



AVAT11011 Human Factors in Airline and Airport Operations

Term 2 - 2022

Profile information current as at 30/04/2024 01:01 pm

All details in this unit profile for AVAT11011 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 assist you to develop an understanding of the relationship between human physiology/psychology and the aviation environment by focusing on the function and limitations of the human body. You will examine problems of perception, cognition and behaviour related to airline operations and the errors and consequences that are caused by human limitations. You will recognise and appropriately apply the principles of human factors to situations in which the relationship between the operator and the task are incompatible. You will learn several important factors including past experiences, a variety of cognitive biases, an escalation of commitment and sunk outcomes, individual differences, and a belief in personal relevance that influence decision making. You will consider management strategies for scenarios unique to airport and airline management such as the check-in process and boarding process.

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 2 - 2022

No offerings for AVAT11011

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. **Essay**

Weighting: 30%

3. **Group Work**

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](#).

Unit Learning Outcomes

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

1. Discuss the special restrictions which apply to human physiology and psychology in the aviation context
2. Describe how the human body is affected by the flight environment
3. Apply the principles of human factors in aviation operations and management
4. Examine how human behaviour affects the work culture, leadership and human resource management within the aviation context
5. Work in teams with a focus on safety, quality, legality, and profitability applying ethical standards with professional accountability
6. Communicate effectively in oral and written form in a professional aviation context.

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	6
1 - Online Quiz(zes) - 30%	•	•	•			
2 - Essay - 30%	•	•	•	•		•
3 - Group Work - 40%				•	•	•

Alignment of Graduate Attributes to Learning Outcomes

Graduate Attributes	Learning Outcomes					
	1	2	3	4	5	6
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			•	•	•	

Graduate Attributes	Learning Outcomes					
	1	2	3	4	5	6
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 - Online Quiz(zes) - 30%		•				•				
2 - Essay - 30%	•		•	•		•		•	•	
3 - Group Work - 40%	•		•		•		•	•	•	

Textbooks and Resources

Textbooks

AVAT11011

Prescribed

Handbook of Aviation Human Factors

Authors: John A. Wise, , V. David Hopkin, , Daniel J. Garland, , and Barry H. Kantowitz

Binding: eBook

Additional Textbook Information

This book is available to read online through the Library website. If you would like your own copy, you can purchase either paper or eBook copies at the CQUni Bookshop here: <http://bookshop.cqu.edu.au> (search on the Unit code).

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

Steve Leib Unit Coordinator
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Schedule

Week 1 - 11 Jul 2022

Module/Topic	Chapter	Events and Submissions/Topic
Overview of Human Factors	JW1	

Week 2 - 18 Jul 2022

Module/Topic	Chapter	Events and Submissions/Topic
Measurement in Aviation Systems	JW3	

Week 3 - 25 Jul 2022

Module/Topic	Chapter	Events and Submissions/Topic
Processes underlying human performance	JW7	

Week 4 - 01 Aug 2022

Module/Topic	Chapter	Events and Submissions/Topic
Automation in Aviation Systems	JW8	

Week 5 - 08 Aug 2022

Module/Topic	Chapter	Events and Submissions/Topic
Team process	JW9	Human Factors Research Summary Due: Week 5 Friday (12 Aug 2022) 5:00 pm AEST

Vacation Week - 15 Aug 2022

Module/Topic	Chapter	Events and Submissions/Topic

Week 6 - 22 Aug 2022

Module/Topic	Chapter	Events and Submissions/Topic
CRM	JW10	

Week 7 - 29 Aug 2022

Module/Topic	Chapter	Events and Submissions/Topic
Fatigue and Biological Rhythms	JW11	

Week 8 - 05 Sep 2022

Module/Topic	Chapter	Events and Submissions/Topic
Situation Awareness in Aviation Systems Part I	JW12	

Week 9 - 12 Sep 2022

Module/Topic	Chapter	Events and Submissions/Topic
Situation Awareness in Aviation Systems Part II	JW12	

Week 10 - 19 Sep 2022

Module/Topic	Chapter	Events and Submissions/Topic
Pilot Performance	JW14	

Week 11 - 26 Sep 2022

Module/Topic	Chapter	Events and Submissions/Topic
Organizational Human Factors in Aviation	JW5	

Week 12 - 03 Oct 2022

Module/Topic	Chapter	Events and Submissions/Topic
Group Presentations	N/A	Accident Analysis Due: Week 12 Monday (3 Oct 2022) 11:45 pm AEST

Term Specific Information

Please contact the instructor via email.

