



AVAT11004 *Unmanned Aerial Vehicles*

Term 2 - 2018

Profile information current as at 20/05/2024 02:45 pm

All details in this unit profile for AVAT11004 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

The unit will provide you with information on the practical use and implementation of Unmanned Aerial Vehicles (UAVs). You will learn about the historical, current and future developments of UAVs. You will cover facets of UAV elements and operations, including an examination of safety procedures and human factors within the UAV system. You will compare the impact of various meteorological conditions and review the legal requirements for UAV pilots and aircraft operations. You will also explore industry needs and the resulting benefits of UAVs.

Details

Career Level: *Undergraduate*

Unit Level: *Level 1*

Credit Points: 6

Student Contribution Band: 8

Fraction of Full-Time Student Load: 0.125

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 2 - 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 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: 50%

2. **Presentation and Written Assessment**

Weighting: 50%

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. Distinguish the different types of Unmanned Aerial Vehicles (UAVs) and provide appropriate aviation definitions
2. Explain the relevant natural laws impacting on UAVs during all stages of flight
3. Evaluate the relationship between human factors, UAVs and the impact on aviation safety
4. Compare the impact of various meteorological conditions on UAVs
5. Review legal requirements for UAV aircraft and UAV pilots
6. Justify industry needs for UAVs and the resulting benefits.

None

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
1 - Written Assessment - 50%	•	•	•			
2 - Presentation and Written Assessment - 50%				•	•	•

Alignment of Graduate Attributes to Learning Outcomes

Graduate Attributes	Learning Outcomes					
	1	2	3	4	5	6
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 - 50%	•	•	•	•				•		
2 - Presentation and Written Assessment - 50%	•	•	•	•		•		•		

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)

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 - 09 Jul 2018

Module/Topic	Chapter	Events and Submissions/Topic
RPAS Legislation	Lecturers notes	

Week 2 - 16 Jul 2018

Module/Topic	Chapter	Events and Submissions/Topic
RPAS Situational Awareness	Lecturers notes	Written assessment accessible to students (due 12th August)

Week 3 - 23 Jul 2018

Module/Topic	Chapter	Events and Submissions/Topic
RPAS Infotechnological Devices	Lecturers notes	

Week 4 - 30 Jul 2018

Module/Topic	Chapter	Events and Submissions/Topic
RPAS Hardware Systems	Lecturers notes	

Week 5 - 06 Aug 2018

Module/Topic	Chapter	Events and Submissions/Topic
RPAS Software	Lecturers notes	Assignment due Sunday 12th August

Vacation Week - 13 Aug 2018

Module/Topic	Chapter	Events and Submissions/Topic
	Lecturers notes	Assignment 1 Due: Vacation Week Monday (13 Aug 2018) 11:45 pm AEST

Week 6 - 20 Aug 2018

Module/Topic	Chapter	Events and Submissions/Topic
RPAS Navigation	Lecturers notes	
Week 7 - 27 Aug 2018		
Module/Topic	Chapter	Events and Submissions/Topic
RPAS Ground Handling	Lecturers notes	
Week 8 - 03 Sep 2018		
Module/Topic	Chapter	Events and Submissions/Topic
RPAS Launch	Lecturers notes	
Week 9 - 10 Sep 2018		
Module/Topic	Chapter	Events and Submissions/Topic
Pre- and post-flight actions	Lecturers notes	
Week 10 - 17 Sep 2018		
Module/Topic	Chapter	Events and Submissions/Topic
RPAS Normal Flight	Lecturers notes	
Week 11 - 24 Sep 2018		
Module/Topic	Chapter	Events and Submissions/Topic
Abnormal flight situations and recovery	Lecturers notes	
Week 12 - 01 Oct 2018		
Module/Topic	Chapter	Events and Submissions/Topic
Practical	Lecturers notes	
Review/Exam Week - 08 Oct 2018		
Module/Topic	Chapter	Events and Submissions/Topic
Review	Lecturers notes	
Exam Week - 15 Oct 2018		
Module/Topic	Chapter	Events and Submissions/Topic

Assessment Tasks

1 Assignment 1

Assessment Type

Written Assessment

Task Description

Remotely Piloted Aircraft Systems' (RPAS) have had a significant impact on industry over the last decade. Discuss the contribution they have made in one of the following industries: Military, Agriculture, Engineering, Photography, Architecture, Utilities (including electricity, natural gas, water, sewage, telephone, and transportation), Film and Video, or Sports. Also discuss the legal aspects faced by RPAS operators and determine what laws have been put in place to regulate this new industry.

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 Abstract, Introduction, Body, and Conclusion (please use these headings. Use the Harvard Referencing Style to cite sources of information.

Do not provide a table of contents. Number your pages by including your last name and the page number in the upper right corner of each page of the essay, including the first page.

Assessment Due Date

Vacation Week Monday (13 Aug 2018) 11:45 pm AEST

Online submission

Return Date to Students

Week 7 Monday (27 Aug 2018)

Online

Weighting

50%

Assessment Criteria

Assessment Criteria	Marks
Evidence of a suitable abstract that summarises the essay and a suitable introduction that informs the reader of the topic as outlined in the assessment task.	/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
Demonstrate your understanding and knowledge of the significant impact RPAS have had on industry over the last decade, the contribution they have made in an industry outlined in the assessment task, and provide evidence through relevant discussion, using appropriate references from scholarly literature/texts to support your essay.	/8
Show your understanding through well informed and critical discussion of the legal obligations required by RPAS operators and what laws have been put in place to regulate this new industry. Use appropriate references from scholarly literature to support your essay.	/8
Evidence of additional research beyond the course material and through the use of academic scholarly journal articles and other texts.	/5
Presentation, including correct in-text referencing, a referencing list at the end of the essay, formatting, layout (essay format) and grammar.	/5

Referencing Style

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

Submission

Online

Learning Outcomes Assessed

- Distinguish the different types of Unmanned Aerial Vehicles (UAVs) and provide appropriate aviation definitions
- Explain the relevant natural laws impacting on UAVs during all stages of flight
- Evaluate the relationship between human factors, UAVs and the impact on aviation safety

Graduate Attributes

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

No Assessment Title**Assessment Type**

Presentation and Written Assessment

Task Description

No Assessment Task Description

Assessment Due Date**Return Date to Students****Weighting**

50%

Assessment Criteria

No Assessment Criteria

Referencing Style

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

Submission

No submission method provided.

Learning Outcomes Assessed

- Compare the impact of various meteorological conditions on UAVs
- Review legal requirements for UAV aircraft and UAV pilots
- Justify industry needs for UAVs and the resulting benefits.

Graduate Attributes

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

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