



AVAT13012 *Flight Planning, Performance and Loading (Air Transport Pilot Licence)*

Term 2 - 2020

Profile information current as at 03/05/2024 04:36 pm

All details in this unit profile for AVAT13012 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

Flight Planning, Performance and Loading (Air Transport Pilot Licence) will provide you with the advanced knowledge required to plan an international Instrument Flight Rules (IFR) flight in a heavy air transport aircraft. You will learn how to interpret large aircraft performance data. From meteorological forecasts, you will determine the appropriate route, altitude, and alternate aerodromes. You will learn how to prepare a load and trim sheet for a large transport aircraft.

Details

Career Level: *Undergraduate*

Unit Level: *Level 3*

Credit Points: *12*

Student Contribution Band: *8*

Fraction of Full-Time Student Load: *0.25*

Pre-requisites or Co-requisites

Prerequisites: AVAT12012 Instrument Flight Rules and Procedures; AVAT12010 Flight Planning, Performance and Loading (Commercial Pilot Licence); AVAT13008 Navigation (Air Transport Pilot Licence); and AVAT13009 Meteorology (Air Transport Pilot Licence).

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 - 2020

- 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. **Online Quiz(zes)**

Weighting: 40%

2. **Online Test**

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

Feedback

This unit was delivered for the first time at CQUniversity. The delivery method and the absorption of core concepts at ATPL level by the student were good. Positive feedback was received from the student.

Recommendation

This unit (double credit unit) is one of the most difficult units in the ATPL curriculum. Physical presence during the lectures and tutorials and discussions with the lecturer would make the learning experience a lot easier. So in the interest of the students, the physical attendance of the lectures and tutorials is strongly recommended.

Feedback from Student

Feedback

Encouraging feedback was received on the mode and contents of the unit.

Recommendation

Efforts will be made to improve the student's experience and increase their engagement.

Unit Learning Outcomes

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

1. Interpret large aircraft performance data
2. Analyse critically appropriate route, altitude, and aerodromes using forecast meteorological conditions
3. Prepare a load and trim sheet for a large transport aircraft
4. Prepare a large aircraft Instrument Flight Rules (IFR) flight plan including navigation plan, fuel plan, and load sheet
5. Exercise judgement in the flight planning process for large transport aircraft.

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 - Online Quiz(zes) - 40%	•	•	•		
2 - Online Test - 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 - Online Quiz(zes) - 40%	•	•	•	•		•	•	•	•	
2 - Online Test - 60%	•	•	•			•	•	•	•	

Textbooks and Resources

Textbooks

AVAT13012

Prescribed

Aeroplane Performance, Planning & Loading for the Air Transport Pilot

Edition: 2002 (2002)

Aviation Theory Centre

Australia

ISBN: 187553736-8

Binding: Paperback

AVAT13012

Prescribed

Boeing 727 Performance and Operating Handbook

Edition: 2001 (2001)

Air-Services Australia (CASA)

ISBN: 0644038136

Binding: Paperback

Additional Textbook Information

If you prefer to study with a paper copy, they can be purchased at the CQUni Bookshop here: <http://bookshop.cqu.edu.au> (search on the Unit code). eBooks can be purchased at the publisher's website.

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

James Musgrave Unit Coordinator

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Aruna Ranganathan Unit Coordinator

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Schedule

Week 1 - 13 Jul 2020

Module/Topic	Chapter	Events and Submissions/Topic
Revision of Altimetry, Airspeed & Time		Lectures and Tutorials

Week 2 - 20 Jul 2020

Module/Topic	Chapter	Events and Submissions/Topic
Review and development of Critical Points		Lecturers and Tutorials
ETP, PNR, EFP, off track ETP, PSD		

Week 3 - 27 Jul 2020

Module/Topic	Chapter	Events and Submissions/Topic
Take-off Performance a. Performance Considerations b. Take-off Runway & Climb Performance c. Obstacle Clearance Requirements d. TOW Limitations	Chapter 1	Lectures/Tutorials

Week 4 - 03 Aug 2020

Module/Topic	Chapter	Events and Submissions/Topic
Enroute Performance a. Climb Performance b. Cruise Performance Theory c. Cruise Profiles d. Operational Factors Landing Performance a. Climb Limited Landing Weight b. Landing Distance Requirements c. Operational Considerations	Chapters 2 & 3	Lectures/Tutorials Preparation for Quiz 1

Week 5 - 10 Aug 2020

Module/Topic	Chapter	Events and Submissions/Topic
Flight Planning- Practical Application - B727 a. B-727 Performance and Operating Handbook b. Take-off and Climb c. Cruise Performance d. Descent, Holding and Landing Performance	Chapter 5	Lectures/Tutorials Quiz 1

Vacation Week - 17 Aug 2020

Module/Topic	Chapter	Events and Submissions/Topic
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Week 6 - 24 Aug 2020

