COIT20248 *Information Systems Analysis and Design*

Term 1 - 2020

Profile information current as at 14/12/2025 03:41 pm

Corrections

Unit Profile Correction added on 30-04-20

End of Term Exam:
Exams for this term will be “take-home” to be completed within 24 hours. The take-home exam will be distributed, submitted, via Moodle.
Take-home exam will consist of two-parts Part A and Part B. Part A will be short answer questions and Part B will be based on Modelling questions similar to the existing Exam so that all LO’s are being assessed.
This will be conducted on the day scheduled centrally by the exam office.
The learning outcomes assessed are unchanged.

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 1 - 2020

- 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 Through Moodle Site

Feedback
The portal should have videos which will help the students in learning the subject more effectively.

Recommendation
To create videos for lectures.

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 critically and 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

Essentials of Systems Analysis and Design 6th edition (2015)
Edition: latest
Authors: J.S. Valacich, J.F. George, J.A. Hoffer
Pearson
ISBN: 1-292-07661-5
Binding: Paperback
COIT20248

Supplementary

Analysis and Design of Information Systems 3rd edition (2008)
Edition: latest
Authors: Arthur M. Langer
Springer-Verlag
ISBN: SBN: 978-1-84628-654-4
Binding: Paperback

Additional Textbook Information
Copies 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)
- Microsoft Office
- Microsoft Project
- Microsoft 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

Meena Jha Unit Coordinator
m.jha@cqu.edu.au

Schedule

Week 1 - 09 Mar 2020

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

Week 2 - 16 Mar 2020

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

Week 3 - 23 Mar 2020

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

Week 4 - 30 Mar 2020

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

Week 5 - 06 Apr 2020

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

Vacation Week - 13 Apr 2020

Module/Topic	Chapter	Events and Submissions/Topic

Week 6 - 20 Apr 2020

Module/Topic	Chapter	Events and Submissions/Topic
Designing the human interface; agile methodologies	Chapter 8 & Appendix B (from *Essentials of Systems Analysis & Design*, by Joseph S. Valacich, Joey F. George & Jeffrey A. Hoffer, 6th edition, 2015, Pearson)	Assignment 1 due **Assignment 1 - Project (applied)** Due: Week 6 Monday (20 Apr 2020) 12:00 am AEST

Week 7 - 27 Apr 2020

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

Week 8 - 04 May 2020

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

Week 9 - 11 May 2020

Module/Topic	Chapter	Events and Submissions/Topic

Website design & architecture	Chapter 16 (from *Analysis & Design of Information Systems*, by Arthur M. Langer, 3rd edition, 2008, Springer)	

Week 10 - 18 May 2020

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

Week 11 - 25 May 2020

Module/Topic	Chapter	Events and Submissions/Topic
Business process reengineering (BPR)	Chapter 13 (from *Analysis & Design of Information Systems*, by Arthur M. Langer, 3rd edition, 2008, Springer)	Assignment 2 due **Assignment 2 - Project (applied)** Due: Week 11 Monday (25 May 2020) 11:45 pm AEST

Week 12 - 01 Jun 2020

Module/Topic	Chapter	Events and Submissions/Topic
Case study analysis; unit revision	Appendix A: Case Study -- The Rainforest Book Company Problem (from *Analysis & Design of Information Systems*, by Arthur M. Langer, 3rd edition, 2008, Springer)	

Review/Exam Week - 08 Jun 2020

Module/Topic	Chapter	Events and Submissions/Topic

Exam Week - 15 Jun 2020

Module/Topic	Chapter	Events and Submissions/Topic

Term Specific Information

Contact information for Meena Jha: Email: m.jha@cqu.edu.au Office: Level 2, 400 Kent Street, Sydney Campus; P +61 2 9324 5776 | X 55776. Please submit questions about the unit through the 'Q&A' discussion forum in Moodle - that way, everyone can benefit from the questions and answers. If you have any individual queries, please email me and I'll try to get back to you within a day or so

Assessment Tasks

1 Assignment 1 - Project (applied)

Assessment Type
Project (applied)

Task Description
Assignment 1 is an *individual* assessment. You will plan and manage the project as well as investigate and document its systems requirements. For your Assignment 1 submission, you will produce a report that discusses the project based on your understanding of it and the related investigation results through the tasks given. The structure of the report and 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 (20 Apr 2020) 12:00 am AEST

Assessment 1 is due on Monday of week 6 at 23:45 hours AEST

Return Date to Students
Week 8 Monday (4 May 2020)

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

Weighting
30%

Assessment Criteria
Assignment 1 Assessment Criteria: (The details of individual tasks will be provided on Moodle in Week 1 or 2)

1. Introduction (5 marks)
2. Approaches to Systems Development (10 Marks)
3. Systems Requirements (15 Marks)
4. Project Cost Benefit Analysis (15 Marks)
5. Project Schedule (20 Marks)
6. System Information Requirement Investigation Techniques (25 Marks)
7. Reflections and Conclusions (5 marks)
8. References (5 marks)

Referencing Style

- Harvard (author-date)

Submission
Online

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

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

2 Assignment 2 - Project (applied)

Assessment Type
Project (applied)

Task Description
Assignment 2 is a *group* assignment (a maximum of 4 students in a group). Your unit knowledge gained about how to model the system requirements in both the object-oriented and traditional system analysis approaches will be assessed through this assignment. You need to submit a design of a website. You should complete the following tasks in the order given based on the case study provided to you on Moodle:

1. Find out all Critical Use Cases
2. Draw Context Level diagram.
3. Draw Level-0 data flow diagram depicting all the business process description provided.
4. Draw ERD showing all required entities and its relationships.
5. Draw CRUD diagram.
6. Identify and provide all the required data elements you will need for your data entities for the case study provided.
7. Provide a prototype of website design and architecture you have developed based on the case study.
8. Details of individual group members contribution towards the project development.

During Week 11, there will be a group presentation based on the case study. Please refer to the Unit Moodle website for more detaileds about this assignment.

Assessment Due Date
Week 11 Monday (25 May 2020) 11:45 pm AEST

Assessment 2 is due on Monday of week 11 at 23:45 hours AEST.

Return Date to Students
Review/Exam Week Monday (8 June 2020)

The marking team will do the best to return assignment 2 feedback to students before the examination.

Weighting
30%

Assessment Criteria
Marking Criteria of Assessment:

1. Introduction (5 marks)
2. Identify all critical use cases (5 marks)
3. Draw context level diagram (5 marks)
4. Draw Level-0 data flow diagram (5 marks)
5. Draw ERD showing all entities & relationships (5 marks)
6. Draw CRUD diagram (5 marks)
7. Provide a prototype of website design & architecture (10 marks)
8. Details of individual group members contribution towards the development of the project (10 marks)
9. Conclusion & summary (5 marks)
10. Group presentation (45 marks)

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.

Referencing Style

- Harvard (author-date)

Submission
Online Group

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

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
180 minutes

Exam Conditions
Closed Book.

Materials
Dictionary - non-electronic, concise, direct translation only (dictionary must not contain any notes or comments).

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