



# BIOL116

## Biology in Practice

S1 Day 2018

*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

#### Convenor

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### Credit points

3

### Prerequisites

### Corequisites

### Co-badged status

### Unit description

Biology in Practice is a skills based unit that aims to ensure you have the required laboratory, safety, field and practical skills essential to studying biology required as a basis for all units offered in the Department of Biological Sciences. The unit consists of a mixture of lectures, tutorials and practicals. You 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, and skills for microbiological and molecular work, as well as accessing and interpreting scientific literature.

## 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**

**TUTORIALS COMMENCE IN WEEK 1**

**AN ON-LINE PRACTICAL MUST BE COMPLETED IN WEEK 1**

**LAB-BASED PRACTICALS COMMENCE IN WEEK 2**

**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 practicals and tutorials

To pass BIOL116 the above requirements need to be fulfilled and an overall mark of 50/100 (50%) needs to be achieved. Failure to fulfil these requirements will lead to a Fail grade for this unit.

A "Skills Achieved" portfolio certificate will be provided through iLearn as students achieve skills during the mid-semester and final exams. 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&amp;tutes</a>	0%	Yes	Weekly
<a href="#">Academic Integrity Modules</a>	0%	No	18th March 2018 (Week 3)
<a href="#">Australian Scientist Summary</a>	5%	No	25th March 2018 (Week 4)
<a href="#">Lab/Tute Prep Activities</a>	10%	No	Weeks 1 to 12
<a href="#">Mid-term Exam</a>	30%	No	30th April - 3rd May (Week 8)
<a href="#">Scientific Report</a>	20%	No	25th May (Week 11)
<a href="#">Final Exam</a>	35%	No	Exam period

### Participation in pracs&tutes

Due: **Weekly**

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 weekly 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 Modules

Due: **18th March 2018 (Week 3)**

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. Several videos must be viewed to enable the completion of the on-line quiz questions that must be undertaken during the first few weeks

of Semester 1. This is a pre-requisite - 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: **25th March 2018 (Week 4)**

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

## Lab/Tute Prep Activities

Due: **Weeks 1 to 12**

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.
- 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.

## Mid-term Exam

Due: **30th April - 3rd May (Week 8)**

Weighting: **30%**

Students will be examined on the skills they have experienced during the first half of the semester. Skills tested during the exam will include activities taken from material covered in practicals and tutorial sessions. The exam will occur during a student's normal practical class in Week 8.

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: **25th 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. Maximum limitation 1500 words. Students must submit their report to Turnitin (for plagiarism assessment). Students are required to submit this assessment in order to pass BIOL116.

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.
- Describe and practice scientific methods from generating hypotheses and predictions through to following experimental procedures, and undertaking data collection.
- 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: **Exam period**

Weighting: **35%**

Students will be examined on the skills they have experienced during the full semester. Skills tested during the exam will include activities taken from material covered in practicals and tutorial sessions. The exam will occur during the formal exam period in June. Students are required to complete this assessment in order to pass BIOL116.

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, 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.

## Delivery and Resources

### Tutorials.

A 1.5 hour tutorial class is presented each week. Tutorials are formulated around both independent and team activities that focus on problem solving and development of resource inquiry and writing skills. Students are encouraged to bring their computer or alternative mobile internet platform (e.g. surface, iPad, mobile) to tutorials to assist with search activities or the use of spreadsheet software (e.g. Excel (TM)). There are pre-tutorial activities where students must come prepared to their class. Tutorial classes are fixed and cannot be changed once selected. Tutorial attendance and participation is compulsory and attendance will be taken via card reader (this is a hurdle requirement). You will be required to bring your student card to each tutorial and swipe it against the card reader at the door of the tutorial room.

### Practicals.

A 2.5 hour practical is presented each week and in the majority of cases there is a short pre-prac activity to complete prior to entering the class. 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.

- Students MUST WEAR ENCLOSED FOOTWEAR 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 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*.
- 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 (this is a hurdle requirement).

## Exams.

BIOL116 has two practical exams (Week 8 and at the end of the semester). Practical exams will be held in the regular practical laboratories and will cover the following:

- Week 8 Prac Exam will cover Tutorial, Pre-prac activities and Practical experiences or material covered in the first 7 weeks of the term. Students will be tested on equipment use or need to answer technique or analytical questions.
- Final Prac Exam will cover Tutorial, Pre-prac activities, and Practical material or experiences across the whole semester. Students will be tested on equipment use or 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 a prac 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).

## 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.*)

Undergraduate 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](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 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](http://ask.mq.edu.au).

## Questions about BIOL116?

To ask a question specific to BIOL116 please use the dedicated e-mail address: [biol116@mq.edu.au](mailto:biol116@mq.edu.au). Your e-mail will be answered by our 100-level teaching co-ordinator Dr Kate Barry or directed to the appropriate BIOL116 tutor or the convenor Dr Kerstin Bilgmann.

## 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)

## 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, 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 foundational learning skills including active engagement in their learning process

### Assessment tasks

- Participation in pracs&tutes
- Academic Integrity Modules

- 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.
- 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.

### Assessment tasks

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- Final Exam

## 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.
- 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.
- 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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- 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 foundational learning skills including active engagement in their learning process

## **Assessment tasks**

- Participation in pracs&tutes
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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**

- Participation in pracs&tutes
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## **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 Modules
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## 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 Modules
- Australian Scientist Summary
- Lab/Tute Prep Activities
- Mid-term Exam
- 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 Modules
- Australian Scientist Summary
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- Mid-term Exam

- Final Exam

## Changes since First Published

Date	Description
27/02/2018	Correction for report due date
13/02/2018	Updated as per 'Student Engagement - 100-level Units'
09/02/2018	Info added about special consideration requests and attendance taking.