GEOS335

Marine Science Capstone

S2 Day 2018

Dept of Earth and Planetary Sciences

Contents

General Information

Unit convenor and teaching staff
Lecturer
April Abbott
april.abbott@mq.edu.au
Contact via email
12 Wally's Walk, Level 3
By appointment

Lecturer
Katherine Dafforn
katherine.dafforn@mq.edu.au
Contact via email
12 Wally's Walk, Level 4
By appointment

Katherine Dafforn
katherine.dafforn@mq.edu.au

Credit points
3

Prerequisites
39cp at 100 level or above

Corequisites
6cp from (BIOL373 or GEOS309 or ENVE301 or ENVS301)

Co-badged status

Unit description
In this interdisciplinary capstone unit students consolidate their learning across the biology, earth and environmental science subjects that comprise the Bachelor of Marine Science degree and prepare themselves for appropriate transition to the next stage of their careers. This involves active reflection on prior learning, building and articulating a positive self-understanding, exploring opportunities, clarifying goals, acquiring adequate employability and workplace skills, and building linkages with professional communities and industries. A series of activities including guest speakers will facilitate students' reflection on their studies and desires for their own career paths. The course also covers key topics such as communicating science, the publication and review process, research ethics, and career pathways.

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:

Evaluate and synthesise data to address questions related to marine science

Design and implement a research plan to address a specific scientific question

Demonstrate competency in a range of marine science relevant laboratory and field techniques

Proficient science communication and advocacy for the importance of interdisciplinary linkages in understanding marine processes

Assess and plan for future careers through the recognition and development of transferable skills and reflection on professional ethics

Assessment Tasks

Name	Weighting	Hurdle	Due
Research Proposal	20%	No	Week 3
Notebook	10%	No	Week 8
Data Report	20%	No	Week 11
Online Professional Profile	15%	No	Week 12
Final Presentation	25%	No	Week 13
Reflective Journal	10%	No	Week 13

Research Proposal

Due: **Week 3**
Weighting: **20%**

Students will write a research proposal prior to field work

On successful completion you will be able to:

- Design and implement a research plan to address a specific scientific question

Notebook

Due: **Week 8**
Weighting: **10%**

Students will keep a field and laboratory notebook documenting their research project.

On successful completion you will be able to:

- Demonstrate competency in a range of marine science relevant laboratory and field techniques

Data Report

Due: **Week 11**
Weighting: **20%**

Students will summarise their research results into a written report.

On successful completion you will be able to:

- Evaluate and synthesise data to address questions related to marine science
- Demonstrate competency in a range of marine science relevant laboratory and field techniques

Online Professional Profile

Due: **Week 12**
Weighting: **15%**

Students will build an online professional profile in stages throughout the unit.

On successful completion you will be able to:

- Proficient science communication and advocacy for the importance of interdisciplinary linkages in understanding marine processes
- Assess and plan for future careers through the recognition and development of transferable skills and reflection on professional ethics

Final Presentation

Due: **Week 13**
Weighting: **25%**

Students will give an oral presentation on their research projects.

On successful completion you will be able to:

- Evaluate and synthesise data to address questions related to marine science
- Proficient science communication and advocacy for the importance of interdisciplinary linkages in understanding marine processes

Reflective Journal

Due: **Week 13**
Weighting: **10%**

Students will complete a reflection on their experience of planning and executing a research project.

On successful completion you will be able to:

- Assess and plan for future careers through the recognition and development of transferable skills and reflection on professional ethics

Delivery and Resources

Student projects will involved field and laboratory components. Each student will be required to complete project-specific field and laboratory safety training. There is no required textbook for this unit.

Unit Schedule

Weeks 1-3: Designing a research project

Weeks 4-10: Executing a research proposal and summarising results

Week 11-13: Summarising and presenting findings

Note there will be mandatory field work on Sunday 26 August

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). 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.)*

Undergraduate students seeking more policy resources can visit the 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).

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 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

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

- Demonstrate competency in a range of marine science relevant laboratory and field techniques
- Proficient science communication and advocacy for the importance of interdisciplinary linkages in understanding marine processes
- Assess and plan for future careers through the recognition and development of transferable skills and reflection on professional ethics

Assessment tasks

- Notebook
- Data Report
- Online Professional Profile
- Final Presentation
- Reflective Journal

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

- Evaluate and synthesise data to address questions related to marine science

- Design and implement a research plan to address a specific scientific question

Assessment tasks

- Research Proposal
- Data Report
- Final Presentation

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

- Evaluate and synthesise data to address questions related to marine science
- Design and implement a research plan to address a specific scientific question
- Demonstrate competency in a range of marine science relevant laboratory and field techniques

Assessment tasks

- Research Proposal
- Notebook
- Data Report
- Final Presentation

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 outcome

- Proficient science communication and advocacy for the importance of interdisciplinary linkages in understanding marine processes

Assessment tasks

- Online Professional Profile
- Final Presentation