



MOLS3002

PACE: Engaging the Community in Science

Full year 1, In person-scheduled-weekday, North Ryde 2025

School of Natural Sciences

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Disclaimer

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General Information

Unit convenor and teaching staff

Unit Convenor

Joanne Jamie

joanne.jamie@mq.edu.au

Contact via Contact via email or phone (9850 8283, 0439170683)

4 Wally's Walk room 231

Students are encouraged to arrange a meeting via email.

Unit Co-Convenor

Ian Jamie

ian.jamie@mq.edu.au

Contact via Contact via email or phone (9850 8293)

4 Wally's Walk room 236

Students are encouraged to arrange a meeting via email.

Credit points

10

Prerequisites

120cp at 1000 level or above and permission by special approval

Corequisites

Co-badged status

Unit description

This PACE unit offers university students from all disciplines the chance to engage in science outreach. Through community involvement, it aims to inspire an appreciation of science and its relevance to daily life at both school and university levels. You'll work with secondary and tertiary students and staff to run interactive science shows and activities for Indigenous and non-Indigenous students, as well as rural, refugee, and Aboriginal communities. The unit develops mentoring, leadership, and communication skills, preparing you to be a socially responsible global citizen. No science background is required, making it valuable for all students. If you are interested in finding out more about this unit, self-enrol in the MOLLS3002 pre-enrolment [iLearn Community Unit](#) and review the available information. Visit [Employability Connect](#) for important information on this unit.

Learning in this unit enhances student understanding of global challenges identified by the United Nations Sustainable Development Goals ([UNSDGs](#)) Quality Education; Reduced Inequality; Sustainable Cities and Communities

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:** Communicate an appreciation and understanding of the value of science community engagement, especially for those within Indigenous, rural and refugee communities.
- ULO2:** Demonstrate safe and responsible behaviour and respect while working with children and Indigenous people and the wider community.
- ULO3:** Demonstrate a knowledge of the science involved in a range of science activities and present these activities to students and/or the wider community at the appropriate level, in an interesting, safe and engaging manner.
- ULO4:** Research, plan and solve complex problems to execute science outreach activities, including those addressing global challenges in the 21st century.
- ULO5:** Exhibit cooperative skills appropriate for diverse contexts and necessary for working effectively and ethically with peers and external partners.
- ULO6:** Critically engage in reflective practices for both personal and professional learning and growth.

General Assessment Information

To pass this unit you are expected to attempt all assessment tasks and you must achieve a total mark equal to or greater than 50%.

General Faculty Policy on assessment submission deadlines and late submissions:

Late Assessment Submission and Penalties

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 7th day (including weekends). After the 7th 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 essays, reflection journals and presentations, please apply for [Special Consideration](#).

Assessments where Late Submissions will be accepted

- Community Engagement Essay - YES, Standard Late Penalty applies

- Reflective Journal - YES, Standard Late Penalty applies
- Reflective Presentations - YES, Standard Late Penalty applies

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 the [Service Connect portal](#).

Assessment Tasks

Name	Weighting	Hurdle	Due
Science activities	50%	No	Week 13 Session 2
Class discussions	10%	No	Week 13 Session 1 and Week 13 Session 2
Induction	5%	No	Week 7 Session 1
Reflective Journal	15%	No	Week 7 & 13 Session 1, Week 7 & 13 Session 2
Community Engagement Essay	10%	No	Week 7 Session 1
Presentations	10%	No	Week 11-13 Session 1, Week 11-13 Session 2

Science activities

Assessment Type ¹: Practice-based task

Indicative Time on Task ²: 20 hours

Due: **Week 13 Session 2**

Weighting: **50%**

Achieved throughout the year as part of conduct of science engagement activities.

On successful completion you will be able to:

- Demonstrate safe and responsible behaviour and respect while working with children and Indigenous people and the wider community.

- Demonstrate a knowledge of the science involved in a range of science activities and present these activities to students and/or the wider community at the appropriate level, in an interesting, safe and engaging manner.

Class discussions

Assessment Type ¹: Practice-based task

Indicative Time on Task ²: 10 hours

Due: **Week 13 Session 1 and Week 13 Session 2**

Weighting: **10%**

Students will engage in weekly SGTA discussions, including in sharing about their science engagement experiences conducted, development of new science engagement activities and problem solving.

