



# AINV20010 Crash Lab Project

## Term 2 - 2017

Profile information current as at 03/05/2024 01:14 am

All details in this unit profile for AINV20010 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

On completion of this unit students will demonstrate advanced knowledge and skills in planning, conducting, managing and leading multidisciplinary accident investigations which utilise advanced accident analysis methods and models, contemporary simulation and reconstruction programs and methods while delivering investigation reports appropriate for submission as expert witness reports for a court or government. All students are required to attend a residential school at the CQUniversity Forensic Accident Investigation Laboratory at the Bundaberg campus.

#### Details

Career Level: *Postgraduate*

Unit Level: *Level 8*

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 2 - 2017

- 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).

#### Residential Schools

This unit has a Compulsory Residential School for distance mode students and the details are:  
Click here to see your [Residential School Timetable](#).

#### 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 Postgraduate 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 Discussion**

Weighting: 20%

#### 2. **Portfolio**

Weighting: 30%

#### 3. **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](#).

## 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 Have Your Say

##### Feedback

Guest lecturers in the various domains provided great content and discussion.

##### Recommendation

Continue to use the specialist lecturers when exploring the different domains.

#### Feedback from Have Your Say

##### Feedback

Further extend the Crash Lab Scenarios and suite of artefacts, so that the learning is even richer.

##### Recommendation

Continue to acquire more artefacts and develop new in-depth scenarios, as per the long term development plan.

## Unit Learning Outcomes

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

1. Plan, execute and evaluate a detailed accident investigation involving appropriate accident analysis simulation and/or reconstruction methods.
2. Analyse accident investigation reporting paradigms associated with the various investigation domains.
3. Prepare an accident investigation report appropriate for submission as an expert witness report for a court or government.
4. Demonstrate individual initiative and effective teamwork and collaboration skills in multidisciplinary investigation teams.
5. Lead and manage investigation teams.

## Alignment of Learning Outcomes, Assessment and Graduate Attributes



### Alignment of Assessment Tasks to Learning Outcomes

Assessment Tasks	Learning Outcomes				
	1	2	3	4	5
<b>1 - Group Discussion - 20%</b>	•			•	•
<b>2 - Portfolio - 30%</b>	•	•			
<b>3 - Written Assessment - 50%</b>	•		•		•

### Alignment of Graduate Attributes to Learning Outcomes

Graduate Attributes	Learning Outcomes				
	1	2	3	4	5
1 - Knowledge	○	○	○	○	
2 - Communication	○		○	○	○
3 - Cognitive, technical and creative skills	○	○	○	○	
4 - Research	○	○			
5 - Self-management	○		○	○	○
6 - Ethical and Professional Responsibility	○		○	○	○
7 - Leadership	○			○	○
8 - 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
1 - Group Discussion - 20%	○	○	○	○	○	○	○	
2 - Portfolio - 30%	○	○	○	○	○	○		
3 - 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

**Allison Hutton** Unit Coordinator  
[a.hutton@cqu.edu.au](mailto:a.hutton@cqu.edu.au)

## Schedule

### Week 1 - 10 Jul 2017

Module/Topic	Chapter	Events and Submissions/Topic
Module 1 : Introduction and Unit Overview; Preparing for Res School		

### Week 2 - 17 Jul 2017

Module/Topic	Chapter	Events and Submissions/Topic
Module 2 : Revision of Investigation Principles Topic 1 : Scene Management		Tutorial 1 - Practical session - Evidence collection and witness interviews Group Discussion 1 Due Monday (17 July 17) 09:00 AM AEST

### Week 3 - 24 Jul 2017

Module/Topic	Chapter	Events and Submissions/Topic
Module 2 : Revision of Investigation Principles Topic 2 : Evidence Collection		Tutorial 2 - Practical session - mapping

### Week 4 - 31 Jul 2017

Module/Topic	Chapter	Events and Submissions/Topic
Module 3 : Analysis and Reporting Topic 1 : Collating the data		Tutorial 3 - Practical data collation - creating logic diagrams Group Discussion 2 Due Monday (31 July 17) 09:00 AM AEST

### Week 5 - 07 Aug 2017

Module/Topic	Chapter	Events and Submissions/Topic
		Residential School 7 - 11 August in Bundaberg Portfolio Parts A, B, C and D due during Residential school

### Vacation Week - 14 Aug 2017

Module/Topic	Chapter	Events and Submissions/Topic
		Submission of residential school presentation slides and risk assessment in Moodle Due Monday (14 Aug 17) 09:00 AM AEST

