



# AINV20008 *Investigation of Human Factors*

## Term 1 - 2020

Profile information current as at 26/05/2022 08:53 pm

All details in this unit profile for AINV20008 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 students with an advanced understanding of human factors investigation methods and models and the contemporary human factors, organisational and safety culture tenets which underpin effective accident prevention and investigation. This will include analysis and investigation of the role of the human in modern socio-technical systems and systems failures, human factors engineering and methods for investigating and analysing safety culture and its influence on the causation of accidents.

### Details

Career Level: *Postgraduate*

Unit Level: *Level 8*

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 1 - 2020

- 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 Postgraduate 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 Discussion**

Weighting: 20%

#### 2. **Written Assessment**

Weighting: 40%

#### 3. **Written Assessment**

Weighting: 40%

### 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 Student feedback

##### Feedback

The system life-cycle component needs to be more clearly integrated within the unit.

##### Recommendation

Systems lifecycle will be incorporated more explicitly into the WorkSafeBC sample accident tutorial discussions.

## Unit Learning Outcomes

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

1. Appraise the role that human factors has in accident causation.
2. Critique and apply contemporary human factors investigation tools and techniques.
3. Evaluate the contribution that organisational factors and safety culture have on accident causation.
4. Recognise the shortcomings in applications of the "blame" and "no-blame" cultures and their impact on investigation.

## Alignment of Learning Outcomes, Assessment and Graduate Attributes



### Alignment of Assessment Tasks to Learning Outcomes

Assessment Tasks	Learning Outcomes			
	1	2	3	4
1 - Group Discussion - 20%	•	•		
2 - Written Assessment - 40%	•	•		
3 - Written Assessment - 40%			•	•

### Alignment of Graduate Attributes to Learning Outcomes

Graduate Attributes	Learning Outcomes			
	1	2	3	4
1 - Knowledge	○	○	○	○
2 - Communication				○
3 - Cognitive, technical and creative skills	○	○	○	○
4 - Research	○	○	○	○

Graduate Attributes	Learning Outcomes			
	1	2	3	4
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 - Written Assessment - 40%	○	○	○	○	○	○		
3 - Written Assessment - 40%	○	○	○	○	○	○		

## 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

**Yvonne Toft** Unit Coordinator  
[y.toft@cqu.edu.au](mailto:y.toft@cqu.edu.au)

## Schedule

### Week 1 - 09 Mar 2020

Module/Topic	Chapter	Events and Submissions/Topic
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Introduction: Getting to know you, Moodle and this course.

Class Zoom Session

### Week 2 - 16 Mar 2020

Module/Topic	Chapter	Events and Submissions/Topic
Module 1: Human factors and accident causation. This week we will recognise that events can be analysed and interpreted in different contexts. Everything may not be as it seems or as simple as it seems.		Class Zoom Session

### Week 3 - 23 Mar 2020

Module/Topic	Chapter	Events and Submissions/Topic
Module 1: Human factors and accident causation. Sociotechnical systems: the relationships between people, machines and systems in society.		Class Zoom Session

### Week 4 - 30 Mar 2020

Module/Topic	Chapter	Events and Submissions/Topic
Module 1: Human factors and accident causation. Barriers to accidents: Tripod.	Additional Assessment 2 pre-readings provided on Moodle.	Class Zoom Session

### Week 5 - 06 Apr 2020

Module/Topic	Chapter	Events and Submissions/Topic
Module 1: Human factors and accident causation. Systems Life Cycle and Design of Socio-technical systems.	Additional Assessment 2 pre-readings provided on Moodle.	Class Zoom Session

### Vacation Week - 13 Apr 2020

Module/Topic	Chapter	Events and Submissions/Topic
Vacation and self-study week.		

### Week 6 - 20 Apr 2020

Module/Topic	Chapter	Events and Submissions/Topic
Module 2: Human factors investigation methods and tools. Introduction to the WorkSafeBC Model of HF Investigation.		<b>Class Zoom Session</b> <b>Tutorial activities</b> Due: Week 6 Friday (24 Apr 2020) 10:00 am AEST

### Week 7 - 27 Apr 2020

Module/Topic	Chapter	Events and Submissions/Topic
Module 2: Human factors investigation methods and tools. Applying the WorkSafeBC model to an accident.		Class Zoom Session

### Week 8 - 04 May 2020

Module/Topic	Chapter	Events and Submissions/Topic
Module 2: Human factors investigation methods and tools. HF Investigative tools for pursuing your lines of inquiry.		Class Zoom Session

### Week 9 - 11 May 2020

Module/Topic	Chapter	Events and Submissions/Topic
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Module 2: Human factors investigation methods and tools.  
Introduction to the HFACS investigative tool.

