



BIOL2400

Biodiversity and Monitoring

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

School of Natural Sciences

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General Information

Unit convenor and teaching staff

Convenor

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Lecturer

Benjamin Pitcher

Lecturer

Melanie Bishop

Lecturer

Jessica O'Hare

Lecturer

Sally Potter

Credit points

10

Prerequisites

BIOL1400 or BIOL1320

Corequisites

Co-badged status

Unit description

Explore biodiversity monitoring and conservation science through authentic field-based learning that mirrors professional research practice. This unit equips you with practical skills in biodiversity sampling, species identification, survey design, and data analysis, while examining the urgent challenges facing Earth's biological heritage.

You will investigate biodiversity sampling techniques, citizen science initiatives, workplace safety and ethics in fieldwork, data collection and analysis methods, and considerations for culturally appropriate and ethical monitoring.

Learning occurs through interactive workshops and a three-day, two-night field trip where you will plan and conduct field-based research, collect and analyse biodiversity data, and present your findings. Please note the field trip will incur a financial cost.

This unit prepares you for careers in conservation science and environmental management, and develops transferable skills in survey design, teamwork, critical analysis, and scientific communication essential for any STEMM profession.

Learning in this unit enhances student understanding of global challenges identified by the United Nations Sustainable Development Goals ([UNSDGs](#)) Life on Land

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 knowledge of biodiversity—including species and ecosystems—to describe and compare patterns of biodiversity in natural habitats

ULO2: Apply field-based techniques to record and classify species diversity for biodiversity monitoring

ULO3: Explain and compare ecological, cultural, and ethical considerations in selecting appropriate methods for biodiversity monitoring in diverse environmental contexts

ULO4: Collaborate in a team setting to plan and conduct biodiversity monitoring activities

ULO5: Communicate findings from primary data in a range of scientific and professional formats

ULO6: Apply professional and self-management skills—including time management, accountability, and independent learning—to biodiversity monitoring projects

General Assessment Information

Assessment details including rubrics will appear on the iLearn page from Week 1.

Requirements to Pass this Unit

To pass this unit you must achieve a total mark equal to or greater than 50%. We strongly encourage all students to actively participate in all learning activities. Regular engagement is crucial for your success in this unit, as these activities provide opportunities to deepen your understanding of the material, collaborate with peers, and receive valuable feedback from instructors, to assist in completing the unit assessments. Your active participation not only enhances your own learning experience but also contributes to a vibrant and dynamic learning environment for everyone.

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 <https://connect.mq.edu.au/>.

Assessment Tasks

Name	Weighting	Hurdle	Due	Groupwork/Individual	Short Extension	AI Approach
Group presentation	30%	No	31/08/2026	Group	No	Observed
Practical skills	30%	No	18/10/2026	Individual	Yes	Open
Individual field report	40%	No	08/11/2026	Individual	Yes	Open

Group presentation

Assessment Type ¹: Practice-based task

Indicative Time on Task ²: 18 hours

Due: **31/08/2026**

Weighting: **30%**

Groupwork/Individual: Group

Short extension ³: No

AI Approach: Observed

You will collaboratively prepare and present key planning elements for an upcoming trip, mirroring real workplace project-planning expectations. Together, you'll research options, make decisions, and produce a clear group presentation. This task strengthens teamwork, organisation, communication, and practical planning skills valuable for future study and professional contexts.

On successful completion you will be able to:

- Apply knowledge of biodiversity—including species and ecosystems—to describe and compare patterns of biodiversity in natural habitats
- Explain and compare ecological, cultural, and ethical considerations in selecting appropriate methods for biodiversity monitoring in diverse environmental contexts
- Collaborate in a team setting to plan and conduct biodiversity monitoring activities
- Communicate findings from primary data in a range of scientific and professional formats
- Apply professional and self-management skills—including time management, accountability, and independent learning—to biodiversity monitoring projects

Practical skills

Assessment Type ¹: Professional task

Indicative Time on Task ²: 16 hours

Due: **18/10/2026**

Weighting: **30%**

Groupwork/Individual: Individual

Short extension ³: Yes

AI Approach: Open

You will demonstrate your individual capability by completing a practical book that applies key field techniques used in professional practice. Through regular documentation and reflection, you'll show how theory informs technique. This task deepens your technical confidence and strengthens your ability to work independently with discipline-specific methods.

On successful completion you will be able to:

- Apply field-based techniques to record and classify species diversity for biodiversity

monitoring

- Explain and compare ecological, cultural, and ethical considerations in selecting appropriate methods for biodiversity monitoring in diverse environmental contexts
- Apply professional and self-management skills—including time management, accountability, and independent learning—to biodiversity monitoring projects

Individual field report

Assessment Type ¹: Written Submission

Indicative Time on Task ²: 40 hours

Due: **08/11/2026**

Weighting: **40%**

Groupwork/Individual: Individual

Short extension ³: Yes

AI Approach: Open

You will produce an individual report based on field trip outcomes, reflecting how professionals document and interpret observations. You'll analyse findings, apply key concepts, and present evidence-based conclusions. This task strengthens your field reporting, analytical interpretation, and discipline-specific communication skills.

