



# EESC2160

## Climate and Oceans

Session 2, Weekday attendance, North Ryde 2021

*Department of Earth and Environmental Sciences*

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#### **Disclaimer**

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#### **Session 2 Learning and Teaching Update**

The decision has been made to conduct study online for the remainder of Session 2 for all units WITHOUT mandatory on-campus learning activities. Exams for Session 2 will also be online where possible to do so.

This is due to the extension of the lockdown orders and to provide certainty around arrangements for the remainder of Session 2. We hope to return to campus beyond Session 2 as soon as it is safe and appropriate to do so.

Some classes/teaching activities cannot be moved online and must be taught on campus. You should already know if you are in one of these classes/teaching activities and your unit convenor will provide you with more information via iLearn. If you want to confirm, see the list of [units with mandatory on-campus classes/teaching activities](#).

Visit the [MQ COVID-19 information page](#) for more detail.

## General Information

Unit convenor and teaching staff

Unit Convenor

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Credit points

10

Prerequisites

(ENVE117 or ENVS117 or ENVS1017 or GEOS117 or GEOS112 or GEOS1110 or GEOS126 or EESC1160) or 10cp in PHYS units at 1000 level

Corequisites

Co-badged status

Unit description

The Earth's climate and oceans are intimately linked and are fundamental to life on this planet. This unit explores the climate system and the role that oceans play in regulating climate. The unit examines climate and ocean interactions and processes on a range of spatial scales (local to global) and time scales (daily to decadal and millennial). The unit includes a field trip that introduces students to evidence of climate drivers and responses in marine and coastal habitats such as sea-level rise impacts and adaptation.

## Important Academic Dates

Information about important academic dates including deadlines for withdrawing from units are available at <https://students.mq.edu.au/important-dates>

## Learning Outcomes

On successful completion of this unit, you will be able to:

**ULO1:** Demonstrate an understanding of the fundamental links between the climate and oceans to interpret climate-ocean interactions and processes.

**ULO2:** Apply data collected from measuring and modelling climate-ocean interactions to understand mechanisms of climate and ocean variability.

**ULO3:** Demonstrate effective individual and team work skills in climate-ocean science to understand and solve real-world environmental problems in both the field and laboratory.

**ULO4:** Draw on and synthesise appropriate sources of information to communicate ideas about climate drivers and responses in marine and coastal habitats.

## General Assessment Information

### Assessment Criteria

Assessment at Macquarie University is standards-based, as outlined in the [Assessment Policy](#). This means that your work will be assessed against clear criteria, and these criteria (e.g. in a rubric) will be made available when the assessment tasks are released to you on iLearn.

### Submission of Assessments

All assessments must be submitted online through [Turnitin](#) unless otherwise indicated. Links for the submission of each assessment will be available on iLearn.

You should always check that you have uploaded the correct file. If you have a problem, please email the Unit Convenor with your correct file. You must also keep a copy of your assessments until the end of semester in case there is a problem with your submission. It is your responsibility to ensure that you can provide a copy of your assessment if requested.

### Marking of Assessments

Assignments will usually be marked through Turnitin with grades provided through Gradebook on iLearn. Please do not submit your assessments via email or in hard copy unless requested (e.g. a sketch or drawing).

We aim to return your assessment grades and feedback within two to three weeks of the date that you submitted it. We appreciate your patience and will advise you through iLearn when your marked assessments and feedback are available for viewing.

### Penalties for Late Assessments

The penalty for late submission of assessments in this unit is **ten percent (10 %) of the assessment value per day**, calculated from the due time and date. This means that if the assignment is worth a total of 30 marks (or 30 % of the unit) you will lose 3 marks for each day it is late. This is a hefty penalty designed to make you aware of the importance of organising yourself around assessment due dates. The penalty will be applied over weekdays and weekends unless you have been granted an extension prior to the due date.

### Extensions for Assessments

To obtain an extension for an assessment task, you will need to follow the formal process as outlined in the [Special Consideration Policy](#), and you must provide appropriate supporting evidence (e.g. medical certificate - see advice for [Special Consideration](#) requests). The final decision regarding the granting of an extension lies with the unit convenor. Permission for

extensions must be sought **before the due date** unless there are exceptional circumstances. Please let us know of problems in advance or as soon as possible, not after the event. We are likely to be much more sympathetic and able to accommodate your circumstance if you follow this advice.

## Assessment Tasks

Name	Weighting	Hurdle	Due
<a href="#">Quizzes</a>	30%	No	10th September & 28th October 2021
<a href="#">Practical report</a>	20%	No	Between 7th August - 3rd September 2021
<a href="#">Fieldtrip report and presentation</a>	50%	No	15th October (report) and 21st October (presentation)

### Quizzes

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

Indicative Time on Task <sup>2</sup>: 18 hours

Due: **10th September & 28th October 2021**

Weighting: **30%**

Assessment 1 involves two multiple-choice quizzes, each worth 15% of the final grade. Content can be from the lectures, practicals, fieldwork or assigned readings.

On successful completion you will be able to:

- Demonstrate an understanding of the fundamental links between the climate and oceans to interpret climate-ocean interactions and processes.
- Apply data collected from measuring and modelling climate-ocean interactions to understand mechanisms of climate and ocean variability.

### Practical report

Assessment Type <sup>1</sup>: Lab report

Indicative Time on Task <sup>2</sup>: 12 hours

Due: **Between 7th August - 3rd September 2021**

Weighting: **20%**

Assessment 2 is a practical report worth 20% of the final grade. The report will include experimental data introduced during practicals that is presented with appropriate graphical representation and statistical analysis, and a conclusion drawing correct associations and inferences from the data. During this assessment task students will develop skills to apply to the fieldtrip report.

