



# **AVAT12011 Aviation Human Factors (Commercial Pilot Licence)**

## **Term 2 - 2018**

Profile information current as at 04/05/2024 11:49 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 03-08-18**

Examination duration: 120 minutes

## 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, 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 and AVAT11006 Aviation Law

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 - 2018

- Bundaberg
- Cairns
- Distance

### 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. **Group Work**

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](#).

## Unit Learning Outcomes

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

1. Explain the medical and physiological aspects related to flight
2. Examine human limitations of perception, cognition and information processing limitations related to flight
3. Describe human behaviour 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



### Alignment of Assessment Tasks to Learning Outcomes

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

### Alignment of Graduate Attributes to Learning Outcomes

Graduate Attributes	Learning Outcomes				
	1	2	3	4	5
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					

### Alignment of Assessment Tasks to Graduate Attributes

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

## Textbooks and Resources

### Textbooks

AVAT12011

#### Supplementary

#### Human Factors for the Private & Commercial Pilot Licences

Edition: 4th Edn (2017)

Authors: David Robson

Aviation Theory Centre Pty Ltd

Brisbane , Qld , Australia

ISBN: 978-1-875537-77-8

Binding: Hardcover

### 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: [Harvard \(author-date\)](#)

For further information, see the Assessment Tasks.

## Teaching Contacts

**John Blair** Unit Coordinator

[j.blair@cqu.edu.au](mailto:j.blair@cqu.edu.au)

## Schedule

### Week 1 - 09 Jul 2018

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

### Week 2 - 16 Jul 2018

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

### Week 3 - 23 Jul 2018

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

### Week 4 - 30 Jul 2018

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

### Week 5 - 06 Aug 2018

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

Lecture and Tutorial

### Vacation Week - 13 Aug 2018

Module/Topic

Chapter

Events and Submissions/Topic

Vacation

### Week 6 - 20 Aug 2018

Module/Topic

Chapter

Events and Submissions/Topic

Training, Pilot Performance  
Teamwork, Crew Resource  
Management

Lecture and Tutorial

### Week 7 - 27 Aug 2018

Module/Topic

Chapter

Events and Submissions/Topic

Flight Deck Design, Displays and  
Controls

Lecture and Tutorial

### Week 8 - 03 Sep 2018

Module/Topic

Chapter

Events and Submissions/Topic

Flight Simulation and Error  
Management

Lecture and Tutorial

### Week 9 - 10 Sep 2018

Module/Topic

Chapter

Events and Submissions/Topic

Threat Management, Crew co-  
ordination and Enforcement Bodies

Lecture and Tutorial

**Written Assignment** Due: Week 9  
Monday (10 Sept 2018) 11:45 pm  
AEST

### Week 10 - 17 Sep 2018

Module/Topic

Chapter

Events and Submissions/Topic

Information Resources, Air Traffic  
Control, Meteorology and  
Maintenance

Lecture and Tutorial

### Week 11 - 24 Sep 2018

Module/Topic

Chapter

Events and Submissions/Topic

Accident/Incident Analysis,  
Investigation and Responsibilities

Lecture and Tutorial

### Week 12 - 01 Oct 2018

Module/Topic

Chapter

Events and Submissions/Topic

First Aid, Survival and Security

Lecture and Tutorial

### Review/Exam Week - 08 Oct 2018

Module/Topic

Chapter

Events and Submissions/Topic

Review

Review

### Exam Week - 15 Oct 2018

Module/Topic

Chapter

Events and Submissions/Topic

## Assessment Tasks

### 1 Written Assignment

**Assessment Type**

Group Work

**Task Description**

See Moodle for Specific Exercise.

This assignment is designed to assist retention of material provided during the first nine weeks of Human Factors in the Aviation Industry.

Additionally, students will be required to research and report issues relating to the Human Factors that influence flight deck operations in contemporary commercial aircraft operations. Specifically, elements of crew resource management, inter-crew communications, situational awareness and control and commands should be critically analysed to ensure safe and efficient operation of commercial aircraft.

Your assessment document must be produced in electronic form (either as (a) a single page word-processed document, (b) single page Publisher document saved in a PDF format, or (c) as a single Power-point slide saved in a PDF format) and should be submitted through the assessment link in Moodle, by uploading your file following the on-screen instructions. Note: that all submissions are processed through the similarity detection software (called Turnitin), hence the requirement to submit the Publisher or Power-point documents as PDF files. You must ensure that all of the work is your own, in line with the University Policy requirements.

**Assessment Due Date**

Week 9 Monday (10 Sept 2018) 11:45 pm AEST

**Return Date to Students**

Exam Week Monday (15 Oct 2018)

**Weighting**

40%

**Minimum mark or grade**

51%

**Assessment Criteria**

Students will be provided with relevant criteria during lecture week 1.

**Referencing Style**

- [Harvard \(author-date\)](#)

**Submission**

Online

**Learning Outcomes Assessed**

- Explain the medical and physiological aspects related to flight
- Examine human limitations of perception, cognition and information processing limitations related to flight
- Describe human behaviour 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
- Team Work
- Information Technology Competence
- Cross Cultural Competence
- Ethical practice

## 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**

51% of overall marks allocated to the examination paper.

**Exam Conditions**

Open 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