



# MOLS8902

## Molecular Sciences Research Experience

Full year 2, In person-scheduled-weekday, North Ryde 2023

*School of Natural Sciences*

### Contents

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<a href="#"><u>General Information</u></a>	2
<a href="#"><u>Learning Outcomes</u></a>	2
<a href="#"><u>General Assessment Information</u></a>	3
<a href="#"><u>Assessment Tasks</u></a>	3
<a href="#"><u>Delivery and Resources</u></a>	5
<a href="#"><u>Policies and Procedures</u></a>	5
<a href="#"><u>Changes from Previous Offering</u></a>	7

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#### **Disclaimer**

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## General Information

Unit convenor and teaching staff

Paul Haynes

[paul.haynes@mq.edu.au](mailto:paul.haynes@mq.edu.au)

Credit points

10

Prerequisites

Admission to MBiotech and 40cp at 8000 level or above

Corequisites

Co-badged status

Unit description

This unit provides students the opportunity to undertake a research project/internship supervised by leaders in the area of molecular sciences within the context of Natural Sciences. Students will acquire research skills, including literature searching, project planning, experimental design, data analysis and scientific communication. Interested students should contact potential supervisors in their preferred research areas to discuss available projects.

## 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:** Conduct research to solve problems in areas relevant to molecular sciences or radiopharmaceutical science.

**ULO2:** Use laboratory skills common in molecular sciences or radiopharmaceutical science and conduct laboratory work in a safe and responsible manner.

**ULO3:** Collect, record and critically interpret their research findings.

**ULO4:** Critically analyse and interpret published literature of relevance to their research.

**ULO5:** Communicate in written and oral format their research findings to scientific audiences.

## General Assessment Information

### Requirements to Pass this Unit

To pass this unit you must:

- Attempt all assessments, and
- Achieve a total mark equal to or greater than 50%,

### Late Assessment Submission Penalty

Unless a Special Consideration request has been submitted and approved, a 5% penalty (of the total possible mark of the task) will be applied for each day a written report or presentation assessment is not submitted, up until the 7<sup>th</sup> day (including weekends). After the 7<sup>th</sup> day, a grade of '0' will be awarded even if the assessment is submitted. The submission time for all uploaded assessments is **11:55 pm**. A 1-hour grace period will be provided to students who experience a technical concern.

For any late submission of time-sensitive tasks, such as scheduled tests/exams, performance assessments/presentations, and/or scheduled practical assessments/labs, please apply for [Special Consideration](#).

### Special Consideration

The [Special Consideration Policy](#) aims to support students who have been impacted by short-term circumstances or events that are serious, unavoidable and significantly disruptive, and which may affect their performance in assessment. If you experience circumstances or events that affect your ability to complete the assessments in this unit on time, please inform the convenor and submit a Special Consideration request through [ask.mq.edu.au](http://ask.mq.edu.au).

## Assessment Tasks

Name	Weighting	Hurdle	Due
<a href="#">Research Report</a>	90%	No	Week 13 of semester 2.
<a href="#">Seminar</a>	10%	No	week 12 of semester 2

### Research Report

Assessment Type <sup>1</sup>: Portfolio

Indicative Time on Task <sup>2</sup>: 75 hours

Due: **Week 13 of semester 2.**

Weighting: **90%**

Students will complete a minimum of 3 assessment tasks, with a maximum of 60% weighting for

any one task. Tasks can vary and may include a major report, initial literature review, project plan, oral presentation, essay or exam, as appropriate for a 10cp unit. The major report will be examined by two examiners. The report will be formatted for submission to a scientific journal, and must conform to published guidelines, which include a strict page limit and allowance for a data appendix. Assessment tasks and weightings will follow a learning plan agreed upon with the unit convenor and supervisor, which is appropriate for a project-based unit, or will be as listed in the unit guide.

