EESC2160

Climate and Oceans

Session 2, In person-scheduled-weekday, North Ryde 2024

School of Natural Sciences

Contents

General Information

Unit convenor and teaching staff
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 and the impact of climate change on ocean and coastal processes. 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://www.mq.edu.au/study/calendar-of-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-coastal interactions to understand mechanisms of climate and ocean and coastal variability, and appropriate management responses.

ULO3: Demonstrate effective individual and team work skills in climate-ocean-coastal 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.

Late Assessment Submission Penalty

From 1 July 2022, Students enrolled in Session based units with written assessments will have the following university standard late penalty applied. Please see https://students.mq.edu.au/study/assessment-exams/assessments for more information.

Unless a Special Consideration request has been submitted and approved, a 5% penalty (of the total possible mark) will be applied each day a written assessment is not submitted, up until the 7th day (including weekends). After the 7th day, a grade of '0' will be awarded even if the assessment is submitted. Submission time for all written assessments is set at 11:55 pm. A 1-hour grace period is provided to students who experience a technical concern.

For any late submission of time-sensitive tasks, such as scheduled tests/exams, performance assessments/presentations, and/or scheduled practical assessments/labs, students need to submit an application for Special Consideration.

Assessments where Late Submissions will be accepted

In this unit, late submissions will accepted as follows:

- Assessment 1 Quiz - NO, unless Special Consideration is Granted
- Assessment 2 Practical Report – YES, Standard Late Penalty applies
- Assessment 3 Field Report - YES, Standard Late Penalty applies

Special Consideration

The Special Consideration Policy aims to support students who have been impacted by short-term circumstances or events that are serious, unavoidable and significantly disruptive, and which may affect their performance in assessment. If you experience circumstances or events that affect your ability to complete the assessments in this unit on time, please inform the convenor and submit a Special Consideration request through ask.mq.edu.au.

Requirements to Pass this Unit

To pass this unit, you must achieve a total mark equal to or greater than 50%

Assessment Tasks

Name	Weighting	Hurdle	Due
Quizzes	20%	No	09/09/2024; 30/10/2024
Practical reports	30%	No	05/08/2024; 12/08/2024; 26/08/2024; 02/09/2024
Fieldtrip report	40%	No	14/10/2024

Name	Weighting	Hurdle	Due
Group presentation	10%	No	16/10/2024; 23/10/2024

Quizzes

Assessment Type [1]: Quiz/Test
Indicative Time on Task [2]: 10 hours
Due: **09/09/2024; 30/10/2024**
Weighting: **20%**

Assessment 1 involves two multiple-choice quizzes, each worth 10% of the final grade. Content can be from the lectures, practicals, fieldwork or assigned readings.

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Practical reports

Assessment Type [1]: Lab report
Indicative Time on Task [2]: 20 hours
Due: **05/08/2024; 12/08/2024; 26/08/2024; 02/09/2024**
Weighting: **30%**

Assessment 2 is a series of practical reports collectively worth 30% 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-coastal 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

Assessment Type [1]: Field work task
Indicative Time on Task [2]: 30 hours
Due: **14/10/2024**
Weighting: **40%**

Assessment 3 is a fieldtrip report based on a 2-day local fieldtrip, worth 40% of the final grade. The content of the report will include an Introduction, Methods, Results, Discussion, Acknowledgements and References.

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- Apply data collected from measuring and modelling climate-ocean-coastal interactions to understand mechanisms of climate and ocean and coastal variability, and appropriate management responses.
- Demonstrate effective individual and team work skills in climate-ocean-coastal science to understand and solve real-world environmental problems in both the field and laboratory.
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Group presentation

Assessment Type [1]: Presentation
Indicative Time on Task [2]: 12 hours
Due: **16/10/2024; 23/10/2024**
Weighting: **10%**

Forming groups, you will present your findings to the class in a 15 minute presentation, followed by five minutes of question time. You will communicate the context of the research, key research findings, conclusions drawn and management recommendations. The Presentation is worth 10% of the final grade

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[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

The Unit consists of a weekly discussion of pre-recorded lectures scheduled for Wednesdays at 1 PM, in 14SCO, T5 Lecture theatre. The lectures are also available in on-line form, uploaded to iLearn on the Friday of the week prior, which can be viewed at a time convenient to the student. The Wednesday morning lecture period is therefore an opportunity for you to engage with the lecturer and the material. There will be a weekly 2-hour practical session on campus on Wednesdays 2 PM - 4 PM, in 01CC, Room 109. The excursion will be held on Saturday 7th September, on the Central Coast, and students will be allocated to either a morning or afternoon group. We will communicate with you via your university email or through announcements on iLearn. Queries to convenors can either be placed on the iLearn discussion board or sent to anjali.gopakumar@mq.edu.au from your university email address.

