



# **AVAT11010 Aviation Safety Fundamentals**

## **Term 3 - 2024**

Profile information current as at 06/07/2025 02:36 am

All details in this unit profile for AVAT11010 have been officially approved by CQUniversity and represent a learning partnership between the University and you (our student). The information will not be changed unless absolutely necessary and any change will be clearly indicated by an approved correction included in the profile.

### **Corrections**

#### **Unit Profile Correction added on 12-11-24**

Assessment 2 (report requirements) should state:

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Report Requirements: You must complete your report using either Overleaf or Word. You must follow the attached templates. Length: The report should be between 5-10 pages, excluding the reference list. Format: Follow APA formatting guidelines, such as: Use a 1-inch margin on all sides. Utilize 12-point Times New Roman font. Ensure the document is double-spaced. Visuals: Incorporate relevant figures and tables to support your analysis. If you have extensive visuals, place them in an appendix. Your report must be uploaded to Moodle by the specified deadline in the unit profile. -----

## General Information

### Overview

This unit will provide you with a broad understanding of the application of safety processes within the aviation industry. You will learn basic concepts of system safety as they developed alongside the aviation industry. You will also learn about standards and practices for safety management with reference to the International Civil Aviation Organization (ICAO) and CASA. You will recognize a systematic approach that is established using four main components including Safety Policy, Safety Assurance, Safety Risk Management, and Safety Promotion to manage safety and how human factors are related within the four components of safety. You will also develop a solid understanding of safety culture and its associated subcultures.

### Details

Career Level: *Undergraduate*

Unit Level: *Level 1*

Credit Points: 6

Student Contribution Band: 8

Fraction of Full-Time Student Load: 0.125

### Pre-requisites or Co-requisites

There are no requisites for this unit.

Important note: Students enrolled in a subsequent unit who failed their pre-requisite unit, should drop the subsequent unit before the census date or within 10 working days of Fail grade notification. Students who do not drop the unit in this timeframe cannot later drop the unit without academic and financial liability. See details in the [Assessment Policy and Procedure \(Higher Education Coursework\)](#).

### Offerings For Term 3 - 2024

- Cairns
- Online

### Attendance Requirements

All on-campus students are expected to attend scheduled classes – in some units, these classes are identified as a mandatory (pass/fail) component and attendance is compulsory. International students, on a student visa, must maintain a full time study load and meet both attendance and academic progress requirements in each study period (satisfactory attendance for International students is defined as maintaining at least an 80% attendance record).

### Website

[This unit has a website, within the Moodle system, which is available two weeks before the start of term. It is important that you visit your Moodle site throughout the term. Please visit Moodle for more information.](#)

## Class and Assessment Overview

### Recommended Student Time Commitment

Each 6-credit Undergraduate unit at CQUniversity requires an overall time commitment of an average of 12.5 hours of study per week, making a total of 150 hours for the unit.

### Class Timetable

#### [Regional Campuses](#)

Bundaberg, Cairns, Emerald, Gladstone, Mackay, Rockhampton, Townsville

#### [Metropolitan Campuses](#)

Adelaide, Brisbane, Melbourne, Perth, Sydney

### Assessment Overview

#### 1. **Online Quiz(zes)**

Weighting: 30%

#### 2. **Case Study**

Weighting: 30%

#### 3. **Online Test**

Weighting: 40%

### Assessment Grading

This is a graded unit: your overall grade will be calculated from the marks or grades for each assessment task, based on the relative weightings shown in the table above. You must obtain an overall mark for the unit of at least 50%, or an overall grade of 'pass' in order to pass the unit. If any 'pass/fail' tasks are shown in the table above they must also be completed successfully ('pass' grade). You must also meet any minimum mark requirements specified for a particular assessment task, as detailed in the 'assessment task' section (note that in some instances, the minimum mark for a task may be greater than 50%). Consult the [University's Grades and Results Policy](#) for more details of interim results and final grades.

## CQUniversity Policies

**All University policies are available on the [CQUniversity Policy site](#).**

You may wish to view these policies:

- Grades and Results Policy
- Assessment Policy and Procedure (Higher Education Coursework)
- Review of Grade Procedure
- Student Academic Integrity Policy and Procedure
- Monitoring Academic Progress (MAP) Policy and Procedure – Domestic Students
- Monitoring Academic Progress (MAP) Policy and Procedure – International Students
- Student Refund and Credit Balance Policy and Procedure
- Student Feedback – Compliments and Complaints Policy and Procedure
- Information and Communications Technology Acceptable Use Policy and Procedure

This list is not an exhaustive list of all University policies. The full list of University policies are available on the [CQUniversity Policy site](#).

