COIT20248 *Information Systems Analysis and Design*

Term 2 - 2021

Profile information current as at 14/12/2025 03:36 pm

Corrections

Unit Profile Correction added on 14-06-21

Currently, this unit has the following three assessment components:
(a) Project (Applied) = 30%
(b) Project (Applied) = 30%
(c) Exam = 40%
This amendment replaces the **examination** with an **individual project** (40%). Details of the project (including assessment criteria) will be provided to students in Week 9 and will be due for submission in Week 12. All other assessment will remain the same.
Please see the Course website for more information.

General Information

Overview

Information systems analysis and design is a complex, challenging, and stimulating organisational process, that a team of business and systems professionals use to develop and maintain computer-based information systems. In this unit, you will learn the importance of responding to and anticipating problems through the innovative use of systems development process. You will learn how understanding user-centered design and task-centered design are fundamental to good systems design. In order to understand these concepts, you will study how to determine user-requirements and convert user requirements to system design. You will demonstrate this understanding by designing web-interfaces of given case studies and practical examples. You will study different phases of the systems development life cycle, which includes developing a system proposal, determining user requirements, designing a system, and applying key principles to the implementation of a system. You will also explore the organisational context and the iterative nature of systems analysis and design.

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

Anti-requisites: COIS20025 Systems Development Overview. Students who have studied COIS20025 in the past cannot take COIT20248.
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 - 2021

- Brisbane
- Melbourne
- Online
- 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 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. **Project (applied)**
Weighting: 30%
2. **Project (applied)**
Weighting: 30%
3. **Examination**
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 Unit Coordinator reflections

Feedback

The time allocated to some topics (e.g. Agile) is too short to cover in sufficient depth.

Recommendation

Re-arrange the ordering of some topics (e.g. bring Agile earlier) and remove some content covered in later units (e.g. details of database design).

Feedback from Unit Coordinator reflections

Feedback

It is difficult for students to appreciate the importance of writing unambiguous requirements for systems.

Recommendation

Introduce a tutorial activity with peer review of requirements tasks, e.g. one team creates a requirements specification, which another team uses an input to create a design.

Unit Learning Outcomes

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

1. Develop requirements, specifications and provide academic and practical arguments to defend the solutions by employing core principles of information system analysis and design
2. Develop prototypes for computer-based information systems demonstrating initiative and problem-solving judgement to meet client briefs
3. Employ effective interpersonal and professional skills to collaborate with and influence team members to achieve a negotiated team outcome while maintaining responsibility and accountability for their own learning and work
4. Analyse and evaluate to critically reflect on the alternative methodologies used in developing business information systems
5. Critically analyse and evaluate different modelling techniques for developing business information systems.

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 SFIA code is included:

- Information Analytics (INAN)
- Systems Design (DESN)
- User Experience Design (HCEV)
- IT Strategy and Planning (ITSP)
- Systems Design (DESN)
- Business Modelling (BSMO)

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
1 - Project (applied) - 30%	•				•
2 - Project (applied) - 30%		•	•		
3 - Examination - 40%	•			•	

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 - Project (applied) - 30%	◦	◦	◦	◦	◦	◦		
2 - Project (applied) - 30%	◦	◦	◦	◦	◦	◦		
3 - Examination - 40%	◦	◦	◦		◦	◦		

Textbooks and Resources

Textbooks

COIT20248

Prescribed

Essential of Systems Analysis and Design
6th edition (2015)
Authors: Joseph S. Valacich, Joey F. George, Jeffrey A. Hoffer
Pearson
Boston , US
ISBN: 978-1-292-07661-4
Binding: Paperback

Additional Textbook Information
Both paper and eBook versions can be purchased at the CQUni Bookshop here: http://bookshop.cqu.edu.au (search on the Unit code)

View textbooks at the CQUniversity Bookshop

IT Resources

You will need access to the following IT resources:

- CQUniversity Student Email
- Internet
- Unit Website (Moodle)
- MS Office
- MS Project
- MS Visio

Referencing Style

All submissions for this unit must use the referencing style: Harvard (author-date)
For further information, see the Assessment Tasks.