### Week 6 - 21 Aug 2017

Module/Topic	Chapter	Events and Submissions/Topic
Module 3 : Analysis and Reporting Topic 2 : Refining your analysis		Tutorial 4 - Practical - testing logic diagrams

### Week 7 - 28 Aug 2017

Module/Topic	Chapter	Events and Submissions/Topic
Module 3 : Analysis and Reporting Topic 3 : Writing reports and reflections		Tutorial 5 - Road Testing your report structure Group Discussion 3 Due Monday (28 Aug 17) 09:00 AM AEST

**Week 8 - 04 Sep 2017**

Module/Topic	Chapter	Events and Submissions/Topic
Module 4 : Domains Topic 1 : Introduction Topic 2 : Aviation - Part 1 - Theory		Tutorial 6 - Aviation - Part 2 Case Studies Group Discussion 4 Due Monday (4 Sep 17) 09:00

**Week 9 - 11 Sep 2017**

Module/Topic	Chapter	Events and Submissions/Topic
Module 4 : Domains Topic 3 : Roads- Part 1 - Theory		Tutorial 7 - Roads Part 2 - Case Studies

**Week 10 - 18 Sep 2017**

Module/Topic	Chapter	Events and Submissions/Topic
Module 4 : Domains Topic 4 : Rail Part 1 - Theory		Tutorial 8 - Rail Part 2 - Case Studies Written Assessment Parts A and B Due Monday (18 Sep 17) 09:00 AM AEST

**Week 11 - 25 Sep 2017**

Module/Topic	Chapter	Events and Submissions/Topic
Module 4 : Domains Topic 5 : Industry Part 1 - Theory		Tutorial 9 - Industry Part 2 - Case Studies

**Week 12 - 02 Oct 2017**

Module/Topic	Chapter	Events and Submissions/Topic
Module 4 : Domains Topic 6 : Maritime Part 1 - Theory Module 5 : Bringing it all together		Tutorial 10 - Maritime Part 2 - Case Studies

**Review/Exam Week - 09 Oct 2017**

Module/Topic	Chapter	Events and Submissions/Topic
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**Exam Week - 16 Oct 2017**

Module/Topic	Chapter	Events and Submissions/Topic
		Written Assessment Part C Due Friday (20 Oct 17) 09:00 AM AEST

## Assessment Tasks

### 1 Group Discussion (20%)

**Assessment Type**

Group Discussion

**Task Description**

During the term, your lecturer will post four discussion questions. You are required to answer each of these discussion questions thoughtfully. For each discussion question, also post at least one constructive reply to another student's post.

**Assessment Due Date**

As per study schedule

**Return Date to Students**

Within three weeks

**Weighting**

20%

**Minimum mark or grade**

Students must submit all four discussion questions and achieve a passing grade in this assessment to pass the unit

### Assessment Criteria

Assessments will be assessed as to whether a clear position is stated, justified and supported by appropriate and referenced evidence.

### Referencing Style

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

### Submission

Online

### Submission Instructions

Submit via the central discussion forum in the Moodle Unit

### Learning Outcomes Assessed

- Plan, execute and evaluate a detailed accident investigation involving appropriate accident analysis simulation and/or reconstruction methods.
- Demonstrate individual initiative and effective teamwork and collaboration skills in multidisciplinary investigation teams.
- Lead and manage investigation teams.

### Graduate Attributes

- Knowledge
- Communication
- Cognitive, technical and creative skills
- Research
- Self-management
- Ethical and Professional Responsibility
- Leadership

## 2 Residential School Portfolio (30%)

### Assessment Type

Portfolio

### Task Description

#### Part A (5%): Crash Kit and Risk Assessment

Before residential school, you will be required to assemble a suitable crash kit, based on the information provided in this unit. You shall also collate appropriate forms and prepare a risk assessment considering the activities required to investigate one of a car, crane, bottling machine or tractor accident at the Bundaberg Crash Lab.

#### Part B (15%) : Portfolio

During residential school, you and your team will collect and create a number of artefacts relevant to different investigations. These will be assessed during and at the end of residential school.

Note : During the residential school, you will create and share artefacts with other students as a member of their investigation team. Failure to share artefacts will result in a Fail grade for the Residential School Portfolio.

#### Part C (10%) : Presentation

During the residential school, you will prepare a presentation of your preliminary findings. You will deliver this presentation by the end of residential school and submit your presentation slides for additional review.

More detail will be provided on Moodle during the term.

#### Part D (Pass/Fail) : Professionalism

Throughout the residential school, students will be assessed on their ability to apply professional approaches to all activities.

