



BIOL3620

Biological Sciences Capstone

Session 2, Weekday attendance, North Ryde 2020

Department of Biological Sciences

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Disclaimer

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Notice

As part of [Phase 3 of our return to campus plan](#), most units will now run tutorials, seminars and other small group learning activities on campus for the second half-year, while keeping an online version available for those students unable to return or those who choose to continue their studies online.

To check the availability of face-to-face and online activities for your unit, please go to [timetable viewer](#). To check detailed information on unit assessments visit your unit's iLearn space or consult your unit convenor.

General Information

Unit convenor and teaching staff

Convenor

Melanie Bishop

melanie.bishop@mq.edu.au

Contact via 9850 4075

14 Eastern Rd Rm 205

Mon 9:30 am - 5 pm; Wed 11:00 - 5 pm

Credit points

10

Prerequisites

130cp at 1000 level or above

Corequisites

10cp from (BIOL3000-BIOL3450) or (BIOL301-BIOL375) or BBE305 or BBE306

Co-badged status

Unit description

The Biology Capstone seeks to equip students for professional engagement in biology disciplines. The unit will focus on developing student awareness and capability across the following themes: career goals; portfolio and network development; awareness and application of research conduct and integrity; human and animal ethics in research; biosecurity; biology in the public sphere; and communicating biology to experts and the public.

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:

ULO1: Compile a portfolio of key knowledge and skills gained throughout the program of study

ULO2: Identify career goals and develop the skills necessary to achieve them.

ULO3: Provide critical analysis and commentary on the contribution of biology to current affairs

ULO4: Explain the concept of ethics in biological research, and apply this knowledge to

the preparation of applications for research activities.

ULO5: Develop a grant proposal that addresses an issue of national relevance

ULO6: Explain complex biological processes in ways that can be understood by the general public

General Assessment Information

Extensions, penalties and special consideration

Unless special arrangements have been made in advance with the Unit Convenor, late submissions of weekly Online Learning activities or Science in the Public Sphere Blogs will receive a mark of **zero**. Similarly, failure to attend your allocated interview time slot will result in a mark of **zero** for this activity.

Late submissions of other assessments will attract a penalty of **5%** of the total marks allocated to the exercise per day. That is, if an assessment is out of 20, 1 mark out of 20 will be deducted for every day late. You may hand in your work after the due date and escape penalty only if you have an acceptable reason (usually a medical certificate). Discuss your problem with the Unit Convenor as early as possible before the due date.

Information on applying for Special Consideration for disruption to studies can be found here: <https://students.mq.edu.au/study/my-study-program/special-consideration>

Assignment submission, grading and return

All assignments will be submitted and graded online.

Submissions of weekly Online Learning activities and Biology in the Public Sphere blogs will be via the Q&A forums at the end of each week's iLearn module. Once you have submitted your post, you will be able to view the work of other students. For each of these assessments you will also be required to cut and paste your text into a Word document and submit this to **turnitin** via the unit's iLearn site for plagiarism detection. We will streamline plagiarism checks of the weekly Online Learning activities by submitting these to turnitin in two batches: a single document, containing the text of posts from week 3-8 posts will be submitted in week 8; in week 13, a single document with text from the week 9-13 posts will be submitted. For the Biology in the Public Sphere Blogs, a single document containing text from all blogs will be submitted for plagiarism detection in Week 13. Please note - the weekly posts will be used for grading, and late submissions will receive a grade of 0 for that week.

Career readiness documents (i.e. CV and job application), the outreach activity and the grant proposal will be all submitted via turnitin.

Turnitin is a powerful online tool for the detection of plagiarism. It works by comparing the text of a submitted document (i.e., your assignment) with the work of your current classmates, other courses at Macquarie, as well as published material in books, journals and on the web.

To submit your assignment via turnitin:

1. Visit the Assessments tab in iLearn, look for the turnitin header and select the relevant

assessment item

2. Click on the Submit Paper tab.
3. Select your Student Name
4. Enter a Submission Title.
5. Select Submission Part if there are multiple parts available.
6. Click Browse and select the file you would like to submit.
7. Click Add Submission.

Grading

All assessments for this unit will be marked according to the rubrics provided in the Assessments folder of ilearn.

This unit and its assessments are moderated according to departmental and university requirements. For example, where assessments are marked by multiple people, all agree on the marking process and marks are compared to ensure consistency. All summative assessments are moderated, with the major assessment also moderated by an academic external to the unit.

Plagiarism

All written work must be in the student's own words. Assessments submitted via Turnitin will be subjected to plagiarism detection. Plagiarism will not be tolerated. Penalties for plagiarism range from loss of marks to awarding a zero, depending upon the level of plagiarism, and will be reported to the Faculty Disciplinary Committee.

