



# COMP4093

## Software Engineering Research Thesis B

Session 2, Special circumstances 2021

*School of Computing*

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#### Disclaimer

Macquarie University has taken all reasonable measures to ensure the information in this publication is accurate and up-to-date. However, the information may change or become out-dated as a result of change in University policies, procedures or rules. The University reserves the right to make changes to any information in this publication without notice. Users of this publication are advised to check the website version of this publication [or the relevant faculty or department] before acting on any information in this publication.

#### Session 2 Learning and Teaching Update

The decision has been made to conduct study online for the remainder of Session 2 for all units WITHOUT mandatory on-campus learning activities. Exams for Session 2 will also be online where possible to do so.

This is due to the extension of the lockdown orders and to provide certainty around arrangements for the remainder of Session 2. We hope to return to campus beyond Session 2 as soon as it is safe and appropriate to do so.

Some classes/teaching activities cannot be moved online and must be taught on campus. You should already know if you are in one of these classes/teaching activities and your unit convenor will provide you with more information via iLearn. If you want to confirm, see the list of [units with mandatory on-campus classes/teaching activities](#).

Visit the [MQ COVID-19 information page](#) for more detail.

## General Information

Unit convenor and teaching staff Kate Stefanov <a href="mailto:kate.stefanov@mq.edu.au">kate.stefanov@mq.edu.au</a>
Credit points 10
Prerequisites 20cp at 4000 level
Corequisites COMP4092 or COMP410
Co-badged status
Unit description In this unit students will conduct the second half of their individual research thesis on a topic in Software Engineering major under the direction of an academic supervisor. Students will implement the previously developed project plan conducting the experimental and theoretical work to obtain results and analysis presented in the form of a final research thesis.

## 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:** Undertake a complex engineering specific research project involving the development of new knowledge, using appropriate technical and /or laboratory skills, data management and synthesis, critical analysis and interpretation of results; culminating in an effective written dissertation and oral presentation to a variety of audiences in research fora.

**ULO2:** Demonstrate technical writing and presentation skills at a standard that would be acceptable in a professional engineering workplace.

**ULO3:** Identify, formulate and solve complex open-ended software engineering problems in an ethical manner.

**ULO4:** Apply research principles, research methods, and technical standards to identify

and provide solutions to complex problems in software engineering.

## General Assessment Information

### Meeting with Supervisors (Hurdle, 0%)

Assessment Type: Participatory task

Due: **Weekly or fortnightly in consultation with your supervisor**

**This is a hurdle assessment task.** For more information on hurdle assessment tasks, follow the link on Assessment Policy in the Policies and Procedures section below.

Students are required to meet with their supervisors on a weekly basis, once the project commences. Such weekly meetings should aim to seek feedback and steer the project, and would normally last at least 15-30 minutes or more. In order to pass this unit, a student must attend at least 6 out of 12 weekly meetings from Week 1 to Week 12. In case a face-to-face meeting is not possible, a meeting must be conducted using telephone or video-conference. Meetings should be logged using the consultation meeting log sheet provided on iLearn.

On successful completion you will be able to:

- Undertake a complex engineering specific research project involving the development of new knowledge, using appropriate technical and /or laboratory skills, data management and synthesis, critical analysis and interpretation of results; culminating in an effective written dissertation and oral presentation to a variety of audiences in research fora.
- Demonstrate technical writing and presentation skills at a standard that would be acceptable in a professional engineering workplace.
- Identify, formulate and solve complex open-ended software engineering problems in an ethical manner.
- Apply research principles, research methods, and technical standards to identify and provide solutions to complex problems in software engineering.

### Management and Engagement (10%)

Assessment Type: Participatory task

Due: **Daily record of your achievements**

Students are required to actively engage with the project-related activities, and to demonstrate a professional demeanour towards project management and record-keeping. Students are also required to maintain a filed book for this unit, where dated records of day-to-day activities associated with the project are maintained.

On successful completion you will be able to:

- Undertake a complex engineering specific research project involving the development of new knowledge, using appropriate technical and /or laboratory skills, data management

and synthesis, critical analysis and interpretation of results; culminating in an effective written dissertation and oral presentation to a variety of audiences in research fora.

