



EESC2150

Mass extinctions and the hidden history of Earth

Session 2, In person-scheduled-weekday, North Ryde 2026

School of Natural Sciences

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General Information

Unit convenor and teaching staff

Unit convenor and Workshop facilitator

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Consultation by email appointment

Field Trip facilitator, Marker

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Field Trip facilitator, Marker

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Credit points

10

Prerequisites

EESC1150

Corequisites

Co-badged status

Unit description

This unit will develop the interdisciplinary skills needed to describe and interpret the geological record throughout Earth history to understand changes in Earth processes and the imprint left in rocks of major upheavals. You will develop skills in field work and geological mapping, rock and mineral identification in hand samples and under the microscope, and synthesising data to address scientific questions.

Learning in this unit enhances student understanding of global challenges identified by the United Nations Sustainable Development Goals ([UNSDGs](#)) Quality Education; Climate Action; Life on Land; Life Below Water

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: observe, understand and record geological information to map rocks and structures and interpret geological history.

ULO2: identify and analyse common sedimentary, metamorphic and igneous rocks to deduce how they formed.

ULO3: integrate scientific data from multiple sources to solve real-world problems and effectively communicate scientific information to experts and non-experts.

ULO4: develop team work, problem solving and project management skills to assess geological settings in Earth's past.

General Assessment Information

Late Assessment Submission Penalty

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/assessments-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 be accepted for all assessments following the standard late penalties described above. The dates for submission of assessment tasks are listed on the schedule. ***Students must keep a photocopy of their reports.***

Requirements to Pass this Unit

To pass this unit, you should attempt all assessments and must achieve a total mark greater than or equal to 50%.

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.

Written Assessments: If you experience circumstances or events that affect your ability to complete the written assessments in this unit on time, please inform the convenor and submit a Special Consideration request through ask.mq.edu.au.

Assessment Tasks

Name	Weighting	Hurdle	Due	Groupwork/Individual	Short Extension	AI Approach
<u>Literature Review</u>	20%	No	21/08/2026	Individual	Yes	Open
<u>Field Report</u>	40%	No	11/09/2026	Individual	Yes	Open
<u>Skills-based test</u>	40%	No	16/09/2026	Individual	No	Observed

Literature Review

Assessment Type ¹: Written Submission

Indicative Time on Task ²: 30 hours

Due: **21/08/2026**

Weighting: **20%**

Groupwork/Individual: Individual

Short extension ³: Yes

AI Approach: Open

A summary, interpretation or an evaluation of research findings in a field of study. See iLearn for details of the literature review.

On successful completion you will be able to:

- integrate scientific data from multiple sources to solve real-world problems and effectively communicate scientific information to experts and non-experts.

Field Report

Assessment Type ¹: Written Submission

Indicative Time on Task ²: 20 hours

Due: **11/09/2026**

Weighting: **40%**

Groupwork/Individual: Individual

Short extension ³: Yes

AI Approach: Open

A report comprising multiple components that may include preparation for going in the field, virtual and field-based tasks and analysis of data. See iLearn for details.

On successful completion you will be able to:

- observe, understand and record geological information to map rocks and structures and interpret geological history.
- identify and analyse common sedimentary, metamorphic and igneous rocks to deduce how they formed.
- integrate scientific data from multiple sources to solve real-world problems and effectively communicate scientific information to experts and non-experts.
- develop team work, problem solving and project management skills to assess geological settings in Earth's past.

Skills-based test

Assessment Type ¹: Examination

Indicative Time on Task ²: 18 hours

Due: **16/09/2026**

Weighting: **40%**

Groupwork/Individual: Individual

Short extension ³: No

AI Approach: Observed

Final test of skills and knowledge developed in this unit.

On successful completion you will be able to:

- identify and analyse common sedimentary, metamorphic and igneous rocks to deduce how they formed.
- integrate scientific data from multiple sources to solve real-world problems and effectively communicate scientific information to experts and non-experts.

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
- [Academic Success](#) 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.

³ An automatic short extension is available for some assessments. Apply through the [Service Connect Portal](#).

Delivery and Resources

Week 1 class: EESC2150 runs a Workshop (3hr) and starts the Field Trip (3hr) work in week 1, i.e., you must attend both classes in week 1.

Methods of communication: We will communicate with you via your university email (if personal) and through announcements on iLearn. Queries to convenors must be placed on the iLearn discussion board (if not personal) or sent to the unit convenor via the contact email on iLearn (if personal).

Introduction: This is a hands on unit of study that will reinforce skills developed in first year (EESC1150 Planet Earth) and acquaint you with the essential features of the materials that constitute the Earth, processes that shape the Earth's surface, and the deeper Earth processes that lead to rock change. The unit is an **introduction to deep Earth processes and interpreting Earth history** and not only forms the vital stepping stone for future studies in Earth and Environmental Science, but also sets out to give students from other disciplines a basic understanding of the physical Earth.

We aim to help you develop the skills necessary for study of the physical Earth. By the end of the unit, you should have the skills to:

- Make critical observations of geology for yourself
- Identify minerals and rocks
- Determine geometric relationships between rock units, as depicted on geological maps
- Use geological information to better understand the physical Earth

STUDY PROGRAM

This unit concentrates on five major themes that will be explored and revisited in various ways throughout the unit. These themes include:

- Deep time (prehistorical and ancient geological past)
- Plate tectonics
- The rock cycle
- Geological skills, e.g., mineral/rock identification, cross-sectioning, interpreting geological history, mapping

- How geoscience can be used to solve some of the problems of the 21st century

There are two modules that investigate different aspects of geoscience. The main ideas and objectives for the modules are:

Module 1: Applied Geology (approximately two-thirds of the unit)

By the end of this unit module students should be able to:

- Understand the rock-cycle and key deep earth processes that make and change rocks
- Distinguish typical hand specimens of different rock types and investigate these in thin section
- Read and interpret geological maps using cross sections to determine geological history

Module 2: Site Investigation and Engineering Geology (approximately one-third of the unit)

By the end of this unit module students should be able to:

- Characterise sedimentary rocks in drill core
- Correlate multiple drill sites to build geological cross-sections
- Complete a site investigation for urban development

FIELD TRIPS

During this unit of study you will be required to participate in field trips: on-campus (in-person during the workshop class) and virtual (completed with the help of a demonstrator in weekly classes). These excursions form an essential part of the unit and give you an introduction to field geology.

Unit Schedule

The schedule is available on iLearn.

Policies and Procedures

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

Academic Success

[Academic Success](#) provides resources to develop your English language proficiency, academic writing, and communication skills.

- [Ask a Study Coach](#)
- [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 <https://students.mq.edu.au/support/technology/service-desk>.

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 unit is continually updated. Please help us by providing feedback each week on how the unit is progressing.

Unit information based on version 2026.03 of the [Handbook](#)