

Course name	GEOS 170: <i>Atmospheric Science</i>
Syllabus version number	2 (1-24-2020)
Semester	Spring, 2020
Instructor	Dr. Shane D. Mayor
Lectures	Mon., Weds., and Fri. 12:00 – 12:50 PM in Performing Arts Center (PAC) 206
Office hours	Mondays from 1:30 to 4:30 or by appointment. (Please e-mail to let me know you are coming to office hours. If not in office, check PHSC 128 or 217.)
Office	Physical Science Building (PHSC) 117
Mailbox	Department of Geological and Environmental Sciences office (PHSC 217)
Phone	530–898–6337
E-mail	sdmayor@csuchico.edu
Teaching assistant	TBD
Public class webpage	Click here.
Prerequisites	none
Required Book	<i>Meteorology Today</i> , 12th Edition ((©2019, Brooks/Cole, Cengage Learning) by C. Donald Ahrens and Robert Henson. Amazon.
Optional Book	<i>Workbook and Study Guide for Meteorology Today</i> , 10th Edition. Amazon.
Calculators	Please bring a calculator to exams. (You may not use a calculator app on a smart phone since the use of phones are forbidden during exams.)
Computers	Use of a personal computer will be necessary to type and submit homework assignments, check e-mail, etc. Also, some simple exercises involving programming or use of a spreadsheet may be assigned.
Blackboard	The instructor periodically communicates to the entire class via e-mail through Blackboard. For example, informing everyone of a class cancellation due to illness. Homework assignments must be submitted through Blackboard TurnItIn. Some teaching materials may be posted on Blackboard. Your scores will be kept on Blackboard.
Course Format	This is a lecture-based course without labs. It is important that you procure and read the required book and come to class. It is highly advisable to take notes in class. Please inform the instructor by e-mail in advance if you cannot come to a class due to illness or for other serious reasons.
Course Overview	This course provides a rigorous introduction to the science of the atmosphere (also known as meteorology). It is a lower division course required by all environmental science majors.

Table 1: *Tentative or approximate* breakdown of course grade based on Spring 2018 course.

	Points	Percentage of grade
Attendance	62	7.9
Homework	100	12.8
Special assignments	50	6.4
Quizzes	70	8.9
Mid-term exams	300	38.3
Final Exam	200	25.6
Total	782	100

Learning Objectives To provide an excellent foundational understanding of the physical basis for weather, climate, and climate change, but with an emphasis on the fundamentals of meteorology. Among the wide range of things that you will learn is the ability to explain the causes of common weather phenomena that you observe in everyday life; the ability to describe the basic composition and structure of the atmosphere; the ability to distinguish a variety of weather systems on multiple scales and what causes them; and the ability to describe how human activities change the atmosphere. We will also begin to show how math can be used to model aspects of the atmosphere.

Course Grade Course grades will be based upon a set of mid-term exams (100 points each), homework assignments from questions at the ends of the chapters (about 10 points each), special assignments not in the book (10 - 20 points each), quizzes (about 10 points each), routine attendance surveys (2 points per class), and a comprehensive final exam (150 - 200 points). A list of these items and an *approximate* breakdown of the course grade is shown in the table above. The actual number of assignments given and therefore the total possible points may be more or less than the amount shown. Scores will be kept on Blackboard for students to review at any time. Please inform the instructor as soon as possible if you see any discrepancies.

A	>92.5	C+	77.5 - 80.0
A-	90.0 - 92.5	C	72.5 - 77.5
B+	87.5 - 90.0	C-	70.0 - 72.5
B	82.5 - 87.5	D+	67.5 - 70.0
B-	80.0 - 82.5	D	62.5 - 67.5

Dropping & Adding You may drop (or add) without obtaining permission until Friday, Jan. 31. From Feb. 1 to Feb. 14, you must obtain permission from the instructor to drop. After Friday, Feb. 14, you will need a serious and compelling reason to drop and your request must be approved by the Department Chair and the College Dean.

Attendance An attendance roster will be circulated on most days when there is not a quiz or exam. Students must sign the attendance roster for credit. Attendance will be a part of your final course grade. Up to three exemptions will be granted. Missed exams cannot be made up unless the instructor has agreed before the exam date and the student has a serious and compelling reason.

Late assignments Scores on assignments received late will be reduced by 20% of the assignment value per day. For example, a 10-point homework assignment completed perfectly will receive only 8 out of 10 points in the 24 hours following the due date; 6 out of 10 points in the 24 - 48 hours after the due date, and so on.

Classroom etiquette **Please do not eat in lecture.** The noises and smells may be a distraction for your peers. Plan your day so that you have adequate nourishment before class.

