



# AVAT11002 *Basic Aeronautical Knowledge*

## Term 1 - 2018

Profile information current as at 09/12/2022 10:38 pm

All details in this unit profile for AVAT11002 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 basic aeronautical knowledge of small general aviation aircraft. You will calculate basic take-off and landing performance and weight and balance information. Other factors that affect flying, such as local weather, will be examined. You will develop knowledge of aerodynamics and aircraft power plants and systems. In this unit you will cover the aeronautical knowledge requirements of the Civil Aviation Safety Authority Syllabus applicable to the Recreational Pilot Licence. This will allow you to sit the Recreational Pilot Licence (Aeroplane) Examination which is a prerequisite for attempting the flight test for the Recreational 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

There are no requisites for this unit.

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 - 2018

- Bundaberg
- Cairns
- Distance

### 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](#).

## Unit Learning Outcomes

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

1. Communicate basic aviation terminology
2. Describe the basics of aircraft power plants and systems
3. Explain the basic aerodynamic principles of flight
4. Calculate basic take-off and landing performance information
5. Calculate basic weight and balance information
6. Examine local weather information
7. Describe local flight rules and procedures.

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

## Textbooks and Resources

### Textbooks

AVAT11002

#### Prescribed

#### Basic Aeronautical Knowledge (BAK)

Edition: Latest (2013)

Authors: Robson, Dyer, and Waddell

Aviation Theory Centre

Darra , QLD , Australia

ISBN: 978-187553757-0

Binding: Other

#### Additional Textbook Information

You can also order the book directly from the publisher:

<https://aviationtheory.net.au/shop/student-and-recreational/basic-aeronautical-knowledge/>

[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](mailto:m.malouf@cqu.edu.au)

**Steven Thatcher** Unit Coordinator

[s.thatcher@cqu.edu.au](mailto:s.thatcher@cqu.edu.au)

## Schedule

### Week 1 - 05 Mar 2018

Module/Topic	Chapter	Events and Submissions/Topic
<b>Aircraft Terminology</b>	Aircraft Terminology	Practice Quiz Practice Quizzes do not count towards your grade. They are there to help you practice for your final exam.

### Week 2 - 12 Mar 2018

Module/Topic	Chapter	Events and Submissions/Topic
Radio and Communications	Communications	Practice Quiz

### Week 3 - 19 Mar 2018

Module/Topic	Chapter	Events and Submissions/Topic
Structure Propulsion and Fuel Systems	Structure Propulsion and Fuel Systems	Practice Quiz

**Week 4 - 26 Mar 2018**

Module/Topic	Chapter	Events and Submissions/Topic
Electrical, Hydraulic, and Instruments	Electrical, Hydraulic Systems, and Instruments	Practice Quiz

**Week 5 - 02 Apr 2018**

Module/Topic	Chapter	Events and Submissions/Topic
Air Law	Air Law	Practice Quiz

**Vacation Week - 09 Apr 2018**

Module/Topic	Chapter	Events and Submissions/Topic
Enjoy this time off although don't forget that you have an assignment due soon as well as the final exam. Be great, Ron Bishop		

**Week 6 - 16 Apr 2018**

Module/Topic	Chapter	Events and Submissions/Topic
Aerodynamics: Basics	Aerodynamics: Performance	Practice Quiz

**Week 7 - 23 Apr 2018**

Module/Topic	Chapter	Events and Submissions/Topic
Aerodynamics: Performance	Aerodynamics: Performance	Practice Quiz

**Week 8 - 30 Apr 2018**

Module/Topic	Chapter	Events and Submissions/Topic
Human Factors	Human Factors	Practice Quiz

**Week 9 - 07 May 2018**

Module/Topic	Chapter	Events and Submissions/Topic
Meteorology/Weather	Meteorology/Weather	Practice Quiz  <b>The History of Australian Aviation</b> Due: Week 9 Monday (7 May 2018) 9:00 am AEST

**Week 10 - 14 May 2018**

Module/Topic	Chapter	Events and Submissions/Topic
Loading /Weight and Balance	Loading/Weight and Balance	Practice Quiz

