BIOL399

Special Interest Topics in Biology

S1 Day 2014

Dept of Biological Sciences

Contents

General Information

Unit convenor and teaching staff
Other Staff
Linda Beaumont
linda.beaumont@mq.edu.au
Contact via linda.beaumont@mq.edu.au
E8C246

Unit Convenor
Glenn Brock
glenn.brock@mq.edu.au
Contact via glenn.brock@mq.edu.au
E8A322

Other Staff
Katherine McClellan
katherine.mcclellan@mq.edu.au
Contact via katherine.mcclellan@mq.edu.au

Credit points
3

Prerequisites
Permission of Executive Dean of Faculty

Corequisites

Co-badged status

Unit description
Students with a special interest in a particular area of biology and palaeobiology may be permitted to enrol in this unit. It is necessary for them to contact the coordinator and arrange for a staff member to supervise their reading and mark the work. Assessment is based on two literature reviews, or equivalent, plus a seminar. Students in the palaeobiology program can undertake a separate palaeobiology readings strand for this unit that delves into some of the most interesting hot topics, controversies, debates and discoveries in the fields of palaeobiology and palaeoecology.

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

Assessment Tasks

Name	Weighting	Due
Early Semester Task	5%	Week 3
Essay 1	40%	Week 8
Essay 2	40%	Week 12
Oral Seminar	15%	Week 13

Early Semester Task

Due: **Week 3**
Weighting: **5%**

All students will be presented with an early assessment task in the unit, the main aim of which is to lay the foundation for good practice in data mining primary scientific literature, evaluating data sources and formatting written work. The exact nature of the task will be designed in consultation with your supervisor. It may take the form of a library resource exercise (e.g. production of an annotated bibliography) or a review of a new and pertinent scientific paper or book. The task will be designed as a relevant prelude to the larger essay topics to be completed later in the unit. Feedback and assessment will be completed in a timely manner to ensure the student has time to correct mistakes and to incorporate feedback into the essay topics.

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.
- Cogently evaluate, synthesise and assess the evidence presented in scientific literature.
- Communicate your understanding of a topic using written scientific conventions.

Essay 1

Due: **Week 8**
Weighting: **40%**

Two essays (maximum 2,500 words each) on separate aspects of a chosen topic (Biology stream), or set topics (Palaeobiology stream), are completed. Details on what is expected regarding each stream, including submission dates, specific marking criteria and format for each stream will be provided separately.

Students will be assessed on coverage and comprehension of the literature relevant to the chosen topic/s, critical evaluation of the material, and style and writing of the essay. Details of the essay requirements for the two streams will vary – students will be provided with detailed separate instructions for the essays by the convener of your stream.

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.

As an **alternative to the second essay**, students (in consultation with their supervisor) may write a mock grant application (such as an ARC Discovery Grant proposal). If so, the student would be expected to download the appropriate guidelines and application forms from the research office web site (www.ro.mq.edu.au) and to follow the instructions as closely as possible. **Contact your supervisor if you would like to attempt this option.** This option would be suitable for a student planning to undertake further academic studies.

The due dates will be agreed in discussions between the student and supervisor. Normally one essay is handed in by the end of week 8, and essay 2 at the end of Week 12.

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.
- Cogently evaluate, synthesise and assess the evidence presented in scientific literature.
- Communicate your understanding of a topic using written scientific conventions.

Essay 2

Due: **Week 12**
Weighting: **40%**

See information for Essay 1.

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.
- Cogently 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**
Weighting: **15%**

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 a large (or select) audience at one time. **Each student will be expected to present a seminar of 20 minutes duration (15 mins talk + 5 mins for questions/discussion)**. Students undertaking the Palaeobiology stream will choose to present their oral presentation on one of a selection of possible topics available separately. This will be your chance to argue your point of view and discuss the evidence in front of an audience.

All students will need to present their seminar using PowerPoint. It would be best if the presentation was completed on an IBM PC or laptop in PowerPoint.

On successful completion you will be able to:

- 4. Communicate and explore, via oral presentation, the most important data, results and conclusions from the primary scientific literature.

Delivery and Resources

iLearn

BIOL399 has an online presence on iLearn. To access this site go tohttps://ilearn.mq.edu.au/login/MQ/. You will need your OneID and password to log in. This site reproduces the BIOL399 Unit Outline and other information including assignment dates. Students undertaking the Palaeobiology stream have a separate set of instructions for the essays.

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.ht

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Assessment Policy http://mq.edu.au/policy/docs/assessment/policy.html

Grading Policy http://mq.edu.au/policy/docs/grading/policy.html

Grade Appeal Policy http://mq.edu.au/policy/docs/gradeappeal/policy.html

Grievance Management Policy http://mq.edu.au/policy/docs/grievance_management/policy.html

Disruption to Studies Policy http://www.mq.edu.au/policy/docs/disruption_studies/policy.html *The Disruption to Studies Policy is effective from March 3 2014 and replaces the Special Consideration Policy.*

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/

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

IT Help

For help with University computer systems and technology, visit http://informatics.mq.edu.au/help/.

When using the University's IT, you must adhere to the Acceptable Use Policy. The policy

applies to all who connect to the MQ network including students.

Graduate Capabilities

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.
- Cogently evaluate, synthesise and assess the evidence presented in scientific literature.
- Communicate your understanding of a topic using written scientific conventions.
- 4. Communicate 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

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

- 4. Communicate 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

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.
- Cogently evaluate, synthesise and assess the evidence presented in scientific literature.
- 4. Communicate 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.

- 4. Communicate 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