On successful completion you will be able to:

- Apply knowledge of biodiversity—including species and ecosystems—to describe and compare patterns of biodiversity in natural habitats
- Apply field-based techniques to record and classify species diversity for biodiversity monitoring
- Explain and compare ecological, cultural, and ethical considerations in selecting appropriate methods for biodiversity monitoring in diverse environmental contexts
- Collaborate in a team setting to plan and conduct biodiversity monitoring activities
- Communicate findings from primary data in a range of scientific and professional formats
- Apply professional and self-management skills—including time management, accountability, and independent learning—to biodiversity monitoring projects

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

Week 1 Classes start:

Class starts in **Week 1** on Tuesday 28th July. We will have a weekly workshop on Tuesday from 1-4, which includes lecture material, laboratory work and practical field experiences.

Mid-semester Field trip

This Unit contains an essential field trip component, in the mid-semester break. Attendance enables you to collect data to complete Assessment 3. The field trip commences Monday 21st Sept – Wed 23rd September, off-campus. Further details about costs and what to expect are below.

Methods of Communication

We will communicate with you via your university email and through announcements on iLearn. Queries to the convenor can either be placed on the iLearn discussion board or sent to the unit convenor via the contact email on iLearn.

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.

Changes from Previous Offering

We value student feedback to be able to continually improve the way we offer our units. As such we encourage students to provide constructive feedback via student surveys, to the teaching staff directly, or via the FSE Student Experience & Feedback link in the iLearn page.

Student feedback from the previous offering of this unit was very positive overall, with students pleased with the clarity around assessment requirements and the level of support from teaching staff. As such, no change to the delivery of the unit is planned, however we will continue to strive to improve the level of support and the level of student engagement.

Field trip in the mid-semester break September 21st-23rd

An essential component of this Unit is participation in a field trip to Blue Gum Lodge, Springwood. Students who have genuine clashes (e.g. other field trips, work or carer responsibilities) must notify the convenor ASAP. Your place on the fieldtrip will not be confirmed until full payment has been made. A web link for sign-up will be made available on iLearn. The cost of the fieldtrip will be approx \$275. This amount includes food and accommodation. Instructions on how to pay will be placed on iLearn.

Highlights

- Small mammal trapping
- Nocturnal frog and mammal spotlighting
- Plant and habitat surveys
- Guest speakers

Transport and address:

You will need to make your own way to the field site (Blue Gum Lodge). The address is:

6 Fels Ave, Springwood NSW 2777

You can plan your trip on public transport using “Trip planner” <https://transportnsw.info/trip#/>

There is plenty of parking and you are welcome to bring your own car (please make sure it is roadworthy and appropriately insured) to drive to the site. We will help to facilitate lifts for those who don't have a vehicle. The drive takes 1-1.5 hrs from Macquarie University.

Program

You will spend time evaluating different ecological communities such as mammals, birds, plants, and frogs. The data collected will form the basis of Assessment 3 (due Week 13). A detailed program will be provided 1-2 weeks before the fieldtrip.

Workshops

For all workshop sessions (including Oral Presentations in Week 6) you must be wearing covered shoes to be allowed entry to the labs and there is strictly no eating or drinking. This means EVERY week you must wear closed toe shoes.

Workshop and field trip safety

All fieldwork carries some amount of risk. For BIOL2400, this is minimal as we will be sampling in the Ecology Reserve which adjoins Lane Cove National Park, and at Blue Gum Lodge during the 3-day fieldtrip. However, just as with any workplace that requires staff to work in the field, there are safety protocols that must be followed, and fieldwork risk assessments that must be completed.

Please read these rules about fieldwork:

1. Participation in all practicals, whether on campus, or at the fieldtrip, is an essential component of the Unit.
2. For all workshops, whether on-campus or on the fieldtrip, you must be wearing covered shoes that are comfortable to walk reasonable distances in (i.e. several kilometres).
3. Please note that the following items of clothing are not acceptable during fieldwork: tops showing mid-riffs, singlets, skirts, shorts or pants showing the ankles. Wearing these clothes increases the risk of ticks, leeches, sunburn, and cuts and scratches that come from walking through dense vegetation. One of the learning outcomes of this unit is “Apply professional and self-management skills—including time management, accountability, and independent learning—to biodiversity monitoring projects”. Therefore, you are required to wear field-safe clothing and shoes, as expected in the profession.

4. All workshops in the Ecology Reserve and the Blue Gum fieldtrip require that fieldwork risk assessments must be completed well in advance. Failure to do so by the due date will mean you cannot undertake the practical or participate in the fieldtrip. We will discuss these forms in the first Weeks 1 and 2, and links to them will be posted on iLearn.

The workshops and field trip will go ahead regardless of the weather, so bring rain gear if the weather looks doubtful (no umbrellas – these cannot open in closed canopy and your hands will be full with equipment).

Changes since First Published

Date	Description
16/07/2026	Edited the due date for the first assessment, brought forward by 24hours

Unit information based on version 2026.03 of the [Handbook](#)