BIOL399

Special Interest Topics in Biology

S2 External 2017

Dept of Biological Sciences

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Disclaimer

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General Information

Unit convenor and teaching staff Ken Cheng ken.cheng@mq.edu.au
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.

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

Communicate your understanding of a topic using written scientific conventions.

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

General Assessment Information

Unit completion requirements

Students need to gain a final grade equivalent to, or greater than, 50 to pass the unit.

Assignment submission

All written assessments are to be submitted via the Turnitin Assignment submission section on the unit's iLearn page. You should also email a copy of the assessment to the Convenor (ken.cheng@mq.edu.au) and your supervisor. Sometimes, the turnitin upload may get stuck in cyberspace.

Turnitin is a plagiarism-detection software. It compares each submission to most other electronic sources, including the work of your classmates or of previous students from Macquarie and other universities, web sites, and published material available on the Internet, such as electronic journal articles and book chapters. The results will be sent only to the unit convenor, who will analyse them with reference to the University's Policy on Academic Honesty.

Extensions and penalties

The deadlines for assignments are not negotiable. Late assignments will be penalised: 10% off the mark allocated for essays will be deducted per day or any part of a day for any work that is submitted after the due date. Extensions are granted only on grounds of illness or misadventure, and appropriate supporting documentation must be submitted. All applications for special consideration or extension must be sought ***before the due date*** unless this is absolutely impossible. **All applications for extensions of deadlines must be submitted to the unit Convenor.**

Work submitted after 2 weeks beyond the due date, or the date for which an extension has been given, will not be accepted. If you are having problems completing an assignment, please contact the unit Convenor as soon as possible.

Assessment Tasks

Name	Weighting	Hurdle	Due
Early writing task	2%	No	Week 3 Fri 18 Aug
Essay 1	40%	No	Week 8; Fri 6 October
Essay 2	40%	No	Week 12; Fri 3 Nov
Oral presentation	18%	No	Week 13; TBA

Early writing task

Due: **Week 3 Fri 18 Aug**
Weighting: **2%**

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.

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Essay 1

Due: **Week 8; Fri 6 October**
Weighting: **40%**

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.

Separate detailed instructions on iLearn.

On successful completion you will be able to:

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Essay 2

Due: **Week 12; Fri 3 Nov**
Weighting: **40%**

(See description for Essay 1 above).

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 presentation

Due: **Week 13; TBA**

Weighting: **18%**

Time limit: 15 minutes, plus 5 minutes of question time

Due date: Week 13; date and time to be determined (see iLearn page)

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.

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- Cogently evaluate, synthesise and assess the evidence presented in scientific literature.
- Communicate and explore, via oral presentation, the most important data, results and conclusions from the primary scientific literature.

Delivery and Resources

About this unit

The aim of this unit is to search, read and critically review the available scientific literature on two, possibly related biological topics**.** The topics are to be decided by the student in consultation with a supervisor from the Department of Biological Sciences.

The objective of the unit is to expose students to the process of reviewing and evaluating the scientific literature. Students are expected to take responsibility for organizing their workload throughout the semester. This unit is offered internally for a single semester (S2). Successful completion of the unit will earn you three credit points.

Workload expectations

BIOL399 is a three-credit-point unit and requires a *minimum* workload commitment of 117 hours (9 hours per week). 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: 65-80 hours (i.e. around 5-6 hours/ week over a 13-week semester)
3. Assessments: 30-45 hours
4. Attending Seminars: 2-4 hours (depending on number of students enrolled in Unit)

iLearn

BIOL399 has an online presence on iLearn. To access this site go to https://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 detailed assignment instructions, submission dates, *Turnitin* links for assessment submission.

All students are expected to check the Unit iLearn site regularly for announcements and information.

Learning and Teaching Activities

Personal reading

Reading through journal articles and online resources pertinent to your topic area.

Meetings and discussions with supervisor

At these meetings you will be expected to select your topic area(s), discuss relevant literature, etc.

Written assessments

These assessments will develop your data mining skills, critical and analytical thinking, and writing skills.

Seminar session

This is your opportunity to argue your point of view with supporting evidence in front of an audience. It will also give you an opportunity to be a respectful audience member and participate

in discussion of diverse topics in biology/palaeobiology.

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

Assessment Policy 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

Disruption to Studies Policy (in effect until Dec 4th, 2017): 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/

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.

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://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 and teaching activities

- At these meetings you will be expected to select your topic area(s), discuss relevant literature, etc.
- These assessments will develop your data mining skills, critical and analytical thinking, and writing skills.
- This is your opportunity to argue your point of view with supporting evidence in front of an audience. It will also give you an opportunity to be a respectful audience member and participate in discussion of diverse topics in biology/palaeobiology.

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 and teaching activities

- Reading through journal articles and online resources pertinent to your topic area.
- These assessments will develop your data mining skills, critical and analytical thinking, and writing skills.

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

Assessment tasks

- Early writing task
- Essay 1
- Essay 2
- Oral presentation

Learning and teaching activities

- Reading through journal articles and online resources pertinent to your topic area.
- These assessments will develop your data mining skills, critical and analytical thinking, and writing skills.
- This is your opportunity to argue your point of view with supporting evidence in front of an audience. It will also give you an opportunity to be a respectful audience member and participate in discussion of diverse topics in biology/palaeobiology.

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.
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Assessment tasks

- Early writing task
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Learning and teaching activities

- Reading through journal articles and online resources pertinent to your topic area.
- At these meetings you will be expected to select your topic area(s), discuss relevant literature, etc.
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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

- 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.

Assessment tasks

- Essay 1
- Essay 2
- Oral presentation

Learning and teaching activities

- These assessments will develop your data mining skills, critical and analytical thinking, and writing skills.

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

Assessment tasks

- Essay 1
- Essay 2
- Oral presentation

Learning and teaching activities

- At these meetings you will be expected to select your topic area(s), discuss relevant literature, etc.
- These assessments will develop your data mining skills, critical and analytical thinking, and writing skills.
- This is your opportunity to argue your point of view with supporting evidence in front of an audience. It will also give you an opportunity to be a respectful audience member and participate in discussion of diverse topics in biology/palaeobiology.

Changes from Previous Offering

This year, there are no separate streams in the unit. The marks assigned to the early writing task are fewer than before; the seminar is now worth more than before.