## Previous Student Feedback

### Feedback, Recommendations and Responses

Every unit is reviewed for enhancement each year. At the most recent review, the following staff and student feedback items were identified and recommendations were made.

#### Feedback from SUTE

**Feedback**

Increased feedback on assessments.

**Recommendation**

Should provide more opportunities for assessment review.

#### Feedback from Results

**Feedback**

Improve student pass rate.

**Recommendation**

Should add intervention strategies for students at risk of failing.

## Unit Learning Outcomes

**On successful completion of this unit, you will be able to:**

1. Describe the aviation industry organizational accident assessment process, including basic concepts of hazards, risks and losses.
2. Justify the development of contemporary safety management systems.
3. Explore applications of safety management used in aviation organizations.
4. Justify the importance of safety culture and sub-cultures to aviation safety management

N/A















## Alignment of Learning Outcomes, Assessment and Graduate Attributes

 N/A Level	 Introductory Level	 Intermediate Level	 Graduate Level	 Professional Level	 Advanced Level
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### Alignment of Assessment Tasks to Learning Outcomes

Assessment Tasks	Learning Outcomes			
	1	2	3	4
1 - Online Quiz(zes) - 30%	•	•	•	
2 - Case Study - 30%	•	•	•	•
3 - Online Test - 40%	•	•		•

### Alignment of Graduate Attributes to Learning Outcomes

Graduate Attributes	Learning Outcomes			
	1	2	3	4
1 - Communication				
2 - Problem Solving				
3 - Critical Thinking				
4 - Information Literacy				
5 - Team Work				
6 - Information Technology Competence				
7 - Cross Cultural Competence				
8 - Ethical practice				
9 - Social Innovation				
10 - Aboriginal and Torres Strait Islander Cultures				

## Textbooks and Resources

### Textbooks

AVAT11010

#### Prescribed

##### **Handbook of Aviation Human Factors**

Edition: 2 (2010)

Authors: Garland, Wise, Hopkin

ISBN: 1-04-007280-1

AVAT11010

#### Prescribed

##### **Managing the Risks of Organizational Accidents**

(2016)

Authors: James Reason

ISBN: 1-134-85542-7

#### **Additional Textbook Information**

Both texts are available online through the CQU library website

### IT Resources

#### **You will need access to the following IT resources:**

- CQUniversity Student Email
- Internet
- Unit Website (Moodle)
- APA Style Writing - <https://apastyle.apa.org/products/publication-manual-7th-edition>

## Referencing Style

All submissions for this unit must use the referencing style: [American Psychological Association 7th Edition \(APA 7th edition\)](#)

For further information, see the Assessment Tasks.

## Teaching Contacts

**Qilei Zhang** Unit Coordinator

[q.zhang@cqu.edu.au](mailto:q.zhang@cqu.edu.au)

## Schedule

### **Week 1 - 04 Nov 2024**

Module/Topic	Chapter	Events and Submissions/Topic
Unit introduction		
Historical Overview of Aviation Human Factors	JR1	
Individual and organizational accidents	JW1	
Nature and variety of defences		

### **Week 2 - 11 Nov 2024**

Module/Topic	Chapter	Events and Submissions/Topic
Swiss Cheese Model		
Active failures and latent conditions	JR1	
Accident trajectory		

**Week 3 - 18 Nov 2024**

Module/Topic	Chapter	Events and Submissions/Topic
Human contribution to accidents Human performance Processes underlying human performance	JR4 JW7	

**Week 4 - 25 Nov 2024**

Module/Topic	Chapter	Events and Submissions/Topic
Module/Topic Errors and successful actions Violations Rule-related behaviors Team Process	JR4 JW9	

**Week 5 - 02 Dec 2024**

Module/Topic	Chapter	Events and Submissions/Topic
Group Presentations		Submit both your presentation slides and written report to Moodle before the class.  <b>Case Study Project</b> Due: Week 5 Monday (2 Dec 2024) 11:59 am AEST

**Week 6 - 09 Dec 2024**

Module/Topic	Chapter	Events and Submissions/Topic
Error management Blame cycle	JR7	

**Week 7 - 16 Dec 2024**

Module/Topic	Chapter	Events and Submissions/Topic
CRM Engineering a safety culture Safety Subcultures	JR9 JW10	

**Vacation Week - 23 Dec 2024**

Module/Topic	Chapter	Events and Submissions/Topic

**Vacation Week - 30 Dec 2024**

Module/Topic	Chapter	Events and Submissions/Topic

**Week 8 - 06 Jan 2025**

Module/Topic	Chapter	Events and Submissions/Topic
Safety subcultures continued	JR9	

**Week 9 - 13 Jan 2025**

Module/Topic	Chapter	Events and Submissions/Topic
SMS1	Reference materials provided	

