



# MEDI741

## Research Rotation 1

S1 Day 2013

*School of Advanced Medicine*

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## General Information

Unit convenor and teaching staff

Unit Convenor

Brendan McMorran

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By appointment

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 ASAM 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. At the conclusion of the rotation students will have a two week period in which they must prepare an assignment in the form of a short communication in which the background, aims and outcomes of their rotation are presented.

## 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 a field of contemporary research

Gain insight into the day-to-day running of a research group and the responsibilities of self-directed postgraduate research.

Gain direct experience of the acquisition, analysis, interpretation and preparation of data for publication and collaboration with other researchers.

Participate in laboratory meetings and journal club presentations.

Articulate cogent argument in written and oral form for a variety of audiences

Work in cooperation and collaboration with others

## Assessment Tasks

Name	Weighting	Due
<a href="#"><u>Journal Club Presentation</u></a>	20%	27 May 2013
<a href="#"><u>Research Project Presentation</u></a>	20%	27 May 2013
<a href="#"><u>Research Project Essay</u></a>	60%	3 June 2013

### Journal Club Presentation

Due: **27 May 2013**

Weighting: **20%**

- 30 minute presentation on a topic related to the research group's interests, but not directly related to the student's own project. May take the form of critiquing an article, discussing a new finding of significance, or review of a topic. This assessment contributes towards outcomes 1 (Advanced theoretical knowledge of a field of research), 4 (participation in laboratory meetings) and 5 (articulation of argument in oral form).
- Students are expected to prepare their own original slides. Use of slides prepared by others must be acknowledged.
- The presentation may be held during the host laboratory's group meeting or at specially nominated time. The audience should consist, at a minimum, most of the host laboratory group.
- The presentation should be conducted during the fourteen week placement period.
- Students are also expected to attend and participate in all of the host laboratory's group meetings during the fourteen week rotation.
- Assessed by laboratory CI.
- This component is compulsory

On successful completion you will be able to:

- Acquire advanced theoretical and practical knowledge of a field of contemporary research

- Gain direct experience of the acquisition, analysis, interpretation and preparation of data for publication and collaboration with other researchers.
- Participate in laboratory meetings and journal club presentations.
- Work in cooperation and collaboration with others

## Research Project Presentation

Due: **27 May 2013**

Weighting: **20%**

- 10 minute talk + 5 mins questions (times must be strictly adhered to). This assessment contributes towards Learning Outcome 1 (theoretical understanding of a field of research), 2 (self-directed postgraduate research), 3 (analysis, interpretation and presentation of data) and 5 (articulation of argument in oral form).
- This talk will be presented during weeks twelve to fourteen to all other students who have just concluded their rotations, and their host laboratory CIs.
- Students are expected to prepare their own original slides. Use of slides prepared by others must be acknowledged
- Assessed by laboratory CI and one other CI from another group participating in the lab rotation program.
- This component is compulsory

On successful completion you will be able to:

- Acquire advanced theoretical and practical knowledge of a field of contemporary research
- Gain direct experience of the acquisition, analysis, interpretation and preparation of data for publication and collaboration with other researchers.
- Articulate cogent argument in written and oral form for a variety of audiences

## Research Project Essay

Due: **3 June 2013**

Weighting: **60%**

- Format shall be consistent with a short communication article in a format chosen by the supervisor.
  - o e.g. 1. *Neuroscience Letters* has an absolute word limit of 5,000 including references.
  - o e.g. 2. *Journal of Biochemistry* has an absolute character limit of 30,000 (~5,000 words), 2 figures.
- The report should present and describe work conducted by the student during their laboratory placement. The assessment contributes towards Learning Outcome 1 (Advanced

theoretical & practical knowledge), 2 (insight into day-to-day running of research group and self-directed research, 3 (direct experience of data acquisition, analysis & interpretation), 5 (articulation of written argument) and 6 (collaborative work).

- General structure of report:
  - o *Title*
  - o *Names of contributing authors*
  - o *Abstract*: Concise (no more than 250 words) structured as background and research question(s), results, conclusion and significance.
  - o *Introduction*
  - o *Methods*
  - o *Results*
  - o *Discussion* (contextual, conclusions and significance)
  - o *Acknowledgments* (note contributions by others, any ethical clearance, relevant grants)
- The inclusion of data produced by other people must be acknowledged. These notes may be placed in an acknowledgement section at the end of the report, or in the figure legends (for specific data).
- The written task will be assessed by laboratory CI and one other CI from another group participating in the lab rotation program.
- All components of the Research Rotation are compulsory

Essays are to be submitted electronically via the iLearn site.

On successful completion you will be able to:

- Acquire advanced theoretical and practical knowledge of a field of contemporary research
- Gain insight into the day-to-day running of a research group and the responsibilities of self-directed postgraduate research.
- Gain direct experience of the acquisition, analysis, interpretation and preparation of data for publication and collaboration with other researchers.
- Articulate cogent argument in written and oral form for a variety of audiences

## Delivery and Resources

This Unit has an online presence in iLearn. You will need access to the internet and a computer, as well as the ability to participate in online forums and communicate by email.

There are no prescribed texts or unit materials.