Assessment Tasks

Name	Weighting	Hurdle	Due
<u>Career readiness</u>	20%	No	CV/application: 11:55 PM Fri 21 Aug; Interview: in class TBC
<u>Online activities</u>	10%	No	11:55 pm Mon, weeks 4-13
<u>Biology in the public sphere blog</u>	30%	No	11:55 pm Sun, weeks 4-13
<u>Outreach activity</u>	10%	No	11:55 PM, Friday 9 October
<u>Grant proposal</u>	30%	No	11:55 pm, Friday 6th November

Career readiness

Assessment Type ¹: Portfolio

Indicative Time on Task ²: 5 hours

Due: **CV/application: 11:55 PM Fri 21 Aug; Interview: in class TBC**

Weighting: **20%**

Includes selection of a target job and preparation of a cover letter, statement of how they meet essential/desirable criteria and a CV/academic portfolio, and a mock interview. Students will use job seek websites to identify a position to which their skills, acquired through their biology/human biology major, might apply. They will prepare a cover-letter and statement of how they meet essential/desirable criteria, as well as a CV. The exact format these take will depend any requirements laid out in the job advertisement, and marks will be allocated to correctly following any instructions provided. The student will then attend a job interview during which they answer questions on their suitability for the position.

On successful completion you will be able to:

- Compile a portfolio of key knowledge and skills gained throughout the program of study
- Identify career goals and develop the skills necessary to achieve them.

Online activities

Assessment Type ¹: Participatory task

Indicative Time on Task ²: 30 hours

Due: **11:55 pm Mon, weeks 4-13**

Weighting: **10%**

Each week students will be required to complete an online module, before coming to the tutorial. This online module will require students to complete tasks, such as reflection, online searches and answer questions. Students will receive a grade based on the extent to which all tasks are completed.

On successful completion you will be able to:

- Compile a portfolio of key knowledge and skills gained throughout the program of study
- Identify career goals and develop the skills necessary to achieve them.
- Provide critical analysis and commentary on the contribution of biology to current affairs
- Explain the concept of ethics in biological research, and apply this knowledge to the preparation of applications for research activities.
- Develop a grant proposal that addresses an issue of national relevance
- Explain complex biological processes in ways that can be understood by the general public

Biology in the public sphere blog

Assessment Type ¹: Non-academic writing

Indicative Time on Task ²: 20 hours

Due: **11:55 pm Sun, weeks 4-13**

Weighting: **30%**

Students will be required to produce blog posts. Each blog post will identify news articles/current affairs appearing in the media during the past week, to which biology is relevant. Each post will summarise the news piece/current affair, provide a critique of the way in which biology is reported/communicated with respect to the issue/topic, and highlight the biological principles underpinning the news issue/topic. The blog posts may incorporate video and/or other media content, and should link to the original news media. Students will receive regular online formative feedback for these blog posts, enabling them to chart their progress and improvement as the course progresses. At the end of the course, each student's collection of blog posts will be marked summatively as one body of work.

On successful completion you will be able to:

- Provide critical analysis and commentary on the contribution of biology to current affairs

Outreach activity

Assessment Type ¹: Lesson plan

Indicative Time on Task ²: 5 hours

Due: **11:55 PM, Friday 9 October**

Weighting: **10%**

Each student will develop an outreach activity and/or presentation explaining the fundamental biological principles underpinning an issue of local/national/global relevance. The activity may take a variety of forms – it could be a hands-on activity (e.g. experiment, game, puzzle, field trip etc), a demonstration and/or a presentation. For the activity, you should clearly outline the topic it seeks to address, the audience (primary, secondary, tertiary/general public), alignment with any relevant curricula and/or topics of public events. Each student will then either need to provide user-friendly instructions of resource needs for the activity and how it should be run (for example, that could be followed by a teacher) or provide a link to a video file in which the student gives the presentation and/or demonstration. The activity should take approx. 15 min to complete.

On successful completion you will be able to:

- Explain complex biological processes in ways that can be understood by the general

public

Grant proposal

Assessment Type ¹: Professional writing

Indicative Time on Task ²: 25 hours

Due: **11:55 pm, Friday 6th November**

Weighting: **30%**

In small groups, students will develop a short grant proposal for a research project addressing one of the Federal Government's National Research Priorities. The proposal will clearly articulate the research problem being addressed, briefly outline the approach to addressing the research question, provide a time-line for the research and a budget. The proposal will also outline how the skills/experience of the students involved will contribute to the project. Each group will initially prepare an expression of interest, which will not be graded but will be a requirement for the completion of the unit, on which they will receive feedback. Based on this feedback students will then individually draft a full proposal, which they will prepare and submit independently.

On successful completion you will be able to:

- Explain the concept of ethics in biological research, and apply this knowledge to the preparation of applications for research activities.
- Develop a grant proposal that addresses an issue of national relevance

¹ If you need help with your assignment, please contact:

- the academic teaching staff in your unit for guidance in understanding or completing this type of assessment
- the [Writing Centre](#) for academic skills support.

