



BIOL391

Biological Sciences Capstone

S1 Day 2014

Dept of Biological Sciences

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General Information

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Credit points
3

Prerequisites
39cp

Corequisites
3cp from BIOL301-BIOL375 or BBE305 or BBE306

Co-badged status

Unit description

Throughout your degree you will have identified an area of interest in biological or medical sciences and acquired knowledge and practical skills from a diversity of units within your program. In this unit you will have the flexibility to explore your discipline area and bring together your acquired knowledge and skills. The unit encompasses significant research of the primary scientific literature in your field and discussions on the latest findings. This will enable you to explore connections among the various disciplines of biology that would be beneficial in addressing contemporary issues of interest to society. A series of guest speakers will talk about exciting new developments in their own research areas, communicating science, the publication and review process, research ethics, and career pathways. A strong focus is placed on developing team skills and effective communication to prepare you for entering the next phase of your career in the biological or medical sciences.

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:

Students can articulate and present evidence of key learning and strengths gained throughout their program of study for the purpose of adding value to their future profession.

Students develop practical transition skills including effective job search strategies and job application skills (CV and interviews), and are clear about the diverse career options where an understanding of biology is essential, valuable or advantageous.

Students are equipped with some of the key workplace skills that help maximise their contribution to their field of work and build positive workplace experience.

Assessment Tasks

Name	Weighting	Due
Participation	5%	as scheduled
Individual Presentation	15%	20/3
Portfolio part I	35%	6/4
Interview	15%	1/5 or 8/5
Portfolio part II	20%	18/5
Group project exercise	10%	29/5 and 5/6

Participation

Due: **as scheduled**

Weighting: **5%**

Attendance of all tutorials; attendance on 5th May Science careers events

On successful completion you will be able to:

- Students are equipped with some of the key workplace skills that help maximise their contribution to their field of work and build positive workplace experience.

Individual Presentation

Due: **20/3**

Weighting: **15%**

3 min presentations on findings from your information interview. You are encouraged to produce 2 slides or so to use as visual aide to illustrate your points.

You are free to source your own subject to interview. You may also attend Careers Fair in the Atrium on 10th March to source your interview subject.

On successful completion you will be able to:

- Students develop practical transition skills including effective job search strategies and job application skills (CV and interviews), and are clear about the diverse career options where an understanding of biology is essential, valuable or advantageous.
- Students are equipped with some of the key workplace skills that help maximise their contribution to their field of work and build positive workplace experience.

Portfolio part I

Due: **6/4**

Weighting: **35%**

A brief personal career statement (1 page) summarising your reflection on your biological learning/training to date, specific skills and knowledge acquaired for the career you are pursuing, your personal traits/strengths, values, interests, general skills, suitable fields of work and work environment, what you identified as potential work choices and any future professional development plan.

Supply a job ad or job descriptipion/reference material of work that you are interested in applying for

CV (2-3 pages) tailored for the work description/job application above

Cover letter (1 page) tailored to accompany the CV

On successful completion you will be able to:

- Students can articulate and present evidence of key learning and strengths gained throughout their program of study for the purpose of adding value to their future profession.
- Students develop practical transition skills including effective job search strategies and job application skills (CV and interviews), and are clear about the diverse career options

where an understanding of biology is essential, valuable or advantageous.

Interview

Due: **1/5 or 8/5**

Weighting: **15%**

Attend a 10min job interview simulation with a panel of three for the position or work you apply for in assignment 2.

On successful completion you will be able to:

- Students develop practical transition skills including effective job search strategies and job application skills (CV and interviews), and are clear about the diverse career options where an understanding of biology is essential, valuable or advantageous.
- Students are equipped with some of the key workplace skills that help maximise their contribution to their field of work and build positive workplace experience.

Portfolio part II

Due: **18/5**

Weighting: **20%**

Individual science communication blog project

On successful completion you will be able to:

- Students can articulate and present evidence of key learning and strengths gained throughout their program of study for the purpose of adding value to their future profession.
- Students are equipped with some of the key workplace skills that help maximise their contribution to their field of work and build positive workplace experience.

Group project exercise

Due: **29/5 and 5/6**

Weighting: **10%**

In group assessment centre exercise style, you will work in a group to resolve a presented issue (29/5). Your task is to work out a solution as a group (29/5) and present (5/6) your proposal to the board.

On successful completion you will be able to:

- Students develop practical transition skills including effective job search strategies and job application skills (CV and interviews), and are clear about the diverse career options where an understanding of biology is essential, valuable or advantageous.

