



# BIOL116

## Biology in Practice

S1 External 2019

*Dept of Biological Sciences*

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### Disclaimer

Macquarie University has taken all reasonable measures to ensure the information in this publication is accurate and up-to-date. However, the information may change or become out-dated as a result of change in University policies, procedures or rules. The University reserves the right to make changes to any information in this publication without notice. Users of this publication are advised to check the website version of this publication [or the relevant faculty or department] before acting on any information in this publication.

## General Information

Unit convenor and teaching staff

Unit Convenor

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Credit points

3

Prerequisites

Corequisites

Co-badged status

Unit description

This unit is a skills-based unit that aims to ensure students have the required laboratory, safety, field and practical skills that are essential for studying biology. These skills are the basis for all units offered in the Department of Biological Sciences. The unit consists of a mixture of lectures, tutorials and practicals. Students will acquire hands-on skills for working in the field and the laboratory, including the use of microscopes, data collection, analysis and graphing, aseptic techniques, skills for microbiological and molecular work, and accessing, interpreting and citing scientific literature. This unit is designed to accompany another 100 level biology unit and the choice of unit will depend on the student's program.

## 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:

Articulate and practice the importance of health and safety in biological sciences (lab and field).

Develop and demonstrate competencies in set up, operation and shutting down/clean-up of standard laboratory and field equipment.

Develop and demonstrate competencies in standard laboratory techniques (e.g. dilutions, aseptic plating, imagery and measurement, labelling).

Maintain an experimental notebook (field and lab); includes field observations with information related to environmental parameters and conditions.

Demonstrate competency in data collation, basic statistical analyses and representation by appropriate graphs in reports.

Describe and practice scientific methods from generating hypotheses and predictions through to following experimental procedures, and undertaking data collection.

Locate, synthesize, appropriately reference (Harvard style) and communicate scientific information, concepts and your own data through oral, visual and written formats (e.g. class tutorials, report, practical exam).

Develop competency in working individually or as a team in tutorials, in the field and the laboratory.

Demonstrate professional behaviour in conduct with colleagues and staff, and the ethical handling of organisms.

Demonstrate foundational learning skills including active engagement in their learning process

## General Assessment Information

**The on-line Safety Quiz (Prac 1) must be completed prior to the On-Campus Session 1.**

THIS IS A PASS/FAIL UNIT, NO GRADES (P, CR, D, HD) ARE GIVEN

### UNIT COMPLETION REQUIREMENTS

1. Submit all assessments and attempt all exams
2. Participate in all on-campus sessions

**Externally enrolled students should pay particular attention to activity and assessment deadlines**, which vary from deadlines set for internal (Day) students undertaking the unit. Extensions will not be granted if External students confuse deadlines.

"Skills Achieved" portfolio certificates will be provided through iLearn as External students achieve skills during the unit. A student's skills portfolio certificate can be used in support of CV

building in 3rd year Capstone Units.

## Assessment Tasks

Name	Weighting	Hurdle	Due
<a href="#">Participation in pracs/tutes</a>	0%	Yes	6 on-campus sessions
<a href="#">Academic Integrity Module Quiz</a>	0%	No	10th March (week 2)
<a href="#">Australian Scientist Summary</a>	5%	No	17th March (Week 3)
<a href="#">Lab/Tute Prep Activities</a>	10%	No	Prior to each OCS
<a href="#">Mid-term Exam</a>	30%	No	16th April (during OCS 4)
<a href="#">Scientific Report</a>	20%	No	26th May (week 11)
<a href="#">Final Exam</a>	35%	No	June 3rd-7th (Week 13)

### Participation in pracs/tutes

Due: **6 on-campus sessions**

Weighting: **0%**

**This is a hurdle assessment task (see [assessment policy](#) for more information on hurdle assessment tasks)**

You must attend and participate in ALL block practical and tutorial classes to pass this unit. Please contact the first year teaching coordinator as soon as possible if you have difficulty attending and participating in any classes. There may be alternatives available to make up the work. If there are circumstances that mean you miss a class, you can apply for special consideration.

