

## EVSC 1300—Earth's Weather and Climate—Spring, 2025

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### Office Hours

Monday, 2:30–4:00 p.m.  
Thursday, 10:30–11:30 a.m.  
or by appointment

*Home Page:* <http://climate.evsc.virginia.edu/evsc-1300>

### COURSE OUTLINE

*Required Text: Meteorology Today* (13th edition) by C. Donald Ahrens & Robert Henson, Cengage Learning, MindTap (which you can access via the "UVA Bookstore Inclusive Access" tab in Canvas). The cost is \$82.35. If you wish to also buy the physical textbook, you can do so at a deeply discounted rate after you purchase MindTap (see below). You should find used copies and you may also use earlier editions.

To access the textbook, navigate to the "UVA Bookstore Inclusive Access" tab in Canvas (left-hand side near the bottom). Once you launch your courseware, you will need to set up an account in Cengage, or to log in to your existing Cengage account if you already have one. If you have trouble logging in, use the link below to access a short video that will work you through the registration process:

<https://startstrong.cengage.com/mindtap-canvas-ia-yes/>

Everyone should have immediate access to the digital textbook and other supporting materials via Canvas. The Inclusive Access program is optional, but you must actively opt-out before the deadline on Monday, January 27 if you choose not to participate. Opting out will automatically generate a credit for the charged amount that should appear on your SIS account within a few days. You will then lose access to the materials. If you have questions, please send an email to [UVAInclusiveAccess@virginia.edu](mailto:UVAInclusiveAccess@virginia.edu).

There will be four in-class examinations during the semester. The exams will consist of objective-type multiple choice questions and will be administered on-line via Canvas. You will need to bring your laptop to class on exam days. There will be no cumulative final exam.

*Honor Policy:* I trust every student will fully comply with all provisions of the UVa Honor System. In addition to pledging that you have neither received nor given aid while taking your exam, your online "signature" also affirms that you have not accessed any notes, study outlines, problem sets, old exams, answer keys, or the textbook while taking an exam and that you have not obtained any answers from another student. All alleged honor violations brought to my attention will be forwarded to the Honor Committee. If, in my judgment, it is beyond a reasonable doubt that you have committed an honor violation with regard to a given exam, you will receive an immediate grade of 'F' (zero points) for that exam, irrespective of any subsequent action taken by the Honor Committee. Furthermore, for this course, the use of exams from prior semesters (including EVSC 1300, EVSC 150, or EVSC 250) for any purpose, including preparation for an exam, is considered to be an honor violation.

*Grading:* Your grade will be based on the points you accumulate from two sources: the four exams and on-line exercises associated with the readings from each chapter (via the "Quizzes" tab in Canvas). Each of these will be worth 30 points (4 exams @ 30 points each plus the on-line exercises scaled to be worth 30 points). I will drop the lowest of these five grades, so your final course grade will be based on your highest point total from the best four out of five sources. That means that you can skip one exam or choose not to do the on-line exercises and still complete the requirements for the course. The best strategy is to do the exercises and to take all four exams so you will have one grade to drop. (FYI, the median grade on the on-line exercises is always higher than the median grade on any of the exams, so for most of you, doing these on-line exercises will provide a chance to raise your course grade. For example, last year the mean exam grade was about 20/30 but the mean quiz score was 25/30.) Each exam will be worth 30 points, so your maximum total points for the semester is 120.

Please put the following exam dates on your calendars and plan your study and social schedules accordingly.

**Exam #1: Wednesday, February 5**

**Exam #2: Monday, March 3**

**Exam #3: Wednesday, April 2**

**Exam #4: Monday, April 28**

Your final grade will be based on the total points you receive from your four best sources. Final grades will be based on the grading scale shown below (out of 120 possible points). This grading scale incorporates a curve that I have established for this course based on many years of teaching this content.

|         |         |         |       |   |     |
|---------|---------|---------|-------|---|-----|
| A plus  | 115–120 | C plus  | 83–87 | F | ≤59 |
| A       | 109–114 | C       | 79–82 |   |     |
| A minus | 102–108 | C minus | 74–78 |   |     |
| B plus  | 97–101  | D plus  | 69–73 |   |     |
| B       | 93–96   | D       | 65–68 |   |     |
| B minus | 88–92   | D minus | 60–64 |   |     |

(Students taking the class using the credit/no credit option will earn credit (CR) with a grade of D minus or higher.)

*Extra Credit:* There will be numerous different opportunities for you to earn extra credit this semester. Students who take full advantage of these can potentially earn enough points to raise their course grade by a full letter grade.

In class, on an occasional basis, we will be doing group exercises, and I will be recording your responses using the Poll Everywhere tool, which you will be able to access via Canvas on your laptop or phone. For every class in which you respond to a question, you'll receive 1/3 of an extra credit point that will be applied at the end of the semester. You earn extra credit regardless of the correctness of your answers.