Teaching Contacts

Pak Poon Unit Coordinator
p.poon@cqu.edu.au

Schedule

Week 1 - 12 Jul 2021

Module/Topic	Chapter	Events and Submissions/Topic
Systems development environment; sources of software	Chapters 1 & 2 (*Essentials of Systems Analysis & Design*, by Joseph S. Valacich, Joey F. George & Jeffrey A. Hoffer, 6th edition, 2015, Pearson)	

Week 2 - 19 Jul 2021

Module/Topic	Chapter	Events and Submissions/Topic
Managing the information systems projects; systems planning & selection	Chapters 3 & 4 (*Essentials of Systems Analysis & Design*, by Joseph S. Valacich, Joey F. George & Jeffrey A. Hoffer, 6th edition, 2015, Pearson)	

Week 3 - 26 Jul 2021

Module/Topic	Chapter	Events and Submissions/Topic
Determining system requirements; use case modelling	Chapter 5 (*Essentials of Systems Analysis & Design*, by Joseph S. Valacich, Joey F. George & Jeffrey A. Hoffer, 6th edition, 2015, Pearson)	

Week 4 - 02 Aug 2021

Module/Topic	Chapter	Events and Submissions/Topic
Structuring system requirements: process modelling	Chapter 6 (*Essentials of Systems Analysis & Design*, by Joseph S. Valacich, Joey F. George & Jeffrey A. Hoffer, 6th edition, 2015, Pearson)	

Week 5 - 09 Aug 2021

Module/Topic	Chapter	Events and Submissions/Topic
Structuring system requirements: conceptual data modeling; object-oriented (OO) analysis & design	Chapter 7 & Appendix A (*Essentials of Systems Analysis & Design*, by Joseph S. Valacich, Joey F. George & Jeffrey A. Hoffer, 6th edition, 2015, Pearson)	

Vacation Week - 16 Aug 2021

Module/Topic	Chapter	Events and Submissions/Topic

Week 6 - 23 Aug 2021

Module/Topic	Chapter	Events and Submissions/Topic
Designing the human interface; agile methodologies	Chapter 8 & Appendix B (*Essentials of Systems Analysis & Design*, by Joseph S. Valacich, Joey F. George & Jeffrey A. Hoffer, 6th edition, 2015, Pearson)	**Systems Analysis & Project Planning** Due: Week 6 Monday (23 Aug 2021) 9:00 pm AEST

Week 7 - 30 Aug 2021

Module/Topic	Chapter	Events and Submissions/Topic
Designing databases; data warehousing	Chapter 9 (*Essentials of Systems Analysis & Design*, by Joseph S. Valacich, Joey F. George & Jeffrey A. Hoffer, 6th edition, 2015, Pearson) Chapter 15 (*Analysis & Design of Information Systems*, by Arthur M. Langer, 3rd edition, 2008, Springer)	

Week 8 - 06 Sep 2021

Module/Topic	Chapter	Events and Submissions/Topic
Systems implementation & operation	Chapter 10 (*Essentials of Systems Analysis & Design*, by Joseph S. Valacich, Joey F. George & Jeffrey A. Hoffer, 6th edition, 2015, Pearson)	

Week 9 - 13 Sep 2021

Module/Topic	Chapter	Events and Submissions/Topic
Website design & architecture	Chapter 16 (*Analysis & Design of Information Systems*, by Arthur M. Langer, 3rd edition, 2008, Springer)	

Week 10 - 20 Sep 2021

Module/Topic	Chapter	Events and Submissions/Topic
Concepts of ISO 9000	Chapter 17 (*Analysis & Design of Information Systems*, by Arthur M. Langer, 3rd edition, 2008, Springer)	

Week 11 - 27 Sep 2021

Module/Topic	Chapter	Events and Submissions/Topic

Business process reengineering (BPR)	Chapter 13 (*Analysis & Design of Information Systems*, by Arthur M. Langer, 3rd edition, 2008, Springer)	**Systems Design** Due: Week 11 Monday (27 Sept 2021) 9:00 pm AEST

