



# GEOS206

## Marine Depositional Environments

S1 External 2015

*Dept of Earth and Planetary Sciences*

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## General Information

Unit convenor and teaching staff

Unit Convenor

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E7A508

Credit points

3

Prerequisites

GEOS125 or GEOS115 or GEOS126 or GEOS116

Corequisites

Co-badged status

Unit description

This unit builds the skills needed to understand geological processes and products in modern and ancient marine environments. The unit examines sedimentary and volcanic processes and their products; evidence of present day hydrothermal alteration and metamorphism of the oceanic lithosphere; and the formation of ore deposits in marine rocks. Emphasis is placed on reconstruction of ancient environments using lithological, geometrical and palaeontological data. There is a five day field trip 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:

- . Understanding of the tools and methods that are used in the geosciences

- Competence in applying geoscientific principles to understanding the world around you

- Capacity to employ appropriate geoscientific tools to solve problems and to interpret the results

- Understanding scientific methodology

- Competence in accessing, using and synthesising appropriate information

- Application of knowledge to solving problems and evaluating ideas and information

Team work skills

Capacity to present ideas clearly with supporting evidence

## Assessment Tasks

Name	Weighting	Due
Research projects	30%	Week6, 10
Fieldwork	14%	TBA
Quizzes	6%	TBA
Practical exam	10%	17th May
Final examination	40%	University exam period

### Research projects

Due: **Week6, 10**

Weighting: **30%**

On successful completion you will be able to:

- Understanding of the tools and methods that are used in the geosciences
- Competence in applying geoscientific principles to understanding the world around you
- Capacity to employ appropriate geoscientific tools to solve problems and to interpret the results
- Understanding scientific methodology
- Competence in accessing, using and synthesising appropriate information
- Application of knowledge to solving problems and evaluating ideas and information
- Team work skills
- Capacity to present ideas clearly with supporting evidence

### Fieldwork

Due: **TBA**

Weighting: **14%**

On successful completion you will be able to:

- Understanding of the tools and methods that are used in the geosciences
- Competence in applying geoscientific principles to understanding the world around you
- Capacity to employ appropriate geoscientific tools to solve problems and to interpret the

results

- Understanding scientific methodology
- Competence in accessing, using and synthesising appropriate information
- Application of knowledge to solving problems and evaluating ideas and information
- Team work skills
- Capacity to present ideas clearly with supporting evidence

## Quizzes

Due: **TBA**

Weighting: **6%**

On successful completion you will be able to:

- . Understanding of the tools and methods that are used in the geosciences
- Competence in applying geoscientific principles to understanding the world around you
- Application of knowledge to solving problems and evaluating ideas and information

## Practical exam

Due: **17th May**

Weighting: **10%**

Exam will require you to identify six rock samples and giving the evidence/logic on which your conclusion was based.

On successful completion you will be able to:

- . Understanding of the tools and methods that are used in the geosciences
- Competence in applying geoscientific principles to understanding the world around you
- Capacity to employ appropriate geoscientific tools to solve problems and to interpret the results
- Competence in accessing, using and synthesising appropriate information
- Application of knowledge to solving problems and evaluating ideas and information

## Final examination

Due: **University exam period**

Weighting: **40%**

On successful completion you will be able to:

- . Understanding of the tools and methods that are used in the geosciences
- Competence in applying geoscientific principles to understanding the world around you

- Capacity to employ appropriate geoscientific tools to solve problems and to interpret the results
- Competence in accessing, using and synthesising appropriate information
- Application of knowledge to solving problems and evaluating ideas and information

## Delivery and Resources

Lectures are available on Ilearn. Some of the practical component will be completed externally but the microscopic examination of rocks in thin section, the poster evaluation, the practical exam will be completed during the on-campus two days (16-17 May).

## Policies and Procedures

Macquarie University policies and procedures are accessible from [Policy Central](#). Students should be aware of the following policies in particular with regard to Learning and Teaching:

Academic Honesty Policy [http://mq.edu.au/policy/docs/academic\\_honesty/policy.html](http://mq.edu.au/policy/docs/academic_honesty/policy.html)

Assessment Policy <http://mq.edu.au/policy/docs/assessment/policy.html>

Grading Policy <http://mq.edu.au/policy/docs/grading/policy.html>

Grade Appeal Policy <http://mq.edu.au/policy/docs/gradeappeal/policy.html>

Grievance Management Policy [http://mq.edu.au/policy/docs/grievance\\_management/policy.html](http://mq.edu.au/policy/docs/grievance_management/policy.html)

Disruption to Studies Policy [http://www.mq.edu.au/policy/docs/disruption\\_studies/policy.html](http://www.mq.edu.au/policy/docs/disruption_studies/policy.html) *The Disruption to Studies Policy is effective from March 3 2014 and replaces the Special Consideration Policy.*

In addition, a number of other policies can be found in the [Learning and Teaching Category](#) of 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/support/student\\_conduct/](https://students.mq.edu.au/support/student_conduct/)

## Results

Results shown in *iLearn*, 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).

## 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 improve your marks and take control of your study.

- [Workshops](#)
- [StudyWise](#)
- [Academic Integrity Module for Students](#)
- [Ask a Learning Adviser](#)

## 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)

## IT Help

For help with University computer systems and technology, visit <http://informatics.mq.edu.au/help/>.

When using the University's IT, you must adhere to the [Acceptable Use Policy](#). The policy applies to all who connect to the MQ network including students.

## Graduate Capabilities

### Creative and Innovative

Our graduates will also be capable of creative thinking and of creating knowledge. They will be imaginative and open to experience and capable of innovation at work and in the community. We want them to be engaged in applying their critical, creative thinking.