On successful completion you will be able to:

- Demonstrate effective individual and team work skills in climate-ocean science to understand and solve real-world environmental problems in both the field and laboratory.
- Draw on and synthesise appropriate sources of information to communicate ideas about climate drivers and responses in marine and coastal habitats.

## Fieldtrip report and presentation

Assessment Type <sup>1</sup>: Field work task

Indicative Time on Task <sup>2</sup>: 30 hours

Due: **15th October (report) and 21st October (presentation)**

Weighting: **50%**

Assessment 3 is a fieldtrip report and presentation based on a 2-day local fieldtrip, worth 50% of the final grade. The content of the report will include an Introduction, Methods, Results, Discussion, Acknowledgements and References. This will be translated to a non-scientific audience in group presentations.

On successful completion you will be able to:

- Demonstrate an understanding of the fundamental links between the climate and oceans to interpret climate-ocean interactions and processes.
- Apply data collected from measuring and modelling climate-ocean interactions to understand mechanisms of climate and ocean variability.
- Demonstrate effective individual and team work skills in climate-ocean science to understand and solve real-world environmental problems in both the field and laboratory.
- Draw on and synthesise appropriate sources of information to communicate ideas about climate drivers and responses in marine and coastal habitats.

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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 [Learning Skills Unit](#) 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

### Unit iLearn

This unit has an iLearn page that can be accessed through [ilearn.mq.edu.au](http://ilearn.mq.edu.au). It contains important information and other materials relating to the unit, including details and links for assessments.

### Communication

The unit iLearn is the primary way that we communicate with you. Please check it regularly for announcements and posts. You are encouraged to use the Discussion Board on iLearn to post questions and generate discussion with other students. Please only email the convenor with private matters – all other questions should be posted on iLearn.

### Unit Organisation

This unit is delivered in **two modules and weekly topics**. A **one day field trip** is also scheduled for this unit outside of normal class time. The organisation of these is outlined in a detailed unit schedule which is available on [iLearn](#).

### Classes

The class timetable for this unit can be found through the [Timetable](#) portal. You should also check the unit schedule as some weeks may have other instructions or locations.

### Workload

The expected workload for this 10-credit point unit is 150 hours of activity, comprising lecture attendance and review, practical class attendance and report completion, research towards the completion of the field trip report and presentation, attendance of the field day, and exam preparation.

### Requirements to complete this unit satisfactorily

To complete this unit satisfactorily, you must:

1. Participate in all scheduled classes;
2. Complete all assessments including the final exam; and
3. Achieve a pass grade or higher.

The descriptions for grades common to all coursework units offered by Macquarie University are outlined in [Schedule 1 of the Assessment Policy](#).

## Recommended Texts and/or Materials

Readings will be provided each week on iLearn

## Technology Used and Required

This unit will use iLearn and Echo360. See the [Instructions on how to log in to iLearn](#) and the [iLearn quick guides for students](#) which will help you:

- [Getting started](#) - Find out how to navigate and familiarise yourself with the iLearn environment
- [Activities](#) - Learn how to effectively complete the activities required of you in iLearn
- [Assignments and Gradebook](#) - Find out how to submit assessments and view your grades using iLearn
- [Online study tips](#) - Studying online is a unique experience, learn how to navigate it here
- [Discussion forums](#) - Explore the different types, and features of discussion forums in iLearn
- [Lecture recordings](#) - Find out how to access lectures online, as well as the features available to you

## Unit Schedule

Week	Date	Lecturer	Lecture Topic	Practical Topic	Assessment
<i>Module 1: Marine Climate Change</i>					
1	Thursday 29th July	SW	Introduction- coupled ocean atmosphere system in time	No practical	
2	Thursday 6th August	NS	Palaeo Sea level and coastal morphodynamics	Practical 1 East Australian sea level trend analysis	Assessable Prac due Fri 7th August
3	Thursday 13th August	NS	Extreme maritime storms	Practical 2 Vertical accretion of intertidal habitats	Assessable Prac due Fri 14th August
4	Thursday 20th August	NS	Marine climate and weather- ENSO and the IOD	Practical 3 Indigenous perspectives in coastal and marine management	

5	Thursday 27th August	NS	Blue Carbon	Practical 4 Spatial analysis of habitat change	Assessable Prac due Fri 28th August
<i>Module 2: Coastal processes and management</i>					
6	Thursday 2nd September	SW	Shoreface and surf zone processes	Practical 5 Beach monitoring data	Assessable Prac due Fri 3rd September
7	Thursday 9th September	SW	Estuarine processes	Practical 6 Tidal current data analysis	1st quiz (15%) Fri 10th September
<i>Study Break</i> <div style="text-align: right;">Excursion Sat 11th &amp; Sun 12th September</div>					
8	Thursday 30th September	SW	Storm surge, coastal flooding and sea-level rise	Practical 7 Storm surge and sea level rise	
9	Thursday 7th October	SW	Coastal Zone Management	Practical 8 Managing the Coasts	
10	Thursday 14th October	SW	Marine Pollution	Practical 9 Pollution management	Field Report due Fri 15th October (30%)
11	Thursday 21st October	SW	Field trip group presentations		In class presentations (20%)
12	Thursday 28th October	SW	Final Quiz		2nd quiz (15%) Thu 28th October
13	No Class				

## 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 Enquiry Service

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)

## Equity 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.

## 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.