



# BIOL711

## Topics in Evolution

S1 Day 2017

*Dept of Biological Sciences*

### Contents

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<u>General Information</u>	2
<u>Learning Outcomes</u>	2
<u>Assessment Tasks</u>	3
<u>Delivery and Resources</u>	4
<u>Policies and Procedures</u>	5
<u>Graduate Capabilities</u>	6
<u>Changes since First Published</u>	8

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## General Information

Unit convenor and teaching staff

Andrew Barron

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Credit points

4

Prerequisites

Admission to MRes

Corequisites

Co-badged status

Unit description

Students will formulate a novel research question within a well-defined topic area, conduct a comprehensive review of the primary literature, synthesise this material to address their research question, and present their findings in oral and written forms. The best reviews will unite evidence from disparate areas to generate novel ideas and hypotheses. This unit provides an opportunity for students to learn about an area of scientific research that they may be unfamiliar with at the outset. The intention is to give students an opportunity to gain exposure to a research area that is completely unrelated to their masters research project. It also provides an opportunity for students to learn about the latest work in a wide variety of research areas through discussions and oral presentations presented by their peers. In the past, some literature reviews by students have been published in refereed scientific journals.

## 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:

Develop skills in scientific writing

Construct a scientific argument

Advance skills in oral presentation of a scientific argument

Synthesise primary scientific literature

Source and frame evidence to critique a scientific argument

## Assessment Tasks

Name	Weighting	Hurdle	Due
<a href="#"><u>Proposal</u></a>	10%	No	20 March 4pm
<a href="#"><u>Oral presentation</u></a>	20%	No	28 April
<a href="#"><u>Summary of top 3 presentations</u></a>	10%	No	5th May 4pm
<a href="#"><u>Literature review</u></a>	60%	No	2nd June 4pm

### Proposal

Due: **20 March 4pm**

Weighting: **10%**

Produce a brief outline of your research topic detailing the question to be addressed, the sub-questions you will consider, an outline of the structure of your review, and six key references you intend to use. Maximum 1 side of A4 paper. The intention of this assessment task is to give early feedback to students on their planned project.

On successful completion you will be able to:

- Develop skills in scientific writing
- Construct a scientific argument

### Oral presentation

Due: **28 April**

Weighting: **20%**

You should deliver a 5-minute presentation of your research topic structured as a short format academic conference presentation. Focus on concisely introducing your question and summarising your key findings. There will then be three minutes for questions. Your oral presentation should be accompanied by slides prepared in Powerpoint. The rule-of-thumb for the number of slides in presentations is 1 per minute (i.e., 5 slides for a 5-minute presentation). You will be penalised if you go over time.

The presentation series will be open to the university community, and so you should anticipate presenting to other Biology academics and students. This should also be seen as an opportunity to gain constructive comment and feedback from your examiners and peers, which will ultimately improve your literature review.

On successful completion you will be able to:

- Construct a scientific argument

- Advance skills in oral presentation of a scientific argument
- Synthesise primary scientific literature

## Summary of top 3 presentations

Due: **5th May 4pm**

Weighting: **10%**

Identify and rank your top three presentations from the class oral presentations. For each presentation, summarise in less than 200 words the scientific content of the presentation as well as describe in less than 100 words why you considered this presentation one of your top three.

On successful completion you will be able to:

- Source and frame evidence to critique a scientific argument

## Literature review

Due: **2nd June 4pm**

Weighting: **60%**

The literature review should be written and formatted as a submission-ready review paper in the style of an appropriate journal. Write your report for a scientifically literate but non-specialist audience. This must be fully referenced following the referencing style of the journal. The review must not exceed 3,500 words *exclusive* of references. A useful guide are the *Trends* journals (Trends in Ecology and Evolution, Trends in Neurosciences, Trends in Plant Sciences), which publish accessible reviews of this length.

A good scientific review requires a clear definition of the problem and question, comprehensive coverage of relevant literature, a concise and unbiased summary of existing evidence, clear structure, precise spelling, grammar and use of written English and a conclusion that addresses the topic question.

You should cite at least 20 papers from the primary peer-reviewed literature in your review, but you may have to read considerably more than this to get a rounded idea of the topic. Emphasis should be placed on recent papers (last 5 years).

On successful completion you will be able to:

- Develop skills in scientific writing
- Construct a scientific argument
- Synthesise primary scientific literature
- Source and frame evidence to critique a scientific argument

## Delivery and Resources

### IMPORTANT DATES

Friday 24 <sup>th</sup> February	11am-1pm	E8A280
Initial meeting, explanation of theme topic & examples.		
Monday 6 <sup>th</sup> March	11am-1pm	E8A280
Follow up meeting to discuss choice of topic areas.		
Friday 28 <sup>th</sup> April	10.00 am – 4:00pm	E8A280
Seminars, attendance at all seminars is compulsory!		

## 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](http://mq.edu.au/policy/docs/academic_honesty/policy.html)

Assessment Policy [http://mq.edu.au/policy/docs/assessment/policy\\_2016.html](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](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](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/](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](http://ask.mq.edu.au).

## Student Support

Macquarie University provides a range of support services for students. For details, visit <http://stu>

[dents.mq.edu.au/support/](https://dents.mq.edu.au/support/)

## Learning Skills

Learning Skills ([mq.edu.au/learningskills](https://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](https://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

### 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 outcome

- Source and frame evidence to critique a scientific argument

#### Assessment tasks

- Summary of top 3 presentations
- Literature review

### 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**

- Construct a scientific argument
- Advance skills in oral presentation of a scientific argument
- Synthesise primary scientific literature
- Source and frame evidence to critique a scientific argument

### **Assessment tasks**

- Proposal
- Oral presentation
- Literature review

## **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**

- Develop skills in scientific writing
- Construct a scientific argument
- Synthesise primary scientific literature
- Source and frame evidence to critique a scientific argument

### **Assessment tasks**

- Proposal
- Literature review

## **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

- Construct a scientific argument
- Source and frame evidence to critique a scientific argument

## Assessment task

- Literature review

## 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

- Develop skills in scientific writing
- Advance skills in oral presentation of a scientific argument

## Assessment tasks

- Oral presentation
- Literature review

## Changes since First Published

Date	Description
04/08/2017	Removal of non-teaching staff