

# **NSCI8990**

# **Master of Research - Natural Sciences**

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

School of Natural Sciences

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#### Disclaimer

Macquarie University has taken all reasonable measures to ensure the information in this publication is accurate and up-to-date. However, the information may change or become out-dated as a result of change in University policies, procedures or rules. The University reserves the right to make changes to any information in this publication without notice. Users of this publication are advised to check the website version of this publication [or the relevant faculty or department] before acting on any information in this publication.

#### **General Information**

Unit convenor and teaching staff Oliver Griffith

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Credit points

80

Prerequisites

Corequisites

Co-badged status

#### Unit description

The Master of Research is undertaken as a single unit. The thesis together with four core research activities form a single coherent research program based on individual research plans and will consist of the following:

- Research Frontiers: You will attend a number of school or faculty-run sessions and engage in a program of activities developing your knowledge of the sub-disciplinary field in which you want to situate your own research, and develop your own presentation skills;
- 2. Literature Review: You will learn how researchers in your field engage with previous research literature, and produce a draft of your own literature review for your thesis;
- 3. Research Methods: With other students and led by academic staff, you will develop the research methods you will use in your research project;
- Research Planning: Through individual work with your supervision team, you will
  develop a plan for a large-scale research project, part of which will be completed in
  the MRes; and
- Thesis: You will complete a small research project and write it up in an externally examined thesis. Following examination, you will revise your thesis to address comments provided by examiners.

# Important Academic Dates

Information about important academic dates including deadlines for withdrawing from units are available at <a href="https://www.mq.edu.au/study/calendar-of-dates">https://www.mq.edu.au/study/calendar-of-dates</a>

# **Learning Outcomes**

On successful completion of this unit, you will be able to:

**ULO1:** Apply critical and integrative thinking to develop research questions within your discipline through scholarly investigation of currently available evidence.

**ULO2:** Communicate a coherent and sustained argument in relation to your research outcomes to specialist and non-specialist audiences.

**ULO3:** Employ integrity and ethical conduct in research as a socially and culturally responsible researcher.

**ULO4:** Plan and execute a research project to contribute knowledge to your discipline.

**ULO5:** Demonstrate expert judgement, adaptability and accountability in your professional practice as an independent researcher.

**ULO6:** Apply high-level cognitive, creative and technical skills to generate and evaluate complex ideas and concepts.

#### **General Assessment Information**

# **Engagement**

As a Master of Research student you are part of the Faculty of Science and Engineering's research community. You are expected to actively participate in the course activities by: asking questions, voicing your opinions, participating in discussions, providing constructive feedback to your peers, and proactively working to find your place in our diverse research community. You are expected to contribute to a supportive and respectful dialogue. Disrespectful, offensive, belittling or exclusionary behaviour will not be tolerated (<a href="https://policies.mq.edu.au/document/view.php?id=55">https://policies.mq.edu.au/document/view.php?id=55</a>).

### **Academic Integrity**

Academic integrity is fundamental to research. Presenting another person's work as your own is a serious breach of the University's rules and carries significant penalties. The University's Academic integrity Policy can be found at <a href="https://policies.mq.edu.au/document/view.php?id=3">https://policies.mq.edu.au/document/view.php?id=3</a>

### **Late Assessment Submission Penalties**

Your poster presentation must be completed during the scheduled poster session. Should this not be possible arrangements must be made with the MRes Director prior to the assessment date.

If your thesis is submitted late, you will be <u>penalised one percentage point</u> from your final MRes thesis grade per calendar day until your thesis is submitted. Submission will be taken as the date your thesis is submitted electronically via the portal.

All other assessments must be completed prior to thesis submission, but those assessments do not directly contribute to your final mark.

### **Special Consideration**

Information on extensions, leave and variations to candidature are provided by the Graduate Research Academy (https://students.mq.edu.au/study/graduateresearch/tools-support/changes).

Relevant policy:

- Graduate Research Variations to Candidature Policy: <a href="https://policies.mq.edu.au/docume">https://policies.mq.edu.au/docume</a>

   nt/view.php?id=145
- if you are supported by a Macquarie Scholarship: Scholarship condidtions

# **Faculty workshops**

The Faculty of Science and Engineering conducts commencement programs for Masters of Research students. Attendance is compulsory and dates and locations will be notified via your official university email address and iLearn.