Please come to class on time. Walking in several minutes late is a distraction for everyone. We understand if it happens rarely due to extraordinary circumstances, but chronic lateness projects lack of maturity and respect and may be taken into account for your course grade.

Please silence mobile phones and avoid texting during lectures.

Please do not chat with your neighbor during lecture. It is very distracting for others in the course who are trying to listen to the instructor.

Use of phones is strictly prohibited during quizzes and exams.

Plagiarism **Plagiarism** is a serious violation of academic integrity and when detected will result in a failing grade for the course and an incident report submitted to the Office of Student Judicial Affairs. For more information on plagiarism, please see the university's [Academic Integrity webpage](#). If you still have a question about what plagiarism is and how to avoid it, please contact the instructor by e-mail or visit during office hours.

Disabilities If you need course adaptations or accommodations because of a disability or chronic illness, or if you need to make special arrangements in case the building must be evacuated, please make an appointment with the instructor as soon as possible, or see me during office hours. Please also contact the [Accessibility Resource Center \(ARC\)](#) as they are the designated department responsible for approving and coordinating reasonable accommodations and services for students with disabilities. ARC will help you understand your rights and responsibilities under the Americans with Disabilities Act and provide you further assistance with requesting and arranging accommodations.

Changes Students are responsible for coming to class to learn about any changes in the schedule and course content. The instructor reserves the right to modify this syllabus at any time. Course content, schedule, and grading policy may be changed during the semester. The schedule on the following page is *tentative*. The exact dates for exams and course material covered are subject to change.

Suggestions for success

- Come to class.
- Take notes.
- Purchase or rent the book. (*12th* edition!)
- Read the book carefully. (An average of a few pages per day is required.)
- Study by rewriting and revising your notes.
- Do the homework and special assignments.
- Get the study guide and do the practice exercises.
- Study in a group. Talk to classmates about the material.
- Ask questions in class.
- Contact the teaching assistant (if we find one).
- Come see me during office hours.

Spring 2020 GEOS 170 meeting dates, significant events, and *tentative* schedule.

Weds.	22	Jan.	Review syllabus. Billion dollar weather and climate disasters in the US.
Fri.	24	Jan.	Begin Chapter 1: the Earth and its atmosphere
Mon.	27	Jan.	Begin Chapter 2: Energy, warming the Earth and the atmosphere
Weds.	29	Jan.	
Fri.	31	Jan.	Last day to add or drop without permission from the instructor.
Mon.	3	Feb.	Begin Chapter 3: Seasonal and daily temperatures
Weds.	5	Feb.	
Fri.	7	Feb.	
Mon.	10	Feb.	Begin Chapter 4: Atmospheric humidity
Weds.	12	Feb.	
Fri.	14	Feb.	No adding or dropping after this date without Chair's and Dean's approval.
Mon.	17	Feb.	
Weds.	19	Feb.	
Fri.	21	Feb.	Exam #1 (Chapters 1-4)
Mon.	24	Feb.	Begin Chapter 5: Condensation: dew, fog, and clouds
Weds.	26	Feb.	
Fri.	28	Feb.	
Mon.	2	Mar.	
Weds.	4	Mar.	Begin Chapter 6: Stability and cloud development
Fri.	6	Mar.	
Mon.	9	Mar.	
Weds.	11	Mar.	
Fri.	13	Mar.	Begin Chapter 7: Precipitation
Mon.	16	Mar.	Spring break. No classes.
Weds.	18	Mar.	Spring break. No classes.
Fri.	20	Mar.	Spring break. No classes.
Mon.	23	Mar.	
Weds.	25	Mar.	
Fri.	27	Mar.	Exam #2 (Chapters 5-7)
Mon.	30	Mar.	Begin Chapter 8: Air pressure and winds
Weds.	1	Apr.	
Fri.	3	Apr.	
Mon.	6	Apr.	
Weds.	8	Apr.	Begin Chapter 9: Wind: Small-scale and local systems
Fri.	10	Apr.	
Mon.	13	Apr.	
Weds.	15	Apr.	
Fri.	17	Apr.	Begin Chapter 10: Wind: Global systems
Mon.	20	Apr.	
Weds.	22	Apr.	
Fri.	24	Apr.	Exam #3 (Chapters 8-10)
Mon.	27	Apr.	Special topics: synoptic weather systems? Severe weather? TBD.
Weds.	29	Apr.	
Fri.	1	May	
Mon.	4	May	Review week
Weds.	6	May	Review week
Fri.	8	May	Review week
Mon.-Fri.	11 - 15	May	Final Exam week. Final comprehensive exam date and time TBD.