Week 12 - 04 Oct 2021

Module/Topic	Chapter	Events and Submissions/Topic
Revision	All the book chapters previously covered	

Review/Exam Week - 11 Oct 2021

Module/Topic	Chapter	Events and Submissions/Topic

Exam Week - 18 Oct 2021

Module/Topic	Chapter	Events and Submissions/Topic

Term Specific Information

Associate Professor Pak Poon (Unit Coordinator)
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(Tel) + 61 (0)3 9616 0693
(Office) Room 6.15, Level 6 (Melbourne Campus)

Assessment Tasks

1 Systems Analysis & Project Planning

Assessment Type
Project (applied)

Task Description
Assignment 1 is an ***individual*** assessment. You will plan & manage the project as well as investigate & document its systems requirements. For your Assignment 1 submission, you will produce a report that discusses the project based on your understanding of it & the related investigation results through the tasks given. The structure of the report & the case study will be provided to you on Moodle in Week 1 or 2. This assignment will assess the unit knowledge gained between Weeks 1 and 5 about different facets of systems development.

Assessment Due Date
Week 6 Monday (23 Aug 2021) 9:00 pm AEST

Late submissions are subject to the university's late submission penalty policies

Return Date to Students
Week 8 Monday (6 Sept 2021)

Marking & feedback of Assignment 1 will be returned to you via Moodle

Weighting
30%

Assessment Criteria
The assessment criteria will cover the contents & the presentation/format of the submission. In addition, all the different parts of the assessment should be written in a professional & coherent manner. A detailed marking template will be available along with the assignment details on the Moodle unit webpage.

Referencing Style

- Harvard (author-date)

Submission
Online

Submission Instructions
Assignment 1 is an individual assessment. Please submit it online via Moodle.

Learning Outcomes Assessed

- Develop requirements, specifications and provide academic and practical arguments to defend the solutions by employing core principles of information system analysis and design
- Critically analyse and evaluate different modelling techniques for developing business information systems.

Graduate Attributes

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

2 Systems Design

Assessment Type
Project (applied)

Task Description
Assignment 2 is a ***group*** assignment. Your unit knowledge gained about how to model the systems requirements in both the object-oriented & traditional approaches will be assessed in this assignment. You need to submit a design of a web-based system. Your design should include various elements such as critical use cases, data flow diagrams & entity-relationship diagrams. During Week 11, there will be a group presentation based on the case study. Please refer to the Unit Moodle website for more details about this assignment.

Assessment Due Date
Week 11 Monday (27 Sept 2021) 9:00 pm AEST

Late submissions are subject to the university's late submission penalty policies

Return Date to Students
Review/Exam Week Monday (11 Oct 2021)

Marking & feedback of Assignment 2 will be returned to you via Moodle

Weighting
30%

Assessment Criteria
For the report, the assessment criteria will cover the contents & the presentation.format of the submission. In addition, all the different parts of the assessment should be written in a professional & coherent manner. For the group presentation, the assessment criteria will cover the level of understanding of the design elements & presentation skills (as individuals & as a group) A detailed marking template will be available along with the assignment details on the Moodle unit webpage.

Referencing Style

- Harvard (author-date)

Submission
Online Group

Submission Instructions
This is a group assignment. All files have to be submitted online via Moodle.

Learning Outcomes Assessed

- Develop prototypes for computer-based information systems demonstrating initiative and problem-solving judgement to meet client briefs
- Employ effective interpersonal and professional skills to collaborate with and influence team members to achieve a negotiated team outcome while maintaining responsibility and accountability for their own learning and work

Graduate Attributes

- Knowledge
- Communication

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

Examination

Outline
Complete an invigilated examination.

Date
During the examination period at a CQUniversity examination centre.

Weighting
40%

Length
120 minutes

Exam Conditions
Closed Book.

Materials
Dictionary - non-electronic, concise, direct translation only (dictionary must not contain any notes or comments).
Calculator - non-programmable, no text retrieval, silent only

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