



COIT11226 Systems Analysis

Term 1 - 2022

Profile information current as at 19/08/2022 05:31 pm

All details in this unit profile for COIT11226 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

In this unit, you will explore problems that require technological solutions as systems analysis involves determining what a system needs to accomplish. This unit covers concepts such as systems feasibility, user requirements elicitation, and systems modelling. You will learn how to analyse systems requirements, select and plan how to take the system through all stages of the system development 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

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 - 2022

- Brisbane
- Cairns
- Melbourne
- Online
- Rockhampton
- Sydney
- Townsville

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. **Online Quiz(zes)**

Weighting: 10%

2. **Written Assessment**

Weighting: 30%

3. **Project (applied)**

Weighting: 40%

4. **Written Assessment**

Weighting: 20%

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 Unit coordinator

Feedback

Quizzes as part of the assessments are helpful in learning the theoretical aspects of this unit.

Recommendation

Continue using quizzes to assess theoretical aspects of the unit.

Feedback from Unit coordinator

Feedback

This unit lacks group work and team building activities.

Recommendation

Consider including group-based activities in the unit.

Feedback from Staff observation

Feedback

The unit lectures currently focus mostly on the traditional waterfall model based on the textbook.

Recommendation

Consider a textbook with coverage on modern development models.

Unit Learning Outcomes

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

1. Explain systems analysis concepts, terminologies, system analysis tasks, models, tools, techniques, and methodologies
2. Select and plan appropriate models, tools, techniques, and methodologies in the systems analysis phase of a systems development project
3. Apply information gathering techniques to derive system functionalities
4. Construct modelling diagrams to depict system functionalities for users' requirements.

Australian Computer Society (ACS) recognises the Skills Framework for the Information Age (SFIA). SFIA is in use in over 100 countries and provides a widely used and consistent definition of ICT skills. SFIA is increasingly being used when developing job descriptions and role profiles.

ACS members can use the tool MySFIA to build a skills profile at

<https://www.acs.org.au/professionalrecognition/mysfia-b2c.html>

This unit contributes to the following workplace skills as defined by SFIA. The SFIA7 code is included:

- Business Analysis (BUAN)
- Requirements Definition and Management (REQM)
- Business Modelling (BSMO)
- Data Modelling and Design (DTAN)

Alignment of Learning Outcomes, Assessment and Graduate Attributes



Alignment of Assessment Tasks to Learning Outcomes

Assessment Tasks	Learning Outcomes			
	1	2	3	4
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 - Online Quiz(zes) - 10%	•	•		•		•				
2 - Written Assessment - 20%	•	•	•	•		•		•		
3 - Written Assessment - 30%	•	•	•			•				
4 - Project (applied) - 40%	•	•	•					•		

Textbooks and Resources

Textbooks

COIT11226

Prescribed

Systems Analysis and Design in a Changing World

Edition: 7th (2016)

Authors: John Satzinger, Robert Jackson, Stephen Burd

Cengage

Australia

ISBN: 978-1-305-11720-4

Binding: Paperback

IT Resources

You will need access to the following IT resources:

- CQUniversity Student Email
- Internet
- Unit Website (Moodle)
- MS Office
- MS Project
- MS Visio
- VirtualBox - A Virtualization Software Package
- Joget

Referencing Style

All submissions for this unit must use the referencing style: [Harvard \(author-date\)](#)

For further information, see the Assessment Tasks.

Teaching Contacts

Jamie Shield Unit Coordinator

j.shield@cqu.edu.au

Schedule

Week 1 - 07 Mar 2022

Module/Topic	Chapter	Events and Submissions/Topic
Overview of Systems Analysis	<ul style="list-style-type: none">• pp. 4-8, 42-46 Systems Analysis• pp. 71-73 User stories• pp. 81-87 Use Case diagrams	

Week 2 - 14 Mar 2022

Module/Topic	Chapter	Events and Submissions/Topic
Process Analysis	pp. 60-63 Activity Diagrams	

Week 3 - 21 Mar 2022

Module/Topic	Chapter	Events and Submissions/Topic
Static Analysis	pp. 103-111 Class diagrams	A1 Quiz 10%

Week 4 - 28 Mar 2022

Module/Topic	Chapter	Events and Submissions/Topic
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Dynamic Analysis Part 1 pp. 139-146 Sequence diagrams

Week 5 - 04 Apr 2022

Module/Topic	Chapter	Events and Submissions/Topic
Dynamic Analysis Part 2	pp. 114-122 State Machines	A2 System Analysis 30%

Vacation Week - 11 Apr 2022

Module/Topic	Chapter	Events and Submissions/Topic
No class		

Week 6 - 18 Apr 2022

Module/Topic	Chapter	Events and Submissions/Topic
Specifying requirements	pp. 133-138, 146-148 Use cases	

Week 7 - 25 Apr 2022

Module/Topic	Chapter	Events and Submissions/Topic
Investigating requirements	pp. 50-58 Information gathering techniques	

