



AVAT12007 General Aeronautical Knowledge (Commercial Pilot Licence) Term 1 - 2019

Profile information current as at 05/07/2022 05:19 pm

All details in this unit profile for AVAT12007 have been officially approved by CQU University 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

General Aeronautical Knowledge (Commercial Pilot Licence) will provide you with knowledge of small commercial aircraft power plants and systems. You will cover the aeronautical knowledge requirements of the Civil Aviation Safety Authority's Commercial Pilot Licence General Aeronautical Knowledge syllabus. Topics you will study in depth include piston engine power plants and propellers. You will learn about aircraft electrical and hydraulic systems, fuel systems, and ice and rain protection systems. You will also become familiar with flight and navigation instruments.

Details

Career Level: *Undergraduate*

Unit Level: *Level 2*

Credit Points: 6

Student Contribution Band: 8

Fraction of Full-Time Student Load: 0.125

Pre-requisites or Co-requisites

Prerequisites: AVAT11002 Basic Aeronautical Knowledge; AVAT11003 Basic Aeronautical Practice and AVAT11005 Aviation Physics

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 - 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 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. **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 Survey

Feedback

Assessment task needs more detail.

Recommendation

Details of the assessment task will be improved.

Unit Learning Outcomes

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

1. Explain the operation and construction of aircraft piston engine power plants
2. Describe the operation and performance characteristics of fixed and variable pitch propellers
3. Describe the function of a typical small aircraft's mechanical system
4. Explain the operation and function of a light aircraft undercarriage system
5. Convert between the various airspeeds
6. Explain the operation of the aircraft pressure and gyro flight instruments
7. Discuss the basic operating principles of aeronautical radio systems.

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	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 - Group Work - 40%	•	•	•	•	•					
2 - Examination - 60%	•	•	•	•						

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)
- Recommended book: Aircraft General Knowledge for the CASA PPL/CPL Day VFR Syllabus.

Referencing Style

All submissions for this unit must use the referencing style: [Harvard \(author-date\)](#)
For further information, see the Assessment Tasks.

Teaching Contacts

Steven Thatcher Unit Coordinator
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Schedule

Week 1 - 11 Mar 2019

Module/Topic	Chapter	Events and Submissions/Topic
Powerplant and systems 1.	Aircraft General Knowledge: Chapter 2.	

Week 2 - 18 Mar 2019

Module/Topic	Chapter	Events and Submissions/Topic
Powerplant and systems 2.	Aircraft General Knowledge: Chapter 2.	

Week 3 - 25 Mar 2019

Module/Topic	Chapter	Events and Submissions/Topic
Lubrication, Cooling and Supercharging.	Aircraft General Knowledge: Chapters 5 and 6.	

Week 4 - 01 Apr 2019

Module/Topic	Chapter	Events and Submissions/Topic
Fuel System.	Aircraft General Knowledge: Chapter 4 and 8.	

Week 5 - 08 Apr 2019

Module/Topic	Chapter	Events and Submissions/Topic
Electrical System, fire protection and climate control.	Aircraft General Knowledge: Chapters 3, 9, 11 and 12.	

Vacation Week - 15 Apr 2019

Module/Topic	Chapter	Events and Submissions/Topic
No lectures.		

Week 6 - 22 Apr 2019

Module/Topic	Chapter	Events and Submissions/Topic
Hydraulic Systems.	Aircraft General Knowledge: Chapter 10.	

Week 7 - 29 Apr 2019

Module/Topic	Chapter	Events and Submissions/Topic
Propellers.	Aircraft General Knowledge: Chapter 7.	

Week 8 - 06 May 2019

Module/Topic	Chapter	Events and Submissions/Topic
Flight Instruments.	Aircraft General Knowledge: Chapters 13, 14 and 15.	

Week 9 - 13 May 2019

Module/Topic	Chapter	Events and Submissions/Topic
Automatic Flight.	Aircraft General Knowledge: Chapter 16.	Assignment Due: Week 9 Monday (13 May 2019) 9:00 am AEST

Week 10 - 20 May 2019

Module/Topic	Chapter	Events and Submissions/Topic
Aeronautical radio telephony.		