On successful completion you will be able to:

- Demonstrate foundational learning skills including active engagement in their learning process

### Academic Integrity Module Quiz

Due: **10th March (week 2)**

Weighting: **0%**

The Macquarie University Academic Integrity Module has been developed for students to understand their responsibilities and expectations surrounding the proper citation of materials/ resources in their work when completing assessments. This is a compulsory hurdle task - students are required to participate in order to pass BIOL116.

On successful completion you will be able to:

- Locate, synthesize, appropriately reference (Harvard style) and communicate scientific information, concepts and your own data through oral, visual and written formats (e.g. class tutorials, report, practical exam).
- Demonstrate professional behaviour in conduct with colleagues and staff, and the ethical handling of organisms.

## Australian Scientist Summary

Due: **17th March (Week 3)**

Weighting: **5%**

Using information from the Australian Academy of Science's *Interviews with Australian Scientists*, students must summarise in their own words the contribution that their chosen scientist has made to Australian or International science, and why this is inspiring to the student. Word limit - 300 words. Students must submit their paragraph to Turnitin (for plagiarism assessment).

On successful completion you will be able to:

- Locate, synthesize, appropriately reference (Harvard style) and communicate scientific information, concepts and your own data through oral, visual and written formats (e.g. class tutorials, report, practical exam).
- Develop competency in working individually or as a team in tutorials, in the field and the laboratory.

## Lab/Tute Prep Activities

Due: **Prior to each OCS**

Weighting: **10%**

Pre-class activities will be set prior to specific practicals and tutorials. Students must complete the activity prior to attending the practical or tutorial session for a grade to be awarded. Each activity will be assigned between 1% and 3% of your final grade. Most pre-class activities will require reading (e.g. articles, risk assessments, prac notes), accessing material (e.g. videos and other media) and answering questions on-line, or the advance preparation of text for a tutorial.

On successful completion you will be able to:

- Articulate and practice the importance of health and safety in biological sciences (lab and field).
- Develop and demonstrate competencies in set up, operation and shutting down/clean-up of standard laboratory and field equipment.
- Develop and demonstrate competencies in standard laboratory techniques (e.g.

dilutions, aseptic plating, imagery and measurement, labelling).

- Maintain an experimental notebook (field and lab); includes field observations with information related to environmental parameters and conditions.
- Demonstrate competency in data collation, basic statistical analyses and representation by appropriate graphs in reports.
- Locate, synthesize, appropriately reference (Harvard style) and communicate scientific information, concepts and your own data through oral, visual and written formats (e.g. class tutorials, report, practical exam).
- Develop competency in working individually or as a team in tutorials, in the field and the laboratory.
- Demonstrate professional behaviour in conduct with colleagues and staff, and the ethical handling of organisms.

## Mid-term Exam

Due: **16th April (during OCS 4)**

Weighting: **30%**

External students will be examined on the skills they have experienced during the first three on-campus sessions (OCS 1-3 of the semester). Skills tested during the exam will include activities taken from material covered in OCS-delivered practicals and tutorial sessions. The mid-term exam will occur on the morning of the 16th April during the OCS 4.

On successful completion you will be able to:

- Develop and demonstrate competencies in set up, operation and shutting down/clean-up of standard laboratory and field equipment.
- Develop and demonstrate competencies in standard laboratory techniques (e.g. dilutions, aseptic plating, imagery and measurement, labelling).
- Demonstrate competency in data collation, basic statistical analyses and representation by appropriate graphs in reports.
- Locate, synthesize, appropriately reference (Harvard style) and communicate scientific information, concepts and your own data through oral, visual and written formats (e.g. class tutorials, report, practical exam).
- Develop competency in working individually or as a team in tutorials, in the field and the laboratory.
- Demonstrate professional behaviour in conduct with colleagues and staff, and the ethical handling of organisms.

