



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

Term 2 - 2020

Profile information current as at 07/05/2024 06:50 am

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.

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 - 2020

- 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. **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](#).

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 - Online Test - 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 | | | | | | | |

| Graduate Attributes | Learning Outcomes | | | | | | |
|--|-------------------|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 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

AVAT11007

Prescribed

Aerodynamics for the Private and Commercial Pilot Licences

1st edition April 2015 (2015)

Authors: David Robson

Aviation Theory Centre Pty Ltd

Narrangba , QLD , Australia

ISBN: 978_1_875537_83_9

Binding: Hardcover

AVAT11007

Prescribed

Aircraft General Knowledge for the Private and Commercial Pilot Licences

Edition: 2nd July 2018 (2018)

Authors: David Robson

Aviation Theory Centre Pty Ltd

Narrangba , QLD , Australia

ISBN: 978_1_875537_14_3

Binding: Hardcover

AVAT11007

Prescribed

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

6th Edition (2019)

Authors: David Robson

Aviation Theory Centre Pty Ltd

Narrangba , QLD , Australia

ISBN: 978_1_875537_27_3

Binding: Hardcover

AVAT11007

Prescribed

Flight Rules and Air Law for the Private and Commercial Pilot Licences

18th Edition (2019)
Authors: David Robson
Aviation Theory Centre Pty Ltd
Narrangba , QLD , Australia
ISBN: 978_1_875537_51_8
Binding: Hardcover
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: Hardcover
AVAT11007

Prescribed**Meteorology for the Private and Commercial Pilot Licences**

2nd Edition April 2018 (2018)
Authors: David Robson
Aviation Theory Centre Pty Ltd
Bundaberg , QLD , Australia
ISBN: 978_1_875537_02_0
Binding: Hardcover
AVAT11007

Prescribed**Navigation for the Private and Commercial Pilot Licences**

1st edition March 2019 (2019)
Authors: David Robson
Aviation Theory Centre Pty Ltd
Narrangba , QLD , Australia
ISBN: 978_1_875537_85_3
Binding: Hardcover

Additional Textbook Information

These 7 reference books can be purchased as a kit (PPL/CPL Kit) and can be used for the PPL and CPL units. Most books can be obtained digitally. However, 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).

In addition students need the following Publications and equipment:

Publications:

CAR 1988
CASR Part 61
CAO 20-95.2
CAAP 92-1(1) and 234-1(2.1)
AIP Book
ERSA
AUS PCA
Visual Flight Rules Guide (VFRG)-CASA publication only
Sydney, Townsville & Bourke WACs

Navigation Equipment:

- dividers
- compass
- protractor
- ruler (or straight-edge)
- non-electronic 'aviation wind triangle and circular slide rule' computer (such as the E6B)

[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

Mike Malouf Unit Coordinator
m.malouf@cqu.edu.au

Schedule

Week 1 - 13 Jul 2020

| Module/Topic | Chapter | Events and Submissions/Topic |
|---------------------------------|---|------------------------------|
| Aeronautical Knowledge -systems | Robson's Aircraft General Knowledge: Chapters 2,6,13,14,15 | Combined quiz |
| Aeronautical knowledge -Radio | Robson's Flight Rules and Air Law: Chapter 4,6,7,8 and Lecture notes | |

Week 2 - 20 Jul 2020

| Module/Topic | Chapter | Events and Submissions/Topic |
|---|--|------------------------------|
| Aeronautical Knowledge -GNSS | Robson's Aircraft General knowledge: Chapter 17 | Combined quiz |
| Aeronautical knowledge - Propellers and Take-off and Landing performance | Robson's Aircraft General knowledge: Chapters 7,16 Robson's Aircraft Operation, Performance and Planning Chapter 2 Lecture notes | |

Week 3 - 27 Jul 2020

| Module/Topic | Chapter | Events and Submissions/Topic |
|-----------------------|---|------------------------------|
| Air Law-Documentation | Robson's Flight Rules and Air Law: Chapter 1 | Combined quiz |
| Air Law -Licensing | Robson's Flight Rules and Air Law: Chapter 2 | |

