



FOSE7902

Advanced STEM research placement

Session 1, In person-scheduled-weekday, North Ryde 2025

Science and Engineering Faculty level units

Contents

<u>General Information</u>	2
<u>Learning Outcomes</u>	2
<u>General Assessment Information</u>	3
<u>Assessment Tasks</u>	6
<u>Delivery and Resources</u>	9
<u>Unit Schedule</u>	9
<u>Policies and Procedures</u>	10
<u>Changes from Previous Offering</u>	12

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General Information

Unit convenor and teaching staff

Convener

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12WW 521

Co-convenor

Daniel Zucker

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Credit points

10

Prerequisites

Admission to GradDipResFSE

Corequisites

10cp at 7000 level

Co-badged status

Unit description

This unit provides an opportunity for hands-on research in STEM. Students will actively participate in a single research placement during which they will develop advanced research skills in an area relating to their research interests and in consultation with research mentors. Students will reflect on new skills in the context of their professional goals.

Learning in this unit enhances student understanding of global challenges identified by the United Nations Sustainable Development Goals ([UNSDGs](#)) Quality Education; Industry, Innovation and Infrastructure

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: Apply knowledge of your WHS, ethical and other legal obligations to create a risk

assessment and management plan for your research.

ULO2: Identify, apply, evaluate and communicate your research activities and findings in oral and written form.

ULO3: Demonstrate competence in the skills and techniques required to undertake your research.

ULO4: Maintain appropriate records of your research activities and utilise these records to reflect on your initial project plan.

ULO5: Work professionally with a research mentor, and other research collaborators as required, to plan and undertake research.

General Assessment Information

General Assessment Information

Requirements to Pass this Unit

To pass this unit you must achieve a total mark equal to or greater than 50%.

Hurdle assessments

Assessment 1: Training & Inductions (0%)

It is important that all students are prepared to undertake their research projects in compliance with the prevailing ethical, professional and health and safety standards. Training and induction components are, to some extent, discipline-specific; please check with the unit convener or your mentor. In all cases, students must undertake the relevant discipline-specific training and induction, and provide evidence to the unit convener. This is a hurdle assessment meaning that failure to meet this requirement may result in a **fail** grade for the unit.

Engagement – please read, as this is very important

As a BPhil / MRes Yr 1 student you are becoming part of our community of researchers. You need to be an active participant in the unit's activities. You will be expected to be an active participant in discussions, ask questions and engage with your cohort, and proactively work to find your place in our diverse research community.

Academic Honesty

Presenting the work of another person as one's own is a serious breach of the University's rules and carries significant penalties. In this unit, we will be checking written work for plagiarism using TurnItIn. Penalties for plagiarism may include a zero mark for the assignment or, in more extreme cases, failure of the unit. Plagiarism **will** be noted on your academic record. (link: [Academic Integrity Policy](#))

Due dates and assessment topics

This unit is flexible by design. Each student will be undertaking a unique project with different academic mentors. See iLearn for more information about placement plans, but your placement plan will specify the due date and the content for each of your unit deliverables. It will also need

to identify 2 or 3 suitable assessors from within your School who could be asked to second-mark your final written report. These assessors cannot be involved in your research or the research group you will be part of for the duration of your project.

Late Assessment Submission Penalty

Unless a [Special Consideration](#) request has been submitted and approved, a 5% penalty (of the total possible mark of the task) will be applied for each day a written report or presentation assessment is not submitted, up until the 7th day (including weekends). After the 7th day, a grade of '0' will be awarded even if the assessment is submitted. **The submission time for all uploaded assessments is 11:55 pm.** A one-hour grace period will be provided to students who experience a technical issue. For any late submission of time-sensitive tasks, such as scheduled tests/exams, performance assessments/presentations, and/or scheduled practical assessments/labs, please apply for [Special Consideration](#).

Assessments where Late Submissions will be accepted

In this unit, late submissions will be accepted for written work, but:

- All training and inductions **MUST** be completed prior to starting work.
- See marking guidance on iLearn or consult the convenor(s) for additional information.

Special Consideration

The Special Consideration Policy aims to support students who have been impacted by short-term circumstances or events that are serious, unavoidable and significantly disruptive, and which may affect their performance in assessment. If you experience circumstances or events that affect your ability to complete the assessments in this unit on time, please inform the convenor and submit a Special Consideration request through <https://connect.mq.edu.au>.

Training & inductions

Assessment Type ¹: Portfolio; Indicative Time on Task ²: 3 hours; Due: **Week 1**; Weighting: **0%**. **This is a hurdle assessment task (see [assessment policy](#) for more information on hurdle assessment tasks).**

Complete required WHS, ethics and other required training and induction prior to starting research work.

