# ELCT4092

## Electrical Engineering Research Thesis A

Session 2, Special circumstances 2021

_School of Engineering_

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## Disclaimer

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## 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](https://unitguides.mq.edu.au/unit_offerings/139711/unit_guide/print).

Visit the [MQ COVID-19 information page](https://www.mq.edu.au/covid-19) for more detail.
General Information

Unit convenor and teaching staff
Unit Convenor
Hazer Inaltekin
hazer.inaltekin@mq.edu.au
Contact via 9850 2280
44 WTR, Room 133
Wednesday 5pm-6pm

Kate Stefanov
kate.stefanov@mq.edu.au

Credit points
10

Prerequisites
(ELEC3024 or ELEC324) and (ELCT3005 or ELEC395) and (ELCT3006 or ELEC396)

Corequisites

Co-badged status

Unit description
In this unit students will conduct the first half of an individual research thesis on a topic in the Electrical 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 Electrical Engineering problem, and propose solutions involving the development of new knowledge or the application of cutting edge techniques.

ULO2: Plan a major Electrical 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 Electrical Engineering.

**ULO4:** Apply core Electrical Engineering principles and practices to a research or industry challenge.

**ULO5:** Demonstrate intellectual independence and an in-depth understanding of a specialist topic within Electrical 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.

### Hurdle Requirements

The Preliminary Thesis is a hurdle requirement. A grade of 50% or more on the Preliminary Thesis is a condition of passing this unit. If you are given a second opportunity to submit your thesis as a result of failing to meet the minimum mark required, your submission will be due during the supplementary examination period and will be notified of the exact day and time by the unit convenor. The second attempt at a hurdle assessment is graded as pass fail. The maximum grade for a second attempt is the hurdle threshold grade.

Regular meetings with thesis supervisor is a hurdle requirement. See details in 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 special consideration application.

Resubmissions of work are not allowed after due date.

## Assessment Tasks

<table>
<thead>
<tr>
<th>Name</th>
<th>Weighting</th>
<th>Hurdle</th>
<th>Due</th>
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<tbody>
<tr>
<td>Preliminary Thesis</td>
<td>70%</td>
<td>Yes</td>
<td>Week 13</td>
</tr>
<tr>
<td>Presentation</td>
<td>20%</td>
<td>No</td>
<td>Week 14-16</td>
</tr>
<tr>
<td>Meeting with Supervisors</td>
<td>0%</td>
<td>Yes</td>
<td>Week 13</td>
</tr>
<tr>
<td>Management and Engagement</td>
<td>10%</td>
<td>No</td>
<td>All Session</td>
</tr>
</tbody>
</table>

[https://unitguides.mq.edu.au/unit_offerings/139711/unit_guide/print](https://unitguides.mq.edu.au/unit_offerings/139711/unit_guide/print)
Preliminary Thesis
Assessment Type 1: Thesis
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)

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 Electrical Engineering problem, and propose solutions involving the development of new knowledge or the application of cutting edge techniques.
• Plan a major Electrical 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 Electrical Engineering.
• Apply core Electrical Engineering principles and practices to a research or industry challenge.
• Demonstrate intellectual independence and an in-depth understanding of a specialist topic within Electrical Engineering, through verbal and written communication.

Presentation
Assessment Type 1: Presentation
Indicative Time on Task 2: 10 hours
Due: Week 14-16
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 Electrical Engineering problem, and propose solutions involving the development of new knowledge or the application of cutting edge techniques.
• Plan a major Electrical 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 Electrical Engineering.
• Apply core Electrical Engineering principles and practices to a research or industry challenge.
• Demonstrate intellectual independence and an in-depth understanding of a specialist topic within Electrical Engineering, through verbal and written communication.

Meeting with Supervisors
Assessment Type: Participatory task
Indicative Time on Task: 5 hours
Due: Week 13
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. Meetings can 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 Electrical Engineering problem, and propose solutions involving the development of new knowledge or the application of cutting edge techniques.
• Plan a major Electrical 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 Electrical Engineering.
• Apply core Electrical Engineering principles and practices to a research or industry challenge.

https://unitguides.mq.edu.au/unit_offerings/139711/unit_guide/print
Demonstrate intellectual independence and an in-depth understanding of a specialist topic within Electrical Engineering, through verbal and written communication.

Management and Engagement

Assessment Type 1: Participatory task
Indicative Time on Task 2: 10 hours
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.

On successful completion you will be able to:

- Analyse a complex Electrical Engineering problem, and propose solutions involving the development of new knowledge or the application of cutting edge techniques.
- Plan a major Electrical 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 Electrical Engineering.
- Apply core Electrical Engineering principles and practices to a research or industry challenge.
- Demonstrate intellectual independence and an in-depth understanding of a specialist topic within Electrical Engineering, through verbal and written communication.

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 Learning Skills Unit 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 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. 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.

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
- 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). 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) 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 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 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.