



AVAT12011 Aviation Human Factors (Commercial Pilot Licence)

Term 2 - 2021

Profile information current as at 26/04/2024 02:18 am

All details in this unit profile for AVAT12011 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 20-09-21

This amendment replaces the invigilated exam with an online test. There are no changes to the assessment weightings, minimum marks or learning outcomes.

The online test will be held at the same time and date as the previously scheduled exam in the exam timetable for T2/2021.

General Information

Overview

Aviation Human Factors (Commercial Pilot Licence) will provide you with knowledge of human performance and human limitations associated with subsonic, low altitude flight in small commercial aircraft. You will also learn about the importance of organisational culture and national culture when operating in the aviation industry. You will cover the aeronautical knowledge requirements of the Civil Aviation Safety Authority Commercial Pilot Licence, Human Factors Syllabus. You will be presented with some of the medical challenges of subsonic speed and low altitude flight. You will examine problems of perception, cognition and behaviour related to flight and the errors that are caused by human limitations. You will reflect on the success of crew resource management strategies to improve pilot judgement and decision making and learn about the principles of threat and error management.

Details

Career Level: *Undergraduate*

Unit Level: *Level 2*

Credit Points: 6

Student Contribution Band: 8

Fraction of Full-Time Student Load: 0.125

Pre-requisites or Co-requisites

Prerequisites: AVAT11002 Basic Aeronautical Knowledge; AVAT11003 Basic Aeronautical Practice; AVAT11006 Aviation Law and AVAT 11007-Flight Planning Performance and Operation-Private Pilot License (PPL).

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 2 - 2021

- Bundaberg
- Cairns
- Online
- Perth

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. **Written Assessment**

Weighting: 40%

2. **Examination**

Weighting: 60%

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 Student evaluation

Feedback

Assessment feedback was insufficient/unclear.

Recommendation

Assessment rubric and feedback format be updated to make it easier to provide detailed feedback.

Feedback from UC observation

Feedback

Student engagement was low.

Recommendation

Develop interactive learning resources.

Unit Learning Outcomes

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

1. Explain the human medical and physiological responses to flight
2. Examine human limitations of perception, cognition, and information processing related to flight
3. Describe human error and behavioural limitations and errors applicable to flight
4. Reflect on the resource management, judgement, and decision making required of a professional pilot
5. Discuss the principles of threat and error management.

N/A

Alignment of Learning Outcomes, Assessment and Graduate Attributes

N/A Level
 Introductory Level
 Intermediate Level
 Graduate Level
 Professional Level
 Advanced Level

Alignment of Assessment Tasks to Learning Outcomes

Assessment Tasks	Learning Outcomes				
	1	2	3	4	5
1 - Written Assessment - 40%	•	•	•	•	•
2 - Examination - 60%	•	•	•	•	•

Alignment of Graduate Attributes to Learning Outcomes

Graduate Attributes	Learning Outcomes				
	1	2	3	4	5
1 - Communication	•	•	•	•	•

Graduate Attributes	Learning Outcomes				
	1	2	3	4	5
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					

Alignment of Assessment Tasks to Graduate Attributes

Assessment Tasks	Graduate Attributes									
	1	2	3	4	5	6	7	8	9	10
1 - Written Assessment - 40%	•	•	•	•		•				
2 - Examination - 60%	•	•	•			•				

Textbooks and Resources

Textbooks

AVAT12011

Prescribed

Human being Pilot

Authors: David Robson

Aviation Theory Centre Pty Ltd

Binding: Paperback

IT Resources

You will need access to the following IT resources:

- CQUniversity Student Email
- Internet
- Unit Website (Moodle)

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

Aruna Ranganathan Unit Coordinator

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Schedule

Week 1 - 12 Jul 2021

Module/Topic	Chapter	Events and Submissions/Topic
Historical Overview of Human Factors in Aviation The Human Body		Lecture and Tutorial

Week 2 - 19 Jul 2021

Module/Topic	Chapter	Events and Submissions/Topic
Human Capabilities and Performance Health and Well-being		Lecture and Tutorial

Week 3 - 26 Jul 2021

Module/Topic	Chapter	Events and Submissions/Topic
Vision, Hearing and Balance		Lecture and Tutorial

Week 4 - 02 Aug 2021

Module/Topic	Chapter	Events and Submissions/Topic
Fatigue and Stress		Lecture and Tutorial