On successful completion you will be able to:

- Conduct research to solve problems in areas relevant to molecular sciences or radiopharmaceutical science.
- Use laboratory skills common in molecular sciences or radiopharmaceutical science and conduct laboratory work in a safe and responsible manner.
- Collect, record and critically interpret their research findings.
- Critically analyse and interpret published literature of relevance to their research.
- Communicate in written and oral format their research findings to scientific audiences.

## Seminar

Assessment Type <sup>1</sup>: Presentation

Indicative Time on Task <sup>2</sup>: 5 hours

Due: **week 12 of semester 2**

Weighting: **10%**

A 10-15 min seminar presentation at a laboratory group meeting will be scheduled in the last week of semester to give the student an opportunity to present research aims and outcomes.

On successful completion you will be able to:

- Communicate in written and oral format their research findings to scientific audiences.

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<sup>1</sup> 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.

<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

## Delivery and Resources

MOLS8902 is a self-organised unit of independent study aimed at providing postgraduate coursework students with substantial experience in a working research laboratory. This can be completed individually or in small groups if required. Students need to be self-directed and independent in order to get the most out of this unit, including optimising their own timetable since there are no timetabled learning activities involved.

Students need to organise a research project ahead of time by approaching academic supervisors directly, and working out who is available to supervise a project in an area that is of interest to the student. Students should consult the School of Natural Sciences website which contains details of all the academic staff in the school including links to profiles with their areas of research interest (<https://www.mq.edu.au/faculty-of-science-and-engineering/departments-and-schools/school-of-natural-sciences>). If that proves to be too difficult, students should consult their program director.

Students are expected to spend at least 150 hours completing the unit across the 13 weeks of semester. This equates to about 1.5 days a week in a laboratory. There are no scheduled classes, you need to sort it out so you can spend sufficient time in the laboratory and that fits in with your own timetable and that of your supervisor.

Most projects will be entirely laboratory-based, but it is possible for students and supervisors to agree on a project which can be completed remotely as it is focused on, for example, bioinformatics, computational analysis, structural modelling, or molecular dynamics simulations.

We will communicate with you via your university email or through announcements on iLearn. Queries to the unit convenor can either be placed on the iLearn discussion board or sent via email from your university email address.

## 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](#)
- [Assessment Procedure](#)
- [Complaints Resolution Procedure for Students and Members of the Public](#)
- [Special Consideration Policy](#)

Students seeking more policy resources can visit [Student Policies \(https://students.mq.edu.au/su\)](https://students.mq.edu.au/su)

[pport/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>) 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](http://ask.mq.edu.au) or if you are a Global MBA student contact [globalmba.support@mq.edu.au](mailto:globalmba.support@mq.edu.au)

## Academic Integrity

At Macquarie, we believe [academic integrity](#) – 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 [online writing and maths support](#), [academic skills development](#) and [wellbeing consultations](#).

## Student Support

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

## The Writing Centre

[The Writing Centre](#) 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](#)
- [Safety support](#) 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 [AskMQ](#), or contact [Service Connect](#).

## IT Help

For help with University computer systems and technology, visit [http://www.mq.edu.au/about\\_us/offices\\_and\\_units/information\\_technology/help/](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.

## Changes from Previous Offering

### Changes to the Special Consideration Policy

Please note, changes to the special consideration policy/procedure were approved by Senate on 24 May 2022. The most significant changes are the use of statements of fact rather than other documentation and the inclusion of "circumstances or events which are anticipated but unable to be changed". These changes took effect for S2 2022.

<https://policies.mq.edu.au/document/view.php?id=136&version=2>

Special Considerations are checked by the central assessment team. If the SC meets the appropriate criteria, then it **must be** accepted by the team and will be forwarded to the unit convenor to action. If the SC doesn't meet the appropriate criteria, it is rejected and does not go to the unit convenor. It is the role of the central assessment team to **accept or reject SCs**. It is the role of the unit convenor to **recommend the remedy**. SCs need to be actioned by UCs within **5 working days**.