Week 8 - 02 May 2022

Module/Topic	Chapter	Events and Submissions/Topic
Nonfunctional requirements		

Week 9 - 09 May 2022

Module/Topic	Chapter	Events and Submissions/Topic
Testing		

Week 10 - 16 May 2022

Module/Topic	Chapter	Events and Submissions/Topic
Systems Development	<ul style="list-style-type: none">• Chapter 10 Development Methods• Chapter 14 Deployment	A3 Improve a System 40%

Week 11 - 23 May 2022

Module/Topic	Chapter	Events and Submissions/Topic
Future		

Week 12 - 30 May 2022

Module/Topic	Chapter	Events and Submissions/Topic
No class		A4 Testing 20%

Term Specific Information

Unit Coordinator: Jamie Shield, Cairns,
j.shield@cqu.edu.au,
Office: 07 4037 4750

Assessment Tasks

1 Quiz

Assessment Type

Online Quiz(zes)

Task Description

There will be one quiz to encourage your understanding of the Week 1 to 3 unit materials including concepts such as requirements, user stories, activity diagrams and class diagrams. You may attempt the quiz as many times as you like until the due date.

Number of Quizzes

1

Frequency of Quizzes

Other

Assessment Due Date

End of Week 3

Return Date to Students

Feedback will be provided after each quiz attempt.

Weighting

10%

Assessment Criteria

This assessment consists of short answer questions. Each question will be marked according to the correctness of the answer.

Referencing Style

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

Submission

Online

Submission Instructions

Complete the quiz on the unit website.

Learning Outcomes Assessed

- Explain systems analysis concepts, terminologies, system analysis tasks, models, tools, techniques, and methodologies
- Select and plan appropriate models, tools, techniques, and methodologies in the systems analysis phase of a systems development project

Graduate Attributes

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

2 Systems Analysis

Assessment Type

Written Assessment

Task Description

This assignment requires you to perform systems analyses. You will be provided with several small case studies for which you will identify, analyse and specify the requirements. As part of your analysis you will be required to construct use case, class, activity and sequence diagrams.

Assessment Due Date

End of Week 5

Return Date to Students

Within 2 weeks of due date

Weighting

30%

Assessment Criteria

You will be assessed on aspects such as correct diagramming techniques, model explanations, and appropriate model abstraction including choice of use cases, classes and attributes.

Referencing Style

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

Submission

Online

Submission Instructions

Complete the case studies online on the unit website

Learning Outcomes Assessed

- Apply information gathering techniques to derive system functionalities
- Construct modelling diagrams to depict system functionalities for users' requirements.

Graduate Attributes

- Communication
- Problem Solving
- Critical Thinking
- Information Technology Competence

3 Improve a System

Assessment Type

Project (applied)

Task Description

You will be provided with a case study for which you will analyse, specify and implement the requirements. You need to manage both functional and nonfunctional requirements. As part of your analysis you will be required to construct use case, class, activity and sequence diagrams.

You may complete this assignment individually or in groups of up to three.

Assessment Due Date

End of Week 10

Return Date to Students

Within two weeks of the due date

Weighting

40%

Assessment Criteria

You will be assessed on aspects such as:

- Specification and management of functional and nonfunctional requirements including prioritisation, lack of ambiguity and traceability
- Quality user stories that are prioritised and which adhere to the user story template and INVEST, e.g. independent, valuable for users and testable via excellent acceptance criteria
- Quality use case set that follow specified guidelines
- Analysis and quality of modelling including model abstraction, understandability, accuracy and explanations
- Quality of the implementation
- Professionalism of your documentation.

Referencing Style

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

Submission

Online

Submission Instructions

Submit a Word document and additional files via the unit website

Learning Outcomes Assessed

- Explain systems analysis concepts, terminologies, system analysis tasks, models, tools, techniques, and methodologies
- Construct modelling diagrams to depict system functionalities for users' requirements.

Graduate Attributes

- Communication
- Problem Solving

- Critical Thinking
- Ethical practice

4 Testing

Assessment Type

Written Assessment

Task Description

You will test two specifications and implementations developed for the case study from the previous assignment. For each specification you will:

- Verify the specification including identifying missing requirements, ambiguous or otherwise inappropriate specifications and critique the quality of the models' abstraction, understandability, accuracy and explanations
- Plan, execute and document user acceptance testing on the implementation of the specification.

Assessment Due Date

End of Week 12

Return Date to Students

Grade certification day

Weighting

20%

Assessment Criteria

You will be assessed on aspects such as:

- Identification and quality of explanation of issues found in the specifications and the models
- Evidence of coverage and traceability of tests
- Professionalism of your documentation.

Referencing Style

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

Submission

Online

Submission Instructions

Submit a Word document via the unit website.

Learning Outcomes Assessed

- Select and plan appropriate models, tools, techniques, and methodologies in the systems analysis phase of a systems development project
- Apply information gathering techniques to derive system functionalities

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