 minutes long, and hopefully you'll be too busy doing fun/engaging/meaningful activities to not feel the need to check your TikTok/Instagram/Snapchat/Bumble/Tinder/JSwipe/Ashley Madison account. That being said, unless it is directly being used for in-class work (it will be sometimes), you are expected to NOT be on your cellphone. If you do decide to be on your phone during class time, be forewarned that I reserve the right to call you out for doing so (I may even do the old fashioned “read your text to everyone in class” trick... probably not, but who knows?!?!). Seriously, it's only 50 minutes... put your phone away and engage in the class!

**Masks and all of the COVID-19 stuff:** We're at a point in the pandemic where, to be frank, everyone has a different view on things like vaccines/masks/etc, and such topics can be very sensitive/volatile issues. My personal philosophy is to allow each one of you to take whatever precautions you feel are necessary... if you want to wear a mask, wear

one... if you don't, then don't. Get the vaccines and boosters as you see fit, and do what you feel you need to do. However, please be respectful of one another and keep in mind that a classmate may be exercising more caution than you, and that's okay. While teaching, I will not be wearing a mask. However, when I come around the room, I will happily use one if a student requests it. Please note that should college/district/county/state policies become stricter, I will adhere to/ask you to adhere to the stricter policies.

**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 in private. I've found that 99.9% of any issues that arise are easily settled (and to everyone's satisfaction) by a brief conversation. With that said, be respectful and professional when approaching me about any issues that arise; grievances aired in a rude and disrespectful manner won't be considered, and won't help your case.

**My Expectations (how to get an "A" in this class):**

1. Attend every (or almost every) class session, and be on time, or reach out to me if you have to miss. While in class, be fully present (i.e. not on your phone/tablet). **Also, know that if you need to miss class, you are still responsible for any material that you missed that day!**
2. Watch the online lecture videos, take notes, and fill out the review sheets. Use the quizzes as an extra study tool.
3. Reach out when you need help or something is wrong; I'm happy to help!
4. Accept constructive criticism/feedback. When I took Met 10 as a student, I didn't get a perfect score on everything... but I learned/grew from it.
5. Become less focused on the points and more focused on the POINT! Students who take an interest in the class almost always get A's. NOTE: I get a ton of emails from students near the end of the quarter saying things like "my grade is important to me," but those same students never once reach out for actual help with understanding the course material. Please note that if your grade is important to you, I EXPECT YOU TO see understanding of the material as important too (and will keep that in mind when considering any requests for things like extensions/grade leniency and stuff like that).

**Assignments and Grading**

In-Class and Field Activities	approx. 100pts
Weekly Video Quizzes	100 pts
Midterms (In-Class, covering material from Videos)	100 pts
Lifestyle Project	100 pts
Final Exam...	100 pts
<b>Total...</b>	<b>approx. 500 pts</b>

**Grading Scale:**

> 90% = A, 80% = B, 65% = C, 55% = D, < 55% = F

+/- grades will be assigned when a grade is within 2% of the next grade level

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

**In-Class Activities:** Throughout the quarter, we'll be doing numerous in-class activities that will be submitted in person. These activities include group and individual assignments that will build on in-class discussions. These are designed to be low-risk, high-reward activities to help you go deeper in your understanding of course material.

**Video Quizzes:** There will be a video quiz every week! These will be based on the lecture videos you watch during the online portion of this class. These assignments will be assigned and completed online through the Canvas Learning Management System.

**Midterms:** There will be two midterms given on-campus, covering material from the lecture videos/review sheets. These will consist of 25 multiple choice questions, some taken from the video quizzes, and others taken from the review sheets. You will be allowed to bring your review sheets/notes with you to take the midterms. The Final Exam will be a comprehensive exam based on a study guide I'll provide two weeks prior to the date of the final.

**Late Work/Makeup Policy:**

1. All assignments and quizzes, with the exception of the midterms, the final exam, or anything due on the last day of classes will have an automatic one-week extension available. You do not need to request the extension... it's automatic
2. This does not apply to the final, or anything due during Finals week... it's not me trying to be a jerk... it's just because, being the last week, I need to get grades in right afterwards (usually by that weekend), so I can't wait a week.
3. THERE WILL BE NO ADDITIONAL EXTENSIONS GRANTED!!!

