

## AVSC 2110 – X52

For additional course information, including prerequisites, corequisites, and course fees, please refer to the Catalog: <https://catalog.uvu.edu/>

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**Semester:** Spring

**Course Prefix:** AVSC

**Course Title:** Aviation Weather

**Year:** 2025

**Course and Section #:** 2110 X52

**Credits:** 3

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### ***Course Description***

Designed for all students interested in aviation careers. Includes a general knowledge of aviation, historical events, and aerospace studies/ development opportunities. Covers aviation and aerospace terminology, how aircraft and spacecraft fly, research and development of future systems, government and industry roles in the growth of aviation. Provides entering students with a first year experience covering critical thinking, time and financial management and collaboration as well as aviation career prospects.

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### ***Course Attributes***

This course has the following attributes:

- General Education Requirements
- Global/Intercultural Graduation Requirements
- Writing Enriched Graduation Requirements
- Discipline Core Requirements in Program
- Elective Core Requirements in Program
- Open Elective

Other: *Click here to enter text.*

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### ***Instructor Information***

**Instructor Name:** Isom, Aaron

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### ***Student Learning Outcomes***

- Discuss significant historical aviation events in chronological order regarding the progress of aviation.
- Identify aviation applications including aerospace technology and terminology.
- Identify the structures of aircraft and spacecraft.
- Explain the physics/principles of flight, including how Bernoulli's principle of pressure/fluid motion and Newton's third law of motion are used to develop lift.
- Explain aircraft and spacecraft stability and flight control operations.
- Demonstrate how aviation regulations and laws are developed and administered.
- Identify basic weather patterns, use Boyle's law of temperature and pressure to determine weather conditions and their effect on flight operations.
- Identify physiological conditions that effect the human body in flight and know the recommended procedures for dealing with these conditions.

- Investigate aviation/aerospace career opportunities and associated skills required in preparation for aviation employment.
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## ***Course Materials and Texts***

No textbook purchase is required. The textbook (Aviation Weather Handbook: FAA-H-8083-28) can be found and accessed online on the Federal Aviation Administration website.

Recommended Reading: [Jeppesen Aviation Weather 4th Edition](#) By Peter F. Lester. This is a link to Amazon but the book can be found at many local flight centers, schools and online.

### Technology Tools

- Internet browsers such as Google Chrome or Firefox are preferred. Web browser compatibility can be found at [Canvas Questions and Answers](#).
  - Microsoft Office (Word, PowerPoint, and Excel) is required. UVU students have free access to Microsoft 365. See [UVU Microsoft Office 365](#).
  - A laptop or desktop computer with a camera and microphone may be required for Kaltura video submission assignments. Instructions for downloading and using Kaltura can be found in the modules where a camera and microphone are necessary. [Computer requirements for Kaltura Capture](#).
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## ***Course Requirements***

### **Course Assignments, Assessments, and Grading Policy**

For this three (3) credit-hour course students should expect to spend up to 9+ hours a week completing course activities. As a student, you can expect this course to challenge and engage you as a learner. You will be expected to: engage in weekly discussions, complete reading assignments, quizzes, and additional assignments as required, and succeed as a student in this course.

Canvas is where course content, grades, and communications will reside for this course.

**Copyleaks:** Assignments have a plagiarism detector that checks your work's originality. Should your instructor have any concerns about plagiarism they will contact you directly. Please refer to [Copyleaks Ltd's Privacy Statement](#). to read how Copyleaks cares about your rights and personal data.

Discussions will be opportunities to explore topics together. Posts to the discussion should add significantly to the conversation and support your point of view. Comments that do not add significantly to a discussion will receive no credit. It is okay to disagree in a discussion. In fact much learning happens when we disagree. However we need to be respectful and keep our online classroom a safe place to learn.

Due dates for discussions correspond with the initial post date which is usually a Wednesday. Follow up comments are due by Sunday. Follow up posts are expected to be after the due date and are not marked late. Discussions conclude by the Sunday following the due date. After this, posts will be marked late.

### Assessments:

Reading reviews are short quizzes that are administered online through Canvas. Their purpose is to assess your understanding of the reading material.

Grade	A	A-	B+	B	B-	C+	C	C-	D+	D	D-	E
Percent	94-100	90-93	87-89	83-86	80-82	77-79	73-76	70-72	67-69	63-66	60-62	0-59

Exams will administered online through Canvas. They are due on the date indicated and no later than 11:59 MST/MDT.

