



MOLS3002

Engaging the Community in Science

Full year 1, Weekday attendance, North Ryde 2021

Archive (Pre-2022) - Department of Molecular Sciences

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Notice

As part of [Phase 3 of our return to campus plan](#), most units will now run tutorials, seminars and other small group activities on campus, and most will keep an online version available to those students unable to return or those who choose to continue their studies online.

To check the availability of face-to-face activities for your unit, please go to [timetable viewer](#). To check detailed information on unit assessments visit your unit's iLearn space or consult your unit convenor.

General Information

Unit convenor and teaching staff

Unit Convenor

Joanne Jamie

joanne.jamie@mq.edu.au

Contact via email or phone (9850 8283)

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 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 provides an opportunity for university students from all disciplines to undertake science outreach. Through participation and community engagement this unit aims to inspire an appreciation of the fascination of science and its relevance to everyday life as well as provide leadership skills and positive role models at the school and university levels. This unit will provide you with the opportunity to work with secondary and tertiary students and staff to run interactive science shows and other science activities for Indigenous and non-Indigenous students, rural and refugee students, Aboriginal community members and the wider public. The curriculum will develop your skills in mentoring and working with children and Indigenous people, as well as interactive science-based activities. Further, this unit will provide you with leadership and communication skills, and through the interaction with the wider community, will be an important part of preparing you to become a socially responsible global citizen. This unit is of value for all university students and does not require a science background.

If you are interested in finding out more about this unit, self-enrol in the MOLS3002 pre-enrolment [iLearn Community Unit](#) and review the available information.

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.
- 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.
- ULO2:** Demonstrate safe and responsible behaviour and respect while working with children and Indigenous people and the wider community.
- 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

Non-Attendance: Students unable to attend any of the weekly class sessions (run via zoom) or make up the hours towards the experiential component of this unit due to illness or other extenuating circumstances must fill in a special consideration request on-line at ask.mq.edu.au and provide formal documentary evidence as soon as possible AND contact A/Prof Joanne Jamie.

If an absence is anticipated (perhaps for a mandatory religious or University associated sporting event) you must inform the unit convenor in advance that this will be the case and discuss alternative arrangements. It is your responsibility to undertake this. Notification after the event of an anticipated absence will not be looked upon favourably. For any unjustified absences students will receive a zero mark for any assessment task that was missed.

Extensions: Students unable to complete a form of assessment on time due to illness or other extenuating circumstances must request special consideration at ask.mq.edu.au and provide formal documentary evidence as soon as possible and contact A/Prof Joanne Jamie to discuss possible extensions. Extensions will be granted based on merit and will be more favourably considered if consultation with the unit coordinator on the need for an extension occurred BEFORE the due date. If there is no acceptable reason for a late submission, marks will be deducted up to 5% per weekday for every day late.

Assessment Tasks

Name	Weighting	Hurdle	Due
<u>Science activities</u>	50%	No	Week 13 S2
<u>Group discussions</u>	10%	No	Week 11 S2
<u>Reflective Journal</u>	10%	No	Week 13 S1, Week 13 S2
<u>Presentations</u>	10%	No	Week 12/13 S1 & Week 12/13 S2
<u>Induction</u>	10%	No	Week 8 S1
<u>Community Engagement Essay</u>	10%	No	Week 6 S1

Science activities

Assessment Type ¹: Participatory task

Indicative Time on Task ²: 20 hours

Due: **Week 13 S2**

Weighting: **50%**

Achieved throughout the year as part of Placements

On successful completion you will be able to:

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

Group discussions

Assessment Type ¹: Participatory task

Indicative Time on Task ²: 10 hours

Due: **Week 11 S2**

Weighting: **10%**

Through weekly meetings

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.

Reflective Journal

Assessment Type ¹: Reflective Writing

Indicative Time on Task ²: 15 hours

Due: **Week 13 S1, Week 13 S2**

Weighting: **10%**

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.

Presentations

Assessment Type ¹: Presentation

Indicative Time on Task ²: 10 hours

Due: **Week 12/13 S1 & Week 12/13 S2**

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.

Induction

Assessment Type ¹: Participatory task

Indicative Time on Task ²: 5 hours

Due: **Week 8 S1**

Weighting: **10%**

Completed through attending weekly classes/workshops (face to face), reading online resources, and online discussions

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.

Community Engagement Essay

Assessment Type ¹: Essay

Indicative Time on Task ²: 10 hours

Due: **Week 6 S1**

Weighting: **10%**

1500 word essay describing the importance of outreach/community engagement

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.

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

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.

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. You can use any web browser such as Firefox, Internet Explorer or Safari to login.

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 student email account so please look at your email account on a frequent basis.

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 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 science 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 outreach events.

Introduction: Week 1 will be a 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 and will also include discussion on reflective practice.

Meetings/group discussions: From weeks 2-8, the focus will be on workshops related to mentoring, working with children, working with Indigenous people and reflective practices, and an introduction to the overall science 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 about the unit content, science activities and methods of presentation, and issues that may arise, as well as reflect more broadly.

Experiential Activities: The experiential component will involve engaging community (eg school students) in science activities including those of relevance to everyday life (eg examining the microscopic world, extracting DNA from fruit, making slime from wood glue and borax). 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 engagement activities on you.

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

Who to Contact

A/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 experiential components. 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 A/Prof Jamie, who will pass them on to the other teaching staff as needed. A/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.

Feedback

We are always open to suggestions for improving the content and delivery of this course. We are very happy to receive any constructive criticism 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 (weeks 1-8). 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 (week 2-8). This orientation/introduction and knowledge development will contribute 10% of the mark.

Developing knowledge will also come from completion of a written report of ~1500 words (10%) 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. This will be submitted in week 6. You will also attend weekly 2 hour meetings throughout S1 and S2 (excluding mid-session and mid-year breaks) 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. The active participation in these meetings will contribute 10% towards the assessment total. Feedback on this participation will be provided to allow opportunity for improvement.

The experiential component will incorporate the science activities with the community and on-going reflection. A range of science activities will be available. Activities and interaction 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%. Feedback from peers and the community participants will be sought to determine your level of engagement and commitment. 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. These written reflections will contribute 10% towards the assessment.

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. This will contribute 10% towards the assessment.

There will be no exam.

To summarise on assessment tasks:

Orientation/introduction and skills/knowledge development – attendance and active participation in weekly meetings/workshops and reading online resources 10% (weeks 1-8, S1 on introductory components, plus throughout via 2 hr weekly meetings (10%) PLUS ~1500 word report 10% (week 6, S1). (Total of 30% of assessment)

Experience/project – a minimum of 40 hours of direct community engagement will be expected of each student. Community engagement will be worth 50% (through academic, self-, peer- and community-assessment).

Reflection - Reflective practice (through journal entries will be worth 10%). Class presentations will be worth 10%. (Total of 20% of assessment)

Wrap up/debrief – presentations as above and general discussions occurring.

Your final mark will be an aggregate mark from all the assessment tasks.

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.