COIT20273 *Software Design and Development Project*
Term 2 - 2018

Profile information current as at 29/04/2024 01:21 pm

All details in this unit profile for COIT20273 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 capstone project, you are required to synthesise and demonstrate your technical and generic skills developed across the units studied previously. To achieve this, you will work in small teams with a designated customer to identify a small software application, its requirements (both functional and non-functional) and a software development methodology for its realisation. Your team will then develop a well designed and documented application that meets the identified requirements. In addition to the documented application, your team will also identify and produce the project management and quality assurance components required to ensure that the project is delivered within specified project outcome parameters. Emerging technologies and current research issues will support your design choices.

Details

Career Level: *Postgraduate*
Unit Level: *Level 9*
Credit Points: *12*
Student Contribution Band: *8*
Fraction of Full-Time Student Load: *0.25*

Pre-requisites or Co-requisites

Pre-requisites: PPMP20007 Project Management Concepts COIT20258 Software Engineering Co-requisites: COIT20259 Enterprise Computing ArchitectureCOIT20257 Distributed Systems: Principles and Development
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 - 2018

- 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 12-credit Postgraduate unit at CQUniversity requires an overall time commitment of an average of 25 hours of study per week, making a total of 300 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: 100%

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 Self reflection.

Feedback
Assessment breakdown submission should be revised to satisfy the Agile software development life cycle.

Recommendation
Review assessment submission plan and the marking criteria.

Unit Learning Outcomes

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

1. Apply a systems engineering process, including requirement analysis, application software design, algorithm design, coding and debugging, software testing, and software project management, informed by research into best practice
2. Demonstrate professional standards of software development including technical skills, documentation, software quality assurance, risk mitigation strategies, ethics and professional responsibility
3. Plan and manage the software development project, particularly the scheduling of time and resources and the generation of supporting documentation
4. Work collaboratively as part of a productive team
5. Communicate effectively by using written and oral presentation, understanding the needs of various stakeholders
6. Review and critically evaluate team and individual performance, reflecting on the processes followed and identifying areas for improvement.

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:

- Programming/software development (PROG)
- Project Management (PRMG)
- System Design (DESN)
- Database design (DBDS)
- Enterprise and business architecture (STPL)
- Application support (ASUP)
- Testing (TEST)
- Research (RSCH)
- User experience analysis (UNAN)
- User experience design (HCEV)
- User experience evaluation (USEV)
- Configuration management (SYSP)
- Quality assurance (QUAS)
- Quality standards (QUST)

— 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
1 - Project (applied) - 100%	•	•	•	•	•	•

Alignment of Graduate Attributes to Learning Outcomes

Graduate Attributes	Learning Outcomes					
	1	2	3	4	5	6
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) - 100%	∘	∘	∘	∘	∘	∘	∘	

Textbooks and Resources

Textbooks

There are no required textbooks.

IT Resources

You will need access to the following IT resources:

- CQUniversity Student Email
- Internet
- Unit Website (Moodle)

Referencing Style

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

Teaching Contacts

Khaleel Petrus Unit Coordinator
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Schedule

Week 1 - 09 Jul 2018

Module/Topic	Chapter	Events and Submissions/Topic
Workshop: • Identify project title. • SCRUM - Agile software project management method.		Form groups. Identify roles in the team (Scrum Master, developer, client). No Submissions this week

Week 2 - 16 Jul 2018

Module/Topic	Chapter	Events and Submissions/Topic
Workshop: • Project planning • SCRUM • Project planning Requirements specification including use cases, user stories, project charter, product backlog for software release 1.0.		Communicate with the client, identify user stories, prioritize user stories, decide the iterations and the length of each milestone No Submissions

Week 3 - 23 Jul 2018

Module/Topic	Chapter	Events and Submissions/Topic
Workshop		Submit Project Plan and Requirement Specification

Week 4 - 30 Jul 2018

Module/Topic	Chapter	Events and Submissions/Topic
Workshop		No Submissions

Week 5 - 06 Aug 2018

Module/Topic	Chapter	Events and Submissions/Topic
Workshop on Software Design		No Submissions