On successful completion you will be able to:

- Communicate an appreciation and understanding of the value of science community engagement, especially for those within Indigenous, rural and refugee communities.
- Demonstrate safe and responsible behaviour and respect while working with children and Indigenous people and the wider community.
- Research, plan and solve complex problems to execute science outreach activities, including those addressing global challenges in the 21st century.
- Exhibit cooperative skills appropriate for diverse contexts and necessary for working effectively and ethically with peers and external partners.

Induction

Assessment Type ¹: Practice-based task

Indicative Time on Task ²: 5 hours

Due: **Week 7 Session 1**

Weighting: **5%**

Completed through students engaging across weeks 1-6 (session 1) in the preparative SGTA sessions (face to face), online discussions and completion of science activity risk assessments.

On successful completion you will be able to:

- Communicate an appreciation and understanding of the value of science community

engagement, especially for those within Indigenous, rural and refugee communities.

- Demonstrate a knowledge of the science involved in a range of science activities and present these activities to students and/or the wider community at the appropriate level, in an interesting, safe and engaging manner.

Reflective Journal

Assessment Type ¹: Reflective Writing

Indicative Time on Task ²: 15 hours

Due: **Week 7 & 13 Session 1, Week 7 & 13 Session 2**

Weighting: **15%**

Ongoing journal assessed end of S1 and S2

On successful completion you will be able to:

- Critically engage in reflective practices for both personal and professional learning and growth.

Community Engagement Essay

Assessment Type ¹: Essay

Indicative Time on Task ²: 10 hours

Due: **Week 7 Session 1**

Weighting: **10%**

1500 word essay describing the importance of science outreach/community engagement and providing literature examples.

On successful completion you will be able to:

- Communicate an appreciation and understanding of the value of science community engagement, especially for those within Indigenous, rural and refugee communities.

Presentations

Assessment Type ¹: Presentation

Indicative Time on Task ²: 10 hours

Due: **Week 11-13 Session 1, Week 11-13 Session 2**

Weighting: **10%**

2 x 5 minute presentations to class

On successful completion you will be able to:

- Communicate an appreciation and understanding of the value of science community engagement, especially for those within Indigenous, rural and refugee communities.
- Critically engage in reflective practices for both personal and professional learning and growth.

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

Who to Contact

Prof Joanne Jamie is the convenor of this unit and should be your main point of contact. Ian Jamie is co-convenor and will also be involved in most of the classes and practice-based tasks. You will get to meet the other staff during scheduled sessions and/or during the various activities. They will all be happy to help in answering questions relevant to their expertise throughout this unit. You are encouraged to direct any questions or queries first to Prof Jamie, who will pass them on to the other teaching staff as needed. Prof Jamie has an open door policy, but you are encouraged to phone or email to organise a meeting. You may also wish to ask questions using the discussion board on the iLearn website.

iLearn Unit Web Page and Other Technology

The web page for this unit can be found at ilearn.mq.edu.au. Just login and follow the prompts to Mols3002.

It is essential that you login to the unit iLearn web site on a regular basis. As well as web-based teaching resources, the iLearn web site will also provide other support for this unit, including an Announcement board for important notices, Discussion Forums, and access to your grades.

Please note information will also be sent by email to your **university email account**, including as calendar invites for science/STEM events, so please look at your university email account on a frequent basis. Queries to convenors are encouraged to be placed on the iLearn discussion board or sent to joanne.jamie@mq.edu.au from your **university email address**.

Required Reading

There is no textbook recommended. Instead Mols3002 makes use of web-based teaching resources on the unit iLearn web site (see below for more information). This includes resources especially designed for PACE units.

Teaching and Learning Strategies

Mols3002 will consist of a mixture of face to face training workshops and group discussion sessions, presentations, online discussions and interactive science and STEM activities. There will be a 2 hour dedicated session most weeks of both semesters for training workshops, seminars, discussion sessions and reflections and critiquing. The community engagement activities – the experiential/practice-based science and STEM activities component of the unit – will be timetabled once the dates are known. Enrolled students will identify which activities they can be a part of. The range of activities provided over the year will allow sufficient choice for all students to be a part of many wonderful science and STEM outreach events.

