



PHYS7911

Physics and Astronomy Advanced Lab

Session 2, In person-scheduled-weekday, North Ryde 2022

School of Mathematical and Physical Sciences

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General Information

Unit convenor and teaching staff

Richard de Grijs

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Credit points

10

Prerequisites

Admission to MRes

Corequisites

Co-badged status

Unit description

This unit will provide students with a bespoke research-based learning path in physics and/or astronomy, tailored to the students' individual development needs. Students will complete a short research project within an active research group, mentored by unit staff as well as by research leaders. Students will write a formal report on their project, including reviewing relevant background literature and supporting theory.

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: apply advanced research skills in an authentic context.

ULO2: use sophisticated instrumentation and/or software tools effectively.

ULO3: identify and articulate how a research project fits within the context of, and contributes to, a wider field of research.

ULO4: demonstrate an understanding of concepts and theory that underpin advanced devices and/or techniques.

ULO5: analyse, interpret and present new research results correctly and coherently, in accordance with discipline standards.

General Assessment Information

Late Assessment Submission Penalty

From 1 July 2022, Students enrolled in Session based units with written assessments will have the following university standard late penalty applied. Please see <https://students.mq.edu.au/study/assessment-exams/assessments> for more information.

Unless a Special Consideration request has been submitted and approved, a 5% penalty (of the total possible mark) will be applied each day a written assessment is not submitted, up until the 7th day (including weekends). After the 7th day, a grade of '0' will be awarded even if the assessment is submitted. Submission time for all written assessments is set at **11:55 pm**. A 1-hour grace period is 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, students need to submit an application for Special Consideration.

Assessments where Late Submissions will be accepted

In this unit, late submissions will accepted as follows:

- Final report: Late submissions accepted; standard late penalty applies.

Assessment Tasks

Name	Weighting	Hurdle	Due
Oral presentation	25%	No	30 September 2022
Project background report	40%	No	Week 13
Project report	35%	No	Week 13

Oral presentation

Assessment Type ¹: Presentation

Indicative Time on Task ²: 10 hours

Due: **30 September 2022**

Weighting: **25%**

Oral presentation to the cohort, describing the project aims, background, and progress so far.

On successful completion you will be able to:

- identify and articulate how a research project fits within the context of, and contributes to, a wider field of research.
- demonstrate an understanding of concepts and theory that underpin advanced devices and/or techniques.

Project background report

Assessment Type ¹: Report

Indicative Time on Task ²: 14 hours

Due: **Week 13**

Weighting: **40%**

Formal report documenting relevant background literature and supporting theory for the student project.

On successful completion you will be able to:

- identify and articulate how a research project fits within the context of, and contributes to, a wider field of research.
- demonstrate an understanding of concepts and theory that underpin advanced devices and/or techniques.

Project report

Assessment Type ¹: Project

Indicative Time on Task ²: 21 hours

Due: **Week 13**

Weighting: **35%**

Formal report documenting their project work, including, data generated, analysis, and outcomes.

On successful completion you will be able to:

- apply advanced research skills in an authentic context.
- use sophisticated instrumentation and/or software tools effectively.
- demonstrate an understanding of concepts and theory that underpin advanced devices and/or techniques.
- analyse, interpret and present new research results correctly and coherently, in

accordance with discipline standards.

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

Week 1: Unit introduction (full cohort meets in person)

Week 8: Oral presentation (full cohort meets in person)

Weeks 1--13: Research projects supervised by individual staff members

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 \(https://students.mq.edu.au/support/study/policies\)](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

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 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/.

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.