



# **AVAT11007 *Flight Planning, Performance and Operation (Private Pilot Licence)***

## **Term 2 - 2021**

Profile information current as at 05/05/2024 08:07 pm

All details in this unit profile for AVAT11007 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.

### **Corrections**

#### **Unit Profile Correction added on 20-09-21**

Currently, this unit has the following assessment components:

- (a) Online quizzes = (40%)
- (b) Invigilated Exam = (60%), hurdle 50% pass rate

This amendment replaces the invigilated exam (60%) with an online test (60%). There are no changes to the assessment weightings, minimum marks or learning outcomes.

The online test will be held at the same time and date as the previously scheduled exam in the exam timetable for T2/2021.

## General Information

### Overview

This unit will provide you with the aeronautical knowledge of flight planning, navigation, performance, loading and operations pertaining to small general aviation aircraft. You will calculate basic flight plans and fuel plans. You will also study meteorological and navigational factors that affect flying, including aerodrome forecasts and area forecasts. You will develop knowledge of planning flights on navigational charts and airspace requirements. You will also study the flight rules and procedures relevant to a Private Pilot. In this unit, you will cover the aeronautical knowledge requirements of Schedule 3 of the Civil Aviation Safety Authority's Part 61, Manual of Standards (Aeronautical Knowledge Standards) applicable to the Private Pilot Licence. This will allow you to sit the Private Pilot Licence (Aeroplane) Examination which is a prerequisite for attempting the flight test for the Private Pilot Licence.

### Details

Career Level: *Undergraduate*

Unit Level: *Level 1*

Credit Points: 12

Student Contribution Band: 8

Fraction of Full-Time Student Load: 0.25

### Pre-requisites or Co-requisites

Prerequisite unit: 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 2 - 2021

- Bundaberg
- Cairns
- Online
- Perth

### 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. **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 Students

**Feedback**

Feedback on assessment items

**Recommendation**

Most students want a discussion forum where they can solve problems to questions.

#### Feedback from Students

**Feedback**

More CASA style questions

**Recommendation**

Generate CASA style questions for the quizzes in order for students to sit and pass the CASA exam.

#### Feedback from Self

**Feedback**

Sequencing of lectures

**Recommendation**

Have lectures sequenced according to the practical flight instruction.

#### Feedback from Students

**Feedback**

YouTube videos

**Recommendation**

Embed YouTube videos into the lectures around more difficult concepts.

## Unit Learning Outcomes

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

1. Extract and apply relevant information from aviation documents and charts in the Civil Aviation Publications, Civil Aviation Advisory Publications, Civil Aviation Legislation, and Notices to Airmen
2. Explain the basic human factors considerations for a Private Pilot
3. Convert between time standards using beginning and end of civil twilight graphs or charts
4. Describe the principle of operation of Global Navigation Satellite Systems navigation, its advantages, disadvantages, limitations, and restrictions
5. Demonstrate basic knowledge of the atmosphere including heat, temperature, humidity, pressure, clouds and precipitation, local weather, meteorological forecasts and reports, and their effect on planning a basic navigation exercise
6. Complete a basic flight plan with an Equi-Time Point including take-off and landing, cruise, climb and descent performance, and weight and balance using available weather forecasts and operational briefing documents
7. Demonstrate a knowledge of the Private Pilot Licence competencies in Schedule 3 of Part 61, Manual of Standards.

There is no external accreditation for aviation awards however, there are legal requirements to be met under the Civil Aviation Act and Civil Aviation Regulations.

## 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 | 7 |
| 1 - Online Quiz(zes) - 40% | •                 | • | • | • | • | • | • |
| 2 - Examination - 60%      | •                 | • | • |   | • | • | • |

### Alignment of Graduate Attributes to Learning Outcomes

| Graduate Attributes                                 | Learning Outcomes |   |   |   |   |   |   |
|---|-------------------|---|---|---|---|---|---|
|   | 1                 | 2 | 3 | 4 | 5 | 6 | 7 |
| 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 - Examination - 60%      | •                   | • | • | • |   |   |   | • | • |    |

## Textbooks and Resources

### Textbooks

AVAT11007

#### **Prescribed**

##### **Aerodynamics for the private & commercial pilot licences.**

Edition: 1st (2015)

Authors: David Robson

Aviation Theory Centre (NZ)

Darra , QLD , Australia

ISBN: 9781875537839

Binding: Paperback

AVAT11007

#### **Prescribed**

##### **Aircraft General Knowledge for the Private and Commercial Pilot Licences**

2nd Edition (2018)