## Scientific Report

Due: **26th May (week 11)**

Weighting: **20%**

Students must use a standard scientific report structure (outlined in class and detailed on iLearn) to convey the experimental method and results of their field work survey undertaken on campus during practical sessions. Students must submit their report to Turnitin (for plagiarism assessment).

On successful completion you will be able to:

- Articulate and practice the importance of health and safety in biological sciences (lab and field).
- Develop and demonstrate competencies in set up, operation and shutting down/clean-up of standard laboratory and field equipment.
- Demonstrate competency in data collation, basic statistical analyses and representation by appropriate graphs in reports.
- Describe and practice scientific methods from generating hypotheses and predictions through to following experimental procedures, and undertaking data collection.
- Locate, synthesize, appropriately reference (Harvard style) and communicate scientific information, concepts and your own data through oral, visual and written formats (e.g. class tutorials, report, practical exam).
- Develop competency in working individually or as a team in tutorials, in the field and the laboratory.
- Demonstrate professional behaviour in conduct with colleagues and staff, and the ethical handling of organisms.

## Final Exam

Due: **June 3rd-7th (Week 13)**

Weighting: **35%**

External students will be examined on the skills they have experienced within all six on-campus sessions (OCS 1- 6) of the semester. Skills tested during the exam will include activities taken from material covered in practicals and tutorial sessions. The final exam date for External students is scheduled during the last week of internal pracs (week 13).

On successful completion you will be able to:

- Articulate and practice the importance of health and safety in biological sciences (lab and field).
- Develop and demonstrate competencies in set up, operation and shutting down/clean-up

of standard laboratory and field equipment.

- Develop and demonstrate competencies in standard laboratory techniques (e.g. dilutions, aseptic plating, imagery and measurement, labelling).
- Demonstrate competency in data collation, basic statistical analyses and representation by appropriate graphs in reports.
- Locate, synthesise, appropriately reference (Harvard style) and communicate scientific information, concepts and your own data through oral, visual and written formats (e.g. class tutorials, report, practical exam).
- Develop competency in working individually or as a team in tutorials, in the field and the laboratory.
- Demonstrate professional behaviour in conduct with colleagues and staff, and the ethical handling of organisms.

## Delivery and Resources

### Tutorials.

Tutorials are formulated around both independent and team activities that focus on problem solving and development of resource inquiry and writing skills. Access to the internet and the use of spreadsheet software (e.g. Excel (TM)) is assumed. External students should refer to the ***External Students Activity Submission Timetable*** below to ensure that they undertake tutorial activities by the correct due date.

### On-campus sessions.

External students have **SIX COMPULSORY** on-campus sessions to attend. OCSs are an intense and stimulating blend of activities and will also include assessments such as formal examinations. As the unit is focused on a student's handling of basic equipment in the lab/field, and development of technical and analytical skills, students will be expected to maintain an ePracbook during their OCS sessions.

External students should also take due note of the following:

### On Campus sessions run **from 9am to 5pm.**

- External students MUST WEAR ENCLOSED FOOT WARE to all practical sessions.
- Lab coats are not compulsory.
- All other personal protection such as gloves and safety glasses will be supplied as required by our approved risk assessment procedures.
- There are no dissections of animals in BIOL116, however, we do handle insects and take the ethical handling of all organisms very seriously.
- Students that have a medically-assessed allergy to gloves (latex, plastics, nitrile), pollen or crustaceans, or have a disability should make staff aware in advance so that alternative



equipment and activities for certain practicals can be prepared in advance to ensure completion of the unit. Contact: [biol116@mq.edu.au](mailto:biol116@mq.edu.au) and in the subject line use the flag: *Confidential Prac Allergy Notification - External*.

- OCSs are compulsory and are a hurdle requirement of this unit.

Due to University policy on Workplace Health and Safety, access to all laboratory classes will be closed 10 minutes after the start time. **Late entries will not be permitted under any circumstances.**

Practical attendance and participation is compulsory and an attendance roll will be taken.