COVID Information

For the latest information on the University's response to COVID-19, please refer to the Coronavirus infection page on the Macquarie website: https://www.mq.edu.au/about/coronavirus-faqs. Remember to check this page regularly in case the information and requirements change during semester. If there are any changes to this unit in relation to COVID, these will be communicated via iLearn.

Unit Schedule

Week	Date	Lecturer	Lecture Topic	Practical Topic	Assessment
Module 1: Marine climate change					
1	Wednesday 24th July	AG	Introduction-coupled Ocean atmosphere system in time	No practical	

2	Wednesday 31st July	AG	Palaeo Sea level and coastal morphodynamics	Practical 1 East Australian sea level trend analysis	**Assessable practical due Monday, 5th August**
3	Wednesday 7th August	AG	Extreme maritime storms	Practical 2 Vertical accretion of intertidal habitats	**Assessable practical due Monday, 12th August**
4	Wednesday 14th August	AG	Marine climate and weather- ENSO and the IOD	Practical 3: IPCC Interactive Atlas + Indigenous perspectives in coastal management	
Module 2: Coastal processes and management					
5	Wednesday 21st August	AG	Estuarine processes	Practical 4 Spatial analysis of habitat change	**Assessable practical due Monday, 26th August**
6	Wednesday 28th August	AG/ NS	Blue carbon	Practical 5 Indonesia case study	**Assessable practical due Monday, 2nd September**
7	Wednesday 4th September	LW	Seagrasses	Practical 6 Seagrasses	**1st quiz (10%) Monday, 9th September**
Field trip 7th September					
8	Wednesday 11th September	AG	Coastal zone management	Practical 7 Seminar	
Study break: 16-29 September					
9	Wednesday 2nd October	LW	The Southern Ocean	Practical 8 Ocean facilities	
10	Wednesday 9th October	LW	Tropicalization	Practical 9 Managing the Coasts	**Field report due Monday, 14th October (40%)**
11	Wednesday 16th October	AG +LW	Field trip group presentations		**In class presentations (10%)**
12	Wednesday 23rd October	AG +LW	Field trip group presentations		
13	Wednesday 30th October	Final Quiz			**2nd quiz (10%) Wednesday, 30th October**

Policies and Procedures

Macquarie University policies and procedures are accessible from Policy Central (https://policie

s.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
- Assessment Procedure
- Complaints Resolution 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). 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) 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 connect.mq.edu.au or if you are a Global MBA student contact globalmba.support@mq.edu.au

Academic Integrity

At Macquarie, we believe academic integrity – honesty, respect, trust, responsibility, fairness and courage – is at the core of learning, teaching and research. We recognise that meeting the expectations required to complete your assessments can be challenging. So, we offer you a range of resources and services to help you reach your potential, including free online writing and maths support, academic skills development and wellbeing consultations.

Student Support

Macquarie University provides a range of support services for students. For details, visit http://students.mq.edu.au/support/

The Writing Centre

The Writing Centre provides resources to develop your English language proficiency, academic writing, and communication skills.

- Workshops
- Chat with a WriteWISE peer writing leader
- Access StudyWISE
- Upload an assignment to Studiosity
- Complete the 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

Macquarie University offers a range of Student Support Services including:

- IT Support
- Accessibility and disability support with study
- Mental health support
- Safety support to respond to bullying, harassment, sexual harassment and sexual assault
- Social support including information about finances, tenancy and legal issues
- Student Advocacy provides independent advice on MQ policies, procedures, and processes

Student Enquiries

Got a question? Ask us via the Service Connect Portal, or contact Service Connect.

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.

Changes from Previous Offering

This year's offering will place greater emphasis on the practical reports (previously 20%, currently 30%) over quizzes (previously 30%, currently 20%).

Changes since First Published

Date	Description
22/07/2024	Realised that I had written the due date wrongly for the final quiz - changed it to 30th October from 28th October under 'Assessment Tasks' and 'Unit Schedule'.

Unit information based on version 2024.02 of the Handbook