MEDI741

Research Rotation 1

S1 Day 2019

Medicine and Health Sciences Faculty level units

Contents

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General Information

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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 Faculty of Medicine and Health Sciences 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 advanced theoretical and practical knowledge of fields of contemporary research.

Gain insight into the day-to-day running of a research group and the responsibilities in 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.

General Assessment Information

Grade descriptors and other information concerning grading are contained in Schedule 1 of the Macquarie University Assessment Policy, which is available at: https://staff.mq.edu.au/work/strategy-planning-and-governance/university-policies-and-procedures/policies/assessment.

Further details for each assessment task will be available on iLearn.

All final grades in the Masters of Research are determined by a grading committee and are not the sole responsibility of the Unit Convenor.

Students will be awarded a final grade plus a Standardised Numerical Grade (SNG). The SNG is not necessarily a summation of the individual assessment components. The final grade and SNG

that are awarded reflect the corresponding grade descriptor in the Grading Policy.

To pass this unit, students must demonstrate sufficient evidence of achievement of the learning outcomes, attempt all assessment tasks, meet any ungraded requirements including professionalism and achieve an SNG of 50 or better.

Student Professionalism

In the Faculty of Medicine and Health Sciences, professionalism is a key capability embedded in all our programs. As part of developing professionalism, students are expected to attend all small group interactive sessions including tutorials, as well as clinical- and laboratory-based practical sessions.

Furthermore, lectures and seminars are key learning activities that you are expected to attend throughout completion of the Masters of Research program. While audio recordings and lecture slides may be made available following these large group sessions, it is important to recognise that such resources are a study aid - and should not be considered an alternative to lecture or seminar attendance.

Students who do not maintain adequate attendance (greater than or equal to 80% of scheduled classes) may be deemed unable to meet expectations regarding professionalism and may be referred for disciplinary action (which may include exclusion from assessments and unit failure).

Similarly, as part of developing professionalism, students are expected to submit all work by the due date. Applications for assessment task extensions must be supported by appropriate evidence and submitted via www.ask.mq.edu.au. For further details please refer to the Special Consideration Policy available at https://students.mq.edu.au/study/my-study-program/special-consideration.

Late Submission

All assignments which are officially received after the due date, and where no extension has been granted, will incur a deduction of 10% for the first day, and 10% for each subsequent day including the actual day on which the work is received. Weekends and public holidays are included. For example:

Due date	Received	Days late	Deduction	Raw mark	Final mark
Friday 14th	Monday 17th	3	30%	75%	45%

Assessment Tasks

Name	Weighting	Hurdle	Due
Research engagement	15%	No	Week 2 to 13
Poster presentation	30%	No	Week 6
Mini-paper submission	30%	No	Week 10

Name	Weighting	Hurdle	Due
Project proposal	25%	No	Week 14 (exam period)

Research engagement

Due: **Week 2 to 13**
Weighting: **15%**

Contribution in your research placement, including documentation of research activities in a laboratory book or research diary and participating in research activities and discussion. Marks will be proportioned evenly amongst the research placements throughout the session.

On successful completion you will be able to:
- Acquire advanced theoretical and practical knowledge of fields of contemporary research.
- Gain insight into the day-to-day running of a research group and the responsibilities in research and collaborate in discussion centred around research ideas, methods, and data.

Poster presentation

Due: **Week 6**
Weighting: **30%**

A scientific poster presentation on the aims of your work in the first research placement, a critical appraisal of the methods being employed to achieve that aim, and presentation of any preliminary data.

On successful completion you will be able to:
- Acquire advanced theoretical and practical knowledge of fields of contemporary research.
- 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 submission

Due: **Week 10**
Weighting: **30%**

An article in the form of a conference proceeding based on the research work conducted during the second placement. The conference proceeding can present data acquired in the rotation or describe a research project and propose and critique the methods that would be employed in

that research project.

On successful completion you will be able to:

- Acquire advanced theoretical and practical knowledge of fields of contemporary research.
- 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.

Project proposal

Due: **Week 14 (exam period)**
Weighting: **25%**

In the style of an introduction section of a grant or fellowship application. A summary (500 words or less) of a possible research project based on the research you have been exposed to in the third research placement.

On successful completion you will be able to:

- Acquire advanced theoretical and practical knowledge of fields of contemporary research.
- Gain insight into the day-to-day running of a research group and the responsibilities in 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

Course introduction and laboratory induction.

Weeks 2 to 13

Research placements. 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, learning through critical review of literature, or participating in research group discussions.

- **Week 2 to 5** - Research placement 1
- **Week 6 to 9** - Research placement 2
- **Week 10 to 13** - Research placement 3

Learning and Teaching Activities

Course introduction

Conducted in the first week, this activity will provide an overview of the practical format of the unit and the assessment. The various research projects or areas on offer will be introduced. 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.

Laboratory induction

An induction to the laboratory environment will be conducted to equip students with the knowledge to work safely in the Faculty laboratory environment. This induction is compulsory and access to the laboratory can not be granted without attendance of the laboratory induction.

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).

Conference-style presentation of research

A conference proceedings style submission and scientific poster presentation mimic communication of research at a scientific conference. These assessments draw upon the data or knowledge gained in the laboratory placements.

Policies and Procedures

Macquarie University policies and procedures are accessible from Policy Central (https://staff.mq.edu.au/work/strategy-planning-and-governance/university-policies-and-procedures/policy-central). 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 *(**Note:** The Special Consideration Policy is effective from 4 December 2017 and replaces the Disruption to Studies Policy.)*

Undergraduate students seeking more policy resources can visit the Student Policy Gateway (https://students.mq.edu.au/support/study/student-policy-gateway). It is your one-stop-shop for the key policies you need to know about throughout your undergraduate student journey.

If you would like to see all the policies relevant to Learning and Teaching visit Policy Central (https://staff.mq.edu.au/work/strategy-planning-and-governance/university-policies-and-procedures/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/study/getting-started/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

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

Assessment Policy http://mq.edu.au/policy/docs/assessment/policy.html

Grading Policy http://mq.edu.au/policy/docs/grading/policy.html

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

Grievance Management Policy http://mq.edu.au/policy/docs/grievance_management/policy.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

If you are a Global MBA student contact globalmba.support@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 outcome

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

Assessment task

- Research engagement

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 outcome

- Acquire advanced theoretical and practical knowledge of fields of contemporary research.

Assessment tasks

- Research engagement
- Poster presentation
- Mini-paper submission
- Project proposal

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 outcome

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

Assessment tasks

- Poster presentation
- Mini-paper submission
- Project proposal

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 outcome

- Acquire advanced theoretical and practical knowledge of fields of contemporary research.

Assessment tasks

- Research engagement
- Poster presentation
- Mini-paper submission
- Project proposal

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 outcome

- Gain insight into the day-to-day running of a research group and the responsibilities in

research and collaborate in discussion centred around research ideas, methods, and data.

Assessment tasks

- Research engagement
- Poster presentation
- Mini-paper submission
- Project proposal

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 outcome

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

Assessment tasks

- Research engagement
- Poster presentation