

# **GEOS1910**

# Advanced Earth and Environmental Sciences I

Session 2, Special circumstance 2020

Department of Earth and Environmental Sciences

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#### 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 ot her small group learning activities on campus for the second half-year, while keeping an online ver sion available for those students unable to return or those who choose to continue their studies onli ne.

To check the availability of face-to-face and onlin e activities for your unit, please go to timetable viewer. To check detailed information on unit asses sments visit your unit's iLearn space or consult your unit convenor.

#### **General Information**

Unit convenor and teaching staff

Heather Handley

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Credit points

10

Prerequisites

Admission to BAdvSc

Corequisites

Co-badged status

Unit description

This unit caters for advanced Earth and Environmental students who are strong in chemistry, biology, mathematics or physics and who are interested in pursuing a scientific career. This unit consists of weekly research-focussed seminars on current topics in Earth and Environmental sciences with a variety of scientists from a diverse background. Students are expected to produce a presentation on their favourite topic. Students will also undertake research projects with departmental researchers and/or scientists in government departments.

# 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:** Read, interpret and discuss major contributions to earth and environmental science research published in the peer-reviewed literature.

**ULO2:** Evaluate how the experimental design and approach of earth and environmental science studies influences the soundness and impact of conclusions.

**ULO3:** Write a short review paper on a topic in earth and environmental science for a non-specialist audience.

**ULO4:** Present ideas clearly with supporting evidence.

**ULO5:** Apply knowledge to solve problems and evaluate ideas and information.

**ULO6:** Demonstrate the ability to write a scientific report.

#### **Assessment Tasks**

Name	Weighting	Hurdle	Due
Research Report	40%	Yes	Week 13
Oral Presentation	20%	Yes	Week 8
Assignment 2: Data Analysis	20%	Yes	Week 11
Literature Review	20%	Yes	Week 5

# Research Report

Assessment Type 1: Project

Indicative Time on Task 2: 60 hours

Due: Week 13 Weighting: 40%

This is a hurdle assessment task (see <u>assessment policy</u> for more information on hurdle assessment tasks)

The aim of this assignment is to undertake research on a specific problem and produce a scientific report about that research. The student will be embedded into a research group and work as part of that team.

On successful completion you will be able to:

- Read, interpret and discuss major contributions to earth and environmental science research published in the peer-reviewed literature.
- Evaluate how the experimental design and approach of earth and environmental science studies influences the soundness and impact of conclusions.
- Write a short review paper on a topic in earth and environmental science for a nonspecialist audience.
- Present ideas clearly with supporting evidence.
- Apply knowledge to solve problems and evaluate ideas and information.
- Demonstrate the ability to write a scientific report.

#### **Oral Presentation**

Assessment Type 1: Presentation Indicative Time on Task 2: 20 hours

Due: Week 8 Weighting: 20%

This is a hurdle assessment task (see <u>assessment policy</u> for more information on hurdle assessment tasks)

Each student has to select a topic relevant to the unit on which a ~15-20 minute long oral presentation will be given to the academic staff on the unit, and other invited EES researchers and of course your fellow students.

On successful completion you will be able to:

- Read, interpret and discuss major contributions to earth and environmental science research published in the peer-reviewed literature.
- · Present ideas clearly with supporting evidence.

# Assignment 2: Data Analysis

Assessment Type 1: Report

Indicative Time on Task 2: 20 hours

Due: Week 11 Weighting: 20%

This is a hurdle assessment task (see <u>assessment policy</u> for more information on hurdle assessment tasks)

The aim of this assignment is to undertake the analysis of a set of earth and environmental science data and produce a scientific report about that analysis.

On successful completion you will be able to:

- Evaluate how the experimental design and approach of earth and environmental science studies influences the soundness and impact of conclusions.
- Present ideas clearly with supporting evidence.
- Apply knowledge to solve problems and evaluate ideas and information.
- Demonstrate the ability to write a scientific report.

#### Literature Review

Assessment Type 1: Literature review Indicative Time on Task 2: 20 hours

Due: Week 5 Weighting: 20%

This is a hurdle assessment task (see <u>assessment policy</u> for more information on hurdle assessment tasks)

The aim of this assignment is to undertake the review of the literature about a particular earth and environmental science topic, so that you can see what the current understanding about that topic is and how it relates to the broader discipline.

On successful completion you will be able to:

Read, interpret and discuss major contributions to earth and environmental science

- research published in the peer-reviewed literature.
- Write a short review paper on a topic in earth and environmental science for a nonspecialist audience.
- · Present ideas clearly with supporting evidence.

- the academic teaching staff in your unit for guidance in understanding or completing this type of assessment
- · the Writing Centre for academic skills support.

# **Delivery and Resources**

Please see Unit Outline in iLearn and the announcements section for up to date delivery and resource information.

### **Policies and Procedures**

Macquarie University policies and procedures are accessible from Policy Central (https://staff.m.q.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 <u>Student Policy Gateway</u> (https://students.m.g.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 (https://staff.mq.edu.au/work/strategy-planning-and-governance/university-policies-and-procedures/policy-central).

<sup>&</sup>lt;sup>1</sup> If you need help with your assignment, please contact:

<sup>&</sup>lt;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

#### **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 <u>eStudent</u>, (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 <u>eStudent</u>. For more information visit <u>ask.mq.edu.au</u> or if you are a Global MBA student contact <u>globalmba.support@mq.edu.au</u>

# Student Support

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

# **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 <u>Disability Service</u> 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 <a href="http://www.mq.edu.au/about\_us/">http://www.mq.edu.au/about\_us/</a> 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.