



AVAT12010 Flight Planning, Performance and Loading (Commercial Pilot Licence)

Term 2 - 2019

Profile information current as at 05/07/2022 04:15 pm

All details in this unit profile for AVAT12010 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 the knowledge required to plan a Visual Flight Rules (VFR) flight in a small commercial aircraft. You will learn how to interpret small commercial aircraft performance data. From meteorological forecasts, you will determine the appropriate route, altitude and alternate aerodromes. You will also learn how to conduct a weight and balance assessment for a flight.

Details

Career Level: *Undergraduate*

Unit Level: *Level 2*

Credit Points: *12*

Student Contribution Band: *8*

Fraction of Full-Time Student Load: *0.25*

Pre-requisites or Co-requisites

Prerequisites: AVAT12008 Meteorology (Commercial Pilot Licence); AVAT12009 Navigation (Commercial Pilot Licence) 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 - 2019

- 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 12-credit Undergraduate unit at CQUniversity requires an overall time commitment of an average of 25 hours of study per week, making a total of 300 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](#).

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 Source: Self-reflection.

Feedback

The students found it difficult to correctly answer the scenario-based questions in the tutorials as well as in the final examination.

Recommendation

Incorporate more scenario-based examples and tasks to build confidence in students.

Unit Learning Outcomes

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

1. Interpret small commercial aircraft performance data
2. Critically analyse appropriate route, altitude and aerodromes using forecast meteorological conditions
3. Calculate weight and balance and prepare a load sheet for a small commercial aircraft
4. Prepare a small commercial aircraft Visual Flight Rules (VFR) flight plan, including navigation plan and fuel plan
5. Exercise judgement in the flight planning process for small commercial aircraft.

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	•	•	•	•	•

Graduate Attributes	Learning Outcomes				
	1	2	3	4	5
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

AVAT12010

Supplementary

CPL Performance

(2017)

Authors: Bob Tait

Bob Tait's Aviation Theory School

Redcliffe, Queensland, Australia

ISBN: 978164136590-1

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

For further information, see the Assessment Tasks.

Teaching Contacts

Aruna Ranganathan Unit Coordinator
a.ranganathan@cqu.edu.au

Schedule

Week 1 - 15 Jul 2019

Module/Topic	Chapter	Events and Submissions/Topic
Aerodrome & Aeroplane Landing Areas	Chapter 1 - ATC Topic 1 - Bob Tait	Lecture and Tutorial.

Week 2 - 22 Jul 2019

Module/Topic	Chapter	Events and Submissions/Topic
Aircraft Performance - Part 1 a. Understanding Density altitude, Pressure Altitude b. Density Altitude calculation using various methods.	Chapter 2 - ATC Topic 2 - Bob Tait	Lecture and Tutorial. Assignment Overview

Week 3 - 29 Jul 2019

Module/Topic	Chapter	Events and Submissions/Topic
Aircraft Performance - Part 2 a. Understanding Take-off and Landing Performance b. Take-off and Landing calculations using performance charts.	Chapter 2 - ATC Topic 3 - Bob Tait	Lecture and Tutorial.

Week 4 - 05 Aug 2019

Module/Topic	Chapter	Events and Submissions/Topic
Aircraft Performance - Part 3 a. Understanding Climb, Cruise and Descent performance. b. Climb, Cruise and Descent performance calculations using performance charts.	Chapter 3 - ATC Topic 4 - Bob Tait	Lecture and Tutorial.

Week 5 - 12 Aug 2019

Module/Topic	Chapter	Events and Submissions/Topic
Aircraft Loading - Part 1 PPL	Chapter 6 - ATC	Lecture and Tutorial.

Vacation Week - 19 Aug 2019

Module/Topic	Chapter	Events and Submissions/Topic
Vacation week.		

Week 6 - 26 Aug 2019

Module/Topic	Chapter	Events and Submissions/Topic
Aircraft Loading - Part 2 CPL	Chapter 7 - ATC Topic 5 - Bob Tait	Lecture and Tutorial.

Week 7 - 02 Sep 2019

Module/Topic	Chapter	Events and Submissions/Topic
Aircraft Loading - Part 3 Aircraft loading calculations using flight manual/graphs.	Chapter 7 - ATC Topic 5 - Bob Tait	Lecture and Tutorial.

Week 8 - 09 Sep 2019

Module/Topic	Chapter	Events and Submissions/Topic
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Flight Planning - Part 1 Understanding flight planning preparation and various mandatory requirements.	Chapter 4 - ATC Topic 6 - Bob Tait	Lecture and Tutorial. Discussion - Assignment submission.
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Week 9 - 16 Sep 2019

Module/Topic	Chapter	Events and Submissions/Topic
Flight Planning - Part 2 National aeronautical information processing system.	Chapter 4 - ATC Topic 6 - Bob Tait	Lecture and Tutorial. Assignment due date. Written Assignment Due: Week 9 Monday (16 Sept 2019) 11:45 pm AEST

Week 10 - 23 Sep 2019

Module/Topic	Chapter	Events and Submissions/Topic
Flight Planning - Part 3 Operational Considerations - PNR, ETP.	Chapter 5 - ATC Topic 6 - Bob Tait	Lecture and Tutorial.

Week 11 - 30 Sep 2019

Module/Topic	Chapter	Events and Submissions/Topic
Flight Planning - Part 4 Airworthiness and Equipment	Chapter 8 - ATC Topic 7 - Bob Tait	Lecture and Tutorial.

Week 12 - 07 Oct 2019

Module/Topic	Chapter	Events and Submissions/Topic
Flight Planning and Loading - Overall Review	Review CPL Exam	Lecture and Tutorial.

Review/Exam Week - 14 Oct 2019

Module/Topic	Chapter	Events and Submissions/Topic

Exam Week - 21 Oct 2019

Module/Topic	Chapter	Events and Submissions/Topic

- 28 Oct 2019

Module/Topic	Chapter	Events and Submissions/Topic

Term Specific Information

I am the Unit Coordinator and Lecturer for this subject.
During this term, please contact me; if and when, you feel it is necessary for you to progress successfully in this Unit.
Aruna Ranganathan

Assessment Tasks

1 Written Assignment

Assessment Type

Group Work

Task Description

Assignment type: Group work followed by individual report submission online.

Word limit: Nil.

Due date: 16 September 2019.

Task description: The assignment will require students to research and report on aircraft operations, performance and planning issues related to a typical general aviation charter operations within Australia.

Please follow report writing format and referenced using the Harvard referencing style. Also, please use Arial font with 12 size and 1.5 line spacing.

Assessment Due Date

Week 9 Monday (16 Sept 2019) 11:45 pm AEST

Return Date to Students

Week 11 Monday (30 Sept 2019)

Weighting

40%

Assessment Criteria

Assessment criteria/ rubric will be provided to students during week 2 lecture.

Referencing Style

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

Submission

Online

Submission Instructions

Please submit the assessment item online.

Learning Outcomes Assessed

- Interpret small commercial aircraft performance data
- Critically analyse appropriate route, altitude and aerodromes using forecast meteorological conditions
- Calculate weight and balance and prepare a load sheet for a small commercial aircraft
- Prepare a small commercial aircraft Visual Flight Rules (VFR) flight plan, including navigation plan and fuel plan
- Exercise judgement in the flight planning process for small commercial aircraft.

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

150 minutes

Exam Conditions

Restricted.

Materials

Calculator - non-programmable, no text retrieval, silent only

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