



MOLS7910

The Research Experience

Session 2, Special circumstances 2021

Archive (Pre-2022) - Department of Molecular Sciences

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Session 2 Learning and Teaching Update

The decision has been made to conduct study online for the remainder of Session 2 for all units WITHOUT mandatory on-campus learning activities. Exams for Session 2 will also be online where possible to do so.

This is due to the extension of the lockdown orders and to provide certainty around arrangements for the remainder of Session 2. We hope to return to campus beyond Session 2 as soon as it is safe and appropriate to do so.

Some classes/teaching activities cannot be moved online and must be taught on campus. You should already know if you are in one of these classes/teaching activities and your unit convenor will provide you with more information via iLearn. If you want to confirm, see the list of [units with mandatory on-campus classes/teaching activities](#).

Visit the [MQ COVID-19 information page](#) for more detail.

General Information

Unit convenor and teaching staff Alison Rodger alison.rodger@mq.edu.au
Credit points 10
Prerequisites Admission to MRes and 40cp at 7000 level
Corequisites
Co-badged status
Unit description This unit is designed to provide hands-on experience by direct interface with molecular science underway in the Department of Chemistry and Biomolecular Sciences. Students will participate in the programs of two distinct research groups over the semester and navigate typical situations encountered as members of a scientific research team. They will engage in a range of pertinent laboratory activities, receive preparative training in advanced molecular techniques from research scientists, and attend team meetings at which experimental data are reviewed and research planning is encountered.

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: Describe contemporary research practice through participation in several teams engaged in molecular science research

ULO2: Carry out a selection of advanced laboratory procedures, incorporating safe handling of materials (chemical or biological)

ULO3: Actively participate in data collection and report/reflect on experimental findings to the research team

ULO4: Maintain a daily record, to research-level standard, of laboratory work undertaken and results obtained

Assessment Tasks

Name	Weighting	Hurdle	Due
Laboratory notebook A	15%	No	Week 7
Supervisor A report	20%	No	Week 7
Supervisor B Report	20%	No	Week 13
Research presentation A	15%	No	Week 7
Research presentation B	15%	No	Week 13
Laboratory notebook B	15%	No	Week 13

Laboratory notebook A

Assessment Type ¹: Lab book

Indicative Time on Task ²: 4 hours

Due: **Week 7**

Weighting: **15%**

A notebook will be provided for the recording of your laboratory activities in a style appropriate to the relevant research discipline. A laboratory notebook forms the primary source of new experimental information and contributes to formal records maintained by a research team. Your lab notebook must be written up as experiments are set-up and progress, alongside your observations or insights. Each task and observation must be clearly dated, and reflection noted on the experimental result. The level of description should be sufficient to allow experiments to be replicated by another worker. The names and storage location of all data files and samples related to each experiment must be identified clearly. Your notebook must be certified on a weekly basis by your supervisor or a senior researcher in your team.

On successful completion you will be able to:

- Describe contemporary research practice through participation in several teams engaged in molecular science research
- Carry out a selection of advanced laboratory procedures, incorporating safe handling of materials (chemical or biological)
- Maintain a daily record, to research-level standard, of laboratory work undertaken and results obtained

Supervisor A report

Assessment Type ¹: Practice-based task

Indicative Time on Task ²: 0 hours

Due: **Week 7**

Weighting: **20%**

Your supervisor will report on your laboratory performance, technical competencies and degree of research engagement. Factors such as attention to detail, ability to learn new methods, and your contribution to experimental interpretation will be assessed.

On successful completion you will be able to:

- Describe contemporary research practice through participation in several teams engaged in molecular science research
- Carry out a selection of advanced laboratory procedures, incorporating safe handling of materials (chemical or biological)
- Actively participate in data collection and report/reflect on experimental findings to the research team

Supervisor B Report

Assessment Type ¹: Practice-based task

Indicative Time on Task ²: 0 hours

Due: **Week 13**

Weighting: **20%**

As for A, your supervisor will report on your laboratory experience

On successful completion you will be able to:

- Describe contemporary research practice through participation in several teams engaged in molecular science research
- Carry out a selection of advanced laboratory procedures, incorporating safe handling of materials (chemical or biological)
- Actively participate in data collection and report/reflect on experimental findings to the research team

Research presentation A

Assessment Type ¹: Presentation

Indicative Time on Task ²: 4 hours

Due: **Week 7**

Weighting: **15%**

During your last week of placement, you will give a short presentation at a research team meeting outlining the experiments in which you were involved and some background literature. You will receive constructive feedback on your results or understanding. By attending group meetings throughout your research team visit, you will be exposed to examples of short presentations by other student researchers.

On successful completion you will be able to:

- Describe contemporary research practice through participation in several teams engaged in molecular science research
- Carry out a selection of advanced laboratory procedures, incorporating safe handling of materials (chemical or biological)
- Actively participate in data collection and report/reflect on experimental findings to the research team

Research presentation B

Assessment Type ¹: Presentation

Indicative Time on Task ²: 4 hours

Due: **Week 13**

Weighting: **15%**

As for A, during the last week of placement, you will give a short presentation at a research team meeting

On successful completion you will be able to:

- Describe contemporary research practice through participation in several teams engaged in molecular science research
- Carry out a selection of advanced laboratory procedures, incorporating safe handling of materials (chemical or biological)
- Actively participate in data collection and report/reflect on experimental findings to the

research team

Laboratory notebook B

Assessment Type ¹: Lab book

Indicative Time on Task ²: 4 hours

Due: **Week 13**

Weighting: **15%**

As for A, you will maintain a certified record of your laboratory activities

On successful completion you will be able to:

- Describe contemporary research practice through participation in several teams engaged in molecular science research
- Carry out a selection of advanced laboratory procedures, incorporating safe handling of materials (chemical or biological)
- Maintain a daily record, to research-level standard, of laboratory work undertaken and results obtained

¹ 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.

² 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

This unit will be delivered by the Unit Convenor, members of the department providing safety guidance, and academic supervisors of two research experiences per student.

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](#)
- [Grade Appeal Policy](#)
- [Complaint Management 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 or if you are a Global MBA student contact globalmba.support@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 help you improve your marks and take control of your study.

- [Getting help with your assignment](#)
- [Workshops](#)
- [StudyWise](#)
- [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

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.