GEOS7922

Advanced Field and Laboratory Techniques

Session 2, Special circumstances 2021

Archive (Pre-2022) - Department of Earth and Environmental Sciences

Contents

Session 2 Learning and Teaching Update

The decision has been made to conduct study online for the remainder of Session 2 for all units WITHOUT mandatory on-campus learning activities. Exams for Session 2 will also be online where possible to do so.

This is due to the extension of the lockdown orders and to provide certainty around arrangements for the remainder of Session 2. We hope to return to campus beyond Session 2 as soon as it is safe and appropriate to do so.

Some classes/teaching activities cannot be moved online and must be taught on campus. You should already know if you are in one of these classes/teaching activities and your unit convenor will provide you with more information via iLearn. If you want to confirm, see the list of units with mandatory on-campus classes/teaching activities.

Visit the MQ COVID-19 information page for more detail.

General Information

Unit convenor and teaching staff
Ken Cheng
ken.cheng@mq.edu.au

Credit points
10

Prerequisites
Admission to MRes

Corequisites

Co-badged status

Unit description
This foundation unit provides opportunities for preparative training and hands-on experience in learning cutting-edge field and/or laboratory techniques in Earth and Environmental Sciences. Generic research skills developed include research planning, time management, budgeting, note-taking, sketching and formulation of a field sampling or laboratory investigation campaign. Students will explore advanced analytical techniques that may include using high-end equipment and/or completing a field trip that develops field methods, such as geomorphological, soil or outcrop analysis, or terrestrial or marine sample collection. Students will gain a highly tailored experience of advanced techniques relevant to their specific research interests in consultation with a research group or research mentor. Students will demonstrate mastery of new skills through production of a field or laboratory report and associated activities.

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: Demonstrate knowledge of research methods and advanced analytical techniques through the design and implementation of a project plan to answer a specific research question

ULO2: Effectively communicate the design of a field sampling or laboratory investigation to your peers and project-relevant academics using verbal and written methods

ULO3: Work professionally with a research supervisor, and other research collaborators as required to plan and undertake a research project.

ULO4: Appropriately record research findings and utilise these records to produce a research report and reflect on initial project design.

General Assessment Information

Project Plan Presentation

Assessment Type: Presentation

Indicative Time on Task: 10 hours

A 10 minute presentation and 5 minute Q&A on the proposed project plan including methods, budget and timeline

On successful completion you will be able to:

- Demonstrate knowledge of research methods and advanced analytical techniques through the design and implementation of a project plan to answer a specific research question
- Effectively communicate the design of a field sampling or laboratory investigation to your peers and project-relevant academics using verbal and written methods

Lab/Field notebook

Assessment Type: Lab book

Indicative Time on Task: 0 hours

Record of field and/or laboratory activities including reflections on limitations and assumptions of the project design. May contain raw, observational data acquired in the field or in a practical activity, Records may include analyses of data and a discussion of what the data reveal.

On successful completion you will be able to:

Appropriately record research findings and utilise these records to produce a research report and reflect on initial project design.

Project Report

Assessment Type: Report Indicative Time on Task: 57 hours

Project report to include introduction to research question, methods and research plan and research findings.

On successful completion you will be able to:

- Demonstrate knowledge of research methods and advanced analytical techniques through the design and implementation of a project plan to answer a specific research

question

- Work professionally with a research supervisor, and other research collaborators as required to plan and undertake a research project.
- Appropriately record research findings and utilise these records to produce a research report and reflect on initial project design.

Reflection task

Assessment Type: Reflective Writing

Indicative Time on Task: 5 hours

Written reflection on initial individual project plan and recommendations in planning and undertaking research projects to avoid potential pitfalls based on group discussion and reflection.

On successful completion you will be able to:

- Appropriately record research findings and utilise these records to produce a research report and reflect on initial project design.

Assessment Tasks

Name	Weighting	Hurdle	Due
Lab/Field notebook	30%	No	22 October 23:59
Project Report	50%	No	31 October 23:59
Project Plan Presentation	10%	No	19 August 11-1, in class
Reflection task	10%	No	5 November 23:59

Lab/Field notebook

Assessment Type [1]: Lab book
Indicative Time on Task [2]: 0 hours
Due: **22 October 23:59**
Weighting: **30%**

Record of field and/or laboratory activities including reflections on limitations and assumptions of the project design. May contain raw, observational data acquired in the field or in a practical activity, Records may include analyses of data and a discussion of what the data reveal.

On successful completion you will be able to:

- Appropriately record research findings and utilise these records to produce a research report and reflect on initial project design.

Project Report

Assessment Type [1]: Report
Indicative Time on Task [2]: 57 hours
Due: **31 October 23:59**
Weighting: **50%**

Project report to include introduction to research question, methods and research plan and research findings.

On successful completion you will be able to:

- Demonstrate knowledge of research methods and advanced analytical techniques through the design and implementation of a project plan to answer a specific research question
- Work professionally with a research supervisor, and other research collaborators as required to plan and undertake a research project.
- Appropriately record research findings and utilise these records to produce a research report and reflect on initial project design.

Project Plan Presentation

Assessment Type [1]: Presentation
Indicative Time on Task [2]: 10 hours
Due: **19 August 11-1, in class**
Weighting: **10%**

A 10 minute presentation and 5 minute Q&A on the proposed project plan including methods, budget and timeline

On successful completion you will be able to:

- Demonstrate knowledge of research methods and advanced analytical techniques through the design and implementation of a project plan to answer a specific research question
- Effectively communicate the design of a field sampling or laboratory investigation to your

peers and project-relevant academics using verbal and written methods

Reflection task

Assessment Type [1]: Reflective Writing
Indicative Time on Task [2]: 5 hours
Due: **5 November 23:59**
Weighting: **10%**

Written reflection on initial individual project plan and recommendations in planning and undertaking research projects to avoid potential pitfalls based on group discussion and reflection.

On successful completion you will be able to:

- Appropriately record research findings and utilise these records to produce a research report and reflect on initial project design.

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[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
- the Writing Centre 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

Delivery and Resources

This unit has an iLearn page that can be accessed through ilearn.mq.edu.au. It contains important information and other materials relating to the unit, including details and links for assessments.

Policies and Procedures

Macquarie University policies and procedures are accessible from Policy Central (https://policies.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

- Grade Appeal Policy
- Complaint Management 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). 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) 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 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 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 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.