# BIOL188

## Advanced Science (Biology) 1

FY1 Day 2019

*Dept of Biological Sciences*

## Contents

# General Information

Unit convenor and teaching staff
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Credit points
3

Prerequisites
Admission to BAdvSc and permission by special approval

Corequisites

Co-badged status

Unit description
This unit consists of weekly tutorials examining hot topics in biology with a variety of scientists from a diverse background. Students are expected to actively contribute during the tutorials and produce a presentation on their favourite topic of the year. Opportunities for research internships in biology are provided.

## 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:

Read, interpret and discuss major contributions to biological research published in the peer-reviewed literature.

Communicate hot topics in biology to a non-specialist audience.

Evaluate how effective your communication has been to an audience

Demonstrate skills in teamwork and collegial discussion

Evaluate how the experimental design and approach of biological studies influences the validity and impact of conclusions.

# Assessment Tasks

| Name | Weighting | Hurdle | Due |
|---|---|---|---|
| Weekly Discussions | 0% | No | Weekly |
| Written paper | 0% | No | Week 13 Sem 1 |
| Group project | 0% | No | Week 8 Sem 1 |
| Group Project | 0% | No | Mid semester break |
| Report on Outreach | 0% | No | Week 8 Sem 2 |
| Successful Participation | 100% | No | Week 13 Sem 2 |

## Weekly Discussions

Due: **Weekly**
Weighting: **0%**

Read prescribed material, attend and participate in discussion, write a blog about the topic

Need to attend at least 85% of meetings - A roll will be taken

On successful completion you will be able to:

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- Demonstrate skills in teamwork and collegial discussion
- Evaluate how the experimental design and approach of biological studies influences the validity and impact of conclusions.

## Written paper

Due: **Week 13 Sem 1**
Weighting: **0%**

A short essay on a hot topic in the style of News and Views, or the Conversation

On successful completion you will be able to:

- Read, interpret and discuss major contributions to biological research published in the peer-reviewed literature.
- Communicate hot topics in biology to a non-specialist audience.
- Evaluate how the experimental design and approach of biological studies influences the validity and impact of conclusions.

## Group project

Due: **Week 8 Sem 1**
Weighting: **0%**

Planning for group project, scoping and test run of activity

On successful completion you will be able to:

- Read, interpret and discuss major contributions to biological research published in the peer-reviewed literature.
- Communicate hot topics in biology to a non-specialist audience.
- Evaluate how effective your communication has been to an audience
- Demonstrate skills in teamwork and collegial discussion

## Group Project

Due: **Mid semester break**
Weighting: **0%**

National Science Week Outreach Activity

On successful completion you will be able to:

- Read, interpret and discuss major contributions to biological research published in the peer-reviewed literature.
- Communicate hot topics in biology to a non-specialist audience.
- Evaluate how effective your communication has been to an audience
- Demonstrate skills in teamwork and collegial discussion

## Report on Outreach

Due: **Week 8 Sem 2**
Weighting: **0%**

Final report on outreach and Public Science communication

On successful completion you will be able to:

- Read, interpret and discuss major contributions to biological research published in the peer-reviewed literature.
- Communicate hot topics in biology to a non-specialist audience.
- Evaluate how effective your communication has been to an audience
- Demonstrate skills in teamwork and collegial discussion

### Successful Participation

Due: **Week 13 Sem 2**
Weighting: **100%**

This is a pass/fail unit based solely on participation

On successful completion you will be able to:

- Read, interpret and discuss major contributions to biological research published in the peer-reviewed literature.
- Communicate hot topics in biology to a non-specialist audience.
- Evaluate how effective your communication has been to an audience
- Demonstrate skills in teamwork and collegial discussion
- Evaluate how the experimental design and approach of biological studies influences the validity and impact of conclusions.

## Delivery and Resources

There is a weekly meeting where we will discuss set readings and be guided by an academic with expertise in that specific area.

Details of the weekly meetings and readings are available on iLearn

## 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). 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). 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).

## 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 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

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.

# 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

- Communicate hot topics in biology to a non-specialist audience.
- Evaluate how effective your communication has been to an audience
- Demonstrate skills in teamwork and collegial discussion

### Assessment tasks

- Written paper
- Group project
- Group Project
- Report on Outreach
- Successful Participation

## 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

- Read, interpret and discuss major contributions to biological research published in the peer-reviewed literature.
- Communicate hot topics in biology to a non-specialist audience.
- Evaluate how effective your communication has been to an audience

- Demonstrate skills in teamwork and collegial discussion
- Evaluate how the experimental design and approach of biological studies influences the validity and impact of conclusions.

### Assessment tasks

- Weekly Discussions
- Written paper
- Group project
- Group Project
- Report on Outreach
- Successful Participation

## 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

- Read, interpret and discuss major contributions to biological research published in the peer-reviewed literature.
- Evaluate how the experimental design and approach of biological studies influences the validity and impact of conclusions.

### Assessment tasks

- Weekly Discussions
- Written paper
- Group Project
- Successful Participation

## 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

- Read, interpret and discuss major contributions to biological research published in the peer-reviewed literature.
- Communicate hot topics in biology to a non-specialist audience.
- Demonstrate skills in teamwork and collegial discussion
- Evaluate how the experimental design and approach of biological studies influences the validity and impact of conclusions.

## Assessment tasks

- Weekly Discussions
- Written paper
- Group project
- Successful Participation

# 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

- Read, interpret and discuss major contributions to biological research published in the peer-reviewed literature.
- Communicate hot topics in biology to a non-specialist audience.
- Evaluate how effective your communication has been to an audience
- Evaluate how the experimental design and approach of biological studies influences the validity and impact of conclusions.

## Assessment tasks

- Weekly Discussions
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- Group Project
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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

- Read, interpret and discuss major contributions to biological research published in the peer-reviewed literature.
- Evaluate how effective your communication has been to an audience
- Demonstrate skills in teamwork and collegial discussion

### Assessment tasks

- Weekly Discussions
- Group project
- Group Project
- Successful Participation

## 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

- Read, interpret and discuss major contributions to biological research published in the peer-reviewed literature.
- Communicate hot topics in biology to a non-specialist audience.
- Evaluate how effective your communication has been to an audience
- Demonstrate skills in teamwork and collegial discussion

### Assessment tasks

- Weekly Discussions
- Written paper
- Group project

- Group Project
- Report on Outreach
- Successful Participation

## 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 outcome

- Evaluate how the experimental design and approach of biological studies influences the validity and impact of conclusions.

### Assessment tasks

- Group project
- Group Project
- Successful Participation

## 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 outcome

- Evaluate how the experimental design and approach of biological studies influences the validity and impact of conclusions.

### Assessment tasks

- Group project
- Group Project
- Successful Participation