



# BIOL773

## Advanced Marine Ecology

S1 Day 2014

*Dept of Biological Sciences*

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## General Information

Unit convenor and teaching staff

Other Staff

Katherine McClellan

[katherine.mcclellan@mq.edu.au](mailto:katherine.mcclellan@mq.edu.au)

Contact via [katherine.mcclellan@mq.edu.au](mailto:katherine.mcclellan@mq.edu.au)

Unit Convenor

Jane Williamson

[jane.williamson@mq.edu.au](mailto:jane.williamson@mq.edu.au)

Contact via [jane.williamson@mq.edu.au](mailto:jane.williamson@mq.edu.au)

Credit points

4

Prerequisites

Admission to MRes

Corequisites

Co-badged status

NCCW Biol373

Unit description

Marine ecosystems play a crucial role in the health and functioning of our world, and consist of a complex and dynamic interplay of biological, chemical and physical processes. Once thought to be relative stable in the face of adversity, we now know that most marine systems are fragile and easily disturbed. In this unit we will assess identify important marine habitats, assess what constitutes a 'healthy' habitat, and explore how such habitats can be conserved in the face of adversities such as human exploitation, habitat modification and climate change. This unit takes a problem-solving approach to gain an advanced understanding of such issues through lectures, practical work, tutorials and assessments, including a literature review (unrelated to the student's masters research topic). Students will have first hand experience in designing and carrying out a research project. The small research project, along with the literature review, will be written up in journal format with the ultimate aim of producing documents of publishable quality. Students will also receive advanced skills for presenting key concepts in marine ecology via novel assessment items such as making conference-quality posters and giving short presentations. The unit will enhance knowledge and skills for students intending to continue with higher degree research.

## 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:

- Describe why marine conservation and management is necessary from a local to global perspective.
- Describe in detail the physical and chemical process that shape and change marine ecosystems.
- Identify threats to all life forms in local, regional and global marine ecosystems.
- Conceptualize the conflicts between marine conservation and the management of marine resources.
- Carry out biodiversity assessments.
- Collect experimental data accurately and apply statistical methods to analyze and graph for results interpretation.
- Conceptualize current and future issues faced by marine parks and fisheries due to the impact of climate change.
- Identify particular marine conservation and management issues associated with urban areas, and how these may differ latitudinally
- Comply with occupational health and safety issues associated with marine field work.
- Prepare written reports to a high scientific standard.
- Develop innovate management solutions to marine conservation issues.
- Communicate complex marine conservation issues at an academic and local community level.

## Assessment Tasks

Name	Weighting	Due
<a href="#">Plastic Pollution</a>	20%	11 April 2014
<a href="#">Podcast</a>	15%	7-11 April 2014
<a href="#">Report</a>	40%	25 April 2014
<a href="#">Shark Diversity</a>	25%	4 April 2014

## Plastic Pollution

Due: **11 April 2014**

Weighting: **20%**

Details week 1 ilearn page

On successful completion you will be able to:

- Describe why marine conservation and management is necessary from a local to global perspective.
- Describe in detail the physical and chemical process that shape and change marine ecosystems.
- Identify threats to all life forms in local, regional and global marine ecosystems.
- Conceptualize the conflicts between marine conservation and the management of marine resources.
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- Identify particular marine conservation and management issues associated with urban areas, and how these may differ latitudinally
- Comply with occupational health and safety issues associated with marine field work.
- Prepare written reports to a high scientific standard.
- Develop innovative management solutions to marine conservation issues.

## Podcast

Due: **7-11 April 2014**

Weighting: **15%**

details week 1 ilearn page

On successful completion you will be able to:

- Describe why marine conservation and management is necessary from a local to global perspective.
- Conceptualize the conflicts between marine conservation and the management of marine resources.
- Conceptualize current and future issues faced by marine parks and fisheries due to the impact of climate change.

- Identify particular marine conservation and management issues associated with urban areas, and how these may differ latitudinally
- Develop innovative management solutions to marine conservation issues.
- Communicate complex marine conservation issues at an academic and local community level.

## Report

Due: **25 April 2014**

Weighting: **40%**

Details week 4 in ilearn

On successful completion you will be able to:

- Describe why marine conservation and management is necessary from a local to global perspective.
- Describe in detail the physical and chemical process that shape and change marine ecosystems.
- Identify threats to all life forms in local, regional and global marine ecosystems.
- Conceptualize the conflicts between marine conservation and the management of marine resources.
- Carry out biodiversity assessments.
- Collect experimental data accurately and apply statistical methods to analyze and graph for results interpretation.
- Conceptualize current and future issues faced by marine parks and fisheries due to the impact of climate change.
- Comply with occupational health and safety issues associated with marine field work.
- Prepare written reports to a high scientific standard.
- Develop innovative management solutions to marine conservation issues.
- Communicate complex marine conservation issues at an academic and local community level.

## Shark Diversity

Due: **4 April 2014**

Weighting: **25%**

details week 1 ilearn page

On successful completion you will be able to:

- Describe in detail the physical and chemical process that shape and change marine ecosystems.
- Carry out biodiversity assessments.
- Collect experimental data accurately and apply statistical methods to analyze and graph for results interpretation.
- Identify particular marine conservation and management issues associated with urban areas, and how these may differ latitudinally
- Prepare written reports to a high scientific standard.
- Develop innovative management solutions to marine conservation issues.