**Week 10 - 20 Jan 2025**

Module/Topic	Chapter	Events and Submissions/Topic
SMS2	Reference materials provided	

**Week 11 - 27 Jan 2025**

Module/Topic	Chapter	Events and Submissions/Topic
SMS3	Reference materials provided	

**Week 12 - 03 Feb 2025**

Module/Topic	Chapter	Events and Submissions/Topic

**Exam Week - 10 Feb 2025****Module/Topic****Chapter****Events and Submissions/Topic**

**Final Test** Due: Exam Week Friday  
(14 Feb 2025) 5:00 pm AEST

## Term Specific Information

**Communication**

Please use AVAT11010 as the first word in the subject line for emails. Typically, I will be able to answer emails within 2 business days, unless I am away for an extended period of time. In your emails, always end the email with your name and CQU email address.

**Writing Style**

Students are recommended to purchase the Manual of Publication by the American Psychological Association (APA) (7th Ed.). It is the major reference source for style or format questions in aviation program. The format of references, citations, quotation, and headings should be identical to APA requirements. Be sure to read and understand the plagiarism sections.

**Use of Generative AI**

The use of generative AI (e.g. ChatGPT) to create original text is strictly prohibited in this unit. Students may use AI-based support tools to enhance the quality of existing text or improve spelling, grammar, etc. To ensure appropriate use of generative AI tools and avoid accidental misuse, students should liaise with the CQU Academic Learning Centre (ALC) at <https://www.cqu.edu.au/study/experience/support/academic-learning-centres>.

## Assessment Tasks

### 1 Online Quizzes

**Assessment Type**

Online Quiz(zes)

**Task Description**

There are 3 quizzes throughout this unit:

1. Quiz 1 will be conducted at the end of Week 2, covering basic safety concepts and SCM.
2. Quiz 2 will be conducted at the end of Week 4, covering human contribution to accidents and performance concepts.
3. Quiz 3 will be conducted at the end of Week 8, covering safety culture and safety subcultures.

You have 30 minutes to complete each quiz, and only one attempt is permitted. Each quiz will be available on Moodle from Monday evening of the scheduled week and must be submitted by Friday at 5:00 PM (AEST) via the relevant portal in Moodle.

**Number of Quizzes**

3

**Frequency of Quizzes**

Other

**Assessment Due Date****Return Date to Students****Weighting**

30%

**Assessment Criteria**

All quizzes will be scored automatically.

**Referencing Style**

- [American Psychological Association 7th Edition \(APA 7th edition\)](#)



**Submission**

Online

**Submission Instructions**

Submit via the relevant Moodle portal.

**Learning Outcomes Assessed**

- Describe the aviation industry organizational accident assessment process, including basic concepts of hazards, risks and losses.
- Justify the development of contemporary safety management systems.
- Explore applications of safety management used in aviation organizations.

## 2 Case Study Project

**Assessment Type**

Case Study

**Task Description****Overview**

You are required to choose an airline or airport accident to research and analyze using the Swiss Cheese Model. You may work individually or collaborate in pairs (maximum of two people per group). This project involves two components:

1. Presentation: Prepare a 5~10-minute presentation on your case study to be delivered to the class either in person or via Zoom during Week 5.
2. Written Report: Submit a comprehensive report detailing your analysis.

**Report Requirements:**

- You must complete your report within the MyStudy portal of Moodle, which includes a template that you must follow.
- Length: The report should be between 5–10 pages, excluding the reference list, figures, and tables.
- Format: Follow APA formatting guidelines, such as:
  - Use a 1-inch margin on all sides.
  - Utilize 12-point Times New Roman font.
  - Ensure the document is double-spaced.
- Visuals: Incorporate relevant figures and tables to support your analysis. If you have extensive visuals, place them in an appendix.
- Your report must be uploaded to Moodle by the specified deadline in the unit profile.

**Presentation Requirements**

- Your presentation must adhere to the 5–10 minute time frame. Presentations exceeding the time limit by over one minute will incur a 10% grade deduction.
- Students are encouraged to be creative with the presentation style and formatting, however students should ensure that the presentation is easy to understand and is not distracting from the content.
- Your presentation must be uploaded to Moodle by the specified deadline in the unit profile.

**Assessment Due Date**

Week 5 Monday (2 Dec 2024) 11:59 am AEST

During regularly scheduled class time

**Return Date to Students****Weighting**

30%

**Assessment Criteria**

The overall objective is to accurately apply the Swiss Cheese Model, including the identification of active failures and latent conditions.

