COMP4092

Software Engineering Research Thesis A

Session 1, In person-scheduled-weekday, North Ryde 2025

School of Computing

Contents

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General Information

Unit convenor and teaching staff
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Credit points
10

Prerequisites
COMP3000 and COMP3010 and COMP3100

Corequisites
COMP4050 or COMP4060

Co-badged status

Unit description
In this unit students will conduct the first half of an individual research thesis project on a topic in the Software Engineering major under the direction of an academic supervisor. The focus of the work will be on developing the project proposal, conducting the literature review and project planning and design.

Learning in this unit enhances student understanding of global challenges identified by the United Nations Sustainable Development Goals (UNSDGs) Industry, Innovation and Infrastructure

Important Academic Dates

Information about important academic dates including deadlines for withdrawing from units are available at https://www.mq.edu.au/study/calendar-of-dates

Learning Outcomes

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

ULO1: Analyse a complex software engineering problem and define discipline specific research questions that require the development of new knowledge or research into cutting-edge techniques.

ULO2: Plan a major software engineering research project, including the design of necessary processes, information management, records keeping, project management, and communications.

ULO3: Demonstrate an advanced knowledge of contextual factors, research direction,

and foundational concepts in software engineering.

ULO4: Apply core software engineering principles, practices, and research methods to a research or industry challenge.

ULO5: Demonstrate intellectual independence, and an in-depth understanding of a specialist topic within software engineering through verbal and written communication.

General Assessment Information

Grading and passing requirement for unit

In order to pass this unit a student must

- obtain a mark of 50 or more for the unit (i.e. obtain a passing grade P/ CR/ D/ HD)

For further details about grading, please refer below in the policies and procedures section.

Late submissions and Re-submissions

All assessments must be submitted by 11:55 pm (Sydney Time) on their due date. Should the activities be missed due to illness or misadventure, students may apply for Special Consideration.

- **Preliminary Thesis Report:** NO, unless Special Consideration request is Granted. Resubmissions are not allowed.
- **Presentation:** NO, unless Special Consideration request is Granted. Special considerations for presentations are approved only if there are long delays due to extenuating circumstances. Resubmissions are not allowed.
- **Logbooks (Supervisor Management and Engagement):** NO, unless Special Consideration request is Granted. Resubmissions are not allowed.

Special Consideration

The Special Consideration Policy aims to support students who have been impacted by short-term circumstances or events that are serious, unavoidable and significantly disruptive, and which may affect their performance in assessment. If you experience circumstances or events that affect your ability to complete the assessments in this unit on time, please inform the convenor and submit a Special Consideration request through http://connect.mq.edu.au/.

Written Assessments

If you experience circumstances or events that affect your ability to complete the written assessments in this unit on time, please inform the convenor and submit a Special Consideration request. See details of the Special Consideration Policy below.

Project Implementation

If your project requires on-campus lab attendance and you are unable to do that, please contact with the unit convenor and your supervisor as soon as possible.

Release Dates

The project allocation will be released no later than 17 March (Monday of Week 4), for all students who have submitted their project preferences on time.

Assessment Tasks

Name	Weighting	Hurdle	Due
Presentation and Oral Examination	30%	No	Exam period, Week 14 -- Week 16
Preliminary Thesis	60%	No	Sunday 8 June, 23:55
Supervisor Management Assessment	10%	No	Sunday 8 June, 23:55

Presentation and Oral Examination

Assessment Type [1]: Viva/oral examination
Indicative Time on Task [2]: 10 hours
Due: **Exam period, Week 14 -- Week 16**
Weighting: **30%**

Students are required to deliver a comprehensive presentation and oral defence of their project proposal and progress at the end of the unit.

On successful completion you will be able to:
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- Plan a major software engineering research project, including the design of necessary processes, information management, records keeping, project management, and communications.
- Demonstrate an advanced knowledge of contextual factors, research direction, and foundational concepts in software engineering.
- Apply core software engineering principles, practices, and research methods to a research or industry challenge.
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Preliminary Thesis

Assessment Type [1]: Thesis
Indicative Time on Task [2]: 50 hours
Due: **Sunday 8 June, 23:55**
Weighting: **60%**

Students are required to prepare a thesis report about their projects, including the literature review, project planning & design, progress and achievements.

On successful completion you will be able to:

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- Plan a major software engineering research project, including the design of necessary processes, information management, records keeping, project management, and communications.
- Demonstrate an advanced knowledge of contextual factors, research direction, and foundational concepts in software engineering.
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Supervisor Management Assessment

Assessment Type [1]: Performance
Indicative Time on Task [2]: 15 hours
Due: **Sunday 8 June, 23:55**
Weighting: **10%**

In this unit, development of knowledge and skills will be guided by regular interaction with supervisors. Students must meet with supervisors regularly to show progress and receive feedback. This assessment of performance is made by the student's supervisor. It is comprised of the supervisor's judgement of self-management, engagement, intellectual independence, initiative, as well as judgement of the quality of record keeping & written log book. The logbook should contain dated records of day-to-day activities associated with the project. Outcomes of a minimum of five meetings must be documented using the meeting log sheet provided on iLearn

to meet this hurdle assessment task.

