



UNSW Course Outline

BIOS2091 Marine and Aquatic Ecology - 2024

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General Course Information

Course Code : BIOS2091

Year : 2024

Term : Term 3

Teaching Period : T3

Is a multi-term course? : No

Faculty : Faculty of Science

Academic Unit : School of Biological, Earth and Environmental Sciences

Delivery Mode : In Person

Delivery Format : Standard

Delivery Location : Kensington

Campus : Sydney

Study Level : Undergraduate

Units of Credit : 6

Useful Links

[Handbook Class Timetable](#)

Course Details & Outcomes

Course Description

This course focuses on the ecology and conservation of shallow aquatic habitats, with a major emphasis on the ecology of marine coastal systems such as kelp forests, coral reefs or seagrass meadows but also including freshwater ecosystems. There is a very strong emphasis on

experimental ecological analysis of benthic communities.

The course includes three one-hour lectures and one four-hour practical session per week (in the field or in the lab). Fieldwork is a very important component of the course; this can include snorkeling or intertidal work. Much of the fieldwork is done independently, sometimes outside of class time. There is a whale-watching practical session that incurs additional costs. Assumed Knowledge: MSCI1001 and BIOS1101.

Course Aims

The course is aimed to provide an understanding of the processes that govern the ecology of aquatic habitats with a major emphasis on the ecology of marine coastal systems, and particularly the experimental analysis of benthic communities. The ecology and conservation of freshwater systems are also covered. This course prepares students for further study in both Marine & Coastal Science or Ecology.

Course Learning Outcomes

Course Learning Outcomes
CL01 : Explain the relative importance of the major ecological processes structuring marine and freshwater communities.
CL02 : Design, plan, and conduct ecological field experiments in aquatic habitats.
CL03 : Collect, analyze and interpret field data using surveys and/ or experiments.
CL04 : Communicate scientific knowledge and experimental results using written, visual