



ENVS1505

Indigenous Science

Session 2, In person-scheduled-weekday, North Ryde 2024

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 Western 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 sustainable future. This foundation unit provides a strong framework for students to develop an understanding of Indigenous scientific practice and to appreciate alternative worldviews in science.

This unit has a one-day fieldtrip to two locations in Sydney.

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

Requirements to Pass this Unit

To pass this unit you should attempt all assessments, and 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 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.

Assessment Tasks

Name	Weighting	Hurdle	Due
Indigenous Science Poster	20%	No	2024-10-11
Comparing Scientific Worldviews	40%	No	2024-09-30
Indigenous Science Presentation	20%	No	During the tutorial in Week 11 beginning 13th September
Topic Quizzes	10%	No	10 quiz's covering Indigenous Science topics
Project Plan	10%	No	2024-08-30

Indigenous Science Poster

Assessment Type ¹: Poster

Indicative Time on Task ²: 10 hours

Due: **2024-10-11**

Weighting: **20%**

Choose on Indigenous Science topic and create a poster that explains the topic, using case studies, images and text

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.

Comparing Scientific Worldviews

Assessment Type ¹: Project

Indicative Time on Task ²: 50 hours

Due: **2024-09-30**

Weighting: **40%**

Choose one scientific discipline and explain some of the similarities and differences in Indigenous Australian and Western understandings and practices and relate to one element of the practical work in the unit.

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 Presentation

Assessment Type ¹: Presentation

Indicative Time on Task ²: 12 hours

Due: **During the tutorial in Week 11 beginning 13th September**

Weighting: **20%**

Give an oral presentation on your poster to the class

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.

Topic Quizzes

Assessment Type ¹: Quiz/Test

Indicative Time on Task ²: 15 hours

Due: **10 quiz's covering Indigenous Science topics**

Weighting: **10%**

Students are required to complete multiple choice quizzes relating to the content of 8 topics.

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

Project Plan

Assessment Type ¹: Plan

Indicative Time on Task ²: 5 hours

Due: **2024-08-30**

Weighting: **10%**

Prepare a one page plan for your project

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
- 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

ENV51505 relies on a structured teaching program to facilitate your learning and critical thinking. The unit is taught via interactive lectures, SGTAs, on Country learning, readings, and assessment tasks. Students must attend one two-hour lecture and one one-hour SGTA class per week (note: a SGTA is held in week 1, the SGTA for week 3 is scheduled on Saturday 10th August and there are no SGTAs scheduled in weeks 10, 11 and 13).

Weekday attendance: students are expected to attend the lectures and SGTA. A detailed class schedule with lecture and SGTA topics is available on iLearn. Students must make use of iLearn to access teaching and learning materials, to submit assessment tasks, to stay in touch with the unit, to contact lecturers and tutors, and to discuss issues and concepts with classmates.

Workload ENV51505 earns 10 credit points towards your degree. For a 10 credit point unit such as ENV51505, you are expected to dedicate 150 hours over the semester. This requires planning on your part to do all the work required in lectures, SGTAs and assignments. iLearn ENV51505 iLearn login page: <https://ilearn.mq.edu.au/login/> The ENV51505 iLearn page uses Macquarie University's standard interface and has links, discussion threads, blogs, access to lectures (as audio files through Echo360, and as downloadable PDF presentations) and SGTA material. Important announcements will be made through iLearn, so please check the ENV51505 page regularly. Echo360 Information about how to access lecture recordings through the Echo360 EchoCenter page in iLearn can be found at: <https://students.mq.edu.au/support/study/tools-and-resources/ilearn/ilearn-quick-guides-for-students/lecture-recordings> Turnitin Macquarie University promotes student awareness of information management and information ethics. As well as training and the provision of information, the University promotes academic honesty through use of the online program Turnitin. Information about how to submit assignments to Turnitin in iLearn can be found at: <https://students.mq.edu.au/support/technology/systems/ilearn/assignments-grades>. As well as being a key tool for assignment submission, marking and feedback, Turnitin compares your work with the work of your classmates, with previous students from Macquarie and other universities, with material available on the Internet, and with freely available and Unit guide ENV51505 Unit Schedule Policies and Procedures subscription based electronic journals. The results are sent only to your lecturers, who will analyse them in reference to the University's Academic Integrity Policy. You will be able to access the results of the Turnitin academic honesty scan for your own assignments, known as your 'originality report'. In ENV51505, we will allow you to overwrite the initial submission file with a second submission if you choose to do so, but only up until the final due date and time for the assignment. We consider this opportunity to fine-tune your academic honesty a considerable resource, and we hope that you will use this review process constructively to ensure you are referencing other material correctly and effectively. Recommended Texts and Readings There is no prescribed textbook for ENV51505. However, there are recommended papers for each topic of the unit, a link to the papers will be provided on the iLearn page.

Unit Schedule

This unit will use a two ways or both ways approach to understand science knowledge and practices in Australia. The unit will explore Indigenous science topics including biology, hydrology, agriculture, fire management, bushfoods and medicines, engineering, astronomy, climate change, archaeology, First Nations Peoples land management and protection of Indigenous cultural sites.

Please check the iLearn page for the unit timetable/schedule.

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 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/.

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 2024.02 of the [Handbook](#)