Class Zoom Session

### Week 10 - 18 May 2020

Module/Topic	Chapter	Events and Submissions/Topic
Module 2: Human factors investigation methods and tools. HFACS - looking at nanocodes. This will support the main option for Assessment 3.		Class Zoom Session  <b>Annotated Mindmap and Bibliography</b> Due: Week 10 Monday (18 May 2020) 10:00 am AEST

### Week 11 - 25 May 2020

Module/Topic	Chapter	Events and Submissions/Topic
Module 3: Bringing it all together. Discussing Safety Culture as a HF factor.		Class Zoom Session

### Week 12 - 01 Jun 2020

Module/Topic	Chapter	Events and Submissions/Topic
Catch up and review.		Class Zoom Session

### Review/Exam Week - 08 Jun 2020

Module/Topic	Chapter	Events and Submissions/Topic
		<b>Report</b> Due: Review/Exam Week Monday (8 June 2020) 10:00 am AEST

### Exam Week - 15 Jun 2020

Module/Topic	Chapter	Events and Submissions/Topic
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## Assessment Tasks

### 1 Tutorial activities

#### Assessment Type

Group Discussion

#### Task Description

Students will complete a variety of tutorial activities as directed in Moodle during the first 5 weeks of class. The tasks will allow you to practice the concepts covered in class. Complete a minimum of four of the following tasks/ activities.

1. Context of a simple task: Map the context of a simple task and identify the multiple perspectives that can inform the 'contextual reality' of the scenario.
2. System map: Identify a common socio-technical system and identify / mindmap the components of the system.
3. Tripod analysis:
  - Describe a simple accident scenario
  - Choose a system
  - Apply Tripod to analyse the accident.
4. System life cycle System Life Cycle:
  - Describe a system
  - Illustrate the system life cycle
  - Explain where failures might occur.
5. Worksafe BC model.

#### Assessment Due Date

Week 6 Friday (24 Apr 2020) 10:00 am AEST  
Post your tasks to the Moodle forum weekly.

#### Return Date to Students

Week 8 Friday (8 May 2020)

**Weighting**

20%

**Assessment Criteria**

For each assessment item:

1. Applies key concepts with accuracy and relevance (30%).
2. Demonstrates logical analysis and argument (30%).
3. Shows good writing with accurate language and grammar.
4. Includes a reference list and uses Harvard style for referencing for information, data, tables or images sourced.
5. Respectful feedback is given to fellow students.

Specific assessment criteria and a marking rubric for each assessment piece will be provided through Moodle.

**Referencing Style**

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

**Submission**

Online

**Submission Instructions**

Post your answers to the Moodle online submission forum.

**Learning Outcomes Assessed**

- Appraise the role that human factors has in accident causation.
- Critique and apply contemporary human factors investigation tools and techniques.

**Graduate Attributes**

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

## 2 Annotated Mindmap and Bibliography

**Assessment Type**

Written Assessment

**Task Description**

This task will have a self and peer review component.

The 'whys' above should draw on evidence in the report AND in the literature (i.e. bibliographies). It should include formal 'in text' referencing in the mind map and include a separate reference list.

- What happened (describe circumstances)
- Why it happened (discuss findings)
- Nature of system and system parts
- Design failures and system life cycle
- Issues and findings related to people, workplaces & management
- Human factors investigation tools recommended to investigate the issues

Your annotated mind map should evidence:

For this task you will be required to review the literature and complete an annotated Mindmap and Bibliography based around a specific case study. of your choice.

Further details about this task will be provided through Moodle.

**Assessment Due Date**

Week 10 Monday (18 May 2020) 10:00 am AEST

**Return Date to Students**

Week 12 Monday (1 June 2020)

**Weighting**

40%

**Assessment Criteria**

1. Description of the circumstances of what happened.

2. Discussion of your findings of why it happened.
3. Identification and description of the nature of the system and system parts.
4. Identification and description of the design failures and system life cycle issues.
5. Identification and description of the issues and findings related to people, workplaces and management.
6. Identification and description of the human factors investigation tools that you recommend to investigate the lines of inquiry identified from your accident analysis.

Specific assessment criteria and a marking rubric will be provided through Moodle.

### Referencing Style

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

### Submission

Online

### Submission Instructions

Assessments will only be marked if submitted in a format that is compatible with MS Word or pdf.

### Learning Outcomes Assessed

- Appraise the role that human factors has in accident causation.
- Critique and apply contemporary human factors investigation tools and techniques.

### Graduate Attributes

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

## 3 Report

### Assessment Type

Written Assessment

### Task Description

This problem-solving activity will extend the work done in Assessment 2. You should re-use the same scenario from Assessment 2 but apply a new HF Investigative tool (such as HFACS). There will be three investigative options available to complete this assignment depending on the students own circumstances and interests. It will also include an evaluation of the contribution that organisational factors and safety culture have on accident causation with reference to the topics covered in Module 1 and 2.

Further information will be provided through Moodle.

### Assessment Due Date

Review/Exam Week Monday (8 June 2020) 10:00 am AEST

### Return Date to Students

Exam Week Friday (19 June 2020)

### Weighting

40%

### Assessment Criteria

1. Applies investigative techniques not used for assessment 2.
2. Description of the role of organisational factors in accident causation.
3. Description of the role of safety culture factors in accident causation.
4. Reflection on the comparative outcomes of Assessment 2 in light of Assessment 3.

Specific assessment criteria and a marking rubric will be provided through Moodle.

### Referencing Style

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

### Submission

Online

### **Submission Instructions**

Assessments will only be marked if submitted in a format that is compatible with MS Word or pdf.

### **Learning Outcomes Assessed**

- Evaluate the contribution that organisational factors and safety culture have on accident causation.
- Recognise the shortcomings in applications of the "blame" and "no-blame" cultures and their impact on investigation.

### **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