On successful completion you will be able to:

- Apply knowledge of your WHS, ethical and other legal obligations to create a risk assessment and management plan for your research.
- Identify, apply and evaluate research methods.
- Work professionally with a research mentor, and other research collaborators as required, to plan and undertake research.

Placement plan

Assessment Type ¹: Plan; Indicative Time on Task ²: 12 hours; Due: **Week 1**; Weighting: **15%**

Create a plan for your research placement including: your proposed activities, time-line, data records and reporting format. Also include the names of 2 or 3 potential assessors from your School who could be asked to second-mark your final report. They cannot be associated with your research or the research group you are assigned to in any way. Please check that they are potentially willing to undertake the marking in Weeks 14 and/or 15.

On successful completion you will be able to:

- Identify, apply and evaluate research methods.
- Demonstrate competence in the skills and techniques required to undertake your research.
- Work professionally with a research mentor, and other research collaborators as required, to plan and undertake research.

Placement deliverable

Assessment Type ¹: Report; Indicative Time on Task ²: 23 hours; Due: **Week 13**; Weighting: **50%**

Your placement plan will outline the format and the content of your final report. You are expected to compose a written report of up to 20 pages (additional pages will be disregarded) formatted as if it were an article ready for submission to a peer-reviewed journal in your discipline. It should include records of your research activity as appropriate for the research undertaken.

On successful completion you will be able to:

- Identify, apply and evaluate research methods.
- Demonstrate competence in the skills and techniques required to undertake your research.
- Maintain appropriate records of your research activities and use these records to reflect on your initial project plan.
- Work professionally with a research mentor, and other research collaborators as required, to plan and undertake research.

Oral presentation

Assessment Type ¹: Oral presentation; Indicative Time on Task ²: 10 hours; Due: **Weeks 11 or 12 (pending scheduling)**; Weighting: **20%**

Oral presentations are part and parcel of the modern work environment, particularly for university graduates. You will receive instruction as to how to compose a compelling oral presentation and deliver an oral progress report towards the end of the unit. You are expected to compose compelling slides, turning your research journey into a convincing and engaging narrative. The presentation length will be up to 10 minutes per student, including questions (pending scheduling).

On successful completion you will be able to:

- Identify, apply and evaluate research methods and present them verbally in a concise manner.
- Demonstrate competence in the skills and techniques required to undertake your research.
- Deliver a compelling presentation, showing a clear line and a convincing story, supported by clear slides and a logical sequence.

Placement reflection

Assessment Type ¹: Reflective Writing; Indicative Time on Task ²: 10 hours; Due: **Week 13**; Weighting: **15%**

A reflection on your research experience in the context of your individual research and career goals.

On successful completion you will be able to:

- Identify, apply and evaluate research methods.
- Maintain appropriate records of your research activities and use these records to reflect on your initial project plan.
- Work professionally with a research mentor, and other research collaborators as required, to plan and undertake research.
- Work professionally with a research mentor, and other research collaborators as required, to plan and undertake research.

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

Assessment Tasks

Name	Weighting	Hurdle	Due
Placement plan	15%	No	07/03/2025
Oral presentation	20%	No	Weeks 11 or 12 (pending scheduling)
Professional reflection	15%	No	06/06/2025
Placement deliverable	50%	No	06/06/2025

Placement plan

Assessment Type ¹: Plan

Indicative Time on Task ²: 12 hours

Due: **07/03/2025**

Weighting: **15%**

Complete a placement plan outlining the research to be done and outlining any required WHS, ethics or other required training or inductions that need to be completed prior to starting your research placement.

On successful completion you will be able to:

- Apply knowledge of your WHS, ethical and other legal obligations to create a risk assessment and management plan for your research.
- Identify, apply, evaluate and communicate your research activities and findings in oral and written form.
- Maintain appropriate records of your research activities and utilise these records to reflect on your initial project plan.
- Work professionally with a research mentor, and other research collaborators as required, to plan and undertake research.

Oral presentation

Assessment Type ¹: Presentation

Indicative Time on Task ²: 10 hours

Due: **Weeks 11 or 12 (pending scheduling)**

Weighting: **20%**

Oral presentation in relation to your research placement.

On successful completion you will be able to:

- Identify, apply, evaluate and communicate your research activities and findings in oral and written form.
- Demonstrate competence in the skills and techniques required to undertake your research.
- Maintain appropriate records of your research activities and utilise these records to

reflect on your initial project plan.

- Work professionally with a research mentor, and other research collaborators as required, to plan and undertake research.

