COMP420

Software Engineering Research Thesis B

S2 Day 2018

Dept of Computing

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General Information

Unit convenor and teaching staff Convenor Michael Johnson michael.johnson@mq.edu.au Contact via michael.johnson@mq.edu.au 9WW 383 By appointment
Credit points 6
Prerequisites 75cp at 100 level or above including COMP410
Corequisites COMP430 or COMP434
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:

At the end of this unit students will be able to undertake a complex engineering specific research project involving the development of new knowledge, using appropriate technical 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.

At the end of this unit students will be able to demonstrate an advanced knowledge of contextual factors, research direction, and underpinning information impacting the

engineering discipline.

At the end of this unit students will be able to identify, formulate and solve engineering problems in an ethical manner, including complex and open-ended problems, using established engineering methods, processes, and procedures.

At the end of this unit students will be able to apply research principles, research methods, and technical standards as well as further learning to identify and provide solutions to complex problems with intellectual independence.

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 to the policies and procedures section below.

Hurdle Requirements

Regular meetings with the thesis supervisor is a hurdle requirement. See details in the assessment task description.

Late submissions and Re-submissions

Late submissions will attract a penalty of 10 marks per day. Extenuating circumstances will be considered upon lodgement of a formal special consideration application.

Resubmissions of work are not allowed after due date.

Assessment Tasks

Name	Weighting	Hurdle	Due
Thesis	70%	No	Week 13
Management and Engagement	10%	No	All Session
Meetings with Supervisors	0%	Yes	Week 13
Presentation	20%	No	TBA

Thesis

Due: **Week 13**
Weighting: **70%**

Refer to iLearn for guidelines.

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Management and Engagement

Due: **All Session**
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. More guidelines are provided on iLearn.

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solutions to complex problems with intellectual independence.

Meetings with Supervisors

Due: **Week 13**
Weighting: **0%**
This is a hurdle assessment task (see assessment policy for more information on hurdle assessment tasks)

Students are expected to meet with their supervisor 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 minutes or more. In order to pass this unit, a student must attend at least 6 out of 14 weekly meetings between Week 1 and Week 12. In case a face-to-face meeting is not possible, a meeting must be conducted using telephone, video-conference or via detailed progress updates through email, at the supervisor's discretion. Meetings should be logged using the consultation meeting log sheet provided on iLearn.

On successful completion you will be able to:

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Presentation

Due: **TBA**
Weighting: **20%**

Refer to iLearn for guidelines

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research project involving the development of new knowledge, using appropriate technical 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.

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Delivery and Resources

Unit Delivery

This is a project-based unit and has no scheduled lectures or tutorial sessions. Special lectures may be organised and related announcements will be made via iLearn.

Logbook

This unit requires a logbook. Each student must maintain an individual logbook that contains a dated log of day-to-day activities undertaken in relation to the project. The logbook needs to be a bound, hardcopy book. Entries should be made daily, and must be signed and dated, and leave no undue white space. Entries will include records of daily progress, ideas, plans and conceptual developments, as they occur. The logbook is intended to be **evidentiary** -- it can be used to demonstrate in, for example, a priority dispute, just when a particular idea or development first took place. That is why it needs to be difficult to alter (bound, not loose leaf, hardcopy not electronic, signed and dated each day, and with no space left that could be used for later entries).

Technology Used and Required

Students are required to discuss with their supervisor the software/hardware resources required for development, analysis, simulation, testing and experiments related to their projects. In addition, word processing software (LaTeX, MS Word, etc.) will be required to produce the theses and Beamer, MS PowerPoint or equivalent software will be required for presentation slides.

Unit Webpage: Access from iLearn at http://ilearn.mq.edu.au (curiously titled ELEC411 Electronics Engineering Research Thesis B ELEC411/417/421 MECH411/421 COMP420 ENGG806).

Required and Recommended Texts/Materials

There is no set textbook for this unit. Students are required to discuss with their supervisors any required/recommended reading materials as suited to their individual project needs.

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.)*

Undergraduate 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 shown in *iLearn*, 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.

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 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

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.

Graduate Capabilities

Discipline Specific Knowledge and Skills

Our graduates will take with them the intellectual development, depth and breadth of knowledge, scholarly understanding, and specific subject content in their chosen fields to make them competent and confident in their subject or profession. They will be able to demonstrate, where relevant, professional technical competence and meet professional standards. They will be able to articulate the structure of knowledge of their discipline, be able to adapt discipline-specific knowledge to novel situations, and be able to contribute from their discipline to inter-disciplinary solutions to problems.

This graduate capability is supported by:

Learning outcomes

- At the end of this unit students will be able to undertake a complex engineering specific research project involving the development of new knowledge, using appropriate technical 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.
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Assessment tasks

- Thesis
- Management and Engagement
- Meetings with Supervisors
- Presentation

Critical, Analytical and Integrative Thinking

We want our graduates to be capable of reasoning, questioning and analysing, and to integrate and synthesise learning and knowledge from a range of sources and environments; to be able to critique constraints, assumptions and limitations; to be able to think independently and systemically in relation to scholarly activity, in the workplace, and in the world. We want them to have a level of scientific and information technology literacy.

This graduate capability is supported by:

Learning outcomes

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Problem Solving and Research Capability

Our graduates should be capable of researching; of analysing, and interpreting and assessing data and information in various forms; of drawing connections across fields of knowledge; and they should be able to relate their knowledge to complex situations at work or in the world, in order to diagnose and solve problems. We want them to have the confidence to take the initiative in doing so, within an awareness of their own limitations.

This graduate capability is supported by:

Learning outcomes

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Effective Communication

We want to develop in our students the ability to communicate and convey their views in forms effective with different audiences. We want our graduates to take with them the capability to read, listen, question, gather and evaluate information resources in a variety of formats, assess, write clearly, speak effectively, and to use visual communication and communication

technologies as appropriate.

This graduate capability is supported by:

Learning outcomes

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Changes from Previous Offering

This is the first offering of COMP420

Changes in Response to Student Feedback

This is the first offering of COMP420