



GEOS1130

Blue Planet: Oceans, Climate and Life

Session 2, Weekday attendance, North Ryde 2020

Department of Earth and Environmental Sciences

Contents

General Information	2
Learning Outcomes	2
General Assessment Information	3
Assessment Tasks	4
Delivery and Resources	8
Policies and Procedures	9

Disclaimer

Macquarie University has taken all reasonable measures to ensure the information in this publication is accurate and up-to-date. However, the information may change or become out-dated as a result of change in University policies, procedures or rules. The University reserves the right to make changes to any information in this publication without notice. Users of this publication are advised to check the website version of this publication [or the relevant faculty or department] before acting on any information in this publication.

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

Stefan Loehr

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Credit points

10

Prerequisites

Corequisites

Co-badged status

Unit description

Oceans cover more than 70% of the Earth's surface; they are the unique feature of our home planet which enabled the evolution of complex life, influence Earth's climate and weather, and provide food for much of the world's population. This unit introduces students to this exceptional environment through study of the oceans past, present and future, with particular focus on the oceans' ties to climate and life. The unit considers: the geological history and dynamics of ocean basins; technology for probing the ocean's depths; physical, biological and chemical oceanographic processes; ocean circulation patterns; waves and tides; shallow water and deep marine depositional environments; marine life; long term global climate change; and human interactions with the marine environment. Students will be introduced to water and sediment sampling techniques via a virtual fieldtrip, as well as practise basic sediment characterisation techniques.

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 processes that control the configuration and temporal evolution of ocean basins

ULO2: Describe the major patterns and controls on oceanic and atmospheric circulation, shallow versus deep water sedimentation, and climate change through Earth's history

ULO3: Identify the major classes and characteristics of marine life, and link their distribution to the physical, chemical and biological properties of seawater

- ULO4:** Display basic familiarity with the tools and approaches used to explore and map the ocean, collect marine samples, characterise sediments and reconstruct past climates
- ULO5:** Display competency in accessing, synthesising and using appropriate information to address questions in marine science
- ULO6:** Accurately communicate ideas with supporting evidence

General Assessment Information

GENERAL ASSESSMENT CRITERIA

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.

Hurdle Requirements

A hurdle requirement is an activity for which a minimum level of performance or participation is a condition of passing the unit (see the [Assessment Policy](#)). Failure to meet the hurdle requirement will result in failure of the unit. In this unit **practical participation** is a hurdle requirement. You must attend and participate in at least 10 of the 12 weekly practical classes to pass this unit. Please contact your tutor or the unit convenor if you are unwell and are unable to attend, you can attend a practical scheduled on another day or participate online if approved by the unit convenor.

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.

Exams

Details of exam conditions and timetables can be found on the [Exams and Results](#) portal. The draft exam timetable will be released approximately eight weeks before the commencement of the exams. The final exam timetable will be published 4 weeks before commencement. All students (including exchange students) are expected to present themselves for the exam at the time and place designated in the exam timetable. Note this may include weekends.

For unavoidable disruptions during exams, you should apply for [Special Consideration](#) as soon as possible. If a Supplementary Examination is granted as a result of the Special Consideration process, the exam time will be scheduled after the conclusion of the official examination period and you will receive an individual notification prior to the exam with the exact date and time of the Supplementary Examination. You will only be allowed one opportunity to sit the Supplementary Exam as outlined in the [Special Consideration Policy](#).

Assessment Tasks

Name	Weighting	Hurdle	Due
Tectonics, Oceanography & Climate Report	20%	No	Week 7
Case study report	20%	No	Week 12
Non-Assessment Practical Participation Requirement Hurdle	0%	Yes	Each week
Weekly quizzes	20%	No	Each week
Final Exam	40%	No	Examination Period

Tectonics, Oceanography & Climate Report

Assessment Type ¹: Report

Indicative Time on Task ²: 24 hours

Due: **Week 7**

Weighting: **20%**

Report evaluating the links between tectonics, oceanography and climate (1500 words min, 3000 words max).

