



# FOSE7902

## Advanced STEM research placement

Session 2, In person-scheduled-weekday, North Ryde 2024

*Science and Engineering Faculty level units*

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#### **Disclaimer**

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## General Information

### Unit convenor and teaching staff

#### Convener

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#### Co-convenor

Rich Mildren

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### Credit points

10

### Prerequisites

Admission to BPhil/MRes

### 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.

## 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.

**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

### Requirements to Pass this Unit

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

### 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. Each student may have very different project deliverables that should be multi-part. 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.

### 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.
- Seminar and discussion participation and discussion leadership must take place at the agreed/scheduled times unless a special consideration is granted.
- 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 contact the convenor prior to submitting a Special Consideration request through [ask.mq.edu.au](https://ask.mq.edu.au).

## Group discussion participation

Assessment Type <sup>1</sup>: Participatory task Indicative Time on Task <sup>2</sup>: 0 hours Due: **Fortnightly through session** Weighting: **10%**

Active participation in scheduled unit discussions.

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.

## Training & inductions

Assessment Type <sup>1</sup>: Portfolio Indicative Time on Task <sup>2</sup>: 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 <sup>1</sup>: Plan Indicative Time on Task <sup>2</sup>: 7 hours Due: **Week 1** Weighting: **15%**

Create a plan for your research placement including: your proposed activities, time-line, data records and reporting format.

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 <sup>1</sup>: Report Indicative Time on Task <sup>2</sup>: 25 hours Due: **as agreed in placement plan** Weighting: **60%**

Your placement plan will outline the format and the content of your project deliverable. Typically this is a report on the research experience. It should include records of your research activity as appropriate for the research undertaken. In addition, students are encouraged to include other assessable items in their placement plan, such as oral presentations, posters, data/field records, software under development, etc. The final written report is mandatory and should get a weighting of between 30 and 40%.

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 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 reflection

Assessment Type <sup>1</sup>: Reflective Writing Indicative Time on Task <sup>2</sup>: 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 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.
- Work professionally with a research mentor, and other research collaborators as required, to plan and undertake research.

<sup>1</sup> 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.

<sup>2</sup> 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
<a href="#">Group discussion participation</a>	10%	No	Fortnightly through session
<a href="#">Training &amp; inductions</a>	0%	Yes	Week 1
<a href="#">Research plan</a>	15%	No	Week 1
<a href="#">Placement deliverable</a>	60%	No	As agreed in placement plan
<a href="#">Professional reflection</a>	15%	No	Week 13

### Group discussion participation

Assessment Type <sup>1</sup>: Participatory task

Indicative Time on Task <sup>2</sup>: 0 hours

Due: **Fortnightly through session**

Weighting: **10%**

Active participation in scheduled unit discussions.

On successful completion you will be able to:

- Identify, apply, evaluate and communicate your research activities and findings.

- 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.

## Training & inductions

Assessment Type <sup>1</sup>: Portfolio

Indicative Time on Task <sup>2</sup>: 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.

## Research plan

Assessment Type <sup>1</sup>: Plan

Indicative Time on Task <sup>2</sup>: 7 hours

Due: **Week 1**

Weighting: **15%**

Create a plan for your research project including: your proposed activities, time-line and reporting format.

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.

- 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 <sup>1</sup>: Report

Indicative Time on Task <sup>2</sup>: 25 hours

Due: **As agreed in placement plan**

Weighting: **60%**

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

On successful completion you will be able to:

- Identify, apply, evaluate and communicate your research activities and findings.
- 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 <sup>1</sup>: Reflective Writing

Indicative Time on Task <sup>2</sup>: 10 hours

Due: **Week 13**

Weighting: **15%**

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

On successful completion you will be able to:



- Identify, apply, evaluate and communicate your research activities and findings.
- 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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<sup>1</sup> 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.

<sup>2</sup> 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

### 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 other week (in odd weeks). These are managed by the unit convener, with details provided via iLearn.

## 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 [ask.mq.edu.au](https://ask.mq.edu.au) or if you are a Global MBA student contact [globalmba.support@mq.edu.au](mailto: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 [AskMQ](#), 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/](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 new Faculty-wide unit. For physics and astronomy students, it replaces PHYS7911.

This will be the second session we run this unit. We have implemented lessons learnt from its first incarnation; e.g., we will now provide formal rubrics for marking posters and field/data records.

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Unit information based on version 2024.01 of the [Handbook](#)