



# BIOL766

## Advanced Studies in Palaeobiology

S1 Day 2018

*Dept of Biological Sciences*

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#### **Disclaimer**

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## General Information

Unit convenor and teaching staff

Administrator

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Credit points

4

Prerequisites

Admission to MRes

Corequisites

Co-badged status

Unit description

This is an advanced unit that exposes students to the best examples of recent (and classic) primary literature across a broad range of fields including palaeobiology, evolutionary biology, ecology and geobiology. In particular, this unit focuses on exciting interdisciplinary research streams where the work of geneticists and embryologists is combined fruitfully with the investigations of palaeobiologists and evolutionary biologists in order to decipher important evolutionary questions. The unit also focuses on the enormous interest in reconstructing past environments through studies of community palaeoecology, taphonomy and ecosystem evolution. Students will participate in and contribute to weekly group based discussions, debates and seminars that aim to probe, critically evaluate and assess topical questions and test prevailing models and/or hypotheses across a wide range of interdisciplinary research themes. The curriculum will include written and oral essay style assessments as well as planning and presentation of a novel research project focused on an important aspect of evolutionary biology and/or palaeobiology. This unit provides students an opportunity to directly interact with research active academic staff, postdoctoral researchers and PhD students from many disciplines including evolutionary biology, palaeobiology, ecology and geoscience.

## 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:

1. Evaluate and synthesise current literature concerning large spatial, temporal and intellectual scales in evolutionary biology, palaeobiology and ecology
2. Design, construct, and present innovative written and oral evaluations and interpretations of relevant primary literature at an advanced level
3. Organise, lead, and convene a group discussion focussed on current or controversial topics in evolutionary biology and based on recently published relevant primary sources
4. Plan and devise novel research focussed on an important aspect of evolutionary biology and/or palaeobiology

## Assessment Tasks

Name	Weighting	Hurdle	Due
<a href="#">Weekly Summaries</a>	5%	No	each week
<a href="#">Essay 1</a>	40%	No	Week 7
<a href="#">Essay 2</a>	40%	No	Week 11
<a href="#">Research Presentation</a>	15%	No	Weeks 11, 12, or 13

### Weekly Summaries

Due: **each week**

Weighting: **5%**

#### **Brief annotated bibliography related to the weekly discussion**

On successful completion you will be able to:

- 1. Evaluate and synthesise current literature concerning large spatial, temporal and intellectual scales in evolutionary biology, palaeobiology and ecology
- 3. Organise, lead, and convene a group discussion focussed on current or controversial topics in evolutionary biology and based on recently published relevant primary sources

### Essay 1

Due: **Week 7**

Weighting: **40%**

## **2500 word essay on a topic of your choice**

On successful completion you will be able to:

- 1. Evaluate and synthesise current literature concerning large spatial, temporal and intellectual scales in evolutionary biology, palaeobiology and ecology
- 2. Design, construct, and present innovative written and oral evaluations and interpretations of relevant primary literature at an advanced level
- 4. Plan and devise novel research focussed on an important aspect of evolutionary biology and/or palaeobiology

## **Essay 2**

Due: **Week 11**

Weighting: **40%**

## **2500 word essay on a topic of your choice**

On successful completion you will be able to:

- 1. Evaluate and synthesise current literature concerning large spatial, temporal and intellectual scales in evolutionary biology, palaeobiology and ecology
- 2. Design, construct, and present innovative written and oral evaluations and interpretations of relevant primary literature at an advanced level
- 4. Plan and devise novel research focussed on an important aspect of evolutionary biology and/or palaeobiology

## **Research Presentation**

Due: **Weeks 11, 12, or 13**

Weighting: **15%**

## **20 minute seminar based on research carried out during the semester**

On successful completion you will be able to:

- 1. Evaluate and synthesise current literature concerning large spatial, temporal and intellectual scales in evolutionary biology, palaeobiology and ecology
- 2. Design, construct, and present innovative written and oral evaluations and interpretations of relevant primary literature at an advanced level
- 3. Organise, lead, and convene a group discussion focussed on current or controversial topics in evolutionary biology and based on recently published relevant primary sources
- 4. Plan and devise novel research focussed on an important aspect of evolutionary biology and/or palaeobiology

## Delivery and Resources

### Pre-requisites

BIOL766 is offered as an optional unit in Biological Sciences for students enrolled in the Bachelor of Philosophy and Master of Research Degrees.

### Unit description

This is an advanced postgraduate unit that exposes students to the best examples of recent (and classic) primary scientific literature across a broad range of fields including palaeobiology, evolutionary biology, ecology, and geobiology. Students will contribute to weekly group based discussions, debates, and seminars that aim to critically evaluate topical questions and test prevailing hypotheses across a wide range of interdisciplinary research themes. The curriculum will include written and oral essay style assessments as well as planning and presentation of a novel research project, preferably focussed on an important aspect of evolutionary biology and/or palaeobiology. This unit provides students with an opportunity to directly interact with research active academic staff, postdoctoral researchers, PhD and Year 2 MRes students from many disciplines including evolutionary biology, palaeobiology, ecology and geoscience.

## 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 \(https://staff.mq.edu.au/work/strategy-planning-and-governance/university-policies-and-procedures/policy-central\)](https://staff.mq.edu.au/work/strategy-planning-and-governance/university-policies-and-procedures/policy-central).

## 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).

## 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

### 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**

- 1. Evaluate and synthesise current literature concerning large spatial, temporal and intellectual scales in evolutionary biology, palaeobiology and ecology
- 2. Design, construct, and present innovative written and oral evaluations and interpretations of relevant primary literature at an advanced level
- 3. Organise, lead, and convene a group discussion focussed on current or controversial topics in evolutionary biology and based on recently published relevant primary sources
- 4. Plan and devise novel research focussed on an important aspect of evolutionary biology and/or palaeobiology

## **Assessment tasks**

- Weekly Summaries
- Essay 1
- Essay 2
- Research Presentation

## **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**

- 1. Evaluate and synthesise current literature concerning large spatial, temporal and intellectual scales in evolutionary biology, palaeobiology and ecology
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- 3. Organise, lead, and convene a group discussion focussed on current or controversial topics in evolutionary biology and based on recently published relevant primary sources
- 4. Plan and devise novel research focussed on an important aspect of evolutionary biology and/or palaeobiology

## **Assessment tasks**

- Weekly Summaries
- Essay 1

- Essay 2
- Research Presentation

## 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

- 1. Evaluate and synthesise current literature concerning large spatial, temporal and intellectual scales in evolutionary biology, palaeobiology and ecology
- 2. Design, construct, and present innovative written and oral evaluations and interpretations of relevant primary literature at an advanced level
- 3. Organise, lead, and convene a group discussion focussed on current or controversial topics in evolutionary biology and based on recently published relevant primary sources
- 4. Plan and devise novel research focussed on an important aspect of evolutionary biology and/or palaeobiology

### Assessment tasks

- Weekly Summaries
- Essay 1
- Essay 2
- Research Presentation

## 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

- 1. Evaluate and synthesise current literature concerning large spatial, temporal and intellectual scales in evolutionary biology, palaeobiology and ecology
- 2. Design, construct, and present innovative written and oral evaluations and interpretations of relevant primary literature at an advanced level
- 3. Organise, lead, and convene a group discussion focussed on current or controversial



topics in evolutionary biology and based on recently published relevant primary sources

- 4. Plan and devise novel research focussed on an important aspect of evolutionary biology and/or palaeobiology

## **Assessment tasks**

- Weekly Summaries
- Essay 1
- Essay 2
- Research Presentation