COIT20248 *Information Systems Analysis and Design*

Term 1 - 2017

Profile information current as at 09/12/2022 09:40 pm

General Information

Overview

Information systems and design is a complex, challenging and stimulating organizational process that a team of business and systems professionals uses to develop and maintain computer-based information systems. In this unit students will learn information analysis and logical specification of the system development process. Students will learn how understanding user-centred design and task-centred design are fundamental to good systems design. In order to understand these concepts, students will study how to determine user-requirements, and demonstrate that understanding through designing web-interfaces. Students will learn how understanding user-centred design and task-centred design are fundamental to good systems design. In order to understand these concepts, students will study how to determine user-requirements, and demonstrate that understanding through designing web-interfaces. Software Reuse is an important concept which must be taken into account when developing an Information System. Through case studies and practical examples the student will study the phases in the systems development life cycle (determining the user requirements, developing a systems proposal, designing the system) and apply the key principles to the implementation of system development problems in organisations. The organisational context of systems analysis and design and the iterative nature of the analysis and design process will be explored. Note: If you have completed unit COIS20025 then you cannot take this unit.

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

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 - 2017

- Brisbane
- Distance
- 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 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. **Practical and Written Assessment**
Weighting: 30%
2. **Presentation and Written Assessment**
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 Moodle Site

Feedback
more step by step guidelines on doing the assessment

Recommendation
Video on some topics are to be given

Action
Guidelines to do assessments were provided. Video was provided on drawing UML diagrams.

Unit Learning Outcomes

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

1. Identify and apply core principles of information systems analysis and design process.
2. Analyse different stages through which information systems are developed.
3. Apply the tools used in modelling workplace information flows so that they can be implemented in the systems.
4. Employ the tools, techniques, and methods to produce requirement specifications, and provide an academic and practical argument to defend the solution.
5. Assess the impact of the intended target audience on the design of a user interface.
6. Develop specifications for an information systems with limited scope.
7. Apply systems analysis and design techniques for problem solving in the organizational context for a system development.

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 Analysis (INAN)
- Business Analysis (BUAN)
- Requirements Definition and Management (REQM)
- Business Modelling (BSMO)
- Data Analysis (DTAN)
- Systems Design (DESN)
- Database/Repository Design (DBDS)

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 - Practical and Written Assessment - 30%	•	•	•	•	•	•	•

Assessment Tasks	Learning Outcomes						
	1	2	3	4	5	6	7
2 - Presentation and Written Assessment - 30%	•	•	•	•	•	•	•
3 - Examination - 40%	•	•	•	•	•	•	•

Alignment of Graduate Attributes to Learning Outcomes

Graduate Attributes	Learning Outcomes						
	1	2	3	4	5	6	7
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 - Practical and Written Assessment - 30%	○		○	○	○	○		
2 - Presentation and Written Assessment - 30%	○	○	○	○	○	○		
3 - Examination - 40%	○	○	○		○	○		

Textbooks and Resources

Textbooks

COIT20248

Prescribed

Analysis and Design of Information Systems
third Edition (2010)
Authors: Arthur M. Langer
Springer- verlag
London , London , England
ISBN: 978-1-84628-654-4
Binding: Paperback
COIT20248

Prescribed

Essentials of Systems Analysis and Design
Sixth Edition (2015)
Authors: Joseph S. Valacich, Joey F. George, Jeffery A. Hoffer
Pearson Education Limited
New Jersey , New Jersey , USA
ISBN: 10:1-292-07661-5
Binding: Hardcover

Additional Textbook Information

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 - 06 Mar 2017

Module/Topic	Chapter	Events and Submissions/Topic

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 - 13 Mar 2017

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 - 20 Mar 2017

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 - 27 Mar 2017

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 - 03 Apr 2017

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 - 10 Apr 2017

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

Week 6 - 17 Apr 2017

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 **Practical and Written Assessment** Due: Week 6 Thursday (20 Apr 2017) 8:00 pm AEST

Week 7 - 24 Apr 2017

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 - 01 May 2017

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 - 08 May 2017

Module/Topic	Chapter	Events and Submissions/Topic
Website Design and Architecture	Chapter 16 from Analysis and Design of Information Systems, by Arthur M. Langer, Third Edition 2008, Springer.	Return of marked assignment 1

Week 10 - 15 May 2017

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 - 22 May 2017

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.	**Presentation and Written Assessment** Due: Week 11 Friday (26 May 2017) 8:00 pm AEST

Week 12 - 29 May 2017

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.	

Review/Exam Week - 05 Jun 2017

Module/Topic	Chapter	Events and Submissions/Topic

Exam Week - 12 Jun 2017

Module/Topic	Chapter	Events and Submissions/Topic
Exam Week	Exam Week	

Term Specific Information

Contact information for Dr Meena Jha: Email: m.jha@cqu.edu.au Telephone: (02) 9324 5776 Office: Level 6, 400 Kent Street, Sydney Campus. Please submit questions about the course 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. For an individual discussion, please ring during working hours (leave a message if I'm not in and I'll return your call as soon as I can).

Assessment Tasks

1 Practical and Written Assessment

Assessment Type
Practical and Written Assessment

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 2. This assignment will assess the unit knowledge gained between week 1 and week 5 about different facets of information system analysis and design.

Assessment Due Date
Week 6 Thursday (20 Apr 2017) 8:00 pm AEST
Assignment 1 is due on week 6 Thursday at 20:00 AEST.

Return Date to Students
Week 9 Friday (12 May 2017)
3 weeks - moderation & marking 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. Approach 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)

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

- Identify and apply core principles of information systems analysis and design process.
- Analyse different stages through which information systems are developed.
- Apply the tools used in modelling workplace information flows so that they can be implemented in the systems.
- Employ the tools, techniques, and methods to produce requirement specifications, and provide an academic and practical argument to defend the solution.
- Assess the impact of the intended target audience on the design of a user interface.
- Develop specifications for an information systems with limited scope.
- Apply systems analysis and design techniques for problem solving in the organizational context for a system development.

Graduate Attributes

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

2 Presentation and Written Assessment

Assessment Type
Presentation and Written Assessment

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 task 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. Provide a prototype of website design and architecture you have developed based on the case study.
7. Details of individual group members contribution towards the development of the project.

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 11 Friday (26 May 2017) 8:00 pm AEST
Assignment 2 is due on week 11 Friday at 20:00 AEST.

Return Date to Students
Exam Week Friday (16 June 2017)
The marking team will do the best to return assignment 2 to students before the examination.

Weighting
30%

Assessment Criteria
Marking Assessment Criteria:
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. (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

Submission Instructions
This is a group assignment. All members will submit their file individually with detailed description of individual tasks done. All members will write a page on their own contribution towards this assessment.Merge all files in one document and upload it on Moodle plateform.

Learning Outcomes Assessed

- Identify and apply core principles of information systems analysis and design process.
- Analyse different stages through which information systems are developed.
- Apply the tools used in modelling workplace information flows so that they can be implemented in the systems.
- Employ the tools, techniques, and methods to produce requirement specifications, and provide an academic and practical argument to defend the solution.
- Assess the impact of the intended target audience on the design of a user interface.
- Develop specifications for an information systems with limited scope.
- Apply systems analysis and design techniques for problem solving in the organizational context for a system development.

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

Minimum mark or grade
Complete an Examination

Exam Conditions
Closed Book.

Materials
No calculators permitted
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