Week 11 - 27 May 2019

Module/Topic	Chapter	Events and Submissions/Topic
Radio waves.		

Week 12 - 03 Jun 2019

Module/Topic	Chapter	Events and Submissions/Topic
Review.	Aircraft General Knowledge: Chapters 2 to 16.	

Review/Exam Week - 10 Jun 2019

Module/Topic	Chapter	Events and Submissions/Topic
Review / final exam.		

Exam Week - 17 Jun 2019

Module/Topic	Chapter	Events and Submissions/Topic
Final exam.		

Term Specific Information

Recommended text book:
 Aircraft General Knowledge for the CASA PPL/CPL Day VFR Syllabus.
 ISBN 978-1-875537-82-2
 Aviation Theory Centre Pty Ltd
www.aviationtheory.net.au

Assessment Tasks

1 Assignment

Assessment Type
 Group Work

Task Description

A written assignment worth 40% will be issued in week 2. The due date will be week 9.

Note that this is NOT Group Work; the assignment must be completed individually.

The assignment will require students to identify, research and discuss various concepts covered in this unit. More details will be provided in week 2.

The assignment should be submitted in Turnitin in Moodle by the due date.

The assignment should be submitted as either a Word or a PDF document.

Note: all submissions are processed through the plagiarism software (Turnitin) and, in line with university policy, the work should be unique.

Assessment Due Date

Week 9 Monday (13 May 2019) 9:00 am AEST

Return Date to Students

Exam Week Monday (17 June 2019)

Weighting

40%

Assessment Criteria

High distinction standard

- * the answer is very well written and clearly expressed
- * there is a demonstrated appreciation and understanding of the issues involved
- * the answer is well structured and logically organised
- * demonstrated mastery of referencing system
- * there is evidence of a comprehensive analysis of the issues
- * conclusions are backed by well-reasoned arguments demonstrating a detailed insight and analysis of issues
- * comprehensive coverage of all relevant issues

Distinction standard

- * the answer is well written and expressed
- * the answer is structured and logical
- * the issues have been reasonably well identified and appreciated
- * there is correct use of referencing
- * issues have been analysed
- ** there is a comprehensive coverage of the issues

Credit standard

- * the answer is generally well written and expressed
- * the answer is structured and sequential
- * referencing is satisfactory
- * issues are identified and addressed
- * there has been an attempt to analyse some of the issues
- * the coverage of issues is reasonably comprehensive often with a good treatment and analysis of particular points
- * depth of treatment is often lacking in some of the issues.

Pass standard

- * the answer is able to be followed and understood
- * the answer could perhaps be better organised and structured
- * the referencing may need improvement
- * issues may need to be identified and addressed in more depth
- * analysis when present may be incorrect
- * sometimes the conclusions reached are simple
- * there may be quantities of material of marginal relevance included in the answer.

Fail standard

- * the answer may be significantly short of the required length
- * the written expression is poor and difficult to understand
- * the answer is poorly organised
- * there has been a failure to identify and address the issues in the question
- * referencing is generally inadequate
- * the reasoning and application demonstrated is poor
- * frequently there is much irrelevant material.

Referencing Style

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

Submission

Online

Learning Outcomes Assessed

- Explain the operation and construction of aircraft piston engine power plants
- Describe the operation and performance characteristics of fixed and variable pitch propellers
- Describe the function of a typical small aircraft's mechanical system
- Explain the operation and function of a light aircraft undercarriage system
- Convert between the various airspeeds
- Explain the operation of the aircraft pressure and gyro flight instruments
- Discuss the basic operating principles of aeronautical radio systems.

Graduate Attributes

- Communication
- Problem Solving
- Critical Thinking
- Information Literacy
- Team Work

Examination

Outline

Complete an invigilated examination.

Date

During the examination period at a CQUniversity examination centre.

Weighting

60%

Length

90 minutes

Exam Conditions

Closed Book.

Materials

Calculator - all non-communicable calculators, including scientific, programmable and graphics calculators are authorised

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