Authors: David Robson

Aviation Theory Centre Pty Ltd

Narrangba , QLD , Australia

ISBN: 978\_1\_875537\_14\_3

Binding: Paperback

AVAT11007

#### **Prescribed**

##### **Aircraft Operation, Performance and Planning for the Private and Commercial Pilot Licences**

6th Edition (2019) (2019)

Authors: David Robson

Aviation Theory Centre Pty Ltd

Narrangba , QLD , Australia

ISBN: 978\_1\_875537\_27\_3

Binding: Paperback

AVAT11007

#### **Prescribed**

##### **Flight Rules and Air Law : For the Private and Commercial Pilot Licences**

Edition: 19th (2020)

Authors: David Robson

Aviation Theory Centre Pty Ltd

Hamilton , QLD , Australia

ISBN: 9780949499004

Binding: Paperback

AVAT11007

#### **Prescribed**

##### **Human Factors for the Private and Commercial Pilot Licences**

4th Edition (2017)

Authors: David Robson

Aviation Theory Centre Pty Ltd

Narrangba , QLD , Australia

ISBN: 978\_1\_875537\_77\_8

Binding: Paperback

AVAT11007

#### **Prescribed**

##### **Meteorology : for the private and commercial pilot licenses**

2nd Edition (2018)

Authors: David Robson

Aviation Theory Centre Pty Ltd

Hamilton , QLD , Australia

ISBN: 9781875537020

Binding: Paperback

### Additional Textbook Information

All aviation documents published through CASA and Air Services Australia that are relevant to the CASA PPL exam are required

[View textbooks at the CQUniversity Bookshop](#)

## 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

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## Schedule

### Week 1 - 12 Jul 2021

| Module/Topic             | Chapter                            | Events and Submissions/Topic |
|--------------------------|------------------------------------|------------------------------|
| Meteorology-Basic Met 1  | Robson's Meteorology. Chapters 1-8 | Quiz 1                       |
|                          | Robson's Meteorology:Chapters 1-8  | Quiz 2                       |
| Meteorology -Basic Met 2 |                                    |                              |

### Week 2 - 19 Jul 2021

| Module/Topic                       | Chapter                           | Events and Submissions/Topic |
|------------------------------------|-----------------------------------|------------------------------|
| Meteorology: Met Systems           | Robson's Meteorology:Chapters 7,8 | Quiz 3                       |
| Meteorology: Forecasts and Reports | Robson's Meteorology:Chapters 9   | Quiz 4                       |

### Week 3 - 26 Jul 2021

| Module/Topic                         | Chapter                              | Events and Submissions/Topic |
|--------------------------------------|--------------------------------------|------------------------------|
| General Navigation                   | Robson's Navigation:Chapters 1,2,3   | Quiz 5                       |
| Navigation: Computational techniques | Robson's Navigation:Chapters 4 and 5 | Quiz 6                       |

### Week 4 - 02 Aug 2021

| Module/Topic          | Chapter                              | Events and Submissions/Topic |
|-----------------------|--------------------------------------|------------------------------|
| Navigation: Planning  | Robson's Navigation:Chapters 5       | Quiz 7                       |
| Navigation: VOR, GNSS | Robson's Navigation:Chapters 6,7,8,9 | Quiz 8                       |

