



ENVS7403

Science in Environmental Management

Session 1, Weekday attendance, North Ryde 2020

Department of Earth and Environmental Sciences

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General Information

Unit convenor and teaching staff

Kerrie Tomkins

kerrie.tomkins@mq.edu.au

Credit points

10

Prerequisites

Admission to MRes

Corequisites

Co-badged status

Unit description

The aim of this unit is to provide an understanding of how environmental science is used to inform environmental management and decision making. The unit introduces students to the core principles of scientific method and practice, as well as some of the major physical, chemical and ecological processes that effect and control natural and anthropogenic environmental impacts. Core skills in field data collection, laboratory analysis and scientific writing are developed through a weekend field trip, and weekly lectures and workshops. Students gain experience in applying their research skills to evaluate real-world environmental management problems and develop effective solutions and recommendations from the viewpoint of science.

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 a sound understanding of the principles of scientific method and practice.

ULO2: Critically review peer-reviewed scientific literature relating to environmental management.

ULO3: Collect and analyse scientific data to evaluate real-world environmental management problems.

ULO4: Research and synthesise different forms of scientific data and other information on an environmental topic, and present this in written, oral and visual forms.

ULO5: Demonstrate proficiency in professional skills acquired through individual research and working in groups.

Assessment Tasks

Coronavirus (COVID-19) Update

Assessment details are no longer provided here as a result of changes due to the Coronavirus (COVID-19) pandemic.

Students should consult [iLearn](#) for revised unit information.

[Find out more about the Coronavirus \(COVID-19\) and potential impacts on staff and students](#)

General Assessment Information

Assessment Criteria

Assessment at Macquarie University is standards-based, as outlined in the [Assessment Policy](#). This means that your work will be assessed against clear criteria, and these criteria will be made available when the assessment tasks are released to you on iLearn.

Submission of Assessments

All assignments must be submitted online through [Turnitin](#) unless otherwise indicated. Links for the submission of each assignment will be available on [iLearn](#).

Marking of Assessments

Assignments will be marked through Turnitin with grades and feedback provided through GradeMark. Please do not submit your assignments via email or in hard copy.

We aim to return your assignments with feedback within two to three weeks of the date that you submit your assignment, and before your next assignment is due. We appreciate your patience and will advise you through iLearn when your marked assignments and feedback are available for viewing.

Penalties for Late Assessments

The penalty for late submission of assessments in this unit is **ten percent (10 %) of the assessment value per day**, calculated from the due time and date. This means that if the assignment is worth a total of 30 marks (or 30 % of the unit) you will lose 3 marks for each day late. This is a hefty penalty designed to make you aware of the importance of organising yourself around assessment due dates. The penalty will be applied over weekdays and weekends unless you have been granted an extension prior to the due date.

Extensions for Assessments

To obtain an extension for an assessment task, you will need to follow the formal process as outlined in the [Special Consideration Policy](#), and you must provide appropriate supporting documentation (e.g. medical certificate - see advice for [Special Consideration](#) requests). The final decision regarding the granting of an extension and/or a late penalty lies with the unit convenor. Permission for extension must be sought **well before the due date** unless this is absolutely impossible. Let us know of problems in advance or as soon as possible, not after the event: we are likely to be much more sympathetic and flexible in our requirements if you follow this advice.

Delivery and Resources

Coronavirus (COVID-19) Update

Any references to on-campus delivery below may no longer be relevant due to COVID-19.

Please check here for updated delivery information: https://ask.mq.edu.au/account/pub/display/unit_status

Class schedule

The class timetable can be found through the [Timetable](#) portal. This year classes have been scheduled for **Wednesday evenings in 3 Innovation, Room G240, from 6-9 pm, plus a weekend field trip on 21-22 March**. A detailed schedule with lecture and practical topics, assessment due dates, etc. will be made available to all enrolled students through [iLearn](#).

Learning activities

The unit is comprised of 11 weeks of classes, plus the field trip to the Blue Mountains. The format of the classes varies and includes lectures, writing skills workshops, lab skills workshops (location to be advised) and student presentations. As a result, it is essential that students attend each class and the field trip. This unit is not able to be offered externally.

In addition to the scheduled classes, students are also required to spend time doing their own independent reading and research, with most of this time going towards completing the assessments. As a guide, students should aim to spend approximately 100 hours of their own time on the unit over the semester, in addition to the scheduled classes and field trip.

Field trip

The unit includes a weekend field trip to Katoomba in the Blue Mountains, which is home to the famous Three Sisters, and provides easy access to the Blue Mountains World Heritage area. Katoomba is the largest centre in the Blue Mountains, with a population of ~8000 people. Each year, the region receives over 4 million visitors with most of these stopping at Katoomba. As a result, the area is an ideal place to learn about the natural environment and environmental management. Students will visit different sites to observe environmental management issues and collect water quality samples for subsequent analysis in the lab.

Note: **The cost of the field trip is not covered by the unit fees**. Students will need to pay for transport to/from and around Katoomba either by driving or by catching the train. They will also

need to purchase a ticket for Scenic World (approx \$40) which allows easy access in and out of the valley. Students have the option of staying in Katoomba on the Friday and Saturday night or travelling up/back each day. There are several options for accommodation in Katoomba - the cheapest and best option is to stay at the Katoomba YHA which also has some great package deals for less than \$100: <https://www.yha.com.au/hostels/nsw/blue-mountains/katoomba/specials/> Logistics will be discussed during the first week of class.

Requirements to Complete this Unit Satisfactorily

Students must submit all assignments and gain a final mark of at least 50% to complete this unit satisfactorily.

Students are required to attend at least 80% of the scheduled classes, including the field trip and presentations in Week 12 and 13. Permission to be excused will only be granted in exceptional circumstances such as unavoidable clashes with other units. Attendance may be taken into account when assigning final grades for the unit where marks are on the border between one grade and the next.

Technologies Used and Required

Students should **bring a computer to class each week**. We will use basic programs such as Word and Excel. Students will also need to have access to a computer to use the university systems (e.g. iLearn, library) and complete the assessment tasks. Submissions of the assessment tasks will be arranged through iLearn using Turnitin. Academic search engines (ISI Web of Knowledge and Scopus) and submission of the assessment tasks will be discussed during the first night of the class.

Field and Lab Work, Health and Safety

To minimise the risk of incidents, students must wear/bring appropriate clothing and bring adequate water and food for each day on the field trip, and wear closed shoes when working in the lab.

Background Reading

There is no single text for this course. Background reading can be found in the following:

O'Riordan, T (1999) Environmental Science for Environmental Management, Taylor and Francis Ltd

Aplin, G (2002), Australians and their Environment: An Introduction to Environmental Studies, Oxford University Press

Arms K (1994). Environmental Science, Saunders College Publishing, Fort Worth, 2nd edition.

Beckmann R (1994). Environmental Science, Australian Academy of Science, Canberra.

Enger ED and Smith BF (2006). Environmental Science: a study of interrelationships, McGraw Hill Publish.

Huxham M and Sumner D (2000). Science and Environmental Decision Making, Pearson Education.

Jacobson M.C. (2000). Earth System Science: From Biogeochemical Cycles to Global Change. Academic Press, London. QH344.E17/2000

Munasinghe M and Swart R (2005). Primer on Climate Change and Sustainable Development, Cambridge University Press.

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.*)

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 \(https://staff.mq.edu.au/work/strategy-planning-and-governance/university-policies-and-procedures/policy-central\)](https://staff.mq.edu.au/work/strategy-planning-and-governance/university-policies-and-procedures/policy-central).

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 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.