## Delivery and Resources

### CLASSES

#### Lectures

- Tuesday 11-12 E7B 164
- Tuesday 2-3pm E5A 170

#### Practical

- Wednesday 2-5pm F7B 102

### REQUIRED AND RECOMMENDED TEXTS AND/OR MATERIALS

#### Textbook

The textbook for BIOL373 is

- Connell SD & Gillanders BM 2007 *Marine Ecology*. Oxford University Press, 630 pages (ISBN 978-0-19-555302-4).

This book is available at the University bookshop and several copies are held in Open Reserve in the Library. Other recommended readings will be given at the end of lecture summaries and some may be accessible through the library.

### UNIT WEBPAGE AND TECHNOLOGY USED AND REQUIRED

#### BIOL373 Web page

Summaries of lectures, data sets from practicals, instructions for assessment and other juicy resources will be posted throughout the course on the iLearn BIOL373 website. Please check this regularly for any urgent messages (e.g., cancellation of a field trip due to rough seas) – this is our main link with you outside contact hours. You can also use the unit website as a discussion forum to chat with each other regarding aspects of the unit, or to seek help from unit staff for simple questions. If you have larger or difficult questions, please arrange an appointment

with one of the unit staff rather than posting your question online. Unit staff will monitor the online discussions daily each weekday. To access the website go to: <https://ilearn.mq.edu.au/login/MQ/>

More information on this system can be found at: [http://www.mq.edu.au/iLearn/student\\_info/](http://www.mq.edu.au/iLearn/student_info/)

### Marine biology readings Online

Recommended readings are given at the end of each lecture summary and are accessible through library databases or will be made available online. You are not expected to read all of the recommended readings for each lecture; they are there for extra referencing should you wish to know more about a particular topic. You will also be expected to do your own literature searches through the library for assignments. MQ student's usernames and passwords: All students will have received a Username and Password in the mail after enrolments. Usernames consist of the first letter of your given name, then the first four letters of your surname followed by three random numbers as per notification. Passwords are made up of two random characters followed by your birthday (ddmmyy).

## Unit Schedule

### Unit Structure

Weeks 1, 2, 3, and 5 of BIOL773 are delivered via the 'Virtual Classroom'. Whilst you do not physically need to come to campus to attend these sessions, you are expected to logon to each session. It will also be very beneficial for assessment preparation and will give you the perfect opportunity to ask any assessment or BIOL773 questions to the senior tutor. Week 4 is dedicated to the intensive Heron Island research project.

All of these sessions are compulsory

Activity	Date	Time	Location
Preparation	17th-21st March 2014		Virtual Classroom
Meet & Greet	21st March 2014	9:00-11am	Virtual Classroom
Lecture 1-2	24th March 2014	9:00-11am	Virtual Classroom
Tutorial 1	24th March 2014	3:00-4pm	Virtual Classroom
Lecture 3-4	25th March 2014	9:00-11am	Virtual Classroom
Tutorial 2	25th March 2014	3:00-4pm	Virtual Classroom
Lecture 5-6	26th March 2014	9:00-11am	Virtual Classroom
Lecture 7-8	27th March 2014	9:00-11am	Virtual Classroom
Lecture 9-10	28th March 2014	9:00-11am	Virtual Classroom
Lecture 11-12	31st March 2014	9:00-11am	Virtual Classroom

Lecture 13-14	1st April 2014	9:00-11am	Virtual Classroom
Lecture 15	2nd April 2014	9:00-11am	Virtual Classroom
Assessment 1	4th April 2014	Midnight	
Assessment 2	11th April 2014	Midnight	
Assessment 3	7-11 April 2014	9:00-11am	
Heron Island Fieldtrip	13-22nd April 2014	Al day	Heron island (GBR)
Tutorial 3	23rd April 2014	3:00-4pm	Virtual Classroom
Assessment 4	25th April 2014	Midnight	

## Policies and Procedures

Macquarie University policies and procedures are accessible from [Policy Central](#). Students should be aware of the following policies in particular with regard to Learning and Teaching:

Academic Honesty Policy [http://mq.edu.au/policy/docs/academic\\_honesty/policy.html](http://mq.edu.au/policy/docs/academic_honesty/policy.html)

Assessment Policy <http://mq.edu.au/policy/docs/assessment/policy.html>

Grading Policy <http://mq.edu.au/policy/docs/grading/policy.html>

Grade Appeal Policy <http://mq.edu.au/policy/docs/gradeappeal/policy.html>

Grievance Management Policy [http://mq.edu.au/policy/docs/grievance\\_management/policy.html](http://mq.edu.au/policy/docs/grievance_management/policy.html)

Disruption to Studies Policy [http://www.mq.edu.au/policy/docs/disruption\\_studies/policy.html](http://www.mq.edu.au/policy/docs/disruption_studies/policy.html) *The Disruption to Studies Policy is effective from March 3 2014 and replaces the Special Consideration Policy.*

In addition, a number of other policies can be found in the [Learning and Teaching Category](#) of 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/support/student\\_conduct/](https://students.mq.edu.au/support/student_conduct/)

## 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 improve your marks and take control of your study.



- [Workshops](#)
- [StudyWise](#)
- [Academic Integrity Module for Students](#)
- [Ask a Learning Adviser](#)

## 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)

## IT Help

For help with University computer systems and technology, visit <http://informatics.mq.edu.au/help/>.

When using the University's IT, you must adhere to the [Acceptable Use Policy](#). The policy applies to all who connect to the MQ network including students.