COMP4092
Software Engineering Research Thesis A
Session 1, Weekday attendance, North Ryde 2020
Dept of Computing

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General Information

Unit convenor and teaching staff
Michael Johnson
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Credit points
10

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

Corequisites
(COMP430 or COMP4050) or (COMP434 or COMP4060)

Co-badge status

Unit description
In this unit students will conduct the first half of an individual research thesis 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://students.mq.edu.au/important-dates

Learning Outcomes

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

<table>
<thead>
<tr>
<th>Name</th>
<th>Weighting</th>
<th>Hurdle</th>
<th>Due</th>
</tr>
</thead>
<tbody>
<tr>
<td>Meeting with Supervisors</td>
<td>0%</td>
<td>Yes</td>
<td>Weekly</td>
</tr>
<tr>
<td>Management and Engagement</td>
<td>10%</td>
<td>No</td>
<td>Daily (log book entries)</td>
</tr>
<tr>
<td>Preliminary Thesis</td>
<td>70%</td>
<td>Yes</td>
<td>Week 12</td>
</tr>
<tr>
<td>Presentation</td>
<td>20%</td>
<td>No</td>
<td>Weeks 13 and 14</td>
</tr>
</tbody>
</table>

### Meeting with Supervisors

Assessment Type: Participatory task  
Indicative Time on Task: 5 hours  
Due: Weekly  
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 5 out of 10 weekly meetings from Week 4 to Week 13. 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:

- 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.
Management and Engagement

Assessment Type 1: Participatory task
Indicative Time on Task 2: 10 hours
Due: Daily (log book entries)
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:
- 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.

Preliminary Thesis

Assessment Type 1: Thesis
Indicative Time on Task 2: 50 hours
Due: Week 12
Weighting: 70%

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

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

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.

Presentation
Assessment Type 1: Presentation
Indicative Time on Task 2: 10 hours
Due: Weeks 13 and 14
Weighting: 20%

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

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.
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1 If you need guidance or support to understand or complete this type of assessment, please contact the Learning Skills Team

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
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). 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). 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).

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 improve your marks and take control of your study.

- Workshops
- StudyWise
- Academic Integrity Module for Students
- Ask a Learning Adviser

Student Enquiry Service
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

Equity 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.

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.