### Week 5 - 09 Aug 2021

| Module/Topic   | Chapter  | Events and Submissions/Topic |
|--|--|------------------------------|
| Navigation Flight Procedures   | Robson's Navigation: Chapters 5  | Quiz 9                       |
| Navigation: Planning a flight plan   | Robson's Navigation: Chapters 1-9  | Quiz 10                      |
| <b>Vacation Week - 16 Aug 2021</b>   |  |                              |
| Module/Topic   | Chapter  | Events and Submissions/Topic |
| <b>Week 6 - 23 Aug 2021</b>  |  |                              |
| Module/Topic   | Chapter  | Events and Submissions/Topic |
| Performance – Airspace and Aerodromes  | Robson's Aircraft Operation, Performance and Planning: Chapter 1<br>Robson's Flight Rules and Air Law: Chapters 5,6,7,8  | Quiz 11                      |
| Performance--p-charts, loading, PNR, ETP Loading, PNR, ETP(CP)                                     | Robson's Aircraft Operation, Performance and Planning: Chapters 1,2, 5,6   | Quiz 12                      |
| <b>Week 7 - 30 Aug 2021</b>  |  |                              |
| Module/Topic   | Chapter  | Events and Submissions/Topic |
| Aeronautical knowledge-Systems   | Robson's Aircraft General Knowledge: Chapters 2,6,13,14,15<br>Robson's Flight Rules and Air Law: Chapter 4,6,7,8<br>-VFG Radio telephony,<br><a href="https://vfrg.casa.gov.au/general/">https://vfrg.casa.gov.au/general/</a><br>-AIP GEN 3.4 | Quiz 13<br>Quiz 14           |
| Aeronautical knowledge-Radio   | -AIP GEN 1.5<br>-CAAP 166-01   |                              |
| <b>Week 8 - 06 Sep 2021</b>  |  |                              |
| Module/Topic   | Chapter  | Events and Submissions/Topic |
| Aeronautical knowledge -GNSS   | Robson's Aircraft General knowledge: Chapter 17  | Quiz 15                      |
| Aeronautical knowledge-Props, Take-off and Landing performance, Density alt -Pressure alt p-charts | Robson's Aircraft General knowledge: Chapters 7,16<br>Robson's Aircraft Operation, Performance and Planning Chapter 2<br>Lecture notes   | Quizv16                      |
| <b>Week 9 - 13 Sep 2021</b>  |  |                              |
| Module/Topic   | Chapter  | Events and Submissions/Topic |
| Air law-documentation  | Robson's Flight Rules and Air Law: Chapter 1   | Quizn17                      |
| Air law - Licensing  | Robson's Flight Rules and Air Law: Chapter 2   | Quiz 18                      |
| <b>Week 10 - 20 Sep 2021</b>   |  |                              |
| Module/Topic   | Chapter  | Events and Submissions/Topic |
| Air law - operational  | Robson's Flight Rules and Air Law: Chapters 2,3,4,   | Quiz 19 -Not assessed        |
| Human performance - health   | Robson's Human Factors: Chapters 1,2   | Quiz 20 Not assessed         |
| <b>Week 11 - 27 Sep 2021</b>   |  |                              |
| Module/Topic   | Chapter  | Events and Submissions/Topic |



Human Performance-operational - Health 1

Robson's Human Factors: Chapters 1,3,4,

Quiz 21 Not assessed

Human Performance-operational - Health 2

Robson's Human Factors: Chapters 1,3,4

Quiz 22 Not assessed

### Week 12 - 04 Oct 2021

| Module/Topic           | Chapter                                  | Events and Submissions/Topic |
|------------------------|--|------------------------------|
| Human Factors and TEMS | Robson's Human Factors: Chapters 5,6,7,8 | Quiz 23 - Not assessed       |
| Revision               |  |                              |

### Review/Exam Week - 11 Oct 2021

| Module/Topic | Chapter | Events and Submissions/Topic |
|--------------|---------|------------------------------|
|--------------|---------|------------------------------|

### End of Term Exam-Exact date to be advised - 18 Oct 2021

| Module/Topic | Chapter | Events and Submissions/Topic |
|--------------|---------|------------------------------|
|--------------|---------|------------------------------|

## Assessment Tasks

### No Assessment Title

#### Assessment Type

Online Quiz(zes)

#### Task Description

No Assessment Task Description

#### Number of Quizzes

#### Frequency of Quizzes

#### Assessment Due Date

#### Return Date to Students

#### Weighting

40%

#### Assessment Criteria

No Assessment Criteria

#### Referencing Style

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

#### Submission

No submission method provided.

#### Learning Outcomes Assessed

- Extract and apply relevant information from aviation documents and charts in the Civil Aviation Publications, Civil Aviation Advisory Publications, Civil Aviation Legislation, and Notices to Airmen
- Explain the basic human factors considerations for a Private Pilot
- Convert between time standards using beginning and end of civil twilight graphs or charts
- Describe the principle of operation of Global Navigation Satellite Systems navigation, its advantages, disadvantages, limitations, and restrictions
- Demonstrate basic knowledge of the atmosphere including heat, temperature, humidity, pressure, clouds and precipitation, local weather, meteorological forecasts and reports, and their effect on planning a basic navigation exercise
- Complete a basic flight plan with an Equi-Time Point including take-off and landing, cruise, climb and descent performance, and weight and balance using available weather forecasts and operational briefing documents
- Demonstrate a knowledge of the Private Pilot Licence competencies in Schedule 3 of Part 61, Manual of Standards.

#### Graduate Attributes

- Communication

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

## Examination

### **Outline**

Complete an invigilated examination.

### **Date**

During the examination period at a CQUniversity examination centre.

### **Weighting**

60%

### **Length**

150 minutes

### **Minimum mark or grade**

50%

### **Exam Conditions**

Closed Book.

### **Materials**

Dictionary - non-electronic, concise, direct translation only (dictionary must not contain any notes or comments).

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

## 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