



GEOS791

Research Topic in Earth and Planetary Sciences

S2 Day 2019

Dept of Earth and Environmental Sciences

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General Information

Unit convenor and teaching staff Yingjie Yang yingjie.yang@mq.edu.au
Credit points 4
Prerequisites Admission to MRes
Corequisites
Co-badged status
Unit description This unit is designed to provide hands-on experience by direct interface with research underway in the Department of Earth and Planetary Sciences. Students will participate in the programs of one or two distinct research groups over the semester and navigate typical situations encountered as members of a scientific research team. They will engage in a range of pertinent research activities and gain experience in data collection and processing as well as the interpretation of data.

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:

1. Understanding of the major research challenges in Earth and Planetary Sciences
2. Understanding scientific approaches and methodologies
3. Competence in accessing, using and synthesising appropriate information
4. Application of knowledge to solving problems and evaluating ideas and information
5. Capacity to present ideas clearly with supporting evidence
6. Develop a working relationship with an academic supervisor

General Assessment Information

This unit is designed to give the students hands on experience in the 'lab', shadowing other PhD/ post-docs if needed, and generally getting them involved in the research being carried out within

the Department of Earth and Planetary Sciences.

Student must identify a suitable Academic Supervisor. The scope of student's project must be negotiated and approved by the individual Academic Supervisor.

The students need to keep a 'lab' book to record their experience and procedures (such as instrument set up, model parameters, results etc.)

Assessment Tasks

Name	Weighting	Hurdle	Due
<u>Project Study Plan</u>	5%	No	Week 2
<u>Literature Review</u>	15%	No	Week 5
<u>Final Report</u>	55%	No	Week 12
<u>Presentation (Oral or Poster)</u>	25%	No	Week 12-13

Project Study Plan

Due: **Week 2**

Weighting: **5%**

Project Study Plan is negotiated and approved by the individual Academic Supervisor

On successful completion you will be able to:

- 1. Understanding of the major research challenges in Earth and Planetary Sciences
- 6. Develop a working relationship with an academic supervisor

Literature Review

Due: **Week 5**

Weighting: **15%**

Literature Review relevant to a chosen research topic within Earth and Planetary Sciences.

On successful completion you will be able to:

- 1. Understanding of the major research challenges in Earth and Planetary Sciences
- 2. Understanding scientific approaches and methodologies
- 3. Competence in accessing, using and synthesising appropriate information
- 4. Application of knowledge to solving problems and evaluating ideas and information
- 5. Capacity to present ideas clearly with supporting evidence

Final Report

Due: **Week 12**

Weighting: **55%**

A minimum 3000 word report, plus lab note book and any relevant figures and tables

On successful completion you will be able to:

- 1. Understanding of the major research challenges in Earth and Planetary Sciences
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- 3. Competence in accessing, using and synthesising appropriate information
- 4. Application of knowledge to solving problems and evaluating ideas and information
- 5. Capacity to present ideas clearly with supporting evidence

Presentation (Oral or Poster)

Due: **Week 12-13**

Weighting: **25%**

Presentation covering results of whole unit.

It could be oral or poster as approved by the individual Academic Supervisor

On successful completion you will be able to:

- 1. Understanding of the major research challenges in Earth and Planetary Sciences
- 2. Understanding scientific approaches and methodologies
- 3. Competence in accessing, using and synthesising appropriate information
- 5. Capacity to present ideas clearly with supporting evidence

Delivery and Resources

There are no lectures or practicals and no textbooks for this unit. Students are expected to gain hands on experience and generally getting involved in the research within the Department of Earth and Planetary Sciences. Students are expected to scope out a suitable research project with their Academic Supervisor, and complete a Study Plan accordingly. Student will arrange a meeting schedule with their Academic Supervisors as part of this process. Academic Supervisors provide guidance and feedback on progress at these meetings.

The main unit web page will be on iLearn: <https://ilearn.mq.edu.au/login/MQ/>

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.*)

Undergraduate 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 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

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.

Graduate Capabilities

PG - Capable of Professional and Personal Judgment and Initiative

Our postgraduates will demonstrate a high standard of discernment and common sense in their professional and personal judgment. They will have the ability to make informed choices and decisions that reflect both the nature of their professional work and their personal perspectives.

This graduate capability is supported by:

Learning outcome

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

Assessment task

- Final Report

PG - Discipline Knowledge and Skills

Our postgraduates will be able to demonstrate a significantly enhanced depth and breadth of knowledge, scholarly understanding, and specific subject content knowledge in their chosen fields.

This graduate capability is supported by:

Learning outcomes

- 1. Understanding of the major research challenges in Earth and Planetary Sciences
- 2. Understanding scientific approaches and methodologies
- 3. Competence in accessing, using and synthesising appropriate information
- 4. Application of knowledge to solving problems and evaluating ideas and information

- 5. Capacity to present ideas clearly with supporting evidence

Assessment tasks

- Project Study Plan
- Literature Review
- Final Report
- Presentation (Oral or Poster)

PG - Critical, Analytical and Integrative Thinking

Our postgraduates will be capable of utilising and reflecting on prior knowledge and experience, of applying higher level critical thinking skills, and of integrating and synthesising learning and knowledge from a range of sources and environments. A characteristic of this form of thinking is the generation of new, professionally oriented knowledge through personal or group-based critique of practice and theory.

This graduate capability is supported by:

Learning outcomes

- 1. Understanding of the major research challenges in Earth and Planetary Sciences
- 2. Understanding scientific approaches and methodologies
- 3. Competence in accessing, using and synthesising appropriate information
- 4. Application of knowledge to solving problems and evaluating ideas and information
- 5. Capacity to present ideas clearly with supporting evidence

Assessment tasks

- Literature Review
- Final Report
- Presentation (Oral or Poster)

PG - Research and Problem Solving Capability

Our postgraduates will be capable of systematic enquiry; able to use research skills to create new knowledge that can be applied to real world issues, or contribute to a field of study or practice to enhance society. They will be capable of creative questioning, problem finding and problem solving.

This graduate capability is supported by:

Learning outcomes

- 1. Understanding of the major research challenges in Earth and Planetary Sciences
- 2. Understanding scientific approaches and methodologies
- 3. Competence in accessing, using and synthesising appropriate information

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

Assessment task

- Final Report

PG - Effective Communication

Our postgraduates will be able to communicate effectively and convey their views to different social, cultural, and professional audiences. They will be able to use a variety of technologically supported media to communicate with empathy using a range of written, spoken or visual formats.

This graduate capability is supported by:

Learning outcomes

- 5. Capacity to present ideas clearly with supporting evidence
- 6. Develop a working relationship with an academic supervisor

Assessment tasks

- Project Study Plan
- Literature Review
- Final Report
- Presentation (Oral or Poster)

PG - Engaged and Responsible, Active and Ethical Citizens

Our postgraduates will be ethically aware and capable of confident transformative action in relation to their professional responsibilities and the wider community. They will have a sense of connectedness with others and country and have a sense of mutual obligation. They will be able to appreciate the impact of their professional roles for social justice and inclusion related to national and global issues

This graduate capability is supported by:

Learning outcome

- 6. Develop a working relationship with an academic supervisor