



# BIOL7770

## Topics in Australian Marine Science

Session 1, Special circumstances, Other 2021

*Archive (Pre-2022) - 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 activities on campus, and most will keep an online version available to those students unable to return or those who choose to continue their studies online.

To check the availability of face-to-face 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

MQ Convenor

Jane Williamson

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SIMS Convenor

Jessica Boomer

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Credit points

10

Prerequisites

Admission to MRes

Corequisites

Co-badged status

BIOL7770 is also run as BIOL8770.

Unit description

This unit introduces students to current research undertaken in various disciplines of marine science in Australia. It is a multi-institutional unit taught at the Sydney Institute of Marine Science (SIMS) with contributions from the four University partners of SIMS. Lectures and tutorials will be taught by leading researchers in marine science. Topics cover physical and biological oceanography, climate change, molecular ecology, aquaculture, marine biology and marine geosciences. In practical classes, students will analyse and interpret remote-sensing data from the Integrated Marine Observing System (IMOS), which provides comprehensive information on the biological and physical processes of Australia's coastal and oceanic waters. This gives students hands-on experience in working with and analysing big data sets. Students can attend lessons either at SIMS or fully online.

## 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:** Understand the diversity of open access data and instrumentation for data collection

**ULO2:** Formulate and test hypotheses within a scientific framework

**ULO3:** Access and managing data, including those from large datasets

**ULO4:** Produce and present data visually

**ULO5:** Evaluate and synthesise a variety of expert opinions within marine science

## General Assessment Information

### Written assignments on Practical Modules

You are required to hand in written assignments based on the results of exercises completed as part of the practical modules. These will be submitted as an electronic report before the beginning of the practical class the week following the module's conclusion, or as instructed by the lecturer. Reports will include graphs and figures as well as an interpretation of your results in the broader context of the topic. Most practical modules are worth 10%.

Note: some of the modules may be assessed over multiple weeks and will be worth 20% (Physical Oceanography module). The results of the IMOS practical (Week 1) are not assessed.

### Exam

The exam is worth 40% of your total mark. The exam will include multiple choice and short answer questions. More details will be forthcoming closer to the date.

### Academic Honesty

PLEASE READ. Presenting the work of another person as one's own is a serious breach of the University's rules and carries significant penalties. In this unit, we will be checking written work for plagiarism. The University's Academic Honesty Policy can be found at [http://www.mq.edu.au/policy/docs/academic\\_honesty/policy.html](http://www.mq.edu.au/policy/docs/academic_honesty/policy.html)

Penalties for plagiarism include a zero mark for the assessment or in extreme cases, failure of the unit. Plagiarism WILL be noted on your academic record. Full details of penalties can be found at [http://www.mq.edu.au/policy/docs/academic\\_honesty/schedule\\_penalties.html](http://www.mq.edu.au/policy/docs/academic_honesty/schedule_penalties.html)

### Extensions, penalties, and disruption to studies

Late assignments will attract a penalty of 10% of the total mark allocated to the exercise per day. You may hand in work after the due date and escape penalty only if you have an acceptable reason (usually a medical certificate). Discuss your problem with the lecturer as early as possible before the due date. Not that all extension requests must be submitted using an online form from ask.mq.edu.au. Information about the Disruption to Studies policy and procedure is online at Policy Central [http://www.mq.edu.au/policy/docs/disruption\\_studies/procedure.html](http://www.mq.edu.au/policy/docs/disruption_studies/procedure.html). Information on managing your Disruption to Studies is found here [http://students.mq.edu.au/student\\_admin/](http://students.mq.edu.au/student_admin/)

[manage your study program/disruption to studies/](#)

## Assessment Tasks

Name	Weighting	Hurdle	Due
Written assignments	60%	No	TBA (in iLearn)
Test exam	40%	No	TBA

### Written assignments

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

Indicative Time on Task <sup>2</sup>: 60 hours

Due: **TBA (in iLearn)**

Weighting: **60%**

You will submit 6 written assignments based on the results of exercises completed as part of the practical modules.

On successful completion you will be able to:

- Understand the diversity of open access data and instrumentation for data collection
- Formulate and test hypotheses within a scientific framework
- Access and managing data, including those from large datasets
- Produce and present data visually
- Evaluate and synthesise a variety of expert opinions within marine science

### Test exam

Assessment Type <sup>1</sup>: Quiz/Test

Indicative Time on Task <sup>2</sup>: 40 hours

Due: **TBA**

Weighting: **40%**

You will sit a written test exam at the conclusion of the unit. The test format can include multiple-choice questions and short answers.

On successful completion you will be able to:

- Understand the diversity of open access data and instrumentation for data collection
  - Formulate and test hypotheses within a scientific framework
  - Access and managing data, including those from large datasets
  - Produce and present data visually
  - Evaluate and synthesise a variety of expert opinions within marine science
- 

<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

TAMS will run on Thursdays. A face to face class will run at SIMS. You will be able to zoom into the class if working remotely. A recording of the class will be made available. Classes start on the 25th of February and the final exam will be on the 20th of May. Classes will cover a range of modules based on the Integrated Marine Observing System including physical oceanography, zooplankton, animal tracking, Autonomous Underwater Vehicles (AUVs), and benthic ecology.

## Unit Schedule

The weekly schedule is available in iLearn. Please ensure you read the iLearn site prior to classes starting.

## 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](#)
- [Grade Appeal Policy](#)
- [Complaint Management 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](http://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](http://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.

## Assumed Knowledge

This course is data-intensive. You will be downloading, manipulating, and analysing datasets with many thousands of observations. As a result, you need to be proficient in the use of software programs such as Microsoft Excel and basic statistics. We provide below a list of the minimum assumed knowledge to allow you to get the most out of the course. If you are not comfortable with these topics, please spend some time working through the online tutorials we have outlined below.

**Sort and Filter Data:** <https://support.office.microsoft.com/en-au/article/Watch-onlineffb9fcb0-b9cb-48bf-a15c-8bec9fd3a472>

**Doing Calculations and writing formulas in Excel:** <https://support.microsoft.com/en-us/office/create-a-simple-formula-in-excel-11a5f0e5-38a3-4115-85bc-f4a465f64a8a>

**Averaging Data:** <https://support.office.microsoft.com/en-au/article/Watch-online-6cced0be-ca49-41c8-a3f2-cb89e566ab90>

**Plotting in Excel:** <https://support.office.microsoft.com/en-au/article/Watch-online-4d95c6a5-42d2-4cfc-aede-0ebf01d409a8>

**Pivot Tables:** <https://support.office.microsoft.com/en-au/article/Watch-online-7810597d-0837-41f7-9699-5911aa282760>

**Descriptive statistics** - In particular, understanding the mean, standard deviation, standard error and the normal distribution. Many videos can be found here: <https://www.khanacademy.org/math/probability/descriptive-statistics>