In addition, I will be providing some optional, sample questions periodically to summarize topics we've been covering in class. If you get all of the questions

correct in these exercises, you will earn 1 extra credit point; if you miss only one question, you will get 0.5 point. You will also have a second chance opportunity. Therefore, through class participation/attendance and attempting these sample questions outside of class, you will be able to boost your final course grade. Individual extra credit for additional work is not available to anyone in this course under any circumstance.

*Other Important Dates:*

Add deadline: January 27

Drop deadline: January 28 (everyone but SEAS)

SEAS drop deadline: February 24

Class cancelled: January 20, March 7

Withdraw deadline (drop with "W"): March 10

(You may take this course under the credit/no credit option. Before making this decision, check with your academic advisor regarding the acceptability of this option for your major. A grade of D- or higher is needed to receive credit.)

*Class Rules*

1) email: All of my communication with you outside of class will be via your UVa email account (or whatever is linked via Canvas). If you are not a frequent email user, plan to log on at least once daily.

2) Canvas: You will take your exams on Canvas and I will likewise use Canvas to post your grades. You will also find assignments and Powerpoint slideshows on Canvas.

3) Website: The class website will be used to access external links on the internet associated with various lecture topics and weather discussions. Please add this link now to your favorite web browser:

[climate.evsc.virginia.edu/evsc-1300](http://climate.evsc.virginia.edu/evsc-1300)

4) Electronic devices: It's fine if you choose to use your laptops/tablets/ipads to take notes; however, please turn off all distractions before class starts. All cell phones must be silenced before class. (If you have an emergency issue, set your phone to vibrate and if you get a call, quietly get up and leave class to take it.) Even phones on vibrate are distractions to your fellow classmates.

Failure to follow this policy will result in me dropping you from the class...please respect me and your fellow students by obeying this policy.

4) Disruptive behavior: Please keep unnecessary talking to a minimum. This is a large class, and it is easy to become disengaged. Please do your best to focus for 50 minutes.

## How To Do Well

*Show Up:* I do not teach from a textbook...this course has evolved in its current form based upon many years of continuous revision and updates, trial and error. Attending class is the most important factor in getting a good grade. (IF YOU MISS CLASS, the best strategy is to get the lecture notes from at least two of your classmates, copy them, make note of any confusing material, and see me with any questions. I do not teach from a set of notes.)

*Pay Attention:* Showing up and not paying attention is effectively the same as not showing up at all, right?

*Take Notes:* Although I will provide you with my Powerpoint slides, everything that you need to know will NOT be on those slides. Pay particular attention to points that I emphasize in class.

*Engage:* Ask questions, provide examples, request clarifications. See me after class or during office hours. Send me emails (<https://medium.com/@lportwoodstacer/how-to-email-your-professor-without-being-annoying-af-cf64ae0e4087#.sroi79ro7>). In many cases, I will get back to you surprisingly quickly.

*Prepare:* Read the associated pages in the textbook (many students find it better to do so AFTER the lecture rather than before, but this varies from person to person). Do the assigned exercises. Review (and even rewrite) your notes—this is a great way to begin studying for exams well before the exam date.

*Be Thorough:* There are roughly eight lectures before each exam and 30-point exams, so on average you can expect four test questions to come from each lecture. The exams are comprehensive. If there are topics that you do not understand, make every effort to figure them out prior to the test. Hoping that some topic will not be on the exam is not a smart strategy. I welcome your questions, emails, and office hour visits.

*Summary:* The workload for this class is not onerous and I think most of you will find the material to be interesting and useful for your daily life. If you keep up with the lectures and with reading the related chapters, you should do well. Try not to fall behind and let confusing topics fester by not asking questions.

### **A note about sickness**

If you are sick, you have a responsibility to yourself and to your fellow classmates to stay home. I promise that I will not come to class if I am not feeling well. This is the appropriate behavior if you have COVID-19, influenza A/B, ebola, or any other communicable disease. Our species has managed to coexist with viruses for centuries and we will continue to do so. Please take personal responsibility for your health and the health of others.

## READING ASSIGNMENTS/LECTURE SCHEDULE

Rather than assign specific pages in the book that correspond with the lecture topics, I merely refer you to the proper chapter (in parentheses in the schedule, below). Chapters numbers are linked to the 13th edition of the text. In the lectures, I will provide specific section numbers for partial chapters that you can access in Canvas. You are not responsible for material in the textbook that has not been covered in class. I will try to keep to this schedule, but I reserve the right to change topics depending on the pace of the class, unusual weather events, etc.