- Students are equipped with some of the key workplace skills that help maximise their contribution to their field of work and build positive workplace experience.

Delivery and Resources

Technology

Unit outline, workshop notes and course notes will be distributed via iLearn. <http://ilearn.mq.edu.au>

iLearn is a web-based computer mediated communication package and can be accessed by most web browsers from inside or outside the University. iLearn and email will be the principle method of communication in this subject.

- You must use iLearn for
- Regularly checking subject announcement- particularly with regard to the pracs and class readings;
- Downloading course materials;
- Dowloading some of the reference material;
- Using the discussion board.

If you are having trouble accessing your online unit due to a disability or health condition, please go to the Student Services Website at <http://sss.mq.edu.au/equity/about> for information on how to get assistance. If you are having problems logging on and you cannot log in after ensuring you have entered your username and password correctly, you should contact Student IT Help, phone (02) 9850 4357 (in Sydney) or 1 800 063 191 (outside Sydney).

Lecture and Tutorial times

Lecture (2h) Monday 15:00-17:00 E7B T3

Tutorial (2h) Thursday 09:00-11:00 W6B286

12:00-14:00 E7B 164

15:00-17:00 C4A312

Career Resources

Young, S. P. (1984) Careers in the Biological Sciences: Finding Your Niche. In *The American Biology Teacher*. 46(1), pp. 12-17+64.

Blickley, J. L. et al. (2013) Graduate Student's Guide to Necessary Skills for Nonacademic Conservation Careers. In *Conservation Biology*. 27(1), pp.24-34

Career View publications are available on http://www.victoria.ac.nz/st_services/careers/resources/career_publications/career_view/index.aspx

Career View: Genetics and Molecular Biology

Career View: Marine Biology, Ecology and Biodiversity

Career View: Biotechnology

Career View: Biomedical Science

Graduate Careers Australia

<http://www.graduatecareers.com.au/CareerPlanningandResources/careerprofiles/index.htm>

Myfuture

<http://myfuture.edu.au/Explore%20Careers.aspx>

Astor, B. (2005) *What Can You Do with a Major in Biology?* New Jersey: Wiley Publishing.

Bernard, T. (2005) *Bernard's Pharmaceutical & Biotechnology Jobseeker's Guide 2005*. Queensland: Paddington Academic Press.

Advertisements for a range of positions can be found online or in the print media. For example, the *Sydney Morning Herald* publishes *My Career* every Saturday and local newspapers generally have classifieds sections advertising jobs. More high powered or specialized jobs are often advertised in major scientific sources such as *Science* and *Nature*.

Public sector positions

The Australian Public Service - jobs within federal government departments and agencies

<http://www.apsjobs.gov.au/>

NSW Government Jobs - jobs within NSW government departments and agencies

<http://www.jobs.nsw.gov.au/>

Jobs within other state government departments and agencies

Victoria -<http://www.careers.vic.gov.au/>

Queensland -<http://jobs.qld.gov.au/>

Western Australia -<http://www.jobs.wa.gov.au/>

South Australia -<http://www.vacancies.sa.gov.au/asp/public/Home.aspx>

Northern Territory -<http://notes.nt.gov.au/dcis/RMS.nsf/NTGEmploymentHome?OpenForm>

Tasmania -<http://www.jobs.tas.gov.au/>

Private sector positions

Natural Resource Management Jobs - <http://search.emailmedia.com.au/nrmjobs.php>

EnviroJobs - <http://www.envirojobs.com.au/>

SEEK - <http://www.seek.com.au/>

Job Search Australia - <http://jobsearch.gov.au/default.aspx>

How you should assess your skills

We will cover this in detail in lectures. Briefly, one strategy is to consider ‘hard’ and ‘soft’ skills. Hard skills are the specific things you learned to do as an undergraduate. These might include operating equipment, performing analyses, giving presentations or writing reports (see Table 1). More specific examples might include that you learnt to run a PCR, conduct a faunal or plant survey, operate diagnostic equipment of some sort or use GIS (Geographic Information System). Potential employers might be looking for these skills.

Soft skills are also referred to as ‘transferrable skills’, ‘generic skills’ or ‘people skills’, and are also highly valued by employers. You should make it clear that you have these sorts of skills too.

Unit Schedule

Week	Topic	Tut/Reading/Assignment
1. 3/3 Intro to course/ Thinking about careers	Intro to course-Martin Thinking about your careers (theory informed career concepts to apply to your own development)-Julie/Serene	R: reference materials on biological careers. No tutorial.
2. 10/3 Self- assessment, opportunity awareness and decision making	Reflection ,exploring self and opportunities, clarifying goals, making action plans and information interviewing-Julie/ Serene	T: Reflection exercise, use of self-assessment tools, research relevant work opportunities (local or international) and their requirements. Serene and Julie. (Also, careers fair on 10 th March at the Atrium, MQ.)