- Demonstrate technical writing and presentation skills at a standard that would be acceptable in a professional engineering workplace.
- Identify, formulate and solve complex open-ended software engineering problems in an ethical manner.
- Apply research principles, research methods, and technical standards to identify and provide solutions to complex problems in software engineering.

## Thesis (Hurdle, 70%)

Assessment Type: Thesis

Due: **Week 13 This is a hurdle assessment task.** For more information on hurdle assessment tasks, follow the link on Assessment Policy in the Policies and Procedures section below.

Students are required to prepare a thesis report about their projects, including the literature review, technical execution of the project, discussion and understanding of results, and conclusions and added value of work.

On successful completion you will be able to:

- Undertake a complex engineering specific research project involving the development of new knowledge, using appropriate technical and /or laboratory skills, data management and synthesis, critical analysis and interpretation of results; culminating in an effective written dissertation and oral presentation to a variety of audiences in research fora.
- Demonstrate technical writing and presentation skills at a standard that would be acceptable in a professional engineering workplace.
- Identify, formulate and solve complex open-ended software engineering problems in an ethical manner.
- Apply research principles, research methods, and technical standards to identify and provide solutions to complex problems in software engineering.

## Presentation (20%)

Assessment Type: Presentation

Due: **Week 14 or 15 at a time to be determined**

Students are required to deliver a comprehensive oral presentation about their project outcomes at the end of the unit.

On successful completion you will be able to:

- Undertake a complex engineering specific research project involving the development of

new knowledge, using appropriate technical and /or laboratory skills, data management and synthesis, critical analysis and interpretation of results; culminating in an effective written dissertation and oral presentation to a variety of audiences in research fora.

- Demonstrate technical writing and presentation skills at a standard that would be acceptable in a professional engineering workplace.
- Identify, formulate and solve complex open-ended software engineering problems in an ethical manner.
- Apply research principles, research methods, and technical standards to identify and provide solutions to complex problems in software engineering.

**Note:** The Estimated time-on-task is only indicative of the time required for completion of the assessment task and is subject to individual variation.

## Assessment Tasks

Name	Weighting	Hurdle	Due
Meeting with Supervisors	0%	Yes	Weekly or fortnightly in consultation with your supervisor
Management and Engagement	10%	No	Daily record of your achievements
Thesis	70%	Yes	Week 13
Presentation	20%	No	Week 14 or 15 at a time to be determined

### Meeting with Supervisors

Assessment Type <sup>1</sup>: Participatory task

Indicative Time on Task <sup>2</sup>: 5 hours

Due: **Weekly or fortnightly in consultation with your supervisor**

Weighting: **0%**

**This is a hurdle assessment task (see [assessment policy](#) for more information on hurdle assessment tasks)**

Students are required to meet with their supervisors on a weekly basis, once the project commences. Such weekly meetings should aim to seek feedback and steer the project, and would normally last at least 15-30 minutes or more. In order to pass this unit, a student must attend at least 6 out of 12 weekly meetings from Week 1 to Week 12. In case a face-to-face meeting is not possible, a meeting must be conducted using telephone or video-conference. Meetings should be logged using the consultation meeting log sheet provided on iLearn.

On successful completion you will be able to:

- Undertake a complex engineering specific research project involving the development of new knowledge, using appropriate technical and /or laboratory skills, data management and synthesis, critical analysis and interpretation of results; culminating in an effective written dissertation and oral presentation to a variety of audiences in research fora.
- Demonstrate technical writing and presentation skills at a standard that would be acceptable in a professional engineering workplace.
- Identify, formulate and solve complex open-ended software engineering problems in an ethical manner.
- Apply research principles, research methods, and technical standards to identify and provide solutions to complex problems in software engineering.

## Management and Engagement

Assessment Type <sup>1</sup>: Participatory task

Indicative Time on Task <sup>2</sup>: 10 hours

Due: **Daily record of your achievements**

Weighting: **10%**

Students are required to actively engage with the project-related activities, and to demonstrate a professional demeanour towards project management and record-keeping. Students are also required to maintain a logbook for this unit, where dated records of day-to-day activities associated with the project are maintained.