This graduate capability is supported by:

### Learning outcomes

- Competence in applying geoscientific principles to understanding the world around you
- Competence in accessing, using and synthesising appropriate information

### Assessment tasks

- Research projects
- Fieldwork

### Capable of Professional and Personal Judgement and Initiative

We want our graduates to have emotional intelligence and sound interpersonal skills and to demonstrate discernment and common sense in their professional and personal judgement. They will exercise initiative as needed. They will be capable of risk assessment, and be able to handle ambiguity and complexity, enabling them to be adaptable in diverse and changing

environments.

This graduate capability is supported by:

### **Learning outcomes**

- Competence in applying geoscientific principles to understanding the world around you
- Application of knowledge to solving problems and evaluating ideas and information
- Team work skills

### **Assessment tasks**

- Research projects
- Fieldwork

## **Commitment to Continuous Learning**

Our graduates will have enquiring minds and a literate curiosity which will lead them to pursue knowledge for its own sake. They will continue to pursue learning in their careers and as they participate in the world. They will be capable of reflecting on their experiences and relationships with others and the environment, learning from them, and growing - personally, professionally and socially.

This graduate capability is supported by:

### **Learning outcomes**

- Competence in applying geoscientific principles to understanding the world around you
- Application of knowledge to solving problems and evaluating ideas and information

### **Assessment tasks**

- Research projects
- Fieldwork

## **Discipline Specific Knowledge and Skills**

Our graduates will take with them the intellectual development, depth and breadth of knowledge, scholarly understanding, and specific subject content in their chosen fields to make them competent and confident in their subject or profession. They will be able to demonstrate, where relevant, professional technical competence and meet professional standards. They will be able to articulate the structure of knowledge of their discipline, be able to adapt discipline-specific knowledge to novel situations, and be able to contribute from their discipline to inter-disciplinary solutions to problems.

This graduate capability is supported by:

### **Learning outcomes**

- . Understanding of the tools and methods that are used in the geosciences
- Competence in applying geoscientific principles to understanding the world around you

- Capacity to employ appropriate geoscientific tools to solve problems and to interpret the results
- Understanding scientific methodology
- Competence in accessing, using and synthesising appropriate information
- Application of knowledge to solving problems and evaluating ideas and information
- Team work skills

## **Assessment tasks**

- Research projects
- Fieldwork
- Quizzes
- Practical exam
- Final examination

## **Critical, Analytical and Integrative Thinking**

We want our graduates to be capable of reasoning, questioning and analysing, and to integrate and synthesise learning and knowledge from a range of sources and environments; to be able to critique constraints, assumptions and limitations; to be able to think independently and systemically in relation to scholarly activity, in the workplace, and in the world. We want them to have a level of scientific and information technology literacy.

This graduate capability is supported by:

## **Learning outcomes**

- . Understanding of the tools and methods that are used in the geosciences
- Competence in applying geoscientific principles to understanding the world around you
- Capacity to employ appropriate geoscientific tools to solve problems and to interpret the results
- Understanding scientific methodology
- Competence in accessing, using and synthesising appropriate information
- Application of knowledge to solving problems and evaluating ideas and information
- Team work skills
- Capacity to present ideas clearly with supporting evidence

## **Assessment tasks**

- Research projects
- Fieldwork
- Quizzes
- Practical exam



- Final examination

## Problem Solving and Research Capability

Our graduates should be capable of researching; of analysing, and interpreting and assessing data and information in various forms; of drawing connections across fields of knowledge; and they should be able to relate their knowledge to complex situations at work or in the world, in order to diagnose and solve problems. We want them to have the confidence to take the initiative in doing so, within an awareness of their own limitations.

This graduate capability is supported by:

### Learning outcomes

- . Understanding of the tools and methods that are used in the geosciences
- Competence in applying geoscientific principles to understanding the world around you

### Assessment tasks

- Research projects
- Fieldwork
- Practical exam
- Final examination

## Effective Communication

We want to develop in our students the ability to communicate and convey their views in forms effective with different audiences. We want our graduates to take with them the capability to read, listen, question, gather and evaluate information resources in a variety of formats, assess, write clearly, speak effectively, and to use visual communication and communication technologies as appropriate.

This graduate capability is supported by:

### Learning outcomes

- Competence in applying geoscientific principles to understanding the world around you
- Capacity to employ appropriate geoscientific tools to solve problems and to interpret the results
- Team work skills

### Assessment tasks

- Research projects
- Fieldwork
- Practical exam
- Final examination

## Engaged and Ethical Local and Global citizens

As local citizens our graduates will be aware of indigenous perspectives and of the nation's historical context. They will be engaged with the challenges of contemporary society and with knowledge and ideas. We want our graduates to have respect for diversity, to be open-minded, sensitive to others and inclusive, and to be open to other cultures and perspectives: they should have a level of cultural literacy. Our graduates should be aware of disadvantage and social justice, and be willing to participate to help create a wiser and better society.

This graduate capability is supported by:

### Learning outcome

- Competence in applying geoscientific principles to understanding the world around you

### Assessment task

- Fieldwork

## Socially and Environmentally Active and Responsible

We want our graduates to be aware of and have respect for self and others; to be able to work with others as a leader and a team player; to have a sense of connectedness with others and country; and to have a sense of mutual obligation. Our graduates should be informed and active participants in moving society towards sustainability.

This graduate capability is supported by:

### Learning outcomes

- Competence in accessing, using and synthesising appropriate information
- Application of knowledge to solving problems and evaluating ideas and information
- Team work skills

### Assessment tasks

- Research projects
- Fieldwork