### Assessment Due Date

Part A is due at the beginning of residential school; Parts B and D will be assessed during residential school and Part C will be assessed at the end of residential school.

### Return Date to Students

Within three weeks

### Weighting

30%

### Minimum mark or grade

To pass this assessment, students must be graded Pass in all core skills: scene management, photography, mapping, witness interviewing and professionalism during the Residential School. Students must pass this assessment to pass this

unit.

### Assessment Criteria

You will be assessed against your ability to :

- Plan, execute and evaluate a detailed accident investigation involving appropriate evidence collection and accident analysis methods.
- Demonstrate individual initiative and effective teamwork and collaboration in multidisciplinary investigation teams.
- Lead and manage investigation teams.
- Apply professional approaches to all activities

### Referencing Style

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

### Submission

Offline Online

### Submission Instructions

Submission will be both during residential school and via Moodle. Detailed submission instructions will be provided.

### Learning Outcomes Assessed

- Plan, execute and evaluate a detailed accident investigation involving appropriate accident analysis simulation and/or reconstruction methods.
- Analyse accident investigation reporting paradigms associated with the various investigation domains.

### Graduate Attributes

- Knowledge
- Communication
- Cognitive, technical and creative skills
- Research
- Self-management
- Ethical and Professional Responsibility

## 3 Written Assessment (50%)

### Assessment Type

Written Assessment

### Task Description

This assessment contains three parts. Submission of all three parts is mandatory. Failure to submit one of the three parts will result in failure of this assessment.

#### Part A (30%) - Accident Analysis Report - due 0900 Mon 18 Sep (Wk 10)

During the Crash Lab Project residential school each student will have lead an investigation team. For this assessment task, you must:

- Obtain copies of all the relevant physical and documentary evidence, photographs, logs, interview statements etc collected by the members of your investigation team as part of the investigation in which you were leader
- Assemble a timeline to display the critical sequence of events
- Explain the accident using an event tree
- Complete your analysis of the accident and PEEPO, Timeline and Event Tree diagrams which were commenced during the residential school
- Prepare a comprehensive report describing the accident, your investigation, your analysis of the evidence including your PEEPO, Timeline and Event Tree logic diagrams. Your report should conclude with your findings regarding causation of the accident and recommendations for corrective action.

#### Part B (5%) - Reflection on Investigation Process (how did it go and how would they improve?) - due Mon 0900 18 Sep (Wk 10)

You will be required to reflect on your preparedness for professional practice. For Part B of this assessment task, you are required to:

- Reflect on your learning in the course to date.
- Complete a self assessment of your Part A report (using criteria provided on the Moodle site during the term).
- Identify your strengths and weaknesses in relation to each of the crash lab activities (eg evidence collection, logic diagrams etc)



- Explain how you will address any shortcomings prior to your industry placement.

You are free to present this Part B of the assessment in the format of your choice.

**Part C (15%) – Domain Evaluation and Comparison – due 0900 Fri 20 Oct (Exam Week)**

Evaluate aspects of accident investigation and forensics unique to two domains (air, rail, road, maritime or industrial safety)

- Access accident reports from each of the two specific domain(s); and
- Access a public accident database relative to the domain from the list provided on Moodle during the term
- From the databases, select a signature report for each of your two chosen domains, and, in the light of other information you've collected in each domain, respond to a number of specific issues listed on the Moodle site.
- Compare and contrast the key aspects of accident investigation and forensics between your two chosen domains in relation to effectiveness in relation to the criteria provided.
- Compare and contrast the domain investigation framework as described in the lectures as a tool for domain learning and accident prevention

**Assessment Due Date**

Part A and B due 0900 Monday 18 September; Part C due 0900 Friday 20 October

**Return Date to Students**

Within three weeks

**Weighting**

50%

**Minimum mark or grade**

To pass this assessment students must achieve a passing grade in each of Parts A, B and C. Students must pass this assessment to pass this unit.

**Assessment Criteria**

You will be assessed again your ability to analyse accident investigation reporting paradigms associated with the various investigation domains.

**Referencing Style**

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

**Submission**

Online

**Submission Instructions**

Submission will be via Moodle

**Learning Outcomes Assessed**

- Plan, execute and evaluate a detailed accident investigation involving appropriate accident analysis simulation and/or reconstruction methods.
- Prepare an accident investigation report appropriate for submission as an expert witness report for a court or government.
- Lead and manage investigation teams.

**Graduate Attributes**

- Knowledge
- Communication
- Cognitive, technical and creative skills
- Research
- Self-management
- Ethical and Professional Responsibility

## 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