AVAT12011 *Commercial Pilot Licence Human Factors*
Term 2 - 2023

Profile information current as at 29/04/2024 06:35 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.

General Information

Overview

This unit 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

Students must meet all requisites: 1. AVAT11002 Basic Aeronautical Knowledge OR (AVAT11012 Aviation Practice AND AVAT11013 Introduction to Aviation); AND 2. AVAT11005 Flight Fundamentals; AND 3. AVAT11010 Aviation Safety Fundamentals OR AVAT11007 Flight Planning, Performance, and Operation.
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 - 2023

- Bundaberg
- 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. **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 Unit Coordinator Observation

Feedback

Case-based scenarios have increased student engagement during lectures/tutorials.

Recommendation

To continue the good practice.

Feedback from Unit Coordinator Observation

Feedback

Aviation incidents/accidents of the recent past are a good feed for discussions on HF related issues.

Recommendation

Aviation incidents/accidents of the recent past are to be included in discussions during tutorials.

Unit Learning Outcomes

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

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

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Schedule

Week 1 - 10 Jul 2023

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

Week 2 - 17 Jul 2023

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

Week 3 - 24 Jul 2023

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

Week 4 - 31 Jul 2023

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

Week 5 - 07 Aug 2023

Module/Topic	Chapter	Events and Submissions/Topic

| | Decision Making and Automation in Aviation | | Lecture and Tutorial |

Vacation Week - 14 Aug 2023

Module/Topic	Chapter	Events and Submissions/Topic
Vacation		

Week 6 - 21 Aug 2023

Module/Topic	Chapter	Events and Submissions/Topic
Training, Pilot Performance Teamwork, Crew Resource Management		Lecture and Tutorial **Written Assessment** Due: Week 6 Wednesday (23 Aug 2023) 11:45 pm AEST

Week 7 - 28 Aug 2023

Module/Topic	Chapter	Events and Submissions/Topic
Flight Deck Design, Displays and Controls		Lecture and Tutorial

Week 8 - 04 Sep 2023

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

Week 9 - 11 Sep 2023

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

Week 10 - 18 Sep 2023

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

Week 11 - 25 Sep 2023

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

Week 12 - 02 Oct 2023

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

Review/Exam Week - 09 Oct 2023

Module/Topic	Chapter	Events and Submissions/Topic
Review		Review

Exam Week - 16 Oct 2023

Module/Topic	Chapter	Events and Submissions/Topic

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 6 Wednesday (23 Aug 2023) 11:45 pm AEST

Return Date to Students
Week 8 Wednesday (6 Sept 2023)

Weighting
40%

Assessment Criteria
Rubric will be made available in Moodle

Referencing Style

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

Submission
Online

Learning Outcomes Assessed

- Explain the human medical and physiological responses to the flight
- Examine human limitations of perception, cognition, and information processing related to flight
- Describe the 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.

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
Restricted.

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