### **Required or Recommended Reading Assignments**

Aviation Weather Handbook: FAA-H-8083-28

### **General Description of the Subject Matter of Each Lecture or Discussion**

Module 1: The Atmosphere

Module 2: Pressure, Altitude, and Density

Module 3: Wind

Module 4: Vertical Motion and Stability

Module 5: Atmospheric Moisture

Module 6: Scales of Atmospheric Circulations

Module 7: Airmass, Fronts, and Cyclones

Module 8: Thunderstorms

Module 9: Local Winds

Module 10: Windshear and Turbulence

Module 11: Icing

Module 12: IMC and Additional Weather Hazards

Module 13: Aviation Weather Resources

Module 14: Weather Evaluations

### ***Required Course Syllabus Statements***

#### **Generative AI**

You may use AI programs e.g. ChatGPT to help generate ideas and brainstorm. However, you should note that the material generated by these programs may be inaccurate, incomplete, or otherwise problematic. For example, AI-generated language programs are known to "hallucinate", i.e. create references to non-existent resources. Beware that use of AI may also stifle your own independent thinking and creativity.

You may not submit any work generated by an AI program as your own. If you include material generated by an AI program, it should be cited like any other reference material (with due consideration for the quality of the reference, which may be poor).

Any plagiarism or other form of cheating will be dealt with severely under relevant UVU Plagiarism policies as described in the [UVU Student Code of Conduct.](#), UVU Policy [541](#).

#### **Using Remote Testing Software**

This course does not use remote testing software.

□ This course uses remote testing software. Remote test-takers may choose their remote testing locations. Please note, however, that the testing software used for this may conduct a brief scan of remote test-takers' immediate surroundings, may require use of a webcam while taking an exam, may require the microphone be on while taking an exam, or may require other practices to confirm academic honesty. Test-takers therefore shall have no expectation of privacy in their test-taking location during, or immediately preceding, remote testing. If a student strongly objects to using test-taking software, the student should contact the instructor at the beginning of the semester to determine whether alternative testing arrangements are feasible. Alternatives are not guaranteed.

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## ***Required University Syllabus Statements***

### **Accommodations/Students with Disabilities**

Students needing accommodations due to a permanent or temporary disability, pregnancy or pregnancy-related conditions may contact UVU [Accessibility Services](#) at [accessibilityservices@uvu.edu](mailto:accessibilityservices@uvu.edu) or 801-863-8747.

Accessibility Services is located on the Orem Campus in BA 110.

Deaf/Hard of Hearing students requesting ASL interpreters or transcribers can contact Accessibility Services to set up accommodations. Deaf/Hard of Hearing services can be contacted at [DHHservices@uvu.edu](mailto:DHHservices@uvu.edu)

DHH is located on the Orem Campus in BA 112.

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### **Academic Integrity**

At Utah Valley University, faculty and students operate in an atmosphere of mutual trust. Maintaining an atmosphere of academic integrity allows for free exchange of ideas and enables all members of the community to achieve their highest potential. Our goal is to foster an intellectual atmosphere that produces scholars of integrity and imaginative thought. In all academic work, the ideas and contributions of others must be appropriately acknowledged and UVU students are expected to produce their own original academic work.

Faculty and students share the responsibility of ensuring the honesty and fairness of the intellectual environment at UVU. Students have a responsibility to promote academic integrity at the university by not participating in or facilitating others' participation in any act of academic dishonesty. As members of the academic community, students must become familiar with their [rights and responsibilities](#). In each course, they are responsible for knowing the requirements and restrictions regarding research and writing, assessments, collaborative work, the use of study aids, the appropriateness of assistance, and other issues. Likewise, instructors are responsible to clearly state expectations and model best practices.

Further information on what constitutes academic dishonesty is detailed in [UVU Policy 541: Student Code of Conduct](#).

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### **Equity and Title IX**

Utah Valley University does not discriminate on the basis of race, color, religion, national origin, sex, sexual orientation, gender identity, gender expression, age (40 and over), disability, veteran status, pregnancy, childbirth, or pregnancy-related conditions, citizenship, genetic information, or other basis protected by applicable law, including Title IX and 34 C.F.R. Part 106, in employment, treatment,

admission, access to educational programs and activities, or other University benefits or services. Inquiries about nondiscrimination at UVU may be directed to the U.S. Department of Education's Office for Civil Rights or UVU's Title IX Coordinator at 801-863-7999 – [TitleIX@uvu.edu](mailto:TitleIX@uvu.edu) – 800 W University Pkwy, Orem, 84058, Suite BA 203.

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### **Religious Accommodation**

UVU values and acknowledges the array of worldviews, faiths, and religions represented in our student body, and as such provides supportive accommodations for students. Religious belief or conscience broadly includes religious, non-religious, theistic, or non-theistic moral or ethical beliefs as well as participation in religious holidays, observances, or activities. Accommodations may include scheduling or due-date modifications or make-up assignments for missed class work.

To seek a religious accommodation, a student must provide written notice to the instructor and the Director of Accessibility Services at [accessibilityservices@uvu.edu](mailto:accessibilityservices@uvu.edu). If the accommodation relates to a scheduling conflict, the notice should include the date, time, and brief description of the difficulty posed by the conflict. Such requests should be made as soon as the student is aware of the prospective scheduling conflict.

While religious expression is welcome throughout campus, UVU also has a [specially dedicated space](#) for meditation, prayer, reflection, or other forms of religious expression.