## Exams.

External students have two practical exams. The first on the morning of the fourth on-campus session and the second in week 13 (exact date to be advised). Practical exams will cover the following:

- **OCS 4 (Tuesday 16th April)**. The mid-term practical exam will cover Tutorial, Pre-prac activities and Practical experiences or material covered up to and inclusive of the first 3 OCSs. External students will be tested on equipment use or will need to answer technique or analytical questions.
- **Week 13 (Jun 3rd-7th, exact date TBA)**. The final practical exam will cover Tutorial, Pre-prac activities, and Practical material or experiences across the whole semester. External students will be tested on equipment use or will need to answer technique or analytical questions.

## Special Consideration.

If you require an assignment extension or miss an exam due to illness/misadventure, please submit a request for special consideration via [ask.mq.edu.au](mailto:ask.mq.edu.au). If you miss an OCS for any reason, please do not submit a formal request via [ask.mq](mailto:ask.mq), but instead email the first year teaching co-ordinator via [biol116@mq.edu.au](mailto:biol116@mq.edu.au) to discuss your options.

## Unit Schedule

### Dates set for OCS sessions and External Exam

OCS 1 (1 day) Sat 9th March

OCS 2 (1 day) Sat 30th March

OCS 3-4 (2 days) Mon-Tues 15-16th April

OCS 5 (1 day) Sat 11th May

OCS 6 (1 day) Sat 1st June

Final prac exam for Externals in week 13 (June 3rd-7th, exact date TBA)

## Policies and Procedures

Macquarie University policies and procedures are accessible from [Policy Central](https://staff.mq.edu.au/policy-central) (<https://staff.mq.edu.au/policy-central>)

[mq.edu.au/work/strategy-planning-and-governance/university-policies-and-procedures/policy-central](http://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](http://students.mq.edu.au/support/study/student-policy-gateway) (<http://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](http://ask.mq.edu.au) or if you are a Global MBA student contact [globalmba.support@mq.edu.au](mailto: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](http://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](http://ask.mq.edu.au)

If you are a Global MBA student contact [globalmba.support@mq.edu.au](mailto: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/](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

### Creative and Innovative

Our graduates will also be capable of creative thinking and of creating knowledge. They will be imaginative and open to experience and capable of innovation at work and in the community. We want them to be engaged in applying their critical, creative thinking.

This graduate capability is supported by:

### Learning outcomes

- Develop and demonstrate competencies in standard laboratory techniques (e.g. dilutions, aseptic plating, imagery and measurement, labelling).
- Maintain an experimental notebook (field and lab); includes field observations with information related to environmental parameters and conditions.
- Describe and practice scientific methods from generating hypotheses and predictions through to following experimental procedures, and undertaking data collection.
- Locate, synthesise, appropriately reference (Harvard style) and communicate scientific information, concepts and your own data through oral, visual and written formats (e.g. class tutorials, report, practical exam).
- Demonstrate foundational learning skills including active engagement in their learning process

### Assessment tasks

- Participation in pracs/tutes

- Academic Integrity Module Quiz
- Australian Scientist Summary
- Lab/Tute Prep Activities
- Mid-term Exam
- Scientific Report
- Final Exam

## Capable of Professional and Personal Judgement and Initiative

We want our graduates to have emotional intelligence and sound interpersonal skills and to demonstrate discernment and common sense in their professional and personal judgement. They will exercise initiative as needed. They will be capable of risk assessment, and be able to handle ambiguity and complexity, enabling them to be adaptable in diverse and changing environments.

This graduate capability is supported by:

### Learning outcomes

- Articulate and practice the importance of health and safety in biological sciences (lab and field).
- Develop and demonstrate competencies in set up, operation and shutting down/clean-up of standard laboratory and field equipment.
- Develop and demonstrate competencies in standard laboratory techniques (e.g. dilutions, aseptic plating, imagery and measurement, labelling).
- Maintain an experimental notebook (field and lab); includes field observations with information related to environmental parameters and conditions.
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- Develop competency in working individually or as a team in tutorials, in the field and the laboratory.
- Demonstrate professional behaviour in conduct with colleagues and staff, and the ethical handling of organisms.

