



AVAT13023 Aviation Data Analysis

Term 1 - 2024

Profile information current as at 04/05/2024 02:58 pm

All details in this unit profile for AVAT13023 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

Aviation Data Analysis will introduce statistical analysis techniques for aviation service providers (Airports, Airlines and Air Traffic Control Management units), based on the International Civil Aviation Organisation (ICAO) program and recommendation on air transport. You will learn about applications of Statistical Analysis and Forecasting Techniques in management practice and, you will apply these techniques in quantitative practical workshops designed to improve your analytical skills in an aviation context.

Details

Career Level: *Undergraduate*

Unit Level: *Level 3*

Credit Points: 6

Student Contribution Band: 8

Fraction of Full-Time Student Load: 0.125

Pre-requisites or Co-requisites

Students must meet the following prerequisites: 1. Students must complete both of the following units: AVAT11008 Introduction to Aviation Management AVAT12020 Airline Resource Management 2. Students must also complete one of the following units: AVAT11013 Introduction to Aviation AVAT11002 Basic Aeronautical Knowledge

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 1 - 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. **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. Apply the International Civil Aviation Organisation (ICAO) Statistics Programme to an air transport scenario
2. Forecast aviation traffic through use of descriptive statistics principles including linear and multiple regression models
3. Discuss principles governing statistical activities and the methods of calculating airport performance measures
4. Demonstrate advanced management skills including problem-solving and written communication.

NA

Alignment of Learning Outcomes, Assessment and Graduate Attributes



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 - Group Work - 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

There are no required textbooks.

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

Wen-Chun Tseng Unit Coordinator
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Schedule

Week 1 - 04 Mar 2024

Module/Topic	Chapter	Events and Submissions/Topic
Unit Introduction		

Week 2 - 11 Mar 2024

Module/Topic	Chapter	Events and Submissions/Topic
What is Data?		

Week 3 - 18 Mar 2024

Module/Topic	Chapter	Events and Submissions/Topic
Big Data Analysis		

Week 4 - 25 Mar 2024

Module/Topic	Chapter	Events and Submissions/Topic
Data Analysis Tool I		

Week 5 - 01 Apr 2024

Module/Topic	Chapter	Events and Submissions/Topic
Data Analysis Tool II		

Vacation Week - 08 Apr 2024

Module/Topic	Chapter	Events and Submissions/Topic
Term Break		

Week 6 - 15 Apr 2024

Module/Topic	Chapter	Events and Submissions/Topic
Airline Case I		

Week 7 - 22 Apr 2024		
Module/Topic	Chapter	Events and Submissions/Topic
Airline Case II		
Week 8 - 29 Apr 2024		
Module/Topic	Chapter	Events and Submissions/Topic
Airline Case III		
Week 9 - 06 May 2024		
Module/Topic	Chapter	Events and Submissions/Topic
Airport Case I		
Week 10 - 13 May 2024		
Module/Topic	Chapter	Events and Submissions/Topic
Airport Case II		
Week 11 - 20 May 2024		
Module/Topic	Chapter	Events and Submissions/Topic
Airport Case III		
Week 12 - 27 May 2024		
Module/Topic	Chapter	Events and Submissions/Topic
Unit Review and Presentation		
Review/Exam Week - 03 Jun 2024		
Module/Topic	Chapter	Events and Submissions/Topic
Exam Week - 10 Jun 2024		
Module/Topic	Chapter	Events and Submissions/Topic

Assessment Tasks

1 ONLINE QUIZZES

Assessment Type

Online Quiz(zes)

Task Description

Two open-book online quizzes designed to assess your skills in locating, reviewing, and applying information from lectures and relevant online sources.

Number of Quizzes

Frequency of Quizzes

Assessment Due Date

TBA

Return Date to Students

TBA

Weighting

30%

Assessment Criteria

The two online quizzes comprise the formative assessment to ensure the subject material is being understood. Each quiz has 15 multiple choice questions worth 15% of grade. It is accessed on the Moodle site under Assessments. The total mark from both quizzes is 30% of grade.

Referencing Style

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

Submission

Online

Submission Instructions

Submit through Moodle

Learning Outcomes Assessed

- Apply the International Civil Aviation Organisation (ICAO) Statistics Programme to an air transport scenario
- Discuss principles governing statistical activities and the methods of calculating airport performance measures

2 CASE STUDY

Assessment Type

Case Study

Task Description

Data analysis report with given data.

Assessment Due Date

TBA

Return Date to Students

TBA

Weighting

30%

Assessment Criteria

The case study will be marked out of 30 points as follows:

1. Discussion & Analysis (15 marks)
2. Specifications (10 marks)
3. Professional Standards (5 marks)

Referencing Style

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

Submission

Online

Submission Instructions

Submit through Moodle

Learning Outcomes Assessed

- Apply the International Civil Aviation Organisation (ICAO) Statistics Programme to an air transport scenario
- Forecast aviation traffic through use of descriptive statistics principles including linear and multiple regression models
- Demonstrate advanced management skills including problem-solving and written communication.

3 GROUP WORK

Assessment Type

Group Work

Task Description

Presentation Task: Group will be responsible for a 15 minutes in-class presentation that highlights your group report and convinces the audiences that your marketing proposal is practicable, originality, complete and beneficial.

Assessment Due Date

TBA

Return Date to Students

TBA

Weighting

40%

Assessment Criteria

- a) Organizing
- b) Coherence
- c) Structure
- d) Format
- e) Quality of Contents

Referencing Style

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

Submission

Offline Group

Submission Instructions

In Class

Learning Outcomes Assessed

- Forecast aviation traffic through use of descriptive statistics principles including linear and multiple regression models
- Discuss principles governing statistical activities and the methods of calculating airport performance measures
- Demonstrate advanced management skills including problem-solving and written communication.

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