



GEOS809

Geophysics Laboratory Project

S2 External 2015

Dept of Earth and Planetary Sciences

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General Information

Unit convenor and teaching staff Mark Lackie mark.lackie@mq.edu.au
Credit points 4
Prerequisites Permission of Executive Dean of Faculty
Corequisites
Co-badged status
Unit description Students in this unit complete an approved laboratory or computer project in an area of geophysics. The completed project must be presented as a scientific report suitable for publication in a technical journal.

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:

- Competence in accessing, using and synthesising appropriate information
- Application of knowledge to solving problems and evaluating ideas and information
- Capacity to present ideas clearly with supporting evidence
- Understanding scientific methodology
- Ability to acquire quality scientific data

Assessment Tasks

Name	Weighting	Due
Initial Proposal	5%	Week 2
Literature Review	15%	Week 4

Name	Weighting	Due
<u>Scientific Report</u>	70%	Week 12
<u>Presentation</u>	10%	Week 13

Initial Proposal

Due: **Week 2**

Weighting: **5%**

Formulate a proposal to undertake a scientific investigation of a problem.

On successful completion you will be able to:

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

Literature Review

Due: **Week 4**

Weighting: **15%**

Undertake a review of the literature about a key aspect of the scientific problem being considered or the technique that is being used to answer the problem.

On successful completion you will be able to:

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

Scientific Report

Due: **Week 12**

Weighting: **70%**

Collect, analyse and/or model data that has been collected to answer a scientific question. Interpret that data and then write a scientific report on that data and how it relates to the research question.

On successful completion you will be able to:

- Competence in accessing, using and synthesising appropriate information

- Application of knowledge to solving problems and evaluating ideas and information
- Capacity to present ideas clearly with supporting evidence
- Understanding scientific methodology
- Ability to acquire quality scientific data

Presentation

Due: **Week 13**

Weighting: **10%**

Give a presentation on the findings of the research undertaken.

On successful completion you will be able to:

- Capacity to present ideas clearly with supporting evidence
- Understanding scientific methodology

Delivery and Resources

There is no textbook for the unit.

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

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

Disruption to Studies Policy 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/

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](#).

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

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

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

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

- Understanding scientific methodology

Assessment tasks

- Initial Proposal
- Literature Review
- Scientific Report

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

- Competence in accessing, using and synthesising appropriate information
- Application of knowledge to solving problems and evaluating ideas and information
- Capacity to present ideas clearly with supporting evidence
- Understanding scientific methodology
- Ability to acquire quality scientific data

Assessment tasks

- Initial Proposal
- Literature Review
- Scientific Report

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

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

- Ability to acquire quality scientific data

Assessment tasks

- Initial Proposal
- Literature Review
- Scientific 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

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

Assessment tasks

- Initial Proposal
- Literature Review
- Scientific Report
- Presentation