



# GEOS2130

## Marine Sediments: Records of Past Earth

Session 1, Weekday attendance, North Ryde 2021

*Archive (Pre-2022) - Department of Earth and Environmental Sciences*

### Contents

---

<a href="#"><u>General Information</u></a>	2
<a href="#"><u>Learning Outcomes</u></a>	2
<a href="#"><u>General Assessment Information</u></a>	3
<a href="#"><u>Assessment Tasks</u></a>	3
<a href="#"><u>Delivery and Resources</u></a>	6
<a href="#"><u>Policies and Procedures</u></a>	6

#### **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 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

Unit convenor and lecturer

Stefan Loehr

[stefan.loehr@mq.edu.au](mailto:stefan.loehr@mq.edu.au)

Contact via x8378

12 WW 334

By agreement, please contact via email or on iLearn

Credit points

10

Prerequisites

(GEOS112 or GEOS125 or GEOS126 or GEOS1110 or GEOS1120 or GEOS1130) and (60cp at 1000 level or above)

Corequisites

Co-badged status

Unit description

This unit builds the skills necessary to understand geological processes in modern and ancient marine environments. With a focus on marine sedimentology, we will examine the formation, accumulation, alteration, and preservation of sediments in the geological record. We will cover the basics of fluid flow and sediment transport, sedimentary textures and structures, and illustrate the connections between modern landforms and ancient rocks/depositional environments. This unit will focus on the reconstruction and interpretation of ancient palaeo-environments based on the analysis of sedimentary structures, stratigraphy, and fossils. The unit will include practical components as well as a fieldtrip to the New South Wales south coast.

## 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:** Identify the common types of sedimentary rocks, sedimentary structures, stratigraphic features, and use these to infer depositional environments

**ULO2:** Deduce the depositional history from a stratigraphic sequence

**ULO3:** Utilise specialised software and tools to interrogate samples or data sets to formulate internally consistent answers to scientific questions

**ULO4:** Demonstrate the ability to observe and record information in the field in order to later report on field trip results

**ULO5:** Examine and interpret the interactions between climate, circulation, tectonics, weathering, and sedimentary environments

**ULO6:** Effectively and professionally communicate scientific information to experts and non-experts

## General Assessment Information

### Late Submissions

Any work received after the deadline will be marked down 10%, with an additional 5% each additional day (24 hrs) past the deadline. Extensions are only possible with instructor permission and requests must be made by email to the unit convenor before the assessment deadline.

### Final Exam

If you apply for Disruption to Study for your final examination, you must make yourself available during the supplemental exam period. If you are not available at that time, there is no guarantee an additional examination time will be offered. Specific examination dates and times will be determined at a later date.

## Assessment Tasks

Name	Weighting	Hurdle	Due
<a href="#">Sedimentary Rock Identification</a>	15%	No	Week 6
<a href="#">Weekly Quiz</a>	20%	No	Weeks 1 to 12
<a href="#">Field Exam &amp; Final Exam</a>	45%	No	Week 7 and Examination Period
<a href="#">Research Poster</a>	20%	No	Week 12

### Sedimentary Rock Identification

Assessment Type <sup>1</sup>: Report

Indicative Time on Task <sup>2</sup>: 20 hours

Due: **Week 6**

Weighting: **15%**

Report demonstrating student's ability to characterise sedimentary rocks and interpret

depositional environments (3 pages maximum)

On successful completion you will be able to:

- Identify the common types of sedimentary rocks, sedimentary structures, stratigraphic features, and use these to infer depositional environments
- Examine and interpret the interactions between climate, circulation, tectonics, weathering, and sedimentary environments
- Effectively and professionally communicate scientific information to experts and non-experts

## Weekly Quiz

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

Indicative Time on Task <sup>2</sup>: 10 hours

Due: **Weeks 1 to 12**

Weighting: **20%**

Weekly quiz covering material from in class, practical and assigned readings

On successful completion you will be able to:

- Identify the common types of sedimentary rocks, sedimentary structures, stratigraphic features, and use these to infer depositional environments
- Deduce the depositional history from a stratigraphic sequence
- Utilise specialised software and tools to interrogate samples or data sets to formulate internally consistent answers to scientific questions
- Examine and interpret the interactions between climate, circulation, tectonics, weathering, and sedimentary environments

## Field Exam & Final Exam

Assessment Type <sup>1</sup>: Examination

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

Due: **Week 7 and Examination Period**

Weighting: **45%**

The Field Exam (15%) comprising a mix of multiple choice and short answer questions in workshop following the fieldtrip (1 hour duration). The Final exam (30%) 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:

- Identify the common types of sedimentary rocks, sedimentary structures, stratigraphic features, and use these to infer depositional environments
- Deduce the depositional history from a stratigraphic sequence
- Utilise specialised software and tools to interrogate samples or data sets to formulate internally consistent answers to scientific questions
- Demonstrate the ability to observe and record information in the field in order to later report on field trip results
- Examine and interpret the interactions between climate, circulation, tectonics, weathering, and sedimentary environments
- Effectively and professionally communicate scientific information to experts and non-experts

## Research Poster

Assessment Type <sup>1</sup>: Project

Indicative Time on Task <sup>2</sup>: 15 hours

Due: **Week 12**

Weighting: **20%**

Students will produce a poster synthesising their research findings on a given time period in Earth's history

On successful completion you will be able to:

- Identify the common types of sedimentary rocks, sedimentary structures, stratigraphic features, and use these to infer depositional environments
- Deduce the depositional history from a stratigraphic sequence
- Utilise specialised software and tools to interrogate samples or data sets to formulate internally consistent answers to scientific questions
- Examine and interpret the interactions between climate, circulation, tectonics, weathering, and sedimentary environments
- Effectively and professionally communicate scientific information to experts and non-experts

<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

### Workshops

GEOS2130 utilises the workshop format, i.e. there are no separately timetables lectures and practicals. Rather there will be recorded online lectures you will be expected to be familiar with before coming to the workshops, alternatively in some weeks lecture and practical hands-on content will be blended in weekly workshops. Lecture slides for pre-recorded lectures and within-workshop 'mini-lectures' will be available on the iLearn page but lecture recordings will not be provided for the within-workshop 'mini-lectures'.

Students are expected to satisfactorily participate in a minimum of 10 (ten) of the 12 (twelve) weekly workshops. To monitor this attendance will be recorded, and workshop hand-outs will be collected and reviewed each week. Due to space and supplies limitations, you must participate in the workshop session you are enrolled in. Permission to attend a different workshop may be possible and will be evaluated on a case by case basis, but this permission must be approved by the unit convenor in advance. Laptop computers will be provided if required. Food and drink are not allowed in the practical room for safety reasons.

### Field work

During this unit we will have a field trip to the NSW South Coast from April 6th through April 10th to study both modern and ancient marine depositional environments. As a vital part of the unit, participation in the field trip is *compulsory*. There is a fee associated with this field trip and the costs will be discussed during the first few weeks of the unit. Students will need to provide their own appropriate personal field gear (sturdy footwear, rain jacket, field notebook) and purchase food in addition to the field trip fee. Please contact one of your instructors immediately with any concerns.

### Quizzes

A quiz will be posted on iLearn weekly (except in week 13). Quizzes will cover material from each workshop, lecture content as well as material covered in the assigned reading materials. Your two lowest marks will be dropped, each of the remaining 10 quizzes will count for 2% of your final mark.

## Policies and Procedures

Macquarie University policies and procedures are accessible from [Policy Central](https://policycentral.mq.edu.au) (<https://policycentral.mq.edu.au>)

[s.mq.edu.au](https://www.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](https://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](https://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.