On successful completion you will be able to:

- Undertake a complex engineering specific research project involving the development of new knowledge, using appropriate technical and /or laboratory skills, data management and synthesis, critical analysis and interpretation of results; culminating in an effective written dissertation and oral presentation to a variety of audiences in research fora.
- Demonstrate technical writing and presentation skills at a standard that would be acceptable in a professional engineering workplace.
- Identify, formulate and solve complex open-ended software engineering problems in an ethical manner.
- Apply research principles, research methods, and technical standards to identify and provide solutions to complex problems in software engineering.

## Thesis

Assessment Type <sup>1</sup>: Thesis

Indicative Time on Task <sup>2</sup>: 50 hours

Due: **Week 13**

Weighting: **70%**

**This is a hurdle assessment task (see [assessment policy](#) for more information on hurdle assessment tasks)**

Students are required to prepare a thesis report about their projects, including the literature review, technical execution of the project, discussion and understanding of results, and conclusions and added value of work.

On successful completion you will be able to:

- Undertake a complex engineering specific research project involving the development of new knowledge, using appropriate technical and /or laboratory skills, data management and synthesis, critical analysis and interpretation of results; culminating in an effective written dissertation and oral presentation to a variety of audiences in research fora.
- Demonstrate technical writing and presentation skills at a standard that would be acceptable in a professional engineering workplace.
- Identify, formulate and solve complex open-ended software engineering problems in an ethical manner.
- Apply research principles, research methods, and technical standards to identify and provide solutions to complex problems in software engineering.

## Presentation

Assessment Type <sup>1</sup>: Presentation

Indicative Time on Task <sup>2</sup>: 10 hours

Due: **Week 14 or 15 at a time to be determined**

Weighting: **20%**

Students are required to deliver a comprehensive oral presentation about their project outcomes at the end of the unit.

On successful completion you will be able to:

- Undertake a complex engineering specific research project involving the development of new knowledge, using appropriate technical and /or laboratory skills, data management and synthesis, critical analysis and interpretation of results; culminating in an effective written dissertation and oral presentation to a variety of audiences in research fora.
- Demonstrate technical writing and presentation skills at a standard that would be acceptable in a professional engineering workplace.
- Identify, formulate and solve complex open-ended software engineering problems in an ethical manner.
- Apply research principles, research methods, and technical standards to identify and provide solutions to complex problems in software engineering.

<sup>1</sup> 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.

<sup>2</sup> 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

There is only one 1-hour lecture per week in this unit as the bulk of the work is in preparation for your thesis.

The lecture will be conducted via Zoom and is synchronous and interactive.

## Policies and Procedures

Macquarie University policies and procedures are accessible from [Policy Central](https://policies.mq.edu.au) (<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](#)
- [Grade Appeal Policy](#)
- [Complaint Management 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) (<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.edu.au) (<https://policies.mq.edu.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 [ask.mq.edu.au](mailto:ask.mq.edu.au) or if you are a Global MBA student contact [globalmba.support@mq.edu.au](mailto:globalmba.support@mq.edu.au)

## Student Support

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

## Learning Skills

Learning Skills ([mq.edu.au/learningskills](http://mq.edu.au/learningskills)) provides academic writing resources and study strategies to help you improve your marks and take control of your study.

- [Getting help with your assignment](#)
- [Workshops](#)
- [StudyWise](#)
- [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

Students with a disability are encouraged to contact the [Disability Service](#) who can provide appropriate help with any issues that arise during their studies.

## Student Enquiries

For all student enquiries, visit Student Connect at [ask.mq.edu.au](mailto:ask.mq.edu.au)

If you are a Global MBA student contact [globalmba.support@mq.edu.au](mailto:globalmba.support@mq.edu.au)

## IT Help

For help with University computer systems and technology, visit [http://www.mq.edu.au/about\\_us/offices\\_and\\_units/information\\_technology/help/](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.