AINV11002 *Socio-technical Systems*
Term 2 - 2017

Profile information current as at 04/05/2024 01:12 am

All details in this unit profile for AINV11002 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 assist you to recognise and optimise the elements that influence the interaction of humans with other elements of a socio-technical system. You will be presented with learning opportunities to understand how systems, work and people interact successfully and in failure mode. You will be introduced to the notion of systems failure and its prevention, for example, design redundancy and resilience, and the concept of the system life cycle.

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
Pre-requisite: AINV11001 Real World Investigation
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

- Adelaide
- Brisbane
- Bundaberg
- Distance
- Gladstone
- Melbourne
- Rockhampton
- Sydney

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. **Group Discussion**
Weighting: 20%
2. **Written Assessment**
Weighting: 20%
3. **Written Assessment**
Weighting: 30%
4. **Written Assessment**
Weighting: 30%

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 formal and informal feedback

Feedback
Students who undertake AINV11001 and AINV11002 in the same term feel challenged by the workload.

Recommendation
Consider changing AINV11001 to a pre-requisite course for AINV11002.

Feedback from Student formal and informal feedback

Feedback
Distance students greatly appreciate it when the classroom students use their microphone.

Recommendation
Continue to encourage students to use the microphone and request teaching spaces that have individual microphones to encourage the practice.

Feedback from Student formal and informal feedback

Feedback
Students reported that they really enjoyed the assessment regime in this unit and found it very beneficial to have each assessment item build into subsequent ones.

Recommendation
Continued with this assessment regime.

Unit Learning Outcomes

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

1. Identify the relationships between people, machines and systems in society.
2. Define the nature of organisations and work.
3. Recognise systems failure, and failure prevention measures.
4. Examine the nature of systems failure and prevention.
5. Illustrate the system life cycle and explain its effect on failure.
6. Employ effective communication strategies appropriate to sociotechnical systems.
7. Demonstrate reflective skills appropriate to the development of the beginning practitioner.

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 - Group Discussion - 20%			•	•		•	•
2 - Written Assessment - 20%			•	•		•	•

Assessment Tasks	Learning Outcomes						
	1	2	3	4	5	6	7
3 - Written Assessment - 30%	•	•			•	•	•
4 - Written Assessment - 30%	•		•	•	•	•	

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 Discussion - 20%	•	•	•	•		•	•	•		
2 - Written Assessment - 20%	•		•	•		•	•	•		
3 - Written Assessment - 30%	•	•		•		•	•			
4 - Written Assessment - 30%	•	•	•	•		•	•	•		

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

Schedule

Week 1 - 10 Jul 2017

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

Week 2 - 17 Jul 2017

Module/Topic	Chapter	Events and Submissions/Topic
Module 1: People, machines and systems		*Introduce yourself to your classmates*

Week 3 - 24 Jul 2017

Module/Topic	Chapter	Events and Submissions/Topic
Module 1: People, machines and systems		**Due** Task 1: 'Define Human-Machine Relationships' (AB1)

Week 4 - 31 Jul 2017

Module/Topic	Chapter	Events and Submissions/Topic
Module 1: People, machines and systems		**Due** Task 2: System Map (TA1-A)

Week 5 - 07 Aug 2017

Module/Topic	Chapter	Events and Submissions/Topic
Module 2: System life-cycle and failure		**Due** Task 3: Tripod analysis (TA1-B)

Vacation Week - 14 Aug 2017

Module/Topic	Chapter	Events and Submissions/Topic

Week 6 - 21 Aug 2017

Module/Topic	Chapter	Events and Submissions/Topic

Module 3: System failure and prevention		**Due** Task 4: System life cycle (TA2) *Begin forming your team*

Week 7 - 28 Aug 2017

Module/Topic	Chapter	Events and Submissions/Topic
Module 3: System failure and prevention		**Due** Task 5: 'Failures related to the design process' (AB2)

Week 8 - 04 Sep 2017

Module/Topic	Chapter	Events and Submissions/Topic
Module 3: System failure and prevention		**Due** Task 6: WorkSafeBC Model (TA3) *Develop team contract*

Week 9 - 11 Sep 2017

Module/Topic	Chapter	Events and Submissions/Topic
Module 3: System failure and prevention		**Due** Task 7: 'Investigating System Failure' (AB3)

