AVAT12008 *Meteorology (Commercial Pilot Licence)*
Term 1 - 2021

Profile information current as at 14/12/2025 12:45 pm

General Information

Overview

Meteorology (Commercial Pilot Licence) will provide you with knowledge of low altitude meteorology applicable to aviation operations. You will cover the aeronautical knowledge requirements of the Civil Aviation Safety Authority Commercial Pilot Licence (CPL) meteorology syllabus. You will study the atmosphere, its structure, composition and dynamics. You will learn how temperature, pressure and density vary with altitude and how this affects your ability to pilot an aircraft. Cloud types and their associated weather will be identified and classified. You will also learn how to read meteorological charts.

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 - 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 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. **Written Assessment**
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
Formal feedback from three students.

Recommendation
The feedback on each occasion indicated satisfaction by the three students of the quality and presentation of the unit material.

Feedback from Unit Coordinator

Feedback
Feedback

Recommendation
Given the satisfaction expressed by the students, one must continue to review and seek improvement in the quality and presentation of this unit.

Unit Learning Outcomes

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

1. Describe the model of International Standard Atmosphere
2. Explain atmospheric characteristics and how temperature, pressure and density vary with altitude
3. Classify cloud types and their associated weather
4. Explain the motion of air masses and fronts, and the weather associated with each type
5. Identify features on low level aviation meteorological charts
6. Decode aviation meteorological forecasts and reports
7. Identify the meteorological hazards for aviation including icing and visibility.

No external accreditation.

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	6	7
1 - Written Assessment - 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 - Written Assessment - 40%	•	•	•	•		•		•		
2 - Examination - 60%	•	•	•			•		•		

Textbooks and Resources

Textbooks

AVAT12008

Prescribed

Manual of Aviation Meteorology
Secon Edition (2007)
Authors: Bureau of Meteorology
Air Services Australia, Locked Bag 8500, Canberra 2601.
Canberra , ACT , Australia
ISBN: 987-0-9578991-7-9
Binding: Other
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Supplementary

Meteorology for the Private & Commercial Pilot Licences
Edition: Reprinted 2015 (2015)
Authors: Robson D, Whellum P, Waddell M.
Aviation Theory Centre Pty Ltd,
Brisbane , Qld , Australia
ISBN: 978-1-875537-84-6
Binding: Other

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

Chris Bernecic Unit Coordinator
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Aruna Ranganathan Unit Coordinator
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Schedule

Week 1 - 08 Mar 2021

Module/Topic	Chapter	Events and Submissions/Topic
The Atmosphere	The Atmosphere	

Week 2 - 15 Mar 2021

Module/Topic	Chapter	Events and Submissions/Topic

Air temperature and heat exchange processes	Air temperature and heat exchange processes	

Week 3 - 22 Mar 2021

Module/Topic	Chapter	Events and Submissions/Topic
Cloud types and associated weather	Cloud types and associated weather	

Week 4 - 29 Mar 2021

Module/Topic	Chapter	Events and Submissions/Topic
Air density	Air density	

Week 5 - 05 Apr 2021

Module/Topic	Chapter	Events and Submissions/Topic
Atmospheric pressure and stability of the atmosphere	Atmospheric pressure and stabilityof the atmosphere	

Vacation Week - 12 Apr 2021

Module/Topic	Chapter	Events and Submissions/Topic
Vacation	Vacation	

Week 6 - 19 Apr 2021

Module/Topic	Chapter	Events and Submissions/Topic
Moist air and clouds	Moist air and clouds	

Week 7 - 26 Apr 2021

Module/Topic	Chapter	Events and Submissions/Topic
Wind, turbulence, synoptic charts, tropical weather	Wind, turbulence, synoptic charts, tropical weather	

Week 8 - 03 May 2021

Module/Topic	Chapter	Events and Submissions/Topic
Thunderstorms, aircraft icing, visibility	Thunderstorms, aircraft icing, visibility	

Week 9 - 10 May 2021

Module/Topic	Chapter	Events and Submissions/Topic
Weather systems and patterns	Weather systems and patterns	Assignment submission **Written Assignment** Due: Week 9 Friday (14 May 2021) 9:00 am AEST

Week 10 - 17 May 2021

Module/Topic	Chapter	Events and Submissions/Topic
Meteorological services, reports, forecasts, satellite images, interpretation of charts	Meteorological services, reports, forecasts, satellite images, interpretation of charts	

Week 11 - 24 May 2021

Module/Topic	Chapter	Events and Submissions/Topic
Adverse weather, volcanic ash, tropopause, weather radar	Adverse weather, volcanic ash, tropopause, weather radar	

Week 12 - 31 May 2021

Module/Topic	Chapter	Events and Submissions/Topic
High level weather conditions	High level weather conditions	

Review/Exam Week - 07 Jun 2021

Module/Topic	Chapter	Events and Submissions/Topic

Revision of unit material	Revision of unit material	

Exam Week - 14 Jun 2021

Module/Topic	Chapter	Events and Submissions/Topic

Assessment Tasks

1 Written Assignment

Assessment Type
Written Assessment

Task Description
Written Assignment including:

- Recognition and explanation of meteorological symbols and abbreviations;
- Discussion in essay form,of a particular meteorological phoenomina

This assignment requires students to identify and apply meteorological symbols and abbreviatoins that are used in the day to day presentation of weather and forecasts as sighted by the aviation industry. Familiarity with these elements enable you to perform the preflight duties required of pilots prior to flight.
You will be required to present, in essay form, a particular feature of meteorology after undertaking the necessary research and applicaiotn of knowlege acquired during the semester. You must be able to identify the initial factors of development, impact of the phenomina on flight operations and subsequent dissipation/passing of the phenomina.
This assignment must be submitted in **Turnitin** in moodle.
Your assignment must be produced in electronic format (either as (a) a single page word-processed document, (b) single page Publisher document saved in a pdf format, or (c) as a single PowerPoint slide saved in a pdf format) and should be submitted through the assessment link in Moodle, by uploading your file following the on-screen instructions.
Note; that all submissions are processed through the similarity detection software (called Turnitin), hence the requirement to submit the Publisher or Powerpoint documents as pdf files. You must ensure that all of the work is your own, in line with University requirements.
You must ensure that all of the work submitted is your own, in line with University Policy requirements.

Assessment Due Date
Week 9 Friday (14 May 2021) 9:00 am AEST

Return Date to Students
Week 11 Friday (28 May 2021)

Via moodle site

Weighting
40%

Minimum mark or grade
50%

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

Submission Instructions
This assignment must be submitted via Turnitin in moodle.

Learning Outcomes Assessed

- Describe the model of International Standard Atmosphere
- Explain atmospheric characteristics and how temperature, pressure and density vary with altitude
- Classify cloud types and their associated weather
- Explain the motion of air masses and fronts, and the weather associated with each type
- Identify features on low level aviation meteorological charts
- Decode aviation meteorological forecasts and reports
- Identify the meteorological hazards for aviation including icing and visibility.

Graduate Attributes

- Communication
- Problem Solving
- Critical Thinking
- Information Literacy
- Information Technology Competence
- Ethical practice

Examination

Outline
Complete an invigilated examination.

Date
During the examination period at a CQUniversity examination centre.

Weighting
60%

Length
120 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