- · Research planning
- · Research integrity
- · Research writing

## Project plan, literature review and research methods

These are formative assessments and they do not contribute to your final mark, however you are required to submit them prior to your thesis. It is expected you will provide the supervisor with drafts, well in advance of the due date to facilitate supervisor feedback. These assessments provide opportunities for you to get feedback on text that at the core of your thesis.

#### Poster presentation

A panel of three academics (MRes advisor or delegate, academic with expertise in your field and an external marker) will mark your poster (marking rubric is available via iLearn).

#### Thesis submission

The Master of Research is a research-based degree, as such it has specific policies and procedures that need to be followed in realtion to your thesis format and submission. Information on thesis submission is provided by the GRA (https://students.mq.edu.au/study/graduateresearch/prepare-for-completion).

Additional information is provided by the faculty and available via <u>iLearn</u>. If you have any question about about your thesis submission please consult with the MRes Director.

#### Thesis examination

Your thesis will be examined by external experts, for additional information on thesis examination: <a href="https://students.mq.edu.au/study/graduateresearch/prepare-for-completion/thesis-examination">https://students.mq.edu.au/study/graduateresearch/prepare-for-completion/thesis-examination</a>

#### Relavant policies and procedures:

- Thesis Preparation, Submission and Examination Policy: <a href="https://policies.mq.edu.au/document/view.php?id=171">https://policies.mq.edu.au/document/view.php?id=171</a>
- Thesis Preparation, Submission and Examination Procedure: <a href="https://policies.mq.edu.au/">https://policies.mq.edu.au/</a>
   document/view.php?id=172
- Schedule 1: Graduate Research Appointment of Examiners: <a href="https://policies.mq.edu.au/d">https://policies.mq.edu.au/d</a>
   ownload.php?id=783&version=3&associated
- Schedule 2: Graduate Research Thesis Examination Criteria: <a href="https://policies.mq.edu.au/">https://policies.mq.edu.au/</a>
  download.php?id=782&version=2&associated

#### **Assessment Tasks**

Name	Weighting	Hurdle	Due
Weekly colloquia	0%	No	School seminars are Tuesdays at 1pm during S1 and S2
Research planning	0%	Yes	As agreed
Literature review	0%	Yes	As agreed
Poster presentation	10%	Yes	July 15
Research Methods	0%	Yes	As agreed
Thesis	90%	Yes	EWS date as specified in your offer letter.

## Weekly colloquia

Assessment Type 1: Practice-based task

Indicative Time on Task 2: 0 hours

Due: School seminars are Tuesdays at 1pm during S1 and S2

Weighting: 0%

You will engage in discipline-specific seminars and colloquia as appropriate

On successful completion you will be able to:

· Communicate a coherent and sustained argument in relation to your research outcomes

to specialist and non-specialist audiences.

- Employ integrity and ethical conduct in research as a socially and culturally responsible researcher.
- Demonstrate expert judgement, adaptability and accountability in your professional practice as an independent researcher.
- Apply high-level cognitive, creative and technical skills to generate and evaluate complex ideas and concepts.

### Research planning

Assessment Type 1: Plan

Indicative Time on Task 2: 14 hours

Due: **As agreed** Weighting: **0**%

This is a hurdle assessment task (see <u>assessment policy</u> for more information on hurdle assessment tasks)

You will learn to manage and plan a major research project. You will submit a brief project plan & budget

On successful completion you will be able to:

- Apply critical and integrative thinking to develop research questions within your discipline through scholarly investigation of currently available evidence.
- Plan and execute a research project to contribute knowledge to your discipline.
- Apply high-level cognitive, creative and technical skills to generate and evaluate complex ideas and concepts.

#### Literature review

Assessment Type 1: Literature review Indicative Time on Task 2: 20 hours

Due: **As agreed** Weighting: **0**%

This is a hurdle assessment task (see <u>assessment policy</u> for more information on hurdle assessment tasks)

You will collate and understand the background literature for your chosen project and produce a written report which will inform your thesis.

On successful completion you will be able to:

- Apply critical and integrative thinking to develop research questions within your discipline through scholarly investigation of currently available evidence.
- Communicate a coherent and sustained argument in relation to your research outcomes to specialist and non-specialist audiences.
- Employ integrity and ethical conduct in research as a socially and culturally responsible researcher.
- Demonstrate expert judgement, adaptability and accountability in your professional practice as an independent researcher.
- Apply high-level cognitive, creative and technical skills to generate and evaluate complex ideas and concepts.

