

AT350: INTRODUCTION TO WEATHER AND CLIMATE

COURSE SYLLABUS

Fall 2023

1:00 - 1:50 PM TUESDAY/THURSDAY

Engineering 120

Instructor: Dr. Steven Rutledge, Professor, Campus Office is Engineering A-102F. Office hours: arranged, following request from individual students. Prof. Rutledge will hold special office hours in Engineering A-102F from 11:30 AM to 12:45 PM prior to the 3 midterm exams. Teaching Assistants will hold regular, weekly office hours.

email: srutledg@colostate.edu

Teaching Assistants for AT350: Ivy Glade (ivyglade@rams.colostate.edu); Lexi Sherman (erinas@rams.colostate.edu)

TA Office hours: 12:30 – 1:30 Mondays, Engineering A-102F. Office hours will also be held virtually on Wednesdays from 3 – 4 PM, via Zoom (<https://us05web.zoom.us/j/86347230193?pwd=YbkFpkBcfqXznbkquh3LKFI2kyBEae.1> Meeting ID: 863 4723 0193 Passcode: 0Z0zx5

Course Objectives: Introduce students to a variety of topics relevant to an understanding of weather, climate and related topics. Familiarize students with information sources regarding these topics. Instill a basic understanding of atmospheric processes and how they determine various atmospheric phenomena.

Text: Meteorology Today: C. Ahrens and R. Henson, Cengage Learning, 13th Edition

Course Website: [All class materials will be available on the Canvas class page.](#)

Course Structure and Grading Criteria: The class is offered for two credits and will meet two times per week for lecture/discussion. Grades will be based on student performance on three hourly exams and a final examination. Exams will be multiple choice. Questions will cover material from readings in the text, lecture material and class discussions. The final grade will be based on equally weighting the two highest midterm scores and the final examination. **Only under prior arrangement and under special circumstances will students be allowed to make up missed examinations.**

Date	Topic(s) and Note Sections	Reading in Text
August 22	Introduction, course mechanics, review of syllabus	-----
August 24	Descriptors of the atmosphere	Chapter 1, 4
August 29	Descriptors of the atmosphere, continued	Chapter 1, 4
August 31	Solar and terrestrial radiation	Chapter 2
September 5	Continued...	Chapter 2
September 7	Seasonal and Daily Temperatures	Chapter 3
September 12	Catch up and brief review for Midterm I	
September 14	Midterm I	
September 19	The atmosphere's water	Chapter 4
September 21	Continued...	
September 26	Condensation: Dew, Fog and Clouds	Chapter 5
September 28	Stability and cloud formation	Chapter 6
October 3	Continued...	
October 5	Precipitation	Chapter 7
October 10	Continued...	
October 12	Forces and winds	Chapter 8
October 17	Continued...	
October 19	Midterm II	
October 24	Local winds; air masses and fronts	Chapter 9; Chapter 11
October 26	Atmospheric General Circulation	Chapter 10
October 31	Continued...	
November 2	Thunderstorms and severe weather	Chapter 14, 15, 16
November 7	Continued...	
November 9	Continued...	
November 14	Lightning and Thunder	Chapter 14
November 16	Midterm III	
November 21	No Class, Thanksgiving Break	
November 23	No Class, Thanksgiving Break	
November 28	Guest: Dr. Russ Schumacher, State Climatologist	
November 30	Climate Change	Chapter 17, 18
December 5	Continued...	
December 7	Wrap up and review for Final Exam	
December 15	FINAL EXAM	9:40-11:40 AM

Important information for students: All students are expected and required to report any COVID-19 symptoms to the university immediately, as well as exposures or positive tests from a non-CSU testing location. If you suspect you have symptoms, please fill out the COVID Reporter (<https://covid.colostate.edu/reporter/>). If you know or believe you have been exposed, including living with someone known to be COVID positive, or have symptoms of COVID, it is important for the health of yourself and others that you complete the online COVID Reporter. Do not ask your instructor to report for you. If you do not have internet access to fill out the online COVID-19 Reporter, please call (970) 491-4600. You will not be penalized in any way for reporting. If you report symptoms or a positive test, you will receive immediate instructions on what to do, and CSU's Public Health Office will be notified. Once notified, that office will contact you and most likely conduct contact tracing, initiate any necessary public health requirements and/or recommendations and notify you if you need to take any steps. For the latest information about the University's COVID resources and information, please visit the CSU COVID-19 site: <https://covid.colostate.edu>

Basic Needs Statement

At CSU, Rams take care of Rams—period. If you are experiencing food, housing, and/or transportation insecurity, please contact lsc_basicneedsinfo@colostate.edu.

Student Disability Center Accommodations

Students who have federally supported disabilities will find information about processes and supports available at this site:

<https://disabilitycenter.colostate.edu/accommodations-process/>