On successful completion you will be able to:

- Analyse a complex software engineering problem and define discipline specific research questions that require the development of new knowledge or research into cutting-edge techniques.
- Plan a major software engineering research project, including the design of necessary processes, information management, records keeping, project management, and communications.
- Demonstrate an advanced knowledge of contextual factors, research direction, and foundational concepts in software engineering.
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[1] If you need help with your assignment, please contact:

- the academic teaching staff in your unit for guidance in understanding or completing this type of assessment
- the Writing Centre for academic skills support.

[2] Indicative time-on-task is an estimate of the time required for completion of the assessment task and is subject to individual variation

Delivery and Resources

Unit Delivery

This is a project-based unit. Development of knowledge and skills will be guided by both weekly sessions with the unit convenor and also regular interaction with your supervisor.

The one-hour sessions (lectures / workshops / discussions) with the unit convenor start in Week 1.

You are strongly advised to meet with your supervisor on a weekly basis, once the project commences. Weekly meetings should aim to seek feedback and steer the project, and would normally last at least 15-30 minutes or more. Meetings can be conducted using telephone or video-conference. Outcomes of a minimum of five meetings must be documented using the meeting log sheet provided on iLearn to meet this hurdle assessment task.

Logbook

This unit requires a logbook. The students should maintain an individual logbook which should contain a dated log of day-to-day activities undertaken in relation to the project.

Technology Used and Required

The students are required to discuss with their supervisor about the software/hardware resources required for analysis, simulation, testing and experiments related to their project. In addition, word processing software (MS Word, Latex etc.) will be required to produce the preliminary thesis and MS PowerPoint or equivalent software will be required for presentation slides.

Unit Webpage

Access from the online iLearn System at http://ilearn.mq.edu.au

Required and Recommended Texts/Materials

There is not set textbook for this unit. The students are required to discuss with their supervisor regarding required/recommended reading materials, as suited to individual project needs.

Communication

We will communicate with you via your university email or through announcements on iLearn. Queries to the convenor can either be placed before/after the weekly meeting, on the iLearn discussion board or sent via email to the convenor's address from your university email address.

Unit Schedule

One hour weekly meeting with the unit convenor and a weekly meeting with your supervisor.

Policies and Procedures

Macquarie University policies and procedures are accessible from Policy Central (https://policies.mq.edu.au). Students should be aware of the following policies in particular with regard to Learning and Teaching:

- Academic Appeals Policy
- Academic Integrity Policy
- Academic Progression Policy
- Assessment Policy
- Fitness to Practice Procedure
- Assessment Procedure
- Complaints Resolution Procedure for Students and Members of the Public
- Special Consideration Policy

Students seeking more policy resources can visit Student Policies (https://students.mq.edu.au/support/study/policies). It is your one-stop-shop for the key policies you need to know about throughout your undergraduate student journey.

To find other policies relating to Teaching and Learning, visit Policy Central (https://policies.mq.e

du.au) and use the search tool.

Student Code of Conduct

Macquarie University students have a responsibility to be familiar with the Student Code of Conduct: https://students.mq.edu.au/admin/other-resources/student-conduct

Results

Results published on platform other than eStudent, (eg. iLearn, Coursera etc.) or released directly by your Unit Convenor, are not confirmed as they are subject to final approval by the University. Once approved, final results will be sent to your student email address and will be made available in eStudent. For more information visit connect.mq.edu.au or if you are a Global MBA student contact globalmba.support@mq.edu.au

Academic Integrity

At Macquarie, we believe academic integrity – honesty, respect, trust, responsibility, fairness and courage – is at the core of learning, teaching and research. We recognise that meeting the expectations required to complete your assessments can be challenging. So, we offer you a range of resources and services to help you reach your potential, including free online writing an d maths support, academic skills development and wellbeing consultations.

Student Support

Macquarie University provides a range of support services for students. For details, visit http://stu dents.mq.edu.au/support/

The Writing Centre

The Writing Centre provides resources to develop your English language proficiency, academic writing, and communication skills.

- Workshops
- Chat with a WriteWISE peer writing leader
- Access StudyWISE
- Upload an assignment to Studiosity
- Complete the Academic Integrity Module

The Library provides online and face to face support to help you find and use relevant information resources.

- Subject and Research Guides
- Ask a Librarian

Student Services and Support

Macquarie University offers a range of Student Support Services including:

- IT Support

- Accessibility and disability support with study

- Mental health support

- Safety support to respond to bullying, harassment, sexual harassment and sexual assault

- Social support including information about finances, tenancy and legal issues

- Student Advocacy provides independent advice on MQ policies, procedures, and processes

Student Enquiries

Got a question? Ask us via the Service Connect Portal, or contact Service Connect.

IT Help

For help with University computer systems and technology, visit http://www.mq.edu.au/about_us/offices_and_units/information_technology/help/.

When using the University's IT, you must adhere to the Acceptable Use of IT Resources Policy. The policy applies to all who connect to the MQ network including students.

Changes since First Published

Date	Description
10/02/2025	ask.mq.edu.au replaced with connect.mq.edu.au

Unit information based on version 2025.04 of the Handbook