### Assessment tasks

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## Commitment to Continuous Learning

Our graduates will have enquiring minds and a literate curiosity which will lead them to pursue knowledge for its own sake. They will continue to pursue learning in their careers and as they participate in the world. They will be capable of reflecting on their experiences and relationships with others and the environment, learning from them, and growing - personally, professionally and socially.

This graduate capability is supported by:

### Learning outcomes

- Articulate and practice the importance of health and safety in biological sciences (lab and field).
- Develop and demonstrate competencies in set up, operation and shutting down/clean-up of standard laboratory and field equipment.
- Develop and demonstrate competencies in standard laboratory techniques (e.g. dilutions, aseptic plating, imagery and measurement, labelling).
- Maintain an experimental notebook (field and lab); includes field observations with information related to environmental parameters and conditions.
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- Demonstrate professional behaviour in conduct with colleagues and staff, and the ethical handling of organisms.
- Demonstrate foundational learning skills including active engagement in their learning process

### Assessment tasks

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## Discipline Specific Knowledge and Skills

Our graduates will take with them the intellectual development, depth and breadth of knowledge, scholarly understanding, and specific subject content in their chosen fields to make them competent and confident in their subject or profession. They will be able to demonstrate, where relevant, professional technical competence and meet professional standards. They will be able to articulate the structure of knowledge of their discipline, be able to adapt discipline-specific knowledge to novel situations, and be able to contribute from their discipline to inter-disciplinary solutions to problems.

This graduate capability is supported by:

### Learning outcomes

- Articulate and practice the importance of health and safety in biological sciences (lab and field).
- Develop and demonstrate competencies in set up, operation and shutting down/clean-up of standard laboratory and field equipment.
- Develop and demonstrate competencies in standard laboratory techniques (e.g. dilutions, aseptic plating, imagery and measurement, labelling).
- Maintain an experimental notebook (field and lab); includes field observations with information related to environmental parameters and conditions.
- Demonstrate competency in data collation, basic statistical analyses and representation by appropriate graphs in reports.
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- Demonstrate foundational learning skills including active engagement in their learning process

### Assessment tasks

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## Critical, Analytical and Integrative Thinking

We want our graduates to be capable of reasoning, questioning and analysing, and to integrate and synthesise learning and knowledge from a range of sources and environments; to be able to critique constraints, assumptions and limitations; to be able to think independently and systemically in relation to scholarly activity, in the workplace, and in the world. We want them to have a level of scientific and information technology literacy.

This graduate capability is supported by:

### Learning outcomes

- Develop and demonstrate competencies in standard laboratory techniques (e.g. dilutions, aseptic plating, imagery and measurement, labelling).
- Maintain an experimental notebook (field and lab); includes field observations with information related to environmental parameters and conditions.
- Demonstrate competency in data collation, basic statistical analyses and representation by appropriate graphs in reports.
- Describe and practice scientific methods from generating hypotheses and predictions through to following experimental procedures, and undertaking data collection.
- Locate, synthesise, appropriately reference (Harvard style) and communicate scientific information, concepts and your own data through oral, visual and written formats (e.g. class tutorials, report, practical exam).
- Demonstrate foundational learning skills including active engagement in their learning process

### Assessment tasks

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- Final Exam

## Problem Solving and Research Capability

Our graduates should be capable of researching; of analysing, and interpreting and assessing data and information in various forms; of drawing connections across fields of knowledge; and they should be able to relate their knowledge to complex situations at work or in the world, in order to diagnose and solve problems. We want them to have the confidence to take the initiative in doing so, within an awareness of their own limitations.

