



COMP4092

Software Engineering Research Thesis A

Session 2, Special circumstance 2020

Department of Computing

Contents

<u>General Information</u>	2
<u>Learning Outcomes</u>	2
<u>General Assessment Information</u>	3
<u>Assessment Tasks</u>	4
<u>Delivery and Resources</u>	6
<u>Policies and Procedures</u>	7
<u>Changes from Previous Offering</u>	8
<u>ENGG4092</u>	8

Disclaimer

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Notice

As part of [Phase 3 of our return to campus plan](#), most units will now run tutorials, seminars and other small group learning activities on campus for the second half-year, while keeping an online version available for those students unable to return or those who choose to continue their studies online.

To check the availability of face-to-face and online activities for your unit, please go to [timetable viewer](#). To check detailed information on unit assessments visit your unit's iLearn space or consult your unit convenor.

General Information

Unit convenor and teaching staff

Convenor and Lecturer

Michael Johnson

michael.johnson@mq.edu.au

Contact via michael.johnson@mq.edu.au

After each lecture

Credit points

10

Prerequisites

(COMP332 or COMP3000) and (COMP333 or COMP3010) and (COMP335 or COMP3100)

Corequisites

(COMP430 or COMP4050) or (COMP434 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.

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 propose solutions involving the development of new knowledge or the application of 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 and practices 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

Note that each student is expected to complete satisfactorily all four components of the assessment. This is a highly integrated unit and attempts to merely accumulate marks in a component without utilising material from the others would be destined to fail.

This unit, like the workplace you will soon be in, requires active involvement and, like the workplace, you will be being judged throughout the semester.

There will be regular feedback during the semester, so students should have an idea of how they are progressing (and if you don't have a clear idea, be sure to ask!).

But it's really important to realise that this unit, the culminating project (part 1) in software engineering, is not like many (probably any) of the units you have studied before. You need to attend all classes and be actively involved. You need to work independently, and commit the required time and discipline. You need to plan and manage carefully your own individual tasks. And you need to take all this seriously and complete it in a business like and conscientious manner.

It goes without saying, but I'll say it anyway, that there are no recorded lectures or web-based Powerpoint presentations for you to use if you miss things. The unit has lectures, but the unit is **about you** and your participation is essential.

Late Submissions

As with all software engineering, timely submission is essential. Late submissions **will not be accepted**. If you are seriously affected by unavoidable and unforeseeable circumstances, you should email the unit convenor as early as possible, and certainly before the due date of the piece of work. In any case, be sure to submit by the due date whatever work you have available for submission. (If after application for for Special Consideration as a result of unavoidable disruption to studies the university deems you to be eligible to complete further work on the assessment item you may be given an opportunity to add to your submission or you may be given a substitute task.)

Written submissions

Software engineering frequently requires written reports, and such reports need to be, as far as possible, of professional quality. Students need to strive to present work which is written clearly, with good grammar, correct word usage, correct punctuation and correct spelling. All written work must be properly referenced and conform to standard stylistic conventions.

A thesis is an especially significant formal document that represents both academic research,

and in this case a substantial individual software engineering project. It takes a very significant amount of time and multiple drafts to properly prepare such a document.

Assessment Tasks

Name	Weighting	Hurdle	Due
<u>Preliminary Thesis Material</u>	70%	Yes	Week 13
<u>Research Plan Presentation</u>	20%	No	Week 14 or 15 at a time to be determined
<u>Meetings with supervisors and clients</u>	0%	Yes	Weekly or fortnightly, in consultation with your supervisor
<u>Engineering Management and Engagement</u>	10%	No	Daily record of your progress

Preliminary Thesis Material

Assessment Type ¹: Plan

Indicative Time on Task ²: 50 hours

Due: **Week 13**

Weighting: **70%**

This is a hurdle assessment task (see assessment policy for more information on hurdle assessment tasks)

A major piece of work towards the thesis that will be submitted at the end of the succeeding unit COMP4093, this document details the plan of work, relevant literature, methodological issues, and a timeline for COMP4093.

On successful completion you will be able to:

- Analyse a complex software engineering problem and propose solutions involving the development of new knowledge or the application of 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.

- Apply core software engineering principles and practices to a research or industry challenge.
- Demonstrate intellectual independence, and an in-depth understanding of a specialist topic within software engineering through verbal and written communication.

Research Plan Presentation

Assessment Type ¹: Presentation

Indicative Time on Task ²: 10 hours

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

Weighting: **20%**

A face-to-face presentation of the proposed research, including background, reasoning and methodology.

On successful completion you will be able to:

- Analyse a complex software engineering problem and propose solutions involving the development of new knowledge or the application of cutting edge techniques.
- Demonstrate an advanced knowledge of contextual factors, research direction, and foundational concepts in software engineering.
- Demonstrate intellectual independence, and an in-depth understanding of a specialist topic within software engineering through verbal and written communication.

Meetings with supervisors and clients

Assessment Type ¹: Simulation/role play

Indicative Time on Task ²: 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)

Regular meetings with clients are essential for quality software engineering

On successful completion you will be able to:

- Plan a major software engineering research project, including the design of necessary

processes, information management, records keeping, project management, and communications.

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

Engineering Management and Engagement

Assessment Type ¹: Field book

Indicative Time on Task ²: 10 hours

Due: **Daily record of your progress**

Weighting: **10%**

An opportunity to demonstrate (and if necessary, learn) the principles of good engineering management, record keeping, and professional engagement

On successful completion you will be able to:

- Plan a major software engineering research project, including the design of necessary processes, information management, records keeping, project management, and communications.
- Apply core software engineering principles and practices to a research or industry challenge.

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

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

The lectures is compulsory, and is currently scheduled for Tuesdays at 3pm. It is very important that you attend as the special nature of thesis work requires special skills, study and guidance.

In 2020 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://staff.mq.edu.au/work/strategy-planning-and-governance/university-policies-and-procedures/policy-central) (<https://staff.mq.edu.au/work/strategy-planning-and-governance/university-policies-and-procedures/policy-central>). 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](#) (**Note:** *The Special Consideration Policy is effective from 4 December 2017 and replaces the Disruption to Studies Policy.*)

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

If you would like to see all the policies relevant to Learning and Teaching visit [Policy Central](https://staff.mq.edu.au/work/strategy-planning-and-governance/university-policies-and-procedures/policy-central) (<https://staff.mq.edu.au/work/strategy-planning-and-governance/university-policies-and-procedures/policy-central>).

Student Code of Conduct

Macquarie University students have a responsibility to be familiar with the Student Code of Conduct: <https://students.mq.edu.au/study/getting-started/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 or if you are a Global MBA student contact 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) 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

If you are a Global MBA student contact 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/.

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 from Previous Offering

The preliminary thesis is now a hurdle requirement and the lectures are compulsory. These changes are in response to difficulties that students had in adjusting to a thesis related unit for the first time, and are designed to help you. More about this will be explained in the first lecture.

ENGG4092

From now until 2022 (inclusive), most students enrolling in COMP4092 will enrol concurrently in ENGG4092. This is so that students can complete "double sized" project units (20 credit points) as required in the programs that students originally entered. This will be further explained in the first lecture.