² Indicative time-on-task is an estimate of the time required for completion of the assessment task and is subject to individual variation

Delivery and Resources

Delivery

This unit will make use of a 'flipped classroom'. The flipped classroom describes a reversal of traditional teaching where students gain first exposure to material outside of class, via readings and videos, and then use class time to engage in discussion, role-play and debates.

This means that instead of attending lectures, you will complete on-line activities and participate in practicals. The on-line activities will require you to explore a variety of media, including peer-

reviewed and grey literature, as well as newspaper articles and radio interviews. **You must complete each online module by 11:55 pm each Monday** (i.e. prior to the internal students' practical sessions). The practicals will provide opportunities to further explore topics through role-play and discussion. Through this approach it is hoped that you will gain a better understanding of how biology contributes to society and where your degree may take you in the future.

Resources

There is no prescribed text book for this course. Instead, you will be directed to required and optional readings through the learning modules in iLearn. Throughout this unit, you are encouraged to keep track of contemporary issues informed by biology by reading the newspaper, listening to the radio and following expert tweets.

Unit web page

The format of this unit requires that you complete learning modules in iLearn. Hence, it is absolutely essential that you log in on a regular basis.

To access the online unit, go to <https://ilearn.mq.edu.au/> and type in your Macquarie OneID Username and password.

New to iLearn? Check out the quick guides at <https://students.mq.edu.au/support/study/tools-and-resources/ilearn/ilearn-quick-guides-for-students>

Experiencing difficulties? Visit: <https://students.mq.edu.au/support/technology/service-desk>

Unit communications

Discussion board: In order to discuss issues of relevance to all students, please use the Discussion Board feature of iLearn. The chances are that if you are confused about something in the unit, so are your peers, so it will be useful to share your questions with all. These questions may be regarding the content of the modules (i.e. a concept you don't understand) or about requirements of the unit.

Email: For matters of a more personal nature, and that do not concern other students (i.e. requests for extensions etc), you should contact the Unit Convener, Melanie Bishop, by email. Contact details are provided at the start of this document.

Twitter: In week 4 all students will establish a Twitter account. You are encouraged to use it throughout the unit to network and engage with professional communities, and follow and share contemporary issues informed by Biology. A Twitter account @biol3620 and a hashtag #biol3620 have been established for this unit. Feel free to mention the unit handle or tweet the unit hashtag if you find news articles or opportunities that others in this unit may be interested in.

Unit Schedule

Schedule of modules

The topics we will cover are listed below. It is absolutely essential that you turn up to practicals having completed the online module first. Online Learning activities (assessable in weeks 4-13) must be completed by due by 11:55 pm each Monday.

- Week 1 (27-31 July) Introduction to the Biological Sciences Capstone
- Week 2 (3-7 August). What have I learned and where to next
- Week 3 (10-14 August) Job search skills
- Week 4 (17-21 August) Establishing a network
- Week 5 (24-28 August) Professional development
- Week 6 (31 August – 4 September) Biology in the public sphere
- Week 7 (7-11 September) Biology for policy makers and managers

MID-SEMESTER RECESS

- Week 8 (28 September – 2 October) Science communication for biologists
- Week 9 (5-9 October) Grant writing I – the big picture
- Week 10 (12-16 October) Grant writing II – getting the specifics right
- Week 11 (19-23 October) Research ethics and integrity
- Week 12 (26-30 October) Research commercialization
- Week 13 (2-6 November) The next steps: onwards and upwards

Practicals

All practicals will be held in the 05WW 428 Glasshouse laboratories. To get to these, take the E4 carpark steps (next to the lifts) to the top level where the biology greenhouses are.

Internal students

Practicals for internal students start in Week 1, and will be held each week of semester. You should attend your assigned practical slot:

- Tuesday 9-11 (face-to-face)
- Tuesday 11-1 (face-to-face)
- Tuesday 2-4 (face-to-face)
- Wednesday 9-11 (online cohort)

External students

There are 4 on-campus sessions that external students will attend. These will run from 9 am - 5 pm on the following dates:

- Saturday 8 August
- Saturday 19 September
- Sunday 20 September
- Saturday 17 October

Please make sure you arrive on time, as we will have a lot to cover

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.*)

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 or if you are a Global MBA student contact 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) provides academic writing resources and study strategies to help you improve your marks and take control of your study.

- [Getting help with your assignment](#)
- [Workshops](#)
- [StudyWise](#)
- [Academic Integrity Module](#)

The Library provides online and face to face support to help you find and use relevant information resources.

- [Subject and Research Guides](#)
- [Ask a Librarian](#)

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

If you are a Global MBA student contact 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/.

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.

Changes from Previous Offering

This unit has a change of Convenor in 2020. Consequently, there are a large number of changes to the assessments and activities from previous offerings. If you have any feedback about the unit, please get in touch with the Unit Convenor. Otherwise, your constructive suggestions through the Learner Experience of Unit survey conducted at the end of semester will be highly valued.