



## AVSC 4550 – X01

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

**Year:** 2025

**Course Prefix:** AVSC

**Course and Section #:** 4550 X01

**Course Title:** Aerospace Support Services

**Credits:** 3

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### ***Course Description***

Explores the standards, regulations, infrastructure, and issues involving the certification, reliability, maintainability, risk management, and safety of aerospace vehicles through their life cycle. Studies the aerospace sectors of civil, defense, unmanned, and space-based systems. Investigates global training and certification standards of maintenance engineers and technicians.

### ***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:** Ley, Stephen C

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

- Contrast the certification, reliability, and maintainability standards necessary to mitigate risk and to ensure the safe, long-term use of an aerospace vehicle between each of the aerospace sectors.
  - Outline the infrastructure organization, expertise, standards, and facilities necessary to sustain an aerospace vehicle through its life cycle for each sector.
  - Determine the relationship between regulations, certification standards, reliability, maintainability, and risk management associated with aerospace products.
  - Evaluate the training and certification standards for roles associated with the inspection, maintenance, and repair of aerospace vehicles based on various international agencies.
  - Generate a workflow plan that integrates certification standards, regulatory requirements, maintenance planning, safety management, and training for a given product within one of the aerospace sectors.
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### ***Course Materials and Texts***

H.A. Kinnison, T. Siddiqui, Aviation Maintenance Management, 2nd Ed., McGraw Hill Publ., 2013, ISBN 978-0-07-180502-5

This course utilizes an extensive list of public domain articles and video resources access via the internet

### 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](#).

## ***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

Activity	Percent
Assignments	30
Discussions	30
Reading Reviews (Quizzes)	20
Final Project	20
Attendance	N/A
Total	100

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

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

Introduction to Air Transport Economics: From Theory to Applications 3RD 18, Vasigh, Bijan, ISBN-978-1-138-23775-9.

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

Module 1 - Purpose of Maintainability Systems

Module 2 - Maintenance Program Concepts

Module 3 - Role of Logistics in Maintainability Systems

Module 4 - Key Performance Indicators in Maintenance Systems

Module 5 - Maintenance Organizations & Functions

Module 6 - Reliability Centered Maintenance, Part 1: Reliability Management & Program Planning

Module 7 - Reliability Centered Maintenance, Part 2: Reliability Measures, FRACAS, FMEA

Module 8 - Quality Systems, Part 1: A Systems Approach

Module 9 - Quality Systems, Part 2: Service Difficulty Reporting & Quality Failure

Module 10 - Aircraft Certification Authority, Rules & Standards

Module 11 - Certification Documentation, Processes, & Designated Roles

Module 12 - Safety Organizations & Systems

Module 13 - Aerospace Industry Outlook & Forecasts

Module 14 - The Rise of Unmanned Air Cargo & Urban Air Mobility

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### ***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](#).

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## **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.