Your Case Study Project will be evaluated based on both the presentation and the written report. The total available points for this assessment are 30 points, allocated as follows:

1. **Presentation (10 Points)**
  - Content Understanding (4 Points): Clear and concise background of the accident.
  - Delivery and Communication (4 Points): Presentation is well-organized and engaging.
  - Professionalism (2 Points): Adherence to presentation guidelines and time management.
2. **Written Report (20 Points)**

- Accident Background and Narrative (5 Points).
- Application of the Swiss Cheese Model (8 Points).
- Clarity and Cohesion (3 Points).
- Writing Quality (2 Points).
- Formatting and Presentation (1 Point).
- References and Citations (1 Point).

### 3. Submission instructions followed (5 Points)

Total Points: 35

#### Referencing Style

- [American Psychological Association 7th Edition \(APA 7th edition\)](#)

#### Submission

Online Group

#### Learning Outcomes Assessed

- Describe the aviation industry organizational accident assessment process, including basic concepts of hazards, risks and losses.
- Justify the development of contemporary safety management systems.
- Explore applications of safety management used in aviation organizations.
- Justify the importance of safety culture and sub-cultures to aviation safety management

## 3 Final Test

#### Assessment Type

Online Test

#### Task Description

The final test will be conducted during the exam week and will cover **Safety Management Systems** and **Safety Culture** concepts discussed in Weeks 7–12.

You have up to 2 hours to complete the test, and only one attempt is permitted. The test will open on Monday evening in exam week and must be submitted by Friday at 5PM via the relevant portal in Moodle.

#### Instructions:

- Accessing the Test: The test will be accessible through the designated portal on Moodle starting Monday evening of the exam week.
- Submission Deadline: Ensure you submit your completed test by Friday at 5:00 PM (AEST) of the exam week. Late submissions will not be accepted.
- Technical Requirements: Make sure you have a reliable internet connection before starting the test.
- One-Time Entry: Once you begin the test, you must complete it in one sitting within the 2-hour time limit.

#### Assessment Due Date

Exam Week Friday (14 Feb 2025) 5:00 pm AEST

Submit via the relevant portal in Moodle.

#### Return Date to Students

#### Weighting

40%

#### Assessment Criteria

This test is a combination of multiple choice and short-answer questions. Review all materials and concepts from Weeks 7–12 to ensure you are well-prepared.

#### Referencing Style

- [American Psychological Association 7th Edition \(APA 7th edition\)](#)

#### Submission

Online

#### Submission Instructions

Submit via the relevant portal in Moodle.

## Learning Outcomes Assessed

- Describe the aviation industry organizational accident assessment process, including basic concepts of hazards, risks and losses.
- Justify the development of contemporary safety management systems.
- Justify the importance of safety culture and sub-cultures to aviation safety management

## Academic Integrity Statement

As a CQUniversity student you are expected to act honestly in all aspects of your academic work.

Any assessable work undertaken or submitted for review or assessment must be your own work. Assessable work is any type of work you do to meet the assessment requirements in the unit, including draft work submitted for review and feedback and final work to be assessed.

When you use the ideas, words or data of others in your assessment, you must thoroughly and clearly acknowledge the source of this information by using the correct referencing style for your unit. Using others' work without proper acknowledgement may be considered a form of intellectual dishonesty.

Participating honestly, respectfully, responsibly, and fairly in your university study ensures the CQUniversity qualification you earn will be valued as a true indication of your individual academic achievement and will continue to receive the respect and recognition it deserves.

As a student, you are responsible for reading and following CQUniversity's policies, including the [Student Academic Integrity Policy and Procedure](#). This policy sets out CQUniversity's expectations of you to act with integrity, examples of academic integrity breaches to avoid, the processes used to address alleged breaches of academic integrity, and potential penalties.

### What is a breach of academic integrity?

A breach of academic integrity includes but is not limited to plagiarism, self-plagiarism, collusion, cheating, contract cheating, and academic misconduct. The Student Academic Integrity Policy and Procedure defines what these terms mean and gives examples.

### Why is academic integrity important?

A breach of academic integrity may result in one or more penalties, including suspension or even expulsion from the University. It can also have negative implications for student visas and future enrolment at CQUniversity or elsewhere. Students who engage in contract cheating also risk being blackmailed by contract cheating services.

### Where can I get assistance?

For academic advice and guidance, the [Academic Learning Centre \(ALC\)](#) can support you in becoming confident in completing assessments with integrity and of high standard.

### What can you do to act with integrity?

**Be Honest**

If your assessment task is done by someone else, it would be dishonest of you to claim it as your own

**Seek Help**

If you are not sure about how to cite or reference in essays, reports etc, then seek help from your lecturer, the library or the Academic Learning Centre (ALC)

**Produce Original Work**

Originality comes from your ability to read widely, think critically, and apply your gained knowledge to address a question or problem