



# BIOL399

## Special Interest Topics in Biology

S2 Day 2019

*Dept of Biological Sciences*

### Contents

<u>General Information</u>	2
<u>Learning Outcomes</u>	2
<u>Assessment Tasks</u>	3
<u>Delivery and Resources</u>	5
<u>Unit Schedule</u>	5
<u>Policies and Procedures</u>	6
<u>Graduate Capabilities</u>	7
<u>Changes from Previous Offering</u>	10

#### Disclaimer

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## General Information

Unit convenor and teaching staff

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Credit points

3

Prerequisites

Permission by special approval

Corequisites

Co-badged status

Unit description

Students with a special interest in a particular area of biology may be permitted to enrol in this unit. Student's work with an academic mentor to pursue a literature based enquiry of a selected topic in biological sciences. It is necessary for the student to contact the coordinator and arrange for a staff member to supervise their readings and topic development.

Assessment is based on two literature reviews, or equivalent, plus a seminar. Students taking this unit must be able to undertake self-directed and independent study.

## 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:

Utilise data mining techniques and skills to comprehensively and rigorously research a topic (or topics) from the primary scientific literature

Evaluate, synthesise, and assess the evidence presented in scientific literature

Communicate your understanding of a topic using written scientific conventions

Discuss and explore, via oral presentation, the most important data, results, and conclusions from the primary scientific literature

## Assessment Tasks

Name	Weighting	Hurdle	Due
<a href="#">Early Semester Task</a>	2%	No	Friday, Week 3
<a href="#">Essay 1</a>	40%	No	Friday, Week 8
<a href="#">Essay 2</a>	40%	No	Friday, Week 12
<a href="#">Oral Seminar</a>	18%	No	Week 13, to be scheduled

### Early Semester Task

Due: **Friday, Week 3**

Weighting: **2%**

#### Summarising one key paper for the first essay/opinion piece in one or two paragraphs

Write one or two paragraphs summarising a key paper. The main aim of the assessment is to provide some early feedback on writing, including aspects of correctness, comprehensibility, and style. The student will be provided feedback as to whether substantial practice to improve writing is needed.

On successful completion you will be able to:

- Communicate your understanding of a topic using written scientific conventions

### Essay 1

Due: **Friday, Week 8**

Weighting: **40%**

#### Essay/opinion piece on Topic 1

Students will submit two essays (Essay 1 and Essay 2) on two, possibly related topics. Marking criteria are provided in a separate document. For each essay, students will be assessed on coverage and comprehension of the literature relevant to the chosen topic, critical evaluation of the material, and style and writing.

The essays will be independently assessed by the supervisor and at least one other member of staff with relevant expertise. More staff may be co-opted to act as independent assessors if required.

On successful completion you will be able to:

- Utilise data mining techniques and skills to comprehensively and rigorously research a topic (or topics) from the primary scientific literature
- Evaluate, synthesise, and assess the evidence presented in scientific literature

- Communicate your understanding of a topic using written scientific conventions

## Essay 2

Due: **Friday, Week 12**

Weighting: **40%**

### Essay/opinion piece on Topic 2

Students will submit two essays (Essay 1 and Essay 2) on two, possibly related topics. Marking criteria are provided in a separate document. For each essay, students will be assessed on coverage and comprehension of the literature relevant to the chosen topic, critical evaluation of the material, and style and writing.

The essays will be independently assessed by the supervisor and at least one other member of staff with relevant expertise. More staff may be co-opted to act as independent assessors if required.

On successful completion you will be able to:

- Utilise data mining techniques and skills to comprehensively and rigorously research a topic (or topics) from the primary scientific literature
- Evaluate, synthesise, and assess the evidence presented in scientific literature
- Communicate your understanding of a topic using written scientific conventions

## Oral Seminar

Due: **Week 13, to be scheduled**

Weighting: **18%**

### 15 min seminar on one essay topic + 5 mins for questions and discussion

Whether it be at scientific meetings or conferences, in schools, or in boardrooms, oral presentations are a time-honoured way of disseminating information and reporting results to an audience. **Each student will be expected to present a seminar of 20 minutes in duration (15 mins talk + 5 mins for questions/discussion).**

This will be your chance to argue your point of view and discuss the evidence in front of an audience. With only 15 minutes, it is important to structure your talk well, keeping the structure simple, but logical. Do not try to cram everything you have learned about the topic into 15 minutes. For a 15-minute presentation you should be looking at no more than a dozen PowerPoint slides (+ 1 slide showing references).

