



ENVS1505

Indigenous Science

Session 2, In person-scheduled-weekday, North Ryde 2026

School of Natural Sciences

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General Information

Unit convenor and teaching staff

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Credit points

10

Prerequisites

Corequisites

Co-badged status

Unit description

In this unit, students will identify and critically explore Aboriginal scientific knowledge systems from across Australia. Using a two-way learning approach of Indigenous knowledge and Eurocentric science, parallels will be drawn across different scientific disciplines, such as biology, marine science, agriculture, fire management, hydrology, engineering, medicine, astronomy and climate change. With the aid of fieldwork and case study components, students will apply this knowledge to recognise the importance of informed decision making in building two-way knowledge and practices for a shared sustainable future. This foundation unit provides a strong framework for students to develop an understanding of Indigenous scientific knowledges and practice and to appreciate alternative worldviews in science.

This unit has a one-day local fieldtrip.

Learning in this unit enhances student understanding of global challenges identified by the United Nations Sustainable Development Goals ([UNSDGs](#)) and NSW Public Service Framework; Aboriginal and Torres Strait Islander Cultural Capabilities.

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: Explain and describe Indigenous scientific systems.

ULO2: Appraise the synergies and differences between Indigenous and Western scientific knowledge and practices.

ULO3: Apply knowledge and critical thinking skills to explore alternative worldviews.

ULO4: Draw on a range of voices and resources to critically evaluate key concepts within the unit.

ULO5: Demonstrate the effective use of written, verbal, computational and scientific communication skills to convey ideas.

General Assessment Information

To pass this unit you must 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 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 technical concerns. 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. For example, if the assignment is worth 8 marks (of the entire unit) and your submission is late by 19 hours (or 23 hours 59 minutes 59 seconds), 0.4 marks (5% of 8 marks) will be deducted. If your submission is late by 24 hours (or 47 hours 59 minutes 59 seconds), 0.8 marks (10% of 8 marks) will be deducted, and so on. 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 <http://connect.mq.edu.au/>.

Assessment Tasks

Name	Weighting	Hurdle	Due	Groupwork/Individual	Short Extension	AI Approach
Scientific Report	40%	No	25/09/2026	Individual	Yes	Observed
Indigenous Science Poster	20%	No	18/10/2026	Individual	Yes	Observed
Final Exam	40%	No	Please check the Macquarie University Exam Timetable	Individual	No	Observed

Scientific Report

Assessment Type ¹: Practice-based task

Indicative Time on Task ²: 56 hours

Due: **25/09/2026**

Weighting: **40%**

Groupwork/Individual: Individual

Short extension ³: Yes

AI Approach: Observed

You will select an Australian native plant and write a scientific report integrating results from a lab experiment and information from scientific journals and online sources. Additionally, you will discuss both Eurocentric and Indigenous customary knowledges and uses of the plant, highlighting the similarities and differences in understandings and practices.

On successful completion you will be able to:

- Explain and describe Indigenous scientific systems.
- Appraise the synergies and differences between Indigenous and Western scientific knowledge and practices.
- Apply knowledge and critical thinking skills to explore alternative worldviews.
- Draw on a range of voices and resources to critically evaluate key concepts within the unit.
- Demonstrate the effective use of written, verbal, computational and scientific communication skills to convey ideas.

Indigenous Science Poster

Assessment Type ¹: Presentation task

Indicative Time on Task ²: 10 hours

Due: **18/10/2026**

Weighting: **20%**

Groupwork/Individual: Individual

Short extension ³: Yes

AI Approach: Observed

You will create a poster that explores a topic related to Indigenous Science, demonstrating your understanding of the relationship between Indigenous and Eurocentric scientific perspectives using text, images, and case studies. You will then present your poster to the class, highlighting key ideas, concepts and the significance of the topic.

On successful completion you will be able to:

- Explain and describe Indigenous scientific systems.
- Appraise the synergies and differences between Indigenous and Western scientific knowledge and practices.
- Apply knowledge and critical thinking skills to explore alternative worldviews.
- Draw on a range of voices and resources to critically evaluate key concepts within the

unit.

- Demonstrate the effective use of written, verbal, computational and scientific communication skills to convey ideas.

Final Exam

Assessment Type ¹: Examination

Indicative Time on Task ²: 26 hours

Due: **Please check the Macquarie University Exam Timetable**

Weighting: **40%**

Groupwork/Individual: Individual

Short extension ³: No

AI Approach: Observed

You will undertake a final examination during the formal examination period.

On successful completion you will be able to:

- Explain and describe Indigenous scientific systems.
- Appraise the synergies and differences between Indigenous and Western scientific knowledge and practices.
- Apply knowledge and critical thinking skills to explore alternative worldviews.
- Draw on a range of voices and resources to critically evaluate key concepts within the unit.
- Demonstrate the effective use of written, verbal, computational and scientific communication skills to convey ideas.

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
- [Academic Success](#) 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.

³ An automatic short extension is available for some assessments. Apply through the [Service Connect Portal](#).

Delivery and Resources

The unit is delivered through a combination of:

- **Lectures and learning activities** examining Indigenous and Western scientific

knowledges and practices.

- **Topics and Case studies** drawn from a range of scientific disciplines and Indigenous perspectives
- **On Country Learning and Fieldwork experiences**, including a **one-day field trip in Sydney**, allowing students to engage with Indigenous knowledge in local and practical contexts.
- A strong emphasis on **critical reflection, discussion, and application of knowledge** to contemporary environmental and sustainability challenges.

Learning Resources

Students draw upon a variety of resources, including:

- Guest presenters: Indigenous knowledge holders and community perspectives
- Academic literature on Indigenous science, environmental management and sustainability.
- Case studies exploring the units topics
- On Country Learning, fieldwork and experiential learning activities.
- Unit guides, lecture materials, recordings and readings provided through the university iLearn page and Leganto.

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/>

Academic Success

[Academic Success](#) provides resources to develop your English language proficiency, academic writing, and communication skills.

- [Ask a Study Coach](#)
- [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 <https://students.mq.edu.au/support/technology/service-desk>.

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.

Unit information based on version 2026.04 of the [Handbook](#)