Assessment Tasks

1 Online Quizzes

Assessment Type

Online Quiz(zes)

Task Description

There will be 3 online quizzes in this unit:

1. At the end of Week 3
2. At the end of Week 7
3. At the end of Week 11

These will cover only the material after the previous quiz. Quizzes will be opened on Moodle after class each week and must be submitted by Friday at 5PM. Students have up to 30 minutes to complete each quiz and only one attempt is permitted.

Number of Quizzes

3

Frequency of Quizzes

Other

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

30%

Assessment Criteria

Quizzes will be multiple choice and must be submitted to the relevant portal on Moodle.

Referencing Style

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

Submission

Online

Submission Instructions

Via the relevant portal in Moodle.

Learning Outcomes Assessed

- Discuss the special restrictions which apply to human physiology and psychology in the aviation context
- Describe how the human body is affected by the flight environment
- Apply the principles of human factors in aviation operations and management

Graduate Attributes

- Problem Solving

- Information Technology Competence

2 Human Factors Research Summary

Assessment Type

Essay

Task Description

Using the CQU Library, you will identify a piece of human factors in aviation research and write a summary report on it. Your selection must be:

- From a peer reviewed publication
- Address a human factors concept in an aviation application
- Published not earlier than 2010

Your report should be a minimum of 1500 words and be organized as follows:

- Introduction, including the purpose of the research, who conducted it, and when
- Summary of human factors theory relevant to the study
- How the study was conducted
- What were the findings
- Conclusion

Assessment Due Date

Week 5 Friday (12 Aug 2022) 5:00 pm AEST
Submitted to the relevant portal on Moodle

Return Date to Students

Week 6 Monday (22 Aug 2022)
Papers will be returned approximately a week after the due date.

Weighting

30%

Assessment Criteria

This assignment is worth 30 points:

- 10 points for an appropriate summary of the research
- 10 points for an accurate and thorough discussion of the human factors concepts presented
- 10 points for formatting, spelling, grammar, etc.

Late submissions will not be accepted.

Referencing Style

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

Submission

No submission method provided.

Learning Outcomes Assessed

- Discuss the special restrictions which apply to human physiology and psychology in the aviation context
- Describe how the human body is affected by the flight environment
- Apply the principles of human factors in aviation operations and management
- Examine how human behaviour affects the work culture, leadership and human resource management within the aviation context
- Communicate effectively in oral and written form in a professional aviation context.

Graduate Attributes

- Communication
- Critical Thinking
- Information Literacy
- Information Technology Competence
- Ethical practice
- Social Innovation

3 Accident Analysis

Assessment Type

Group Work

Task Description

In a group, you will complete a case study analysis of an aviation-related (airport or airline) accident.

Part A: You will complete a report on a major aviation accident of your choice with 3000 words +/- 10%, which should be organized as follows:

- Introduction
- Background of the Accident
- Human Factors Analysis (Relevant environmental issues, breakdowns, team aspects)
- Conclusion
- References

Your essay should also include a minimum of 5 references, including 2 references from peer-reviewed academic journals. All referencing must follow APA formatting.

Part B: You will complete a presentation in-class during Week 12 discussing your accident using a powerpoint presentation. Your presentation should summarize the content of your paper.

Assessment Due Date

Week 12 Monday (3 Oct 2022) 11:45 pm AEST

In-class

Return Date to Students**Weighting**

40%

Assessment Criteria

This assignment is worth 40 points:

- 10 points for an accurate and thorough discussion of the accident
- 20 points for an accurate and thorough discussion of Human Factors concepts
- 10 points for a smooth delivery and quality powerpoint presentation
- 10 points for formatting, spelling, grammar, etc.

Referencing Style

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

Submission

Online

Learning Outcomes Assessed

- Examine how human behaviour affects the work culture, leadership and human resource management within the aviation context
- Work in teams with a focus on safety, quality, legality, and profitability applying ethical standards with professional accountability
- Communicate effectively in oral and written form in a professional aviation context.

Graduate Attributes

- Communication
- Critical Thinking
- Team Work
- Cross Cultural Competence
- Ethical practice
- Social Innovation

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