Week 5 - 09 Aug 2021

Module/Topic	Chapter	Events and Submissions/Topic
Decision Making and Automation in Aviation		Lecture and Tutorial

Vacation Week - 16 Aug 2021

Module/Topic	Chapter	Events and Submissions/Topic
Vacation		

Week 6 - 23 Aug 2021

Module/Topic	Chapter	Events and Submissions/Topic
Training, Pilot Performance Teamwork, Crew Resource Management		Lecture and Tutorial

Week 7 - 30 Aug 2021

Module/Topic	Chapter	Events and Submissions/Topic
Flight Deck Design, Displays and Controls		Lecture and Tutorial
		Written Assessment Due: Week 7 Monday (30 Aug 2021) 11:59 pm AEST

Week 8 - 06 Sep 2021

Module/Topic	Chapter	Events and Submissions/Topic
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Flight Simulation and Error Management

Lecture and Tutorial

Week 9 - 13 Sep 2021

Module/Topic	Chapter	Events and Submissions/Topic
Threat Management, Crew co-ordination and Enforcement Bodies		Lecture and Tutorial

Week 10 - 20 Sep 2021

Module/Topic	Chapter	Events and Submissions/Topic
Information Resources, Air Traffic Control, Meteorology and Maintenance		Lecture and Tutorial

Week 11 - 27 Sep 2021

Module/Topic	Chapter	Events and Submissions/Topic
Accident/Incident Analysis, Investigation and Responsibilities		Lecture and Tutorial

Week 12 - 04 Oct 2021

Module/Topic	Chapter	Events and Submissions/Topic
First Aid, Survival and Security		Lecture and Tutorial

Review/Exam Week - 11 Oct 2021

Module/Topic	Chapter	Events and Submissions/Topic
Review		Review

Exam Week - 18 Oct 2021

Module/Topic	Chapter	Events and Submissions/Topic
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Assessment Tasks

1 Written Assessment

Assessment Type

Written Assessment

Task Description

This assessment is designed to strengthen your understanding of Human Factors in the operation of aircraft in the aviation industry including the impact on safety standards by the introduction of this element to the industry. Your report should nominate and analyze a minimum of six contributing human factors elements that are evident in the QF1, Boeing 747-438, VH-OJH Bangkok, Thailand report.

In order to achieve this task you will need to:

- Be familiar with the readings as they are made available on the Moodle site:
- Recognise the human activities that are integral to the operation of highly technical equipment in modern cockpits:
- Demonstrate a working knowledge, and limitations of, human beings to operate in the demanding environment called "the glass cockpit".

This assignment is to be written in report format. The required word count is 3000 words plus or minus 10%.

Please note the following details:

- A report presents the results of an investigation of a topic or issue in a formal objective manner.

- Reports typically include a title page, table of contents, executive summary, introduction, analysis (main body), conclusions, recommendations, references and an appendix.
- Text should be word-processed, with appropriate layout and use of headings/sub-headings.
- A paragraph should contain one main idea. Refer to graphics, figures and tables, etc. in the paragraphs. Make sure these illustrations are clearly labelled.
- The list of references should form the last page or two, at the end of the assessment. You must always acknowledge the source of information when paraphrasing, using images, direct quotes or citing any other mediums of content.
- Please upload the file as either a PDF or Word Document.

Assessment Due Date

Week 7 Monday (30 Aug 2021) 11:59 pm AEST

Return Date to Students

Week 11 Monday (27 Sept 2021)

Weighting

40%

Assessment Criteria

No Assessment Criteria

Referencing Style

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

Submission

Online

Learning Outcomes Assessed

- Explain the human medical and physiological responses to flight
- Examine human limitations of perception, cognition, and information processing related to flight
- Describe human error and behavioural limitations and errors applicable to flight
- Reflect on the resource management, judgement, and decision making required of a professional pilot
- Discuss the principles of threat and error management.

Graduate Attributes

- Communication
- Problem Solving
- Critical Thinking
- Information Literacy
- Information Technology Competence

Examination

Outline

Complete an invigilated examination.

Date

During the examination period at a CQUniversity examination centre.

Weighting

60%

Length

120 minutes

Minimum mark or grade

50%

Exam Conditions

Closed Book.

Materials

Dictionary - non-electronic, concise, direct translation only (dictionary must not contain any notes or comments).

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