



MEDI742

Research Rotation 2

S2 Day 2016

Department of Biomedical Sciences

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Disclaimer

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General Information

Unit convenor and teaching staff

Lecturer, Unit convenor

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Contact via Email

Level 1, 75 Talavera Road

Credit points

4

Prerequisites

Admission to MRes

Corequisites

Co-badged status

Unit description

This is a shell unit that will provide placements for MRes students in FMHS research laboratories for approximately eleven weeks. Over that period students will become a member of the laboratory; they will be assigned to a senior PhD student to shadow and assist in the development of the student's project. They will have an opportunity to participate in laboratory work, to assist in the acquisition and analysis of data, and to gain insight to the daily working of a research laboratory. Students will participate in laboratory meetings and journal club and present written and oral accounts of their progress. The immersive learning environment of the research laboratory will provide students with access to discipline-specific expertise, and demonstrate the application of the theoretical knowledge obtained in earlier units. The unit will be assessed during the lab rotation period through oral presentations and a written report. The report will take the form of a short communication covering the background, aims and outcomes of their rotation.

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:

Acquire and demonstrate advanced theoretical and/or practical knowledge of a field of research and apply this knowledge to a small research project.

Gain insight into the day-to-day running of a research group and the responsibilities of self-directed postgraduate research and collaborate in discussion centred around research ideas, methods, and data.

Acquire, analyse, and interpret research data and methods in a way suitable for presentation to the scientific community.

Review and critically evaluate diverse scientific literature and present your findings.

Assessment Tasks

Name	Weighting	Due
'Conference' presentation	35%	Week 7
Mini-paper	35%	Week 12
Research participation	30%	Week 1 to 12

'Conference' presentation

Due: **Week 7**

Weighting: **35%**

A scientific presentation on a significant finding in the field of research you were involved with in your first research placement of the session.

On successful completion you will be able to:

- Acquire and demonstrate advanced theoretical and/or practical knowledge of a field of research and apply this knowledge to a small research project.
- Acquire, analyse, and interpret research data and methods in a way suitable for presentation to the scientific community.
- Review and critically evaluate diverse scientific literature and present your findings.

Mini-paper

Due: **Week 12**

Weighting: **35%**

An article in the form of a conference proceeding based on the work conducted in the second half of the semester.

On successful completion you will be able to:

- Acquire and demonstrate advanced theoretical and/or practical knowledge of a field of research and apply this knowledge to a small research project.

- Acquire, analyse, and interpret research data and methods in a way suitable for presentation to the scientific community.
- Review and critically evaluate diverse scientific literature and present your findings.

Research participation

Due: **Week 1 to 12**

Weighting: **30%**

Contribution in your research placement, including document research activities in a laboratory book and participating in research activities and discussion.

On successful completion you will be able to:

- Acquire and demonstrate advanced theoretical and/or practical knowledge of a field of research and apply this knowledge to a small research project.
- Gain insight into the day-to-day running of a research group and the responsibilities of self-directed postgraduate research and collaborate in discussion centred around research ideas, methods, and data.
- Acquire, analyse, and interpret research data and methods in a way suitable for presentation to the scientific community.

Delivery and Resources

- Laboratory heads or supervising researchers will be expected to provide the student with initial reading material (or the sources) relevant to the project.
- Students should use this provided material to actively seek further reading through searching the current literature (e.g. research articles and reviews) using tools such as PubMed, Scopus, and/or GoogleScholar. This material should supplement and extend their understanding of the research topic, and assist in preparation of assessed material.
- Students should keep a laboratory notebook for documentation of their day-to-day work, including details such as experimental methods, observations, results and results analysis, and conclusions. The lab book serves as an important written record in research and may be used to guide future work in your host group. The lab book will remain the property of the research group at the end of the session.

Unit Schedule

Week 1 to 6

As soon as your research group selection has been confirmed, you should contact your research

group leader for the first research placement and arrange to meet. At the latest, this should be in week 2 of session, but if you have your allocation in week 1 you are encouraged to make arrangements during that week. It is expected that each week, at least one and a half days (approximately 11 hours) be engaged in research activities, whether that be laboratory work, preparation/analysis of data, or learning through critical review of literature.

Week 7 to 12

Research placement 2. It is expected that each week, at least one and a half days (approximately 11 hours) be engaged in research activities, whether that be laboratory work, preparation/analysis of data, or learning through critical review of literature.

Learning and Teaching Activities

Laboratory induction

If students have not undergone a laboratory induction (for example, if they were not enrolled in MEDI741), a laboratory induction will need to be organised.

Research placements

The various research projects or areas on offer will be made available online (iLearn). Masters of Research candidates can then choose a research area that they would be interested in participating in. Effort will be made to place Masters of Research candidates in their first preference of research area. However, due to limited places, this can not be guaranteed. Activities will be conducted under the supervision of a post-doctoral researcher or senior PhD student. They will either assist with a currently running project, or conduct a small independent project (at the discretion of the laboratory head). There will be two research placements in two distinct research groups. The first placement spans weeks 1 to 6 of session, and the second placement spans weeks 7 to 12.