You will need to carefully evaluate and present only **essential, important, and relevant materials, especially illustrations**, in an organised and logical sequence. The best seminars are those that are simple to comprehend, logically organised, clearly illustrated, and infotaining! The seminar is worth 18% of your final mark and so we expect high-quality work, especially in terms of scientific evaluation, factual correctness, relevance, and clarity. Seminars will be presented to an audience consisting of at least 2 staff members. Relevant postdocs, postgrads,

and MRes students will also be invited to attend. Other students completing BIOL399 will also be present.

All students will need to present their seminar using PowerPoint. Marks will be allocated for scientific content, interpretation, logical flow and organisation, presentational quality, both oral and visual, adequate acknowledgement of relevant sources, and ability to answer audience questions. See the rubric for the seminar presentation on iLearn.

On successful completion you will be able to:

- Utilise data mining techniques and skills to comprehensively and rigorously research a topic (or topics) from the primary scientific literature
- Evaluate, synthesise, and assess the evidence presented in scientific literature
- Discuss and explore, via oral presentation, the most important data, results, and conclusions from the primary scientific literature

## Delivery and Resources

The aim of this unit is to let students search, read, and critically review and evaluate the available scientific literature on two, possibly related biological topics. The topics are to be decided by the student in consultation with and under the supervision of a nominated academic supervisor from the Department of Biological Sciences. The assessments in this unit are designed to develop your independent data-mining, research, and writing skills.

This unit has no scheduled meetings other than a talk session in Week 13. Students are expected to take responsibility for organizing their workload throughout the semester.

## Unit Schedule

BIOL399 is offered internally for a single semester (S2) as a three-credit-point unit and requires a workload commitment of ~150 hours (10 hours per week, including the midsemester break). There are normally no scheduled classes; instead all students undertake independent research, with regular contact with their topic supervisor. As a rough guide, we expect that this time will be divided into:

1. Regular meetings/contact with your topic supervisor: 6-7 hours
  2. Searching, reading and evaluating the literature: 75-90 hours (i.e. around 5-6 hours/ week over a 15-week semester)
  3. Assessments: 40-55 hours
  4. Attending Seminars: 4-8 hours (depending on number of students enrolled in Unit)
- *Supervision meetings:* **By arrangement with supervisor.**
  - *Final seminars:* **In Week 13. Date and time by arrangement with Convenor and supervisors.**

## 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 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](https://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](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](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

- Evaluate, synthesise, and assess the evidence presented in scientific literature
- Communicate your understanding of a topic using written scientific conventions
- Discuss and explore, via oral presentation, the most important data, results, and conclusions from the primary scientific literature

### Assessment tasks

- Essay 1
- Essay 2

### 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**

- Utilise data mining techniques and skills to comprehensively and rigorously research a topic (or topics) from the primary scientific literature
- Evaluate, synthesise, and assess the evidence presented in scientific literature
- Communicate your understanding of a topic using written scientific conventions
- Discuss and explore, via oral presentation, the most important data, results, and conclusions from the primary scientific literature

## **Assessment tasks**

- Essay 1
- Essay 2
- Oral Seminar

## **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**

- Utilise data mining techniques and skills to comprehensively and rigorously research a topic (or topics) from the primary scientific literature
- Evaluate, synthesise, and assess the evidence presented in scientific literature
- Communicate your understanding of a topic using written scientific conventions
- Discuss and explore, via oral presentation, the most important data, results, and conclusions from the primary scientific literature

## **Assessment tasks**

- Early Semester Task
- Essay 1



- Essay 2
- Oral Seminar

## 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

- Evaluate, synthesise, and assess the evidence presented in scientific literature
- Communicate your understanding of a topic using written scientific conventions
- Discuss and explore, via oral presentation, the most important data, results, and conclusions from the primary scientific literature

### Assessment tasks

- Essay 1
- Essay 2
- Oral Seminar

## 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

- Utilise data mining techniques and skills to comprehensively and rigorously research a topic (or topics) from the primary scientific literature
- Evaluate, synthesise, and assess the evidence presented in scientific literature
- Communicate your understanding of a topic using written scientific conventions
- Discuss and explore, via oral presentation, the most important data, results, and conclusions from the primary scientific literature

### Assessment tasks

- Early Semester Task

- Essay 1
- Essay 2
- Oral Seminar

## 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

- Communicate your understanding of a topic using written scientific conventions
- Discuss and explore, via oral presentation, the most important data, results, and conclusions from the primary scientific literature

### Assessment tasks

- Early Semester Task
- Essay 1
- Essay 2
- Oral Seminar

## Changes from Previous Offering

This unit is running as it did in 2018, with no changes other than dates being about a year later.