This graduate capability is supported by:

## **Learning outcomes**

- Develop and demonstrate competencies in set up, operation and shutting down/clean-up of standard laboratory and field equipment.
- Develop and demonstrate competencies in standard laboratory techniques (e.g. dilutions, aseptic plating, imagery and measurement, labelling).
- Maintain an experimental notebook (field and lab); includes field observations with information related to environmental parameters and conditions.
- Demonstrate competency in data collation, basic statistical analyses and representation by appropriate graphs in reports.
- Describe and practice scientific methods from generating hypotheses and predictions through to following experimental procedures, and undertaking data collection.
- Locate, synthesize, appropriately reference (Harvard style) and communicate scientific information, concepts and your own data through oral, visual and written formats (e.g. class tutorials, report, practical exam).
- Develop competency in working individually or as a team in tutorials, in the field and the laboratory.
- Demonstrate foundational learning skills including active engagement in their learning process

## **Assessment tasks**

- Participation in pracs/tutes
- Academic Integrity Module Quiz
- Australian Scientist Summary
- Lab/Tute Prep Activities
- Mid-term Exam
- Scientific Report
- Final Exam

## **Effective Communication**

We want to develop in our students the ability to communicate and convey their views in forms effective with different audiences. We want our graduates to take with them the capability to read, listen, question, gather and evaluate information resources in a variety of formats, assess, write clearly, speak effectively, and to use visual communication and communication technologies as appropriate.

This graduate capability is supported by:



## Learning outcomes

- Articulate and practice the importance of health and safety in biological sciences (lab and field).
- Develop and demonstrate competencies in standard laboratory techniques (e.g. dilutions, aseptic plating, imagery and measurement, labelling).
- Maintain an experimental notebook (field and lab); includes field observations with information related to environmental parameters and conditions.
- Demonstrate competency in data collation, basic statistical analyses and representation by appropriate graphs in reports.
- Describe and practice scientific methods from generating hypotheses and predictions through to following experimental procedures, and undertaking data collection.
- Locate, synthesize, appropriately reference (Harvard style) and communicate scientific information, concepts and your own data through oral, visual and written formats (e.g. class tutorials, report, practical exam).
- Develop competency in working individually or as a team in tutorials, in the field and the laboratory.
- Demonstrate professional behaviour in conduct with colleagues and staff, and the ethical handling of organisms.
- Demonstrate foundational learning skills including active engagement in their learning process

## Assessment tasks

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## Engaged and Ethical Local and Global citizens

As local citizens our graduates will be aware of indigenous perspectives and of the nation's historical context. They will be engaged with the challenges of contemporary society and with knowledge and ideas. We want our graduates to have respect for diversity, to be open-minded, sensitive to others and inclusive, and to be open to other cultures and perspectives: they should have a level of cultural literacy. Our graduates should be aware of disadvantage and social justice, and be willing to participate to help create a wiser and better society.

This graduate capability is supported by:

## **Learning outcomes**

- Maintain an experimental notebook (field and lab); includes field observations with information related to environmental parameters and conditions.
- Develop competency in working individually or as a team in tutorials, in the field and the laboratory.
- Demonstrate professional behaviour in conduct with colleagues and staff, and the ethical handling of organisms.

## **Assessment tasks**

- Academic Integrity Module Quiz
- Australian Scientist Summary
- Lab/Tute Prep Activities
- Mid-term Exam
- Scientific Report
- Final Exam

## **Socially and Environmentally Active and Responsible**

We want our graduates to be aware of and have respect for self and others; to be able to work with others as a leader and a team player; to have a sense of connectedness with others and country; and to have a sense of mutual obligation. Our graduates should be informed and active participants in moving society towards sustainability.

This graduate capability is supported by:

## **Learning outcomes**

- Articulate and practice the importance of health and safety in biological sciences (lab and field).
- Maintain an experimental notebook (field and lab); includes field observations with information related to environmental parameters and conditions.
- Develop competency in working individually or as a team in tutorials, in the field and the laboratory.
- Demonstrate professional behaviour in conduct with colleagues and staff, and the ethical handling of organisms.

## **Assessment tasks**

- Academic Integrity Module Quiz
- Australian Scientist Summary
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## Changes since First Published

Date	Description
27/02/2019	Kate's email address removed
13/02/2019	More info provided about the final exam
12/02/2019	Change to final exam dates
08/02/2019	OCS dates incorrect
08/02/2019	Days of OCS during vacation were incorrect