Policies and Procedures

Macquarie University policies and procedures are accessible from [Policy Central](#). Students should be aware of the following policies in particular with regard to Learning and Teaching:

Academic Honesty Policy http://mq.edu.au/policy/docs/academic_honesty/policy.html

New Assessment Policy in effect from Session 2 2016 http://mq.edu.au/policy/docs/assessment/policy_2016.html. For more information visit http://students.mq.edu.au/events/2016/07/19/new_assessment_policy_in_place_from_session_2/

Assessment Policy prior to Session 2 2016 <http://mq.edu.au/policy/docs/assessment/policy.html>

Grading Policy prior to Session 2 2016 <http://mq.edu.au/policy/docs/grading/policy.html>

Grade Appeal Policy <http://mq.edu.au/policy/docs/gradeappeal/policy.html>

Complaint Management Procedure for Students and Members of the Public http://www.mq.edu.au/policy/docs/complaint_management/procedure.html

Disruption to Studies Policy http://www.mq.edu.au/policy/docs/disruption_studies/policy.html *The*

Disruption to Studies Policy is effective from March 3 2014 and replaces the Special Consideration Policy.

In addition, a number of other policies can be found in the [Learning and Teaching Category](#) of 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/support/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

PG - Capable of Professional and Personal Judgment and Initiative

Our postgraduates will demonstrate a high standard of discernment and common sense in their professional and personal judgment. They will have the ability to make informed choices and decisions that reflect both the nature of their professional work and their personal perspectives.

This graduate capability is supported by:

Learning outcomes

- Gain insight into the day-to-day running of a research group and the responsibilities of self-directed postgraduate research and collaborate in discussion centred around research ideas, methods, and data.
- Review and critically evaluate diverse scientific literature and present your findings.

Assessment tasks

- 'Conference' presentation
- Mini-paper
- Research participation

Learning and teaching activities

- If students have not undergone a laboratory induction (for example, if they were not enrolled in MEDI741), a laboratory induction will need to be organised.
- The various research projects or areas on offer will be made available online (iLearn). Masters of Research candidates can then choose a research area that they would be interested in participating in. Effort will be made to place Masters of Research candidates in their first preference of research area. However, due to limited places, this can not be guaranteed. Activities will be conducted under the supervision of a post-doctoral researcher or senior PhD student. They will either assist with a currently running project, or conduct a small independent project (at the discretion of the laboratory head). There will be two research placements in two distinct research groups. The first placement spans weeks 1 to 6 of session, and the second placement spans weeks 7 to 12.

PG - Discipline Knowledge and Skills

Our postgraduates will be able to demonstrate a significantly enhanced depth and breadth of knowledge, scholarly understanding, and specific subject content knowledge in their chosen fields.

This graduate capability is supported by:

Learning outcomes

- Acquire and demonstrate advanced theoretical and/or practical knowledge of a field of research and apply this knowledge to a small research project.
- Gain insight into the day-to-day running of a research group and the responsibilities of self-directed postgraduate research and collaborate in discussion centred around research ideas, methods, and data.

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PG - Critical, Analytical and Integrative Thinking

Our postgraduates will be capable of utilising and reflecting on prior knowledge and experience, of applying higher level critical thinking skills, and of integrating and synthesising learning and knowledge from a range of sources and environments. A characteristic of this form of thinking is the generation of new, professionally oriented knowledge through personal or group-based critique of practice and theory.

This graduate capability is supported by:

Learning outcomes

- Acquire, analyse, and interpret research data and methods in a way suitable for presentation to the scientific community.
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PG - Research and Problem Solving Capability

Our postgraduates will be capable of systematic enquiry; able to use research skills to create new knowledge that can be applied to real world issues, or contribute to a field of study or practice to enhance society. They will be capable of creative questioning, problem finding and problem solving.

This graduate capability is supported by:

Learning outcomes

- Acquire and demonstrate advanced theoretical and/or practical knowledge of a field of research and apply this knowledge to a small research project.
- Acquire, analyse, and interpret research data and methods in a way suitable for presentation to the scientific community.

Assessment tasks

- 'Conference' presentation
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PG - Effective Communication

Our postgraduates will be able to communicate effectively and convey their views to different social, cultural, and professional audiences. They will be able to use a variety of technologically supported media to communicate with empathy using a range of written, spoken or visual formats.

This graduate capability is supported by:

Learning outcomes

- Gain insight into the day-to-day running of a research group and the responsibilities of self-directed postgraduate research and collaborate in discussion centred around research ideas, methods, and data.
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PG - Engaged and Responsible, Active and Ethical Citizens

Our postgraduates will be ethically aware and capable of confident transformative action in

relation to their professional responsibilities and the wider community. They will have a sense of connectedness with others and country and have a sense of mutual obligation. They will be able to appreciate the impact of their professional roles for social justice and inclusion related to national and global issues

This graduate capability is supported by:

Learning and teaching activities

- If students have not undergone a laboratory induction (for example, if they were not enrolled in MEDI741), a laboratory induction will need to be organised.

Changes from Previous Offering

Previously (before 2016), this unit was assessed through presentations of research and journal articles within the research group, along with submission of a general essay on the research conducted. The assessment format has been changed to mimic the process of submission of work to a scientific conference, and presentation of work in a format often used at scientific conferences. This has been done so that the Masters of Research candidate not only experiences the day-to-day research environment itself, but also the practical nature of communication of the research to a wider scientific audience.