



COIT20248 *Information Systems Analysis and Design*

Term 1 - 2019

Profile information current as at 02/10/2022 01:33 pm

All details in this unit profile for COIT20248 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

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 - 2019

- 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 Teaching team feedback

Feedback

Student engagement with the unit content via the assessment is inconsistent throughout the term

Recommendation

Redesign the assessment regime to ensure students engage with the unit content over the whole term.

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



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

Analysis and Design of Information Systems 3rd (2010)

Edition: latest (2010)

Authors: Authors: Arthur M. Langer

Springer- verlag

London , London , England

ISBN: SBN: 978-1-84628-654-4

Binding: Hardcover

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Prescribed

Essentials of Systems Analysis and Design 6th (2015)

Edition: 6th (6th (2015))

Authors: Joseph S. Valacich, Joey F. George, Jeffery A. Hoffer

Pearson Education Limited

New Jersey, , New Jersey , USA

ISBN: ISBN: 10:1-292-07661-5

Binding: Hardcover

Additional Textbook Information

Paper 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 - 11 Mar 2019

Module/Topic	Chapter	Events and Submissions/Topic
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Define Information Systems Analysis and Design, modern approaches to systems analysis and design, sources of software.

Chapter 1, 2, from Essentials of Systems Analysis and Design, by Joseph S. Valacich, Joey F. George, Jeffery A. Hoffer, Sixth Edition 2013, Pearson.

Week 2 - 18 Mar 2019

Module/Topic	Chapter	Events and Submissions/Topic
System Planning and Selection and Managing the Information Systems Project	Chapter 3 and 4, from Essentials of Systems Analysis and Design, by Joseph S. Valacich, Joey F. George, Jeffery A. Hoffer, Sixth Edition 2013, Pearson.	

Week 3 - 25 Mar 2019

Module/Topic	Chapter	Events and Submissions/Topic
Determining System Requirements and Developing Use Cases	Chapter 5, from Essentials of Systems Analysis and Design, by Joseph S. Valacich, Joey F. George, Jeffery A. Hoffer, Sixth Edition 2013, Pearson CRO for Developing Use Cases	

Week 4 - 01 Apr 2019

Module/Topic	Chapter	Events and Submissions/Topic
Structuring System Requirements: Process Modelling	Chapter 6, from Essentials of Systems Analysis and Design, by Joseph S. Valacich, Joey F. George, Jeffery A. Hoffer, Sixth Edition 2013, Pearson	

Week 5 - 08 Apr 2019

Module/Topic	Chapter	Events and Submissions/Topic
Structuring System Requirements: Conceptual Data Modelling, OO Analysis and Design	Chapter 7, Appendix A, from Essentials of Systems Analysis and Design, by Joseph S. Valacich, Joey F. George, Jeffery A. Hoffer, Sixth Edition 2013, Pearson	

Vacation Week - 15 Apr 2019

Module/Topic	Chapter	Events and Submissions/Topic
Break Week	Revise all chapters completed so far and work on Assignment 1	

Week 6 - 22 Apr 2019

Module/Topic	Chapter	Events and Submissions/Topic
Designing the Human Interface, Agile Methodologies	Chapter 8 Appendix B from Essentials of Systems Analysis and Design, by Joseph S. Valacich, Joey F. George, Jeffery A. Hoffer, Sixth Edition 2013, Pearson	Assignment 1 Due Assignment 1 - Project (applied) Due: Week 6 Monday (22 Apr 2019) 11:00 pm AEST

Week 7 - 29 Apr 2019

Module/Topic	Chapter	Events and Submissions/Topic
Designing Databases, Data Warehousing	Chapter 9 from Essentials of Systems Analysis and Design, by Joseph S. Valacich, Joey F. George, Jeffery A. Hoffer, Sixth Edition 2013, Pearson and, Chapter 15 as CRO from Analysis and Design of Information Systems, by Arthur M. Langer, Third Edition 2008, Springer.	