Laboratory Heads/Chief Investigators (CI) and supervising PhD students will be expected to

provide the student reading material (or the sources) relevant to the project. Every effort should be made to ensure all necessary articles, reviews etc. are made available to the student.

Students are also expected to seek out additional material (eg. research articles and reviews) to supplement and extend their understanding of the research topic, and assist in their report and presentations.

Students will be provided a laboratory notebook, which they are expected to use to document 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 of your activities in the laboratory and may be used to guide future work in you host group. The lab book will remain the property of ASAM at the conclusion of the rotation.

## Unit Schedule

The laboratory rotations do not involve scheduled lectures or tutorials. Students are expected to spend *at least* 2 full days per week (9am to 5pm) to conduct laboratory work and complete assessment tasks.

Students will attend and host research group meetings and journal clubs.

Weeks one to twelve should be set aside for mostly laboratory work, and the remaining two weeks of semester used to complete the written report and research presentation.

### Laboratory Placement:

- Students will be placed with an ASAM research group under the supervision of a senior PhD student or another member of the group. They will either assist the PhD student with their project, or conduct a small independent project (at the discretion of the laboratory head).
- Students are expected to spend at least 2 full days per week (9am to 5pm) to conduct laboratory work and complete assessment tasks. Students are also expected to attend host research group meetings and journal clubs (where the schedules of other units allows).
- They are expected to keep a record of their laboratory work in a notebook and/or electronic records of data and other results generated. Attendance, record keeping and conduct in the laboratory will be monitored, and their participation marked as satisfactory or unsatisfactory.
- Maps to the following learning outcomes: 1, 2, 3 and 6.

### Journal Club Presentation:

- Students will prepare a 30 minute oral presentation on a topic of interest to their host group, but not directly related to their own project. (They may consult their supervisor or lab head for advice on a suitable topic.)
- The presentation should take place in front of their host group. The student will answer questions from the audience about their presentation. Allow 20-25 minutes for the presentation and 5-10 minutes for questions.
- Preparation time: allow 10-15 hours. This component is assessed.

- Maps to the following learning outcomes: 1, 4 and 5.

### **Research Project Presentation:**

- Students will prepare a short talk describing their research project at the conclusion of the 12 week laboratory project.
- The talk should be structured to include a background and introduction, aims, methodology, results, conclusions, and future directions. These talks will be presented in a colloquium-style setting to the entire ASAM MRes student cohort as well as supervisors and other ASAM staff and students. The talk should contain enough detail and clarity to be understood by researchers working outside the area of study.
- Preparation time: allow 10-15 hours. This component is assessed.
- Maps to the following learning outcomes: 1, 4 and 5.

### **Research Project Essay:**

- In weeks 12-14 students write an essay about their research project in the form of short research article or report. Word/character limits and content guidelines are detailed below.
- Preparation time: allow 30-40 hours. This component is assessed.
- Maps to the following learning outcomes: 1 and 5.

## **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://www.mq.edu.au/policy/docs/academic\\_honesty/policy.html](http://www.mq.edu.au/policy/docs/academic_honesty/policy.html)

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

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

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

Grievance Management Policy [http://mq.edu.au/policy/docs/grievance\\_management/policy.html](http://mq.edu.au/policy/docs/grievance_management/policy.html)

Special Consideration Policy [http://www.mq.edu.au/policy/docs/special\\_consideration/policy.html](http://www.mq.edu.au/policy/docs/special_consideration/policy.html)

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

Internal ASAM Procedures:

### **Code of conduct**

Scholars enrolled in ASAM programs who are also working or observing in Macquarie University Hospital are subject to the Hospital's Code of Conduct.

## Attendance requirements

Students/scholars are required to attend a minimum of 80% of classes and other scheduled learning activities, such as clinics, journal clubs and unit meetings, unless special consideration is granted by the unit convenor. If a student/scholar does not attend a minimum of 80% of classes, he/she may not be able to pass the unit.

## Penalties for late submissions

Late submissions will be penalised unless special consideration is granted by the unit convenor. The penalty is 10% per week or part thereof.

You must complete all assessment tasks to pass the unit.

## Student Support

Macquarie University provides a range of Academic Student Support Services. Details of these services can be accessed at: <http://students.mq.edu.au/support/>

### UniWISE provides:

- Online learning resources and academic skills workshops [http://www.students.mq.edu.au/support/learning\\_skills/](http://www.students.mq.edu.au/support/learning_skills/)
- Personal assistance with your learning & study related questions.
- The Learning Help Desk is located in the Library foyer (level 2).
- Online and on-campus orientation events run by Mentors@Macquarie.

## 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

Details of these services can be accessed at <http://www.student.mq.edu.au/ses/>.

## IT Help

If you wish to receive IT help, we would be glad to assist you at <http://informatics.mq.edu.au/help/>.

When using the university's IT, you must adhere to the [Acceptable Use Policy](#). The policy applies to all who connect to the MQ network including students and it outlines what can be done.

## Unit Rationale

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 other units.

At the conclusion of the rotation students will have a two week period in which they must prepare



an assignment in the form of a short communication in which the background, aims and outcomes of their rotation are presented.

The laboratory rotation does not involve any scheduled lectures or tutorials. Students will be assessed on written and oral presentation components related to the topic of the laboratory project.