Week 4 - 03 Aug 2020

| Module/Topic | Chapter | Events and Submissions/Topic |
|--|---|------------------------------|
| Air Law and Flight Rules-Operations | Robson's Flight Rules and Air Law: Chapters 2,3,4, | Combined quiz |
| Performance-Airspace and Aerodromes | Robson's Aircraft Operation, Performance and Planning: Chapter 1 Robson's Flight Rules and Air Law: Chapters 5,6,7,8 | |

Week 5 - 10 Aug 2020

| Module/Topic | Chapter | Events and Submissions/Topic |
|-----------------------------------|--|------------------------------|
| Performance-Loading, PNR, ETP(CP) | Robson's Aircraft Operation, Performance and Planning: Chapters 1,2, 5,6 | Combined quiz |
| Human Performance-Health | Robson's Human Factors: Chapters 1,2 | |

Vacation Week - 17 Aug 2020

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

Week 6 - 24 Aug 2020

| Module/Topic | Chapter | Events and Submissions/Topic |
|--|---|------------------------------|
| Human Performance-operational Health 1 | Robson's Human Factors: Chapters 1,3,4, | Combined quiz |
| Human Performance-Operational Health 2 | Robson's Human Factors: Chapters 1,3,4 | |

Week 7 - 31 Aug 2020

| Module/Topic | Chapter | Events and Submissions/Topic |
|------------------------|--|------------------------------|
| Human Factors and TEMS | Robson's Human Factors: Chapters 5,6,7,8 | Combined quiz |
| General Navigation | Robson's Navigation:Chapters 1,2,3 | |

Week 8 - 07 Sep 2020

| Module/Topic | Chapter | Events and Submissions/Topic |
|--------------------------------------|--|------------------------------|
| Navigation: Computational Techniques | | |
| Navigation: Planning | Robson's Navigation:Chapters 4 and 5 Robson's Navigation:Chapters 5 | Combined quiz |

Week 9 - 14 Sep 2020

| Module/Topic | Chapter | Events and Submissions/Topic |
|-------------------------------------|--------------------------------------|------------------------------|
| Navigation: NDB/ADF, VOR, DME, GNSS | Robson's Navigation:Chapters 6,7,8,9 | Combined quiz |
| Navigation Procedures | Robson's Navigation:Chapters 5 | |

Week 10 - 21 Sep 2020

| Module/Topic | Chapter | Events and Submissions/Topic |
|------------------------------------|--|------------------------------|
| Navigation: Planning a flight plan | Robson's Navigation: Combined Chapters 1-9 | Combined quiz |
| Basic Meteorology | Robson's Meteorology. Chapters 1-8 | |

Week 11 - 28 Sep 2020

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

Week 12 - 05 Oct 2020

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

Review week for end of term online test - 12 Oct 2020

End of term online test -Exact date to be advised - 19 Oct 2020

Assessment Tasks

1 Online quizzes

Assessment Type

Online Quiz(zes)

Task Description

There will be 20 online quizzes (2 quizzes per week) for the first 10 weeks, each covering the content from that weeks lectures and tutorials. Each quiz consists of 10 multiple choice questions and is open for 15 minutes. The quiz opens on the Friday night at 8.00pm after the lectures and tutorials for the week, and closes on the following Monday evening at 8.00pm.

Number of Quizzes

10

Frequency of Quizzes

Weekly

Assessment Due Date**Return Date to Students**

The online quiz is automatically marked and you will know the result once the quiz is completed

Weighting

40%

Assessment Criteria

The quizzes cover content taught in the first 20 lectures and tutorials.

The weighting of the quizzes is 40%.

Referencing Style

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

Submission

Online

Submission Instructions

online

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

2 End of term online test

Assessment Type

Online Test

Task Description

The end of term online test replaces the examination but is very similar in that there are a total of 60 multiple-choice questions. The online test is found on the Moodle site for AVAT 11007 and a date and time will be advised.

Assessment Due Date

Online test

Return Date to Students

Weighting

60%

Minimum mark or grade

70%

Assessment Criteria

The end of term online test covers content taught in all the lectures, tutorials and quizzes.

The weighting of the quizzes is 60%.

Referencing Style

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

Submission

Online

Submission Instructions

online

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
- 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
- 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