



# BIOL2420

## Marine Environmental Issues

Session 2, Weekday attendance, North Ryde 2020

*Department of Biological Sciences*

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#### Disclaimer

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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

Convenor

Robert Harcourt

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Tutor

Josh Reed

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Tech support

Nick Harris

Contact via 0298504078

Tutor

Vanessa Morris

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Credit points

10

Prerequisites

[(10cp from MATH or STAT units at 1000 level) or FOSE1015 or FOSE1005] and (20cp from (BIOL1310 or BIOL114) or (BIOL1110 or BIOL115) or BIOL121 or ENVE117 or (ENVS1017 or ENVS117) or (GEOS1130 or GEOS126))

Corequisites

Co-badged status

### Unit description

The marine environment is vitally important to humankind. It provides us with food and energy, it serves as a major transportation route, it performs critical roles in nutrient and carbon cycling and is of high recreational value. Overfishing, pollution, habitat damage, invasive species, and climate change are, however, increasingly eroding these important values of marine ecosystems. Because human communities are tightly coupled to coastal marine resources, understanding pathways to sustainability requires understanding as much about humans as about the ocean. In this unit, we will explore factors that contribute to the sustainability and resilience of marine ecosystems and the human communities that depend upon them. We will do so through a series of case studies on topics such as: deep ocean drilling; wind and wave power generation; shoreline engineering and beach management; restoration of coastal wetlands for habitat and carbon values; marine debris; and fisheries and aquaculture. We will also undertake a fieldtrip.

## 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:** Identify the key goods and services provided to humans by marine ecosystems, and explain how these are maintained by physical, chemical, geological and biological processes.

**ULO2:** Compare and contrast how human activities have historically, are presently and are predicted to in the future modify marine ecosystems and their provision of goods and services.

**ULO3:** Compare how different stakeholder groups value marine environments, and identify and explain scenarios under which conflict among these groups might arise.

**ULO4:** Present a clear and scientifically accurate argument to a general audience regarding the need for restoration and conservation of marine habitats.

**ULO5:** Develop and test hypotheses regarding human impacts to marine ecosystems.

**ULO6:** Explain contemporary and historical approaches to managing marine ecosystems. Critically evaluate peer-reviewed, grey and popular literature on marine ecosystems, their use and management, and integrate information from these sources in written form.

## Assessment Tasks

Name	Weighting	Hurdle	Due
<a href="#">Graphs</a>	15%	No	1 week following each of the five pracs
<a href="#">Field trip report</a>	25%	No	6 Nov 2020
<a href="#">Final exam</a>	30%	No	Semester 2 exam period
<a href="#">Journal of learning</a>	30%	No	8 am on the day of your tutorial, weeks 4-13

### Graphs

Assessment Type [1](#): Problem set

Indicative Time on Task [2](#): 5 hours

Due: **1 week following each of the five pracs**

Weighting: **15%**

Graphing exercises will be submitted for each of five practicals.

On successful completion you will be able to:

- Identify the key goods and services provided to humans by marine ecosystems, and explain how these are maintained by physical, chemical, geological and biological processes.
- Present a clear and scientifically accurate argument to a general audience regarding the need for restoration and conservation of marine habitats.

### Field trip report

Assessment Type [1](#): Lab report

Indicative Time on Task [2](#): 25 hours

Due: **6 Nov 2020**

Weighting: **25%**

Research conducted on the field trip will be written up as a report in the style of the journal *Marine and Freshwater Research*. The journal has strict formatting instructions that must be followed throughout.

On successful completion you will be able to:

- Develop and test hypotheses regarding human impacts to marine ecosystems.
  - Explain contemporary and historical approaches to managing marine ecosystems.
- Critically evaluate peer-reviewed, grey and popular literature on marine ecosystems, their use and management, and integrate information from these sources in written form.

## Final exam

Assessment Type <sup>1</sup>: Examination

Indicative Time on Task <sup>2</sup>: 25 hours

Due: **Semester 2 exam period**

Weighting: **30%**

The final exam will be held during the Semester 2 Exam Period. Please consult the University Handbook to determine the commencement and finishing dates of the compulsory exam period.

On successful completion you will be able to:

- Identify the key goods and services provided to humans by marine ecosystems, and explain how these are maintained by physical, chemical, geological and biological processes.
- Compare and contrast how human activities have historically, are presently and are predicted to in the future modify marine ecosystems and their provision of goods and services.
- Compare how different stakeholder groups value marine environments, and identify and explain scenarios under which conflict among these groups might arise.
- Present a clear and scientifically accurate argument to a general audience regarding the need for restoration and conservation of marine habitats.

## Journal of learning

Assessment Type <sup>1</sup>: Professional writing

Indicative Time on Task <sup>2</sup>: 25 hours

Due: **8 am on the day of your tutorial, weeks 4-13**

Weighting: **30%**

For each of the topics covered in 10 of the 13 weeks, you will be required to document your

online learning activities in a 'journal of learning'. Your journal of learning will take the form of a single blog post written in such a way that it can be clearly understood by a general audience.

On successful completion you will be able to:

- Identify the key goods and services provided to humans by marine ecosystems, and explain how these are maintained by physical, chemical, geological and biological processes.
- Compare and contrast how human activities have historically, are presently and are predicted to in the future modify marine ecosystems and their provision of goods and services.
- Compare how different stakeholder groups value marine environments, and identify and explain scenarios under which conflict among these groups might arise.
- Develop and test hypotheses regarding human impacts to marine ecosystems.
- Explain contemporary and historical approaches to managing marine ecosystems. Critically evaluate peer-reviewed, grey and popular literature on marine ecosystems, their use and management, and integrate information from these sources in written form.

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<sup>1</sup> 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.

<sup>2</sup> 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

In this unit lectures are replaced with online activities and tutorials. Each week you will:

- Complete an on-line module in iLearn (with a blog documenting learning activities posted by 8 am Monday, each week). **This should take you ~3 hrs to complete.**
- Attend a compulsory 3 hr tutorial where we will engage in debates and discussions to further unpack some of the topics.

In addition, each student will complete five practicals during the semester (the dates for these are provided later in this document) and attend a compulsory fieldtrip to Chowder Bay, Mosman on Sunday 11 or Monday 12 October.

## 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](https://ask.mq.edu.au) or if you are a Global MBA student contact [globalmba.support@mq.edu.au](mailto: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](https://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](http://ask.mq.edu.au)

If you are a Global MBA student contact [globalmba.support@mq.edu.au](mailto: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/](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.