Vacation Week - 13 Aug 2018

Module/Topic	Chapter	Events and Submissions/Topic

Week 6 - 20 Aug 2018

Module/Topic	Chapter	Events and Submissions/Topic
Workshop on Software Design		Submit Design Document

Week 7 - 27 Aug 2018

Module/Topic	Chapter	Events and Submissions/Topic
Workshop		Submit Progress Report

Week 8 - 03 Sep 2018

Module/Topic	Chapter	Events and Submissions/Topic
Workshop		No Submissions

Week 9 - 10 Sep 2018

Module/Topic	Chapter	Events and Submissions/Topic
Workshop		No Submissions

Week 10 - 17 Sep 2018

Module/Topic	Chapter	Events and Submissions/Topic
Workshop		No Submissions

Week 11 - 24 Sep 2018

Module/Topic	Chapter	Events and Submissions/Topic
Workshop		No Submissions

Week 12 - 01 Oct 2018

Module/Topic	Chapter	Events and Submissions/Topic
Workshop		Submit Final Project Document and Presentation

Review/Exam Week - 08 Oct 2018

Module/Topic	Chapter	Events and Submissions/Topic

Exam Week - 15 Oct 2018

Module/Topic	Chapter	Events and Submissions/Topic

Assessment Tasks

1 Software Development Artefacts

Assessment Type
Project (applied)

Task Description
In this assignment, students will work in teams to produce the following artefacts for a small software development project:
1. Project Plan and Requirements Specification: A two parts word document is submitted. The first part includes description of the project scope, schedule, risks, product quality and resources.The second part, describes the process used to elicit software product requirements the stakeholders.It also includes goals and vision of the product and a clear list of non-functional and functional requirements.
2. Design Document: This assessment outlines in detail the architecture and design of the software product. Among the standard software design, the document will include, use case, data flow, sequence and class diagrams of the product. Also, images will be provided of the user interface design
3. Progress Report: This is a word document which includes the developers overview of the accomplishments so far, what remains to be done, problems faced and solutions to them, any critical changes to the proposal and a brief outline for final report.

4. Final Project Document and Presentation: This is final submission which includes three distinctive parts; final project report describing the programming and testing of the product. The second part is a peer review report, which is individual assessment and each member reports his contribution as well as his peers contribution. The last part has two components; a power point file (group assessment) and oral in-class/online presentation (individual assessment). Each student has to submit his own copy of the submission as two separate files (word document and PPT).

The Agile Software Development principles will be adopted in the project development. The artefacts in assessments 1 and 2 may take several iterations. Contact time is allocated each week in the form of a workshop. During these workshops, the local lecturer will provide teams with assistance and monitor progress. Teams will be required to give presentations for some of the above artefacts in the week that the artefact is due. They will also be required to submit the artefact in electronic form. For distance students, the time of the "presentation" and the technology employed for communication will be determined on an individual basis. The project itself will be concerned with the development of a 3-layered information system or an equivalent application; details will be available on the unit website.

Assessment Due Date

Refer to the unit schedule for due dates.

Return Date to Students

Assessments 1, 2 and 3 will be returned within 2 weeks of submission. Assessment 4 will be returned on Certification day.

Weighting
100%

Assessment Criteria
1. Project Plan and Requirement Specifications (30%)
2. Progress Report (8%)
3. Design Document (20%)
4. Final Project Document and Presentation (42%)

The detailed marking guides are available on the unit website

Referencing Style

- Harvard (author-date)

Submission
No submission method provided.

Learning Outcomes Assessed

- Apply a systems engineering process, including requirement analysis, application software design, algorithm design, coding and debugging, software testing, and software project management, informed by research into best practice
- Demonstrate professional standards of software development including technical skills, documentation, software quality assurance, risk mitigation strategies, ethics and professional responsibility
- Plan and manage the software development project, particularly the scheduling of time and resources and the generation of supporting documentation
- Work collaboratively as part of a productive team
- Communicate effectively by using written and oral presentation, understanding the needs of various stakeholders
- Review and critically evaluate team and individual performance, reflecting on the processes followed and identifying areas for improvement.

Graduate Attributes

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

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