**Week 11 - 21 May 2018**

Module/Topic	Chapter	Events and Submissions/Topic
Take Off and Landing Performance	Take Off and Landing Performance	Practice Quiz

**Week 12 - 28 May 2018**

Module/Topic	Chapter	Events and Submissions/Topic
Navigation	Navigation	Practice Quiz

**Review/Exam Week - 04 Jun 2018**

Module/Topic	Chapter	Events and Submissions/Topic
Review	All	

**Exam Week - 11 Jun 2018**

Module/Topic	Chapter	Events and Submissions/Topic

## Term Specific Information

Welcome to AVAT 11002. I look forward to this term and joining you on your education journey. My name is Ron Bishop I'm your Unit Coordinator and can be reached at (07) 4150 7167. See my Staff Profile at the link below.  
<https://handbook.cqu.edu.au/profiles/view/92>

## Assessment Tasks

### 1 The History of Australian Aviation

#### Assessment Type

Group Work

#### Task Description

#### Written Assessment

This assignment will broaden your understanding of aviation history in Australia. You will need to scan relevant literature (textbooks, websites, etc) to explain Australia's history pertaining to aviation from the beginning to current events.

Your paper should briefly cover the following areas:

- The history of aviation. The development of the aircraft and the implications and limitations of materials, technology, etc., throughout its history and the people that were involved should be discussed.
- Milestones of aviation development matched to historical events.
- Economic viability of aviation and the main sources of income throughout the years.
- Key technological advances in aviation (eg. closed cockpits, monoplanes, variable pitch propeller, pressurization, safety equipment, jet engines)
- Historical flights and events, (eg., Bert Hinkler's flight to Sydney, Charles Lindbergh's trans-oceanic flight, Amelia Earhart) and their impact on aviation and its development.

The paper will draw on sourced literature and other sources. (Hint: Use the Library's resource search and online journal databases, (eg., Ebscohost, books, videos, etc.)

#### Format

The paper is to be written in essay format, with an Introduction, Body, and Conclusion, and will be properly referenced using the Harvard Style. An abstract is required. Do not provide a table of contents. Pages should be numbered in Arabic numerals at the top right corner, except for the title page (no page number) and the abstract should have Roman numerals starting at ii. 2200 words maximum.

Turn in writing assignment here.

#### Assessment Due Date

Week 9 Monday (7 May 2018) 9:00 am AEST

Please submit through Turnitin in Moodle in Week 9

#### Return Date to Students

Review/Exam Week Monday (4 June 2018)

#### Weighting

40%

#### Assessment Criteria

NAME: Dirk the Daring

## Marking Criteria

Assessment Criteria	Marks
Evidence of a suitable introduction that informs the reader of the topic as outlined in the assessment task:	2/2

Evidence of a conclusion that summarises, in a logical manner, the information presented in the discussion of the topic as outlined in the assessment task:	2/2
Demonstrate your understanding and knowledge of the historical development of aviation in Australia as outlined in the assessment task, and provide evidence through relevant analysis and discussion, using appropriate references from scholarly literature/texts to support your essay: 8 marks	8/8
Show your understanding through well informed and critical discussion of the conditions and technological advances which lead to the expansion and development of aviation with appropriate use of examples and milestones as outlined in the assessment task, through relevant analysis and discussion, using appropriate references from scholarly literature to support your essay: 8 marks	8/8
Evidence of additional research beyond the course material and prescribed textbook through the use of academic scholarly journal articles and other texts. : 5 marks	5/5
Presentation, including correct in-text referencing, bibliography, formatting, layout (essay format) and grammar: 5 marks.	5/5
<b>TOTAL MARKS</b>	<b>30/30</b>

## OVERALL COMMENTS

### Referencing Style

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

### Submission

Online

### Submission Instructions

You can work on this assignment as a group although you must submit it as an individual

### Learning Outcomes Assessed

- Calculate basic take-off and landing performance information
- Calculate basic weight and balance information
- Examine local weather information

### Graduate Attributes

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

## Examination

### Outline

Complete an invigilated examination.

### Date

During the examination period at a CQUniversity examination centre.

### Weighting

60%

### Length

90 minutes

### Exam Conditions

Open Book.

### Materials

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