On successful completion you will be able to:

- Demonstrate an understanding of the processes that control the configuration and temporal evolution of ocean basins
- Describe the major patterns and controls on oceanic and atmospheric circulation, shallow versus deep water sedimentation, and climate change through Earth's history
- Identify the major classes and characteristics of marine life, and link their distribution to the physical, chemical and biological properties of seawater
- Display basic familiarity with the tools and approaches used to explore and map the ocean, collect marine samples, characterise sediments and reconstruct past climates
- Display competency in accessing, synthesising and using appropriate information to address questions in marine science
- Accurately communicate ideas with supporting evidence

Case study report

Assessment Type ¹: Case study/analysis

Indicative Time on Task ²: 20 hours

Due: **Week 12**

Weighting: **20%**

Report synthesising sediment property data to explain the source and distribution of sediments in the marine environment (1000 words min, 2000 words max)

On successful completion you will be able to:

- Demonstrate an understanding of the processes that control the configuration and temporal evolution of ocean basins
- Identify the major classes and characteristics of marine life, and link their distribution to the physical, chemical and biological properties of seawater
- Display basic familiarity with the tools and approaches used to explore and map the

ocean, collect marine samples, characterise sediments and reconstruct past climates

- Display competency in accessing, synthesising and using appropriate information to address questions in marine science
- Accurately communicate ideas with supporting evidence

Non-Assessment Practical Participation Requirement Hurdle

Assessment Type ¹: Participatory task

Indicative Time on Task ²: 0 hours

Due: **Each week**

Weighting: **0%**

This is a hurdle assessment task (see [assessment policy](#) for more information on hurdle assessment tasks)

You must upload completed worksheets for at least 10 of the 12 weekly practical classes to demonstrate class participation and pass this unit. Please contact your tutor or the unit convenor as soon as possible if you have difficulty with this. There may be alternatives available to make up the work, e.g. attend one of the other practicals that week. If there are circumstances that mean you miss a class, you can apply for disruption to study.

On successful completion you will be able to:

- Demonstrate an understanding of the processes that control the configuration and temporal evolution of ocean basins
- Describe the major patterns and controls on oceanic and atmospheric circulation, shallow versus deep water sedimentation, and climate change through Earth's history
- Identify the major classes and characteristics of marine life, and link their distribution to the physical, chemical and biological properties of seawater
- Display basic familiarity with the tools and approaches used to explore and map the ocean, collect marine samples, characterise sediments and reconstruct past climates
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Weekly quizzes

Assessment Type ¹: Quiz/Test

Indicative Time on Task ²: 12 hours

Due: **Each week**

Weighting: **20%**

Weekly online quiz covering material from lecture, practical and weekly readings

On successful completion you will be able to:

- Demonstrate an understanding of the processes that control the configuration and temporal evolution of ocean basins
- Describe the major patterns and controls on oceanic and atmospheric circulation, shallow versus deep water sedimentation, and climate change through Earth's history
- Identify the major classes and characteristics of marine life, and link their distribution to the physical, chemical and biological properties of seawater
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Final Exam

Assessment Type ¹: Examination

Indicative Time on Task ²: 18 hours

Due: **Examination Period**

Weighting: **40%**

Final exam comprising a mix of multiple-choice and written questions cover all material covered in unit (2 hour duration, plus 10 minutes reading time)

On successful completion you will be able to:

- Demonstrate an understanding of the processes that control the configuration and temporal evolution of ocean basins
- Describe the major patterns and controls on oceanic and atmospheric circulation, shallow versus deep water sedimentation, and climate change through Earth's history
- Identify the major classes and characteristics of marine life, and link their distribution to the physical, chemical and biological properties of seawater
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address questions in marine science

- Accurately communicate ideas with supporting evidence

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

DELIVERY AND RESOURCES

Unit iLearn

This unit has an iLearn page that can be accessed through 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 as several inter-related modules. The organisation of these is outlined in a detailed unit schedule which is available on [iLearn](#).

The class will be delivered through iLearn, online lectures, practicals as well as mandatory weekly reading. In addition, you are encourage to do your own research.

Classes

Practicals and lectures start in WEEK 1 (29 July-2 Aug). You are expected to have listened to the online lectures **before** participating in the practical class. 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 lectures, practicals, weekly reading, weekly quiz and research and writing of assessment tasks.

Requirements to complete this unit satisfactorily

To complete this unit satisfactorily, you must:

1. Participate in all scheduled classes;
2. Complete all assessments and 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](#).

Textbook

We will be using Segar's "Introduction to Ocean Science (4th Edition)" - available via the authors website - as the primary textbook for GEOS1130. Textbooks usually cost well over \$100, but the author of this text has chosen to make it freely available. However, we do ***ask that you contribute a few dollars for the book through PayPal (info is on the book download page) to help the author cover costs of keeping this excellent resource up to date***. We also highly recommend Trujillo & Thurman's "Essentials of Oceanography". Additional readings will be made available via iLearn as required.

Please remember that the weekly readings are compulsory, you will have to keep on top of these to do well in GEOS1130. The quizzes and the exam will include material from the readings that we will not have time to cover in detail in the lectures or in the practical sessions.

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

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](http://staff.mq.edu.au/work/strategy-planning-and-governance/university-policies-and-procedures/policy-central) (<http://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 or if you are a Global MBA student contact 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) 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

If you are a Global MBA student contact 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/.

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.