Week 10 - 18 Sep 2017

Module/Topic	Chapter	Events and Submissions/Topic
Module 3: System failure and prevention		**Annotated mindmap** Due: Week 10 Friday (22 Sept 2017) 11:45 pm AEST

Week 11 - 25 Sep 2017

Module/Topic	Chapter	Events and Submissions/Topic
Module 4: Complexity and systems thinking		**Due** Task 8: 'Prevention of system failure' (AB4)

Week 12 - 02 Oct 2017

Module/Topic	Chapter	Events and Submissions/Topic
Module 4: Complexity and systems thinking		

Review/Exam Week - 09 Oct 2017

Module/Topic	Chapter	Events and Submissions/Topic
		Team report Due: Review/Exam Week Friday (13 Oct 2017) 11:45 pm AEST

Exam Week - 16 Oct 2017

Module/Topic	Chapter	Events and Submissions/Topic
		Due Task 9: 'Systems thinking' reflection (TA4)

Assessment Tasks

1 Tutorial activities

Assessment Type
Group Discussion

Task Description
These assessment items have been designed to stretch thinking about the unit work or apply new process skills from each module.
The activities may be responded to as a word document / ppt / jpg / pdf or as a blog entry.
The activities for this term include:

1. System map (TA1-A)
2. Tripod analysis (TA1-B)
3. System life cycle (TA2)

4. WorksafeBC model (TA3)
5. 'Systems thinking' reflection (TA4)

For each item you **must submit** your response in the “assignment submission” area (see ‘Assessment Block’ in top left side of moodle) under Tutorial Activities (each activity has a dedicated submission area). The submissions should be clearly named with your surname and activity number.
The assignment submission areas have been set up to receive multiple files.

Assessment Due Date

As per study schedule

Return Date to Students

Two weeks maximum post submission date

Weighting
20%

Assessment Criteria
As a general rule assessment criteria for all assessment items include
1. (90%) Content—includes the accuracy, relevance and application of key concepts, analysis, argument, language and grammar used in answering a question or report (see marking criteria for individual requirements).
2. (10%) References—includes the provision of a reference list and the application of the Harvard style for referencing information, data, tables or images sourced for the assignment or report.
Specific assessment criteria for each assessment piece will be provided through moodle.

Referencing Style

- Harvard (author-date)

Submission
Online

Learning Outcomes Assessed

- Recognise systems failure, and failure prevention measures.
- Examine the nature of systems failure and prevention.
- Employ effective communication strategies appropriate to sociotechnical systems.
- Demonstrate reflective skills appropriate to the development of the beginning practitioner.

Graduate Attributes

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

2 Annotated bibliographies

Assessment Type
Written Assessment

Task Description
This assessment item has been designed to stretch thinking about the unit work and help you (and your colleagues) prepare for your annotated mind map.
The submission will be via a Q & A type discussion forum. I will start the particular topic then students are required to respond with their annotated bibliography entries before they will be able to see the entries submitted by other students.
An annotated bibliography is an organized list of sources, each of which is followed by a brief note or "annotation."
There will be four topics:

1. 'Define Human-Machine Relationships' (AB1)
2. 'Failures related to the design process' (AB2)
3. 'Investigating System Failure' (AB3)
4. 'Prevention of system failure' (AB4)

For each topic, you are required complete:

1. A review of a useful website that furthers understanding the topic (not Wikipedia!); AND
2. A review of a journal article, book or conference paper that furthers understanding the topic; AND
3. A reference list for the articles cited.

Each of the two annotations for each topic must include:

- a description the content and focus of the book, article or website
- suggestions regarding the source's usefulness to your research
- an evaluation of its method, conclusions, or reliability
- a record of your reactions to the source

Your initial posting is the one that will be graded so please make sure that you include both bibliographies in your first post.
All students may use the collective annotated bibliographies when creating their annotated mind maps.
We will be discussing these assessment items during the term but if you have any doubt as to what is required, please don't hesitate seek clarification in moodle or in class.

Assessment Due Date

As per study schedule

Return Date to Students

Two weeks maximum post submission date

Weighting
20%

Assessment Criteria
As a general rule assessment criteria for all assessment items include

1. (90%) Content—includes the accuracy, relevance and application of key concepts, analysis, argument, language and grammar used in answering a question or report (see marking criteria for individual requirements).
2. (10%) References—includes the provision of a reference list and the application of the Harvard style for referencing information, data, tables or images sourced for the assignment or report.
Specific assessment criteria for each assessment piece will be provided through moodle.