Module/Topic	Chapter	Events and Submissions/Topic
Fundamentals of Flight Planning - Part 1 - Zonal Method a. Vertical considerations b. Airspeed c. Fuel Requirements d. Flight Planning Problems e. Operational Aspects f. Aeronautical Charts for IFR Operations	Chapter 4	Lectures/Tutorials Online Quiz Due: Week 6 Monday (24 Aug 2020) 11:45 pm AEST

Week 7 - 31 Aug 2020

Module/Topic	Chapter	Events and Submissions/Topic
Operational Flight Planning - Part 1 (Zonal Flight Plan Considerations) a. CP and PNR b. Pre-Flight Estimates	Chapter 7	Lectures/Tutorials Revision for Quiz 2

Week 8 - 07 Sep 2020

Module/Topic	Chapter	Events and Submissions/Topic
Operational Flight Planning - Part 2 (Zonal Flight Plan Considerations) a. Flight Plan Preparation b. In-Flight Re-Planning	Chapter 7	Lectures/Tutorials Quiz 2 (Syllabus: Week 5-8 Lectures and Tutorials) Weightage 20%

Week 9 - 14 Sep 2020

Module/Topic	Chapter	Events and Submissions/Topic
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Aeroplane Loading - Part 1 - B 727

- a. Weight Terminology
- b. Weight and Balance

Chapter 8

Lectures/Tutorials

Week 10 - 21 Sep 2020

Module/Topic

Chapter

Events and Submissions/Topic

Aeroplane Loading - Part 2 - B 727

- a. Load Control System
- b. B727 Load and Trim Sheet Calculations

Chapter 8

Lectures/Tutorials

Week 11 - 28 Sep 2020

Module/Topic

Chapter

Events and Submissions/Topic

Full flight plan

Lectures/Tutorials

Week 12 - 05 Oct 2020

Module/Topic

Chapter

Events and Submissions/Topic

Full flight plan

Final Revision

Lectures/Tutorials

Review/Exam Week - 12 Oct 2020

Module/Topic

Chapter

Events and Submissions/Topic

Exam Week - 19 Oct 2020

Module/Topic

Chapter

Events and Submissions/Topic

Final Online Test Due: Exam Week
Monday (19 Oct 2020) 11:45 pm AEST

Assessment Tasks

1 Online Quiz

Assessment Type

Online Quiz(zes)

Task Description

The online quiz will require advanced knowledge to plan an international Instrument Flight Rules (IFR) flight in a heavy air transport aircraft; interpret large aircraft performance data; and determine the appropriate route, altitude and alternate aerodromes from meteorological forecasts.

Number of Quizzes

Frequency of Quizzes

Other

Assessment Due Date

Week 6 Monday (24 Aug 2020) 11:45 pm AEST

Return Date to Students

Week 7 Monday (31 Aug 2020)

Weighting

40%

Assessment Criteria

This is a graded unit. The relative weightage for this assessment is 40%. The learning outcomes assessed include

- Interpret large aircraft performance data
- Analyse critically, appropriate route, altitude and aerodromes using forecast meteorological conditions

Referencing Style

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

Submission

Online

Learning Outcomes Assessed

- Interpret large aircraft performance data
- Analyse critically appropriate route, altitude, and aerodromes using forecast meteorological conditions
- Prepare a load and trim sheet for a large transport aircraft

Graduate Attributes

- Communication
- Problem Solving
- Critical Thinking
- Information Literacy
- Information Technology Competence
- Cross Cultural Competence
- Ethical practice
- Social Innovation

2 Final Online Test

Assessment Type

Online Test

Task Description

The final online test will require advanced knowledge to plan an international Instrument Flight Rules (IFR) flight in a heavy air transport aircraft; interpret large aircraft performance data; determine the appropriate route, altitude and alternate aerodromes from meteorological forecasts; and prepare a load and trim sheet for a large transport aircraft.

Assessment Due Date

Exam Week Monday (19 Oct 2020) 11:45 pm AEST

Return Date to Students

Results as per University Policy.

Weighting

60%

Minimum mark or grade

50%

Assessment Criteria

This is a graded unit. The relative weightage for this assessment is 60%. You must obtain a minimum mark of at least 50% for this assessment, in order to pass the unit. The learning outcomes assessed include

- Interpret large aircraft performance data
- Analyse critically, appropriate route, altitude and aerodromes using forecast meteorological conditions
- Prepare a load and trim sheet for a large transport aircraft
- Prepare a large aircraft Instrument Flight Rules (IFR) flight plan, including navigation plan, fuel plan and load sheet
- Exercise judgement in the flight planning process for large transport aircraft.

Referencing Style

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

Submission

Online

Learning Outcomes Assessed

- Interpret large aircraft performance data
- Analyse critically appropriate route, altitude, and aerodromes using forecast meteorological conditions
- Prepare a load and trim sheet for a large transport aircraft
- Prepare a large aircraft Instrument Flight Rules (IFR) flight plan including navigation plan, fuel plan, and load sheet
- Exercise judgement in the flight planning process for large transport aircraft.

Graduate Attributes

- Communication
- Problem Solving
- Critical Thinking
- Information Technology Competence
- 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