Professional reflection

Assessment Type ¹: Reflective Writing

Indicative Time on Task ²: 10 hours

Due: **06/06/2025**

Weighting: **15%**

A reflection on your research placement in the context of your:

1. project plan: including the proposed activities and timeline.
2. research and career goals.

On successful completion you will be able to:

- Identify, apply, evaluate and communicate your research activities and findings in oral and written form.
- Demonstrate competence in the skills and techniques required to undertake your research.
- Maintain appropriate records of your research activities and utilise these records to reflect on your initial project plan.
- Work professionally with a research mentor, and other research collaborators as required, to plan and undertake research.

Placement deliverable

Assessment Type ¹: Report

Indicative Time on Task ²: 23 hours

Due: **06/06/2025**

Weighting: **50%**

A report on your research placement. The content and format of this report should be as presented in your placement plan.

On successful completion you will be able to:

- Apply knowledge of your WHS, ethical and other legal obligations to create a risk assessment and management plan for your research.
- Identify, apply, evaluate and communicate your research activities and findings in oral and written form.
- Demonstrate competence in the skills and techniques required to undertake your research.
- Maintain appropriate records of your research activities and utilise these records to reflect on your initial project plan.
- Work professionally with a research mentor, and other research collaborators as required, to plan and undertake research.

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Delivery and Resources

Finding research mentors:

You are encouraged to be proactive in seeking potential mentors, but school advisor and the unit convenor are here to help. Prior to or at the start of Week 1, and if necessary, the unit convenor will distribute a limited list of potential projects. In addition there are a some resources that are worth looking at:

- [Macquarie University Research Portal](#)
- [Macquarie University Supervisor Database](#) (note this links the above)
- Previous / current students

We specifically use the term "mentor" rather than "supervisor" to make a clear distinction between a year 2 supervisor, and the year 1 mentors who you will work with in this unit. Working with a particular mentor during a year 1 placement does not obligate you (or your mentor) to supervise you in a year 2 project. We want you to use this opportunity to help find the best possible supervisor / topic match for you.

Unit Schedule

Most of this unit will take place in consultation with your mentor / outside of time-tabled locations and times. The unit convenor is available to help you navigate the transition to an active participant in your research group, but the goal is to let you and your mentor operate as

independently as possible!

In principle, students are expected to work one day a week throughout the semester on their projects. Most often this will be the Friday, but this can be negotiated individually with your mentor. Students will additionally be expected to spend one full week during the mid-semester break on their projects.

Formal class sessions will be held every second week, some in conjunction with the FOSE7901 cohort. Please see the unit's iLearn pages for practical details.

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](#)
- [Assessment Procedure](#)
- [Complaints Resolution 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 connect.mq.edu.au or if you are a Global MBA student contact globalmba.support@mq.edu.au

Academic Integrity

At Macquarie, we believe [academic integrity](#) – honesty, respect, trust, responsibility, fairness and courage – is at the core of learning, teaching and research. We recognise that meeting the

expectations required to complete your assessments can be challenging. So, we offer you a range of resources and services to help you reach your potential, including free [online writing and maths support](#), [academic skills development](#) and [wellbeing consultations](#).

Student Support

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

The Writing Centre

[The Writing Centre](#) provides resources to develop your English language proficiency, academic writing, and communication skills.

- [Workshops](#)
- [Chat with a WriteWISE peer writing leader](#)
- [Access StudyWISE](#)
- [Upload an assignment to Studiosity](#)
- [Complete the 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

Macquarie University offers a range of [Student Support Services](#) including:

- [IT Support](#)
- [Accessibility and disability support](#) with study
- Mental health [support](#)
- [Safety support](#) to respond to bullying, harassment, sexual harassment and sexual assault
- [Social support including information about finances, tenancy and legal issues](#)
- [Student Advocacy](#) provides independent advice on MQ policies, procedures, and processes

Student Enquiries

Got a question? Ask us via the [Service Connect Portal](#), or contact [Service Connect](#).

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

This is a relatively new Faculty-wide unit, so we are still ironing out some wrinkles. For physics and astronomy students, it replaces PHYS7911.

This will be the third session we run this unit. Student feedback from the previous offering of this unit was very positive overall, with students pleased with the clarity around assessment requirements and the level of support from teaching staff. As such, no change to the delivery of the unit is planned, however we will continue to strive to improve the level of support and the level of student engagement.

This round, we have streamlined the assessment items and homogenised them for everyone. This was informed by a holistic review of all FOSE units where we checked which skills were assessed in each unit. We have tried to avoid excessive duplication, although we consider practising oral presentations and delivering professional-style written reports core skills that may be repeated.

Unit information based on version 2025.04 of the [Handbook](#)