



BIOL874

Biodiversity Survey and Monitoring

S2 External 2017

Dept of Biological Sciences

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General Information

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Credit points

4

Prerequisites

ENVS803 or GSE803 or (admission to MMarScMgt or MConsBiol or GradDipConsBiol or GradCertConsBiol or MPlan or MSc)

Corequisites

Co-badged status

Unit description

This unit provides training in the study of biodiversity survey and monitoring. Skills in observation and interpretation and field experience in taxonomy will be linked to the planning required to conduct safe, ethical and efficient surveys, including design, data entry, storage and analysis. Students gain skills in a wide range of standard survey techniques for a wide range of organisms. On completion, students will be able to design, conduct and report on biodiversity surveys.

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:

Gain experience of the range of specialist methods available to quantify plant and animal communities or populations, field and lab experience in the practice of a range of specialist survey techniques

Gain experience in the skills required to review and evaluate survey data and scientific reports, relevant to biodiversity surveys. Gain experience of skills required in methods of sampling, measurement, analysis and interpretation. Demonstrated understanding of methods used for measuring and assessment of habitat including abiotic variables

Obtain a working knowledge of the planning and implementation of field work necessary for projects utilising biodiversity survey techniques.

Gain experience in using biodiversity survey data through analysis and use of all data collected and application of skills to improve results from biodiversity survey during field components.

Show evidence of discussion and presentation skills enhanced through online discussions and field trip interaction and through planning and presenting written arguments in coherent, well structured and documented form. Gain experience in working as part of a team during the field trip, demonstrating effective communication skills within and between teams and to supervising staff.

General Assessment Information

To pass this unit all components of each assessment must be completed, and students need to achieve an overall minimum grade of 50%. You will be provided with marking schemes.

All requests for extensions must go via ask.mq as per Disruption policy:

http://students.mq.edu.au/student_admin/manage_your_study_program/disruption_to_studies/

Assessment Tasks

Name	Weighting	Hurdle	Due
<u>Selection of a Study Site</u>	20%	No	18 Aug 2017
<u>Field Trip Report</u>	20%	No	29 September 2017
<u>Field Notebook</u>	20%	No	15 September 2017
<u>Biodiversity Survey</u>	40%	No	20 Nov 2017

Selection of a Study Site

Due: **18 Aug 2017**

Weighting: **20%**

Identify and describe a site for a Biodiversity Survey including target species and the techniques to be used. This assignment will require you to use initiative and learning materials to locate a site suitable for a biodiversity survey. The site can be located in any tenure as long as it meets the objectives of the assignment.

On successful completion you will be able to:

- Gain experience of the range of specialist methods available to quantify plant and animal communities or populations, field and lab experience in the practice of a range of specialist survey techniques
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- Show evidence of discussion and presentation skills enhanced through online discussions and field trip interaction and through planning and presenting written arguments in coherent, well structured and documented form. Gain experience in working as part of a team during the field trip, demonstrating effective communication skills within and between teams and to supervising staff.

Field Trip Report

Due: **29 September 2017**

Weighting: **20%**

Participate in a team survey of the study site on the field trip and provide a report on the results of the field trip surveys. Carry out flora and fauna surveys as per the Field Trip Agenda and Field Trip Outline.

On successful completion you will be able to:

- Gain experience of the range of specialist methods available to quantify plant and animal communities or populations, field and lab experience in the practice of a range of specialist survey techniques
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Field Notebook

Due: **15 September 2017**

Weighting: **20%**

During the field trip for BIOL874, all students will be required to utilise a field notebook for data collection purposes. The field notebook includes data format, metadata and entry on site. Field notebooks will be assessed during the field trip and handed back to students for their field trip report.

On successful completion you will be able to:

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- Obtain a working knowledge of the planning and implementation of field work necessary for projects utilising biodiversity survey techniques.
- Show evidence of discussion and presentation skills enhanced through online discussions and field trip interaction and through planning and presenting written arguments in coherent, well structured and documented form. Gain experience in working as part of a team during the field trip, demonstrating effective communication

skills within and between teams and to supervising staff.

Biodiversity Survey

Due: **20 Nov 2017**

Weighting: **40%**

Complete a Biodiversity survey of a chosen study site and provide a full scientific report on the results with consideration of existing wildlife management activities on the site.

On successful completion you will be able to:

- Gain experience of the range of specialist methods available to quantify plant and animal communities or populations, field and lab experience in the practice of a range of specialist survey techniques
- Gain experience in the skills required to review and evaluate survey data and scientific reports, relevant to biodiversity surveys. Gain experience of skills required in methods of sampling, measurement, analysis and interpretation. Demonstrated understanding of methods used for measuring and assessment of habitat including abiotic variables
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Delivery and Resources

Technology Used and Required

Students are required to have access to a computer and the internet to access the teaching website and lecture materials. Students will also be required to have access to a word processor, spreadsheet manager and database programs to be able to complete set assessment tasks.

For field work students will require access to some field equipment, a complete list of which will be supplied within the teaching website on activation.

Unit Web Page

To access the unit and associated resources, please login to iLearn (<http://ilearn.mq.edu.au/>)
Guides for assist students with on-line websites and resources can be found at

Student iLearn guides: https://www.mq.edu.au/iLearn/student_info/guides.htm

Student Echo guides: https://www.mq.edu.au/iLearn/student_info/lecture_recordings.htm

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_2016.html

Grade Appeal Policy <http://mq.edu.au/policy/docs/gradeappeal/policy.html>

Complaint Management Procedure for Students and Members of the Public http://www.mq.edu.au/policy/docs/complaint_management/procedure.html

Disruption to Studies Policy (in effect until Dec 4th, 2017): http://www.mq.edu.au/policy/docs/disruption_studies/policy.html

Special Consideration Policy (in effect from Dec 4th, 2017): <https://staff.mq.edu.au/work/strategy-planning-and-governance/university-policies-and-procedures/policies/special-consideration>

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://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 outcomes

- Gain experience of the range of specialist methods available to quantify plant and animal communities or populations, field and lab experience in the practice of a range of specialist survey techniques
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discussions and field trip interaction and through planning and presenting written arguments in coherent, well structured and documented form. Gain experience in working as part of a team during the field trip, demonstrating effective communication skills within and between teams and to supervising staff.

Assessment tasks

- Field Trip Report
- Field Notebook
- Biodiversity Survey

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

- Gain experience of the range of specialist methods available to quantify plant and animal communities or populations, field and lab experience in the practice of a range of specialist survey techniques
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Assessment tasks

- Selection of a Study Site
- Field Trip Report

- Field Notebook
- Biodiversity Survey

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

- Gain experience in using biodiversity survey data through analysis and use of all data collected and application of skills to improve results from biodiversity survey during field components.
- Show evidence of discussion and presentation skills enhanced through online discussions and field trip interaction and through planning and presenting written arguments in coherent, well structured and documented form. Gain experience in working as part of a team during the field trip, demonstrating effective communication skills within and between teams and to supervising staff.

Assessment tasks

- Selection of a Study Site
- Field Trip Report
- Biodiversity Survey

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

- Gain experience of the range of specialist methods available to quantify plant and animal communities or populations, field and lab experience in the practice of a range of specialist survey techniques
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Assessment tasks

- Selection of a Study Site
- Field Trip Report
- Field Notebook
- Biodiversity Survey

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

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Assessment tasks

- Selection of a Study Site
- Field Trip Report
- Field Notebook
- Biodiversity Survey

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 outcomes

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Assessment task

- Biodiversity Survey

Changes since First Published

Date	Description
18/07/2017	Dates of assessments corrected