### Poster presentation

Assessment Type 1: Poster

Indicative Time on Task 2: 20 hours

Due: **July 15** Weighting: **10%** 

This is a hurdle assessment task (see <u>assessment policy</u> for more information on hurdle assessment tasks)

You will prepare a poster presentation explaining your current research

On successful completion you will be able to:

- Apply critical and integrative thinking to develop research questions within your discipline through scholarly investigation of currently available evidence.
- Communicate a coherent and sustained argument in relation to your research outcomes to specialist and non-specialist audiences.
- Employ integrity and ethical conduct in research as a socially and culturally responsible researcher.
- Plan and execute a research project to contribute knowledge to your discipline.
- Demonstrate expert judgement, adaptability and accountability in your professional practice as an independent researcher.
- Apply high-level cognitive, creative and technical skills to generate and evaluate complex ideas and concepts.

#### Research Methods

Assessment Type 1: Practice-based task Indicative Time on Task 2: 20 hours

Due: **As agreed** Weighting: **0%** 

This is a hurdle assessment task (see <u>assessment policy</u> for more information on hurdle assessment tasks)

You will demonstrate your understanding and skills in appropriate research methodologies, and that you are able to critically analyse their use in comparison with alternative methods.

On successful completion you will be able to:

- Apply critical and integrative thinking to develop research questions within your discipline through scholarly investigation of currently available evidence.
- Communicate a coherent and sustained argument in relation to your research outcomes to specialist and non-specialist audiences.
- Employ integrity and ethical conduct in research as a socially and culturally responsible researcher.
- Plan and execute a research project to contribute knowledge to your discipline.
- Demonstrate expert judgement, adaptability and accountability in your professional practice as an independent researcher.
- Apply high-level cognitive, creative and technical skills to generate and evaluate complex ideas and concepts.

#### Thesis

Assessment Type 1: Thesis

Indicative Time on Task 2: 200 hours

Due: EWS date as specified in your offer letter.

Weighting: 90%

This is a hurdle assessment task (see <u>assessment policy</u> for more information on hurdle assessment tasks)

You will complete an individual research project, for which you will write a single coherent thesis which is examined externally.

On successful completion you will be able to:

- Apply critical and integrative thinking to develop research questions within your discipline through scholarly investigation of currently available evidence.
- Communicate a coherent and sustained argument in relation to your research outcomes to specialist and non-specialist audiences.
- Employ integrity and ethical conduct in research as a socially and culturally responsible researcher.
- Plan and execute a research project to contribute knowledge to your discipline.
- Demonstrate expert judgement, adaptability and accountability in your professional practice as an independent researcher.
- Apply high-level cognitive, creative and technical skills to generate and evaluate complex ideas and concepts.

- the academic teaching staff in your unit for guidance in understanding or completing this type of assessment
- · the Writing Centre for academic skills support.

# **Delivery and Resources**

A wide variety of research training opportunities are provided. Consult <u>iLearn</u> and <u>MyRDC</u> for additional training opportunities relevant to your research.

#### **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
- · Assessment Procedure
- Complaints Resolution Procedure for Students and Members of the Public
- Special Consideration Policy

<sup>&</sup>lt;sup>1</sup> If you need help with your assignment, please contact:

<sup>&</sup>lt;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

Students seeking more policy resources can visit <u>Student Policies</u> (<u>https://students.mq.edu.au/support/study/policies</u>). 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.e du.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 <a href="mailto:eStudent">eStudent</a>, (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 <a href="mailto:eStudent">eStudent</a>. For more information visit <a href="mailto:connect.mq.edu.au">connect.mq.edu.au</a> or if you are a Global MBA student contact <a href="mailto:globalmba.support@mq.edu.au">globalmba.support@mq.edu.au</a>

## Academic Integrity

At Macquarie, we believe <u>academic integrity</u> – 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 <u>online writing and</u> d maths support, academic skills development and wellbeing consultations.

### Student Support

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

#### **Academic Success**

<u>Academic Success</u> 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
- <u>Safety support</u> 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 <a href="http://www.mq.edu.au/about\_us/">http://www.mq.edu.au/about\_us/</a> offices\_and\_units/information\_technology/help/.

When using the University's IT, you must adhere to the <u>Acceptable Use of IT Resources Policy</u>. The policy applies to all who connect to the MQ network including students.

# **Changes from Previous Offering**

From 2025 the Master of Research has been restructued. We welcome your feedback on the new program structure.

Unit information based on version 2025.04 of the Handbook