- Jan 13: Class organization, introduction, basic principles (Chapter 1)  
Jan 15: Basic principles, atmospheric pressure (1, 8)  
Jan 17: Weather and weather map basics, temperature, pressure (1, 8)
- Jan 20: (Class is cancelled)  
Jan 22: Weather and weather map basics, temperature, pressure (1, 8)  
Jan 24: Atmospheric structure and composition (1)
- Jan 27: Earth/Sun geometry: reasons for the seasons (3)  
Jan 29: Basic principles of radiation (2)  
Jan 31: Global radiation: Balancing the books, the "greenhouse effect" (2)
- Feb 3: Global radiation: Balancing the books, the "greenhouse effect" (2)  
**Feb 5: EXAM 1**  
Feb 7: Exam 1 review; Global warming and climate change (18)
- Feb 10: Global warming and climate change (18)  
Feb 12: Atmospheric humidity (4)  
Feb 14: Weather and human comfort (3, 4)
- Feb 17: Why do clouds form? (5, 6)  
Feb 19: A tutorial on cloud identification (5)  
Feb 21: Precipitation (7)
- Feb 24: Advanced cloud identification (5)  
Feb 26: Weather map symbology (Appendix B)  
Feb 28: Air masses (11)

- Mar 3: EXAM 2**  
Mar 5: Exam 2 review; The Norwegian Cyclone Model (11, 12)  
Mar 7: (Class is cancelled)
- Mar 17: The Norwegian Cyclone Model: Weather changes and fronts (11, 12)  
Mar 19: The Norwegian Cyclone Model: Weather changes and fronts (11,12)  
Mar 21: The Norwegian Cyclone Model: Weather changes and fronts (11,12)
- Mar 24: Basic principles of atmospheric motion (8)  
Mar 26: Global wind patterns (10)  
Mar 28: Cyclones and anticyclones (8)
- Mar 31: Local winds (9)  
**Apr 2: Exam 3**  
Apr 4: Exam 3 review; Monsoons, ocean currents (9, 10)
- Apr 7: Air Pollution (19)  
Apr 9: Climates of Earth (17)  
Apr 11: Climates of Earth (17)
- Apr 14: El Niño (10)  
Apr 16: Lightning (14)  
Apr 18: Thunderstorms and severe thunderstorms (14)
- Apr 21: Tornadoes (15)  
Apr 23: Hurricanes (16)  
Apr 25: Atmospheric optics (rainbows, halos, mirages, etc.) (20)
- Apr 28: EXAM 4**

**Disability accommodations:** If you anticipate or experience any barriers to learning in this course, please let me know. If you have a disability, or think you may have a disability, you may also want to meet with the Student Disability Access Center (<https://www.studenthealth.virginia.edu/SDAC>). If you have already been approved for accommodations through SDAC, please confirm that I have received this information.



**Discrimination, Harassment, Violence, and Retaliation:** Discrimination, harassment, and retaliation are defined in the University's Preventing and Addressing Discrimination and Harassment policy ("PADH Policy") and the Preventing and Addressing Retaliation policy ("PAR Policy"). The PAR Policy not only prohibits retaliation against individuals who complain of discrimination and harassment under the PADH Policy, but also those who assist or participate in a resolution of such a complaint (e.g., an investigative witness). Students and employees who believe that they have been subjected to discrimination, harassment, or retaliation under the PADH and/or PAR Policy should contact the EOCR office. You may report discrimination, harassment, and retaliation to the University through "Just Report It" ([justreportit.virginia.edu/](http://justreportit.virginia.edu/)) or by contacting the Office for Equal Opportunity of Civil Rights (EOCR) at (434) 924-3200 or [UVAEOCR@virginia.edu](mailto:UVAEOCR@virginia.edu) to speak with a member of the EOCR team.

The UVa faculty and administration are committed to providing a safe and equitable classroom environment. The University prohibits discrimination, including sexual and gender-based harassment and violence, on the basis of sex, sexual orientation, gender, and gender identity or expression in all of its programs and activities, including academics, employment, athletics, and other extracurricular activities. For more information, please see: [eocr.virginia.edu/title-ix](http://eocr.virginia.edu/title-ix), where you can also find information about procedures for resolving prohibited conduct. Those who believe that they, or someone else, have been subjected to the above forms of conduct are encouraged to contact the Title IX office at [titleixcoordinator@virginia.edu](mailto:titleixcoordinator@virginia.edu) or (434)-297-7988. You may also report prohibited conduct through "Just Report It" or by contacting the Title IX office to speak with a member of the Title IX staff.

In accordance with UVa policies, faculty are required to report any information disclosed by students regarding alleged acts of prohibited conduct to the Title IX Coordinator. "Confidential Employees" are exempt from this requirement, and they include various licensed professionals who are not bound to disclose. You can find a listing of them here: <https://eocr.virginia.edu/chart-confidential-resources>.

**Final note:** I promise to do my best to treat you as an individual with dignity and respect. By agreeing to take this course, you implicitly agree to abide by the rules set forth in this syllabus. My grading policy is entirely objective—I do not link names to grades when I am determining the grade distribution. Thanks for taking this class—I'm looking forward to a fun and interesting semester!