Week 1 classes - introduction: Classes will commence in the 2 hour allocated class session and will be a face-to-face meet and greet session to get to know everyone's interests in the unit, the strengths you bring to the unit and the potential areas of growth. It will also include discussion on reflective practice.

Meetings/group discussions: The class sessions across the unit will include workshops related to mentoring, working with children, working with Indigenous peoples and reflective practices, and an introduction to the overall science and STEM outreach activities to be undertaken and appropriate safe practices. These sessions will also be used throughout the year to discuss about upcoming activities, including with other teaching staff and community partners, to prepare and plan for the actual activities and evaluate and improve on resources; and following activities, to critique their effectiveness and consider changes needed for improvement. These sessions will also be used to reflect more broadly.

Online Discussion: You are expected to participate regularly in online discussion using the iLearn discussion forum to discuss about the unit content, science and STEM activities and methods of presentation, and issues that may arise, as well as reflect more broadly.

Experiential/Practice-Based Activities: The experiential component will involve engaging community (e.g. school students) in science and STEM activities including those of relevance to everyday life. The activities will be spread throughout the year. At least 40 hours of direct interaction with the community with the science activities will be expected from you and at least an average of 10 hours committed to the preparation and 10 hours to reflection on these activities.

Reflection: Reflection will be a particularly important tool for you in this unit. The participation activities will inherently challenge your approaches, ideas, and understandings about the communities around us and the communication of science therein. You will keep an on-going journal reflecting on your experiences and at the end of each semester, be required as a part of your assessment to present to fellow students and staff about the key achievements and the impact of the science and STEM engagement activities on you.

Workload expectation: Your overall workload across the unit is 150 hours in total.

Feedback

We are always open to suggestions for improving the content and delivery of this course. We are very happy to receive any constructive feedback that you may wish to provide. We hope you find this course both educational and fun!

Unit Schedule

The orientation/introduction will involve classes and directed reading of online resources and workshops related to mentoring, working with children, working with Indigenous people and ethical aspects, reflective practice and an introduction to various science outreach activities (and appropriate safety practices) that Mols3002 will encompass. Scaffolding for skills and knowledge development will include hands-on workshops early on to familiarise you with the main types of science experiments used in the science outreach activities and role playing with your peers.

Developing knowledge will also come from completion of a written report of ~1500 words on why such outreach/community engagement is important, especially to those in groups previously under-represented in higher education, and an example from the literature showing how such outreach can improve educational outcomes. You will also attend weekly 2 hour meetings throughout S1 and S2 (excluding mid-session and mid-year breaks and public holidays) to discuss as a group about upcoming activities, including with community partners, to prepare and plan for the actual activities and evaluate and improve on resources; and following activities to critique their effectiveness and consider changes needed for improvement. Active participation in these meetings is expected. Regular feedback on this participation will be provided to allow opportunity for improvement.

The experiential component will incorporate the science and STEM activities with the community and on-going reflection. A range of science activities will be available. Activities and interaction, including with partner organisations, will occur throughout the year subsequent to the initial orientation and familiarisation exercises. The activities will be spread throughout the year. At least 40 hours of direct interaction with the community with the science activities will be expected and an average of 10 hours committed to the preparation. This experiential component will be worth 50%. You will be expected to spend at least 10 hours reflecting on these specific activities and their impact.

You will undertake reflective practice as part of an on-going journal reflecting on your activities – to be filled in throughout the semester both before and following each science activity and class session. As part of this reflection process, an open web forum will be available for you to discuss your experiences online, as well as a private reflection site. Feedback on your written reflections will be provided midway through S1 and S2 and at the end of S1 and S2.

In week 12/13 of S1 and S2, you will provide a 5 minute presentation describing the impact of the engagement activities on yourself and others as part of a debrief wrap up session to the class.

There will be no exam.

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 connect.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 Advocacy](#) provides independent advice on MQ policies, procedures, and processes

Student Enquiries

Got a question? Ask us via the [Service Connect Portal](#), 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.

Changes from Previous Offering

We value student feedback to be able to continually improve the way we offer Mols3002. As such, we encourage students to provide constructive feedback via student surveys, to Joanne and Ian directly, or via the FSE Experience & Feedback link in the iLearn page. Student feedback from previous offerings of this unit was very positive overall.

Unit information based on version 2025.03 of the [Handbook](#)