



BIOL3420

Biodiversity and Conservation

Session 2, Weekday attendance, North Ryde 2020

Department of Biological 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 learning activities on campus for the second half-year, while keeping an online version available for those students unable to return or those who choose to continue their studies online.

To check the availability of face-to-face and online 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

Jane Williamson

jane.williamson@mq.edu.au

Credit points

10

Prerequisites

130cp at 1000 level or above including (BIOL2410 or BIOL227)

Corequisites

(BIOL3310 or BIOL316) or (BIOL3410 or BIOL347) or (BIOL3430 or BIOL368) or (BIOL3510 or BIOL369) or (BIOL3440 or BIOL373)

Co-badged status

Unit description

Conservation of populations, species and ecosystems are essential in maintaining biodiversity. Any loss or deterioration in the condition of biodiversity can compromise ecological and human wellbeing. This PACE unit covers the major themes of biodiversity and conservation: patterns of biodiversity, principles of conservation biology, human impacts and management principles. Topics include global biodiversity, threatening processes, protected areas, habitat fragmentation, restoration ecology, climate change impacts and management of threatened species. Practical work is conducted in two compulsory intensive sessions in collaboration with a partner organisation, one on campus during a weekend and the other off campus in Sydney for three consecutive days. This unit is beneficial for students interested in conservation and management of marine, freshwater and/or terrestrial ecosystems.

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: Evaluate the major patterns and services provided by biodiversity globally

ULO2: Identify key threatening processes that lead to the loss of biodiversity, including those experienced through the PACE activity

ULO3: Critically evaluate and synthesise diverse information sources on a current, real-

world conservation issue, and communicate that understanding using a variety of techniques

ULO4: Understand conservation management plans for practical application using principles of conservation biology

ULO5: Evaluate the efficacy of new conservation management strategies in a professional context

Assessment Tasks

Name	Weighting	Hurdle	Due
Poster	15%	No	21 August
Species Assessment	25%	No	11 September
Individual Research Project	25%	No	16 October
Final Exam	35%	No	TBA

Poster

Assessment Type ¹: Poster

Indicative Time on Task ²: 15 hours

Due: **21 August**

Weighting: **15%**

You will prepare a poster that summarises and critically appraises a scientific journal article from the recent conservation biology literature. You will submit this online.

On successful completion you will be able to:

- Evaluate the major patterns and services provided by biodiversity globally
- Identify key threatening processes that lead to the loss of biodiversity, including those experienced through the PACE activity
- Critically evaluate and synthesise diverse information sources on a current, real-world conservation issue, and communicate that understanding using a variety of techniques
- Understand conservation management plans for practical application using principles of conservation biology
- Evaluate the efficacy of new conservation management strategies in a professional context

Species Assessment

Assessment Type ¹: Literature review

Indicative Time on Task ²: 30 hours

Due: **11 September**

Weighting: **25%**

You will write a document on the status of an animal or plant species occurring in NSW. You will identify the history of the species in NSW, threats challenging the species' persistence and nominate a level of threat to the species based on IUCN Red List criteria.

On successful completion you will be able to:

- Evaluate the major patterns and services provided by biodiversity globally
- Identify key threatening processes that lead to the loss of biodiversity, including those experienced through the PACE activity
- Critically evaluate and synthesise diverse information sources on a current, real-world conservation issue, and communicate that understanding using a variety of techniques
- Evaluate the efficacy of new conservation management strategies in a professional context

Individual Research Project

Assessment Type ¹: Case study/analysis

Indicative Time on Task ²: 30 hours

Due: **16 October**

Weighting: **25%**

You will research an allocated project on an aspect of conservation and/or biodiversity relevant to Sydney. You will be given data to manipulate and you will produce a scientific report, which you will submit electronically.

On successful completion you will be able to:

- Identify key threatening processes that lead to the loss of biodiversity, including those experienced through the PACE activity
- Critically evaluate and synthesise diverse information sources on a current, real-world conservation issue, and communicate that understanding using a variety of techniques

- Understand conservation management plans for practical application using principles of conservation biology
- Evaluate the efficacy of new conservation management strategies in a professional context

Final Exam

Assessment Type ¹: Examination

Indicative Time on Task ²: 3 hours

Due: **TBA**

Weighting: **35%**

You will sit a final examination during the examination period at the end of the unit.

On successful completion you will be able to:

- Evaluate the major patterns and services provided by biodiversity globally
- Identify key threatening processes that lead to the loss of biodiversity, including those experienced through the PACE activity
- Critically evaluate and synthesise diverse information sources on a current, real-world conservation issue, and communicate that understanding using a variety of techniques
- Understand conservation management plans for practical application using principles of conservation biology
- Evaluate the efficacy of new conservation management strategies in a professional context

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

Delivery

Lectures will be available online.

A field trip consisting of three consecutive days will run at the Coal Loader Centre of Sustainability, Waverton from 14 to 16 September, inclusive. The field trip will run from 9 am to 5 pm each day. Times will be flexible depending on your research project. You must attend the field trip unless you are ill.

Resources

Students are expected to access all unit material through the iLearn website. Students will be required to use internet resources for sourcing information and to use appropriate software, particularly Excel and a statistics package for data analysis. Knowledge of data storage and analysis is assumed as these skills are not taught in the unit. Students will need access to a portable computer and preferably independent internet connection for the field trip.

Policies and Procedures

Macquarie University policies and procedures are accessible from [Policy Central \(https://staff.mq.edu.au/work/strategy-planning-and-governance/university-policies-and-procedures/policy-central\)](https://staff.mq.edu.au/work/strategy-planning-and-governance/university-policies-and-procedures/policy-central). 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](#) (**Note:** *The Special Consideration Policy is effective from 4 December 2017 and replaces the Disruption to Studies Policy.*)

Students seeking more policy resources can visit the [Student Policy Gateway \(https://students.mq.edu.au/support/study/student-policy-gateway\)](https://students.mq.edu.au/support/study/student-policy-gateway). It is your one-stop-shop for the key policies you need to know about throughout your undergraduate student journey.

If you would like to see all the policies relevant to Learning and Teaching visit [Policy Central \(https://staff.mq.edu.au/work/strategy-planning-and-governance/university-policies-and-procedures/policy-central\)](https://staff.mq.edu.au/work/strategy-planning-and-governance/university-policies-and-procedures/policy-central).

Student Code of Conduct

Macquarie University students have a responsibility to be familiar with the Student Code of Conduct: <https://students.mq.edu.au/study/getting-started/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.

BIOL3420 as a PACE unit

BIOL3420 is a PACE unit within the Department of Biological Sciences. This unit provides an opportunity for students to engage directly with the community by working alongside those in the industry. Students visit Balls Head Reserve and the Coal Loader Centre for Sustainability where they collect data that will be utilised by the local community and industry as part of a longitudinal study of the area.

Biodiversity and conservation researchers and industry partners give guest lectures within the unit, giving students direct exposure to transitional links to the workplace. Partners benefit by interacting with enthusiastic discipline-specific students on the cusp of entering the workforce, and through exposure to new advances in the field of biodiversity and conservation. BIOL3420 gives back to the community through the sharing of data and viewpoints. More information on the role of PACE in BIOL3420 will be given in the lectures.