**Returned Work:** Once I return an assignment to you, it is your responsibility to hold on to it until the conclusion of the quarter in case a mistake is made with your final grade.

**Important Reminders:** While these policies represent the "letter of the law," I will, in many cases, be gracious within reason. As the COVID-19 pandemic has dragged on, I've had situations where requests of leniency have become more extreme, and downright unreasonable, so I want to be clear here:

1. You are responsible for all content, assignments, and deadlines, EVEN IF YOU MISS CLASS. Saying "oh, I haven't been here in the past two weeks" isn't a valid excuse (unless you have a legitimate, documented reason). If you need to miss a class session, I strongly recommend making a friend and having them fill you in on what you missed (at least in terms of assignments, etc).
2. I allow for a one-week automatic extension after the deadline... any exceptions to that must be discussed with and approved by me (and only in extenuating circumstances, where it is clear that you were not able to meet the deadline for a valid reason). Emailing me in week 9 asking if you can make up an assignment from week 3 is NOT okay, and such requests will be denied... I'm not trying to be mean... just fair!
  - a. Seriously... I've had people email me in the last week or two of the course asking if I'll accept work from the first few weeks... the answer is no. I bake a lot of forgiveness (dropped assignments, extra credit) into my

grading, so, to quote the Beatles, if you missed something from earlier in the course, “Let it be!”

3. Once I announce a deadline in class (or on Canvas), you are expected to write it down and keep track of it... any additional reminders are a courtesy, and should not be relied on. I’ll always try to give a reminder, but I’m also human.

All of this being said, I seriously try to be gracious... I just want to make sure that I’m establishing a proper boundary, as a well trained therapist would say. If you need to miss a bunch of class, or encounter an issue, please reach out to me, and I’ll work with you... but don’t wait until after things have settled down to do so... the moment you need help, let me know!

## Dropping

I will drop you if:

- You miss more than 3 class sessions\* (2 late arrivals or early departures count as a missed class) -or-
- You miss more than two quizzes.

Otherwise, if you choose to drop the class, you must do so on your own, ***and no later than Friday, June 2<sup>nd</sup>*** (or be awarded a grade of FW, which is treated as an F). I need to enforce this policy, regardless of who you are (you can even be Tad, my favorite Animal Crossing villager, and I’d still have to give you an FW).

## 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!** While you’re allowed (actually, encouraged) to work together on assignments, you must turn in your own paper, 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 Student Conduct.

**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: 4/22*

*Deadline to Drop with a W: 6/2*

*Deadline to Drop with Refund: 4/23*

*Holidays: 5/29 (Mem. Day), 6/19 (Juneteenth)*

## Course Schedule

Week	Topics, Readings, Assignments, Deadlines
1	Introduction to the Course, Global Warming vs. Climate Change, Scientific Method
2	History of Earth's Climate, and Climate Science
3	Heat, Temperature, Radiation and the Greenhouse Effect
4	Carbon Cycle <i>Review and Midterm #1</i>
5	Natural Climate Changes, Radiative Forces
6	Climate Feedback Mechanisms, Runaway Warming, and Future Projections
7	Consequences of Climate Change – Globally and in the Bay Area, Course Project Assigned
8	Energy and Carbon Footprint <i>Review and Midterm #2, Project Week 1</i>
9	Transportation and Mitigation Strategies, <i>Project Week 2</i>
10	Human Perceptions of Climate Change and Climate Policies , <i>Project Week 3</i>
11	Course Project Presentations and Wrap-Up
12	<i>Final Exam (Opens on 6/26 and due by 6/30).</i>

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

## Appendix A: Grading Rubric

**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 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"). Remember that you are trying to show me what you understand.
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.

**Commonly Asked Question: "Do you grade on completion, or accuracy?"**

**My Answer: It depends... but only on the type of assignment:**

1. **In-Class Activities, Homework and Climate Investigations: 80% on Completion, 20% on Accuracy**
2. **Quizzes, Midterms and Final Exam: 0% on Completion, 100% on Accuracy**

**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	12:20 PM	In-Person,Email,Zoom	S48A
T,TH	03:30 PM	04:20 PM	Zoom,Email	