<p>3. 17/3 Extension training Portfolio building</p>	<p>Training beyond undergraduate-Martin, Creating and managing an online presence/profile-Martin</p>	<p>T/A1: 3 min presentation on findings from an information interview. You would need to have conducted an information interview and then present your findings (slides due on 12pm mid-day Wed 19/3, present on 20/3, 15%,). Martin+Serene/Julie</p>
<p>4. 24/3 Preparing for your job application</p>	<p>Effective job search strategies, job analysis, CV and cover letter construction, addressing selection criteria- Serene</p>	<p>T: Sample CVs and resumes critique exercise. Serene.</p>
<p>5. 31/3 Written communication in Science</p>	<p>Writing and publishing in science, science blog- Martin Professional practice I</p>	<p>T: Science blog (Martin) A2 due: portfolio part I (35% due 6/4)</p> <ul style="list-style-type: none"> • Personal career statement covering reflection of learning, self-analysis, work choice research from all sources (desk-top research and information interviewing) • CV • Cover letter
<p>6. 7/4 Articulating what you have to offer at interviews</p>	<p>Interviewing skills-Serene Conducting job interviews and receiving feedback-Serene</p>	<p>T: Interview techniques and speed networking among students in tutorials.</p>
<p>7. 28/4 Professional community and industry engagement</p>	<p>Professional practice II Tips, expectations, networking guide- Serene and a guest speaker</p>	<p>T/A3: Job interviews (15%, on 1/5 or 8/5)</p>
<p>8. 5/5 Science careers and industry networking (not in lecture theatre)</p>	<p>5th May Tues 3-6 pm? Careers in Science+ Q&A + Networking lunch+ Women in Science-Serene</p>	<p>T/A3: Job interviews (15%, on 1/5 or 8/5)</p>
<p>9. 12/5 Ethics- Research, Project planning, Team work and assessment centre</p>	<p>Ethics in research and project planning- Martin Team development and assessment centre-Serene</p>	<p>T: ethics, team work, project planning A4: Portfolio part II: Science blog due (20%, due 18/5)</p>

10. 19/5 Time management, Data management	Time management-Julie Data management- Martin/ Dan Falster	T: Time management
11. 26/5 Workplace survival skills	Workplace challenges, problem solving and etiquette-Julie Professional Practice III	T/A5: Group project (group forming)- assessment centre activity (5%)
12. 2/6 Learning portfolio	Professional practice IV Wrap up- Martin Building your learning portfolio- Serene	T/A5: Group project presentation (5%)

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

- Students develop practical transition skills including effective job search strategies and job application skills (CV and interviews), and are clear about the diverse career options

where an understanding of biology is essential, valuable or advantageous.

- Students are equipped with some of the key workplace skills that help maximise their contribution to their field of work and build positive workplace experience.

Assessment tasks

- Participation
- Portfolio part I
- Interview

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

- Students can articulate and present evidence of key learning and strengths gained throughout their program of study for the purpose of adding value to their future profession.
- Students are equipped with some of the key workplace skills that help maximise their contribution to their field of work and build positive workplace experience.

Assessment tasks

- Individual Presentation
- Portfolio part I
- Portfolio part II
- Group project exercise

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 outcome

- Students can articulate and present evidence of key learning and strengths gained throughout their program of study for the purpose of adding value to their future profession.

Assessment task

- Group project exercise

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

- Students can articulate and present evidence of key learning and strengths gained throughout their program of study for the purpose of adding value to their future profession.
- Students are equipped with some of the key workplace skills that help maximise their contribution to their field of work and build positive workplace experience.

Assessment tasks

- Individual Presentation
- Group project exercise

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

- Students can articulate and present evidence of key learning and strengths gained throughout their program of study for the purpose of adding value to their future profession.

- Students develop practical transition skills including effective job search strategies and job application skills (CV and interviews), and are clear about the diverse career options where an understanding of biology is essential, valuable or advantageous.
- Students are equipped with some of the key workplace skills that help maximise their contribution to their field of work and build positive workplace experience.

Assessment tasks

- Participation
- Individual Presentation
- Portfolio part I
- Interview
- Portfolio part II
- Group project exercise

Changes since First Published

Date	Description
16/01/2014	The Prerequisites and Corequisites were updated.