Referencing Style

- Harvard (author-date)

Submission
Online

Submission Instructions
In dedicated Q & A forum

Learning Outcomes Assessed

- Recognise systems failure, and failure prevention measures.
- Examine the nature of systems failure and prevention.
- Employ effective communication strategies appropriate to sociotechnical systems.
- Demonstrate reflective skills appropriate to the development of the beginning practitioner.

Graduate Attributes

- Communication
- Critical Thinking
- Information Literacy
- Information Technology Competence
- Cross Cultural Competence
- Ethical practice

3 Annotated mindmap

Assessment Type
Written Assessment

Task Description
This assessment item is a complex output that will draw from all of your learning in the term and put you in the front seat as a beginning practitioner.
This is an INDIVIDUAL assignment but you may use the collective annotated bibliographies.
You should choose your case study in Week 6. You should prepare and submit your mind map by the end of Week 10.
The mind map should be prepared to assist your team in the team assignment but must be done individually and must be done first!
It is worth 30% so don't underestimate this one!!!
Your annotated mind map should evidence:

- 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

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.
You are encouraged to use mind mapping software e.g. 'Coggle.it', https://coggle.it/ but you should upload your submission as a pdf.

Assessment Due Date
Week 10 Friday (22 Sept 2017) 11:45 pm AEST

Return Date to Students

Two weeks maximum post submission date

Weighting
30%

Assessment Criteria
As a general rule assessment criteria for all assessment items include
1. (90%) Content—includes the accuracy, relevance and application of key concepts, analysis, argument, language and grammar used in answering a question or report (see marking criteria for individual requirements).
2. (10%) References—includes the provision of a reference list and the application of the Harvard style for referencing information, data, tables or images sourced for the assignment or report.
Specific assessment criteria for each assessment piece will be provided through moodle.

Referencing Style

- Harvard (author-date)

Submission
Online

Learning Outcomes Assessed

- Identify the relationships between people, machines and systems in society.
- Define the nature of organisations and work.
- Illustrate the system life cycle and explain its effect on failure.
- Employ effective communication strategies appropriate to sociotechnical systems.
- Demonstrate reflective skills appropriate to the development of the beginning practitioner.

Graduate Attributes

- Communication
- Problem Solving
- Information Literacy
- Information Technology Competence
- Cross Cultural Competence

4 Team report

Assessment Type
Written Assessment

Task Description
This assessment item provides your team with an opportunity to analyse a complex socio-technical systems failure.
This team work builds on the individual work carried out by students in Assessment 1, 2 & 3.

This report will include:

- Title page - team name and members
- Contents page
- What happened - description of circumstances
- Why it happened - discussion of findings
- Conclusions re major learnings from the accident
- Consideration of prevention strategies
- Formal referencing and reference list
- Appendix (as required and including team contract)

Further detail will be provided in moodle during the term.

Assessment Due Date
Review/Exam Week Friday (13 Oct 2017) 11:45 pm AEST

Return Date to Students

Two weeks maximum post submission date

Weighting
30%

Assessment Criteria
As a general rule assessment criteria for all assessment items include
1. (90%) Content—includes the accuracy, relevance and application of key concepts, analysis, argument, language and grammar used in answering a question or report (see marking criteria for individual requirements).
2. (10%) References—includes the provision of a reference list and the application of the Harvard style for referencing information, data, tables or images sourced for the assignment or report.
Specific assessment criteria for each assessment piece will be provided through moodle.

Referencing Style

- Harvard (author-date)

Submission
Online Group

Submission Instructions
One report only to be submitted per team.

Learning Outcomes Assessed

- Identify the relationships between people, machines and systems in society.
- Recognise systems failure, and failure prevention measures.
- Examine the nature of systems failure and prevention.
- Illustrate the system life cycle and explain its effect on failure.
- Employ effective communication strategies appropriate to sociotechnical systems.

Graduate Attributes

- Communication
- Problem Solving
- Critical Thinking
- Information Literacy
- Information Technology Competence
- Cross Cultural 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