BIOL188

Advanced Science (Biology) 1

FY1 Day 2014

Dept of Biological Sciences

Contents

General Information

Unit convenor and teaching staff
Unit Convenor
Culum Brown
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Other Staff
Katherine McClellan
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Credit points
3

Prerequisites
Admission to BAdvSc and permission of Executive Dean of Faculty

Corequisites

Co-badged status

Unit description
This unit consists of weekly tutorials examining hot topics in biology with a variety of scientists from a diverse background. Students are expected to actively contribute during the tutorials and produce a presentation on their favourite topic of the year. Opportunities for research internships in biology are provided.

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:

- Research a topic from the primary scientific literature
- Critically analyse the literature on a variety of biological topics
- Communicate your understanding of aspects of this topic in written form
- Communicate a synthesis of this topic in oral form
- Gain practical experience in a research laboratory

Assessment Tasks

Name	Weighting	Due
Attendance - discussions	30%	Weekly
Completion of internship	0%	By the end of 3rd year
Presentation of Hot Topic	30%	November
News and Views paper	40%	25.11.2012

Attendance - discussions

Due: **Weekly**
Weighting: **30%**

Attendance and contribution to weekly discussions.

Each week a hot topic in biology will be presented by a variety of experts in the field. Topics include everything from medical science, ecology, evolution and palaeontology. Related reading will be posted on the Adv Bio web site for download. It is expected that all students will read the articles with a critical eye and be prepared for an in-depth discussion on Friday. The discussions take place in the E8A 360A from 9-10am. Attendance at all of the sessions is compulsory.

On successful completion you will be able to:

- Research a topic from the primary scientific literature
- Critically analyse the literature on a variety of biological topics
- Communicate your understanding of aspects of this topic in written form
- Communicate a synthesis of this topic in oral form

Completion of internship

Due: **By the end of 3rd year**
Weighting: **0%**

The lab manager will report back to the director regarding the competency of the student during their internship

On successful completion you will be able to:

- Research a topic from the primary scientific literature
- Critically analyse the literature on a variety of biological topics
- Gain practical experience in a research laboratory

Presentation of Hot Topic

Due: **November**
Weighting: **30%**

Seminar or poster on favourite hot topic of the year. Student are to present a seminar of 12 minutes duration on their favorite hot topic in biology covered during the weekly discussion groups. The talks will be presented at the Advanced Biology Conference which will be organized and run by the students towards the end of second semester. Students will also judge the quality of the presentations using a standardized marking sheet.

On successful completion you will be able to:

- Research a topic from the primary scientific literature
- Critically analyse the literature on a variety of biological topics
- Communicate a synthesis of this topic in oral form

News and Views paper

Due: **25.11.2012**
Weighting: **40%**

Submission of a news and views article based on their favourite hot topic of the year. Students will submit a “news and views” type article on their favourite hot topic of the year to the Director. Reports will be graded by both the Director and the presenter of the topic. Topics may also include subjects not specifically covered during the discussion groups. You can check the suitability of the topic with the Director. The paper is due at the end of second semester.

On successful completion you will be able to:

- Research a topic from the primary scientific literature
- Critically analyse the literature on a variety of biological topics
- Communicate your understanding of aspects of this topic in written form

Delivery and Resources

Delivery is centred around the tutorials which take a variety of forms.

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.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

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

- Research a topic from the primary scientific literature
- Communicate your understanding of aspects of this topic in written form
- Gain practical experience in a research laboratory

Commitment to Continuous Learning

Our graduates will have enquiring minds and a literate curiosity which will lead them to pursue knowledge for its own sake. They will continue to pursue learning in their careers and as they participate in the world. They will be capable of reflecting on their experiences and relationships with others and the environment, learning from them, and growing - personally, professionally and socially.

This graduate capability is supported by:

Learning outcomes

- Research a topic from the primary scientific literature
- Communicate your understanding of aspects of this topic in written form
- Communicate a synthesis of this topic in oral form
- Gain practical experience in a research laboratory

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

- Research a topic from the primary scientific literature
- Critically analyse the literature on a variety of biological topics
- Communicate your understanding of aspects of this topic in written form
- Communicate a synthesis of this topic in oral form
- Gain practical experience in a research laboratory

Assessment tasks

- Attendance - discussions
- Completion of internship
- Presentation of Hot Topic
- News and Views paper

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

- Research a topic from the primary scientific literature
- Critically analyse the literature on a variety of biological topics
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- Gain practical experience in a research laboratory

Assessment tasks

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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

- Research a topic from the primary scientific literature
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- Communicate your understanding of aspects of this topic in written form
- Communicate a synthesis of this topic in oral form
- Gain practical experience in a research laboratory

Assessment tasks

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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

- Research a topic from the primary scientific literature
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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

- Research a topic from the primary scientific literature
- Critically analyse the literature on a variety of biological topics
- Communicate your understanding of aspects of this topic in written form
- Communicate a synthesis of this topic in oral form
- Gain practical experience in a research laboratory

Engaged and Ethical Local and Global citizens

As local citizens our graduates will be aware of indigenous perspectives and of the nation's historical context. They will be engaged with the challenges of contemporary society and with knowledge and ideas. We want our graduates to have respect for diversity, to be open-minded, sensitive to others and inclusive, and to be open to other cultures and perspectives: they should have a level of cultural literacy. Our graduates should be aware of disadvantage and social justice, and be willing to participate to help create a wiser and better society.

This graduate capability is supported by:

Learning outcomes

- Research a topic from the primary scientific literature
- Critically analyse the literature on a variety of biological topics
- Communicate your understanding of aspects of this topic in written form
- Communicate a synthesis of this topic in oral form
- Gain practical experience in a research laboratory

Socially and Environmentally Active and Responsible

We want our graduates to be aware of and have respect for self and others; to be able to work with others as a leader and a team player; to have a sense of connectedness with others and country; and to have a sense of mutual obligation. Our graduates should be informed and active participants in moving society towards sustainability.

This graduate capability is supported by:

Learning outcomes

- Research a topic from the primary scientific literature
- Communicate your understanding of aspects of this topic in written form