Week 8 - 06 May 2019

Module/Topic	Chapter	Events and Submissions/Topic

Systems Implementation and Operation
Chapter 10 from Essentials of Systems Analysis and Design, by Joseph S. Valacich, Joey F. George, Jeffery A. Hoffer, Sixth Edition 2013, Pearson

Week 9 - 13 May 2019

Module/Topic	Chapter	Events and Submissions/Topic
Website Design and Architecture Concepts of DevOps	Chapter 16 from Analysis and Design of Information Systems, by Arthur M. Langer, Third Edition 2008, Springer. Unit resource online provided on "Concepts of DevOps".	

Week 10 - 20 May 2019

Module/Topic	Chapter	Events and Submissions/Topic
Concepts of ISO 9000	Chapter 17 from Analysis and Design of Information Systems, by Arthur M. Langer, Third Edition 2008, Springer.	

Week 11 - 27 May 2019

Module/Topic	Chapter	Events and Submissions/Topic
Business Process Reengineering	Chapter 13 from Analysis and Design of Information Systems, by Arthur M. Langer, Third Edition 2008, Springer.	Assignment 2 Due

Week 12 - 03 Jun 2019

Module/Topic	Chapter	Events and Submissions/Topic
Analysis of Case study	Appendix A Case Study from Analysis and Design of Information Systems, by Arthur M. Langer, Third Edition 2008, Springer.	Assignment 2 - Project (applied) Due: Week 12 Monday (3 June 2019) 11:00 pm AEST

Review/Exam Week - 10 Jun 2019

Module/Topic	Chapter	Events and Submissions/Topic

Exam Week - 17 Jun 2019

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. This assignment will assess the unit knowledge gained

between week 1 and week 5 about different facets of information systems analysis and design.

Assessment Due Date

Week 6 Monday (22 Apr 2019) 11:00 pm AEST

Assessment 1 is due on Monday of week 6 at 23:00 hours AEST

Return Date to Students

Week 8 Monday (6 May 2019)

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)

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

Referencing Style

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

Submission

Online

Submission Instructions

Assignment 1 is an individual assessment. Please submit it online using 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 (Max of four 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 the tasks in assignment 2. You need to submit a design of a website. You are to complete the following tasks in the order given based on the case study provided to you on Moodle:

1. Provide an introduction
2. Find out all Critical Use Cases
3. Draw Context Level diagram.
4. Draw Level 0 data flow diagram depicting all the business process description provided.
5. Draw ERD showing all required entities and its relationships.
6. Draw CRUD diagram.
7. Provide a prototype of website design and architecture you have developed based on the case study.
8. Individual group member need to write towards their own contribution for the development of the project. Individual contribution should focus on what they did and how they did it. Students are also required to write difficulties and challenges they faced while doing their allocated task. Individual group member need to discuss

how this project can be done using DevOps. What benefits DevOps can bring to this software development? Provide justification to the benefits discussed. This should be individuals prospective.

9. Provide conclusion and summary of the project
10. Deliver a presentation

During Week 11, there will be a presentation based on the case study. Please refer to the unit Moodle website for detailed information about this assignment.

Assessment Due Date

Week 12 Monday (3 June 2019) 11:00 pm AEST

Assessment 2 is due on Monday of week 11 at 23:00 hours AEST.

Return Date to Students

Exam Week Monday (17 June 2019)

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. Find out all Critical Use Cases (5 Marks)
3. Draw Context Level diagram. (5 Marks)
4. Draw Level 0 data flow diagram depicting all the business process description provided. (5 Marks)
5. Draw ERD showing all required entities and its relationships. (5)
6. Draw CRUD diagram. (5 Marks)
7. Provide a prototype of website design and architecture you have developed based on the case study. (10 Marks)
8. Details of individual group members contribution towards the development of the project. Individual group member need to discuss how this project can be done using DevOps. What benefits DevOps can bring to this software development? (10 Marks)
9. Conclusion and summary (5 Marks)
10. Presentation (45 Marks)

During Week 11, there will be a presentation based on the case study. Please refer to the unit Moodle website for detailed information about this assignment.

Referencing Style

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

Submission

Online Group

Submission Instructions

This is a group assignment. Only one member will submit the file. Member who is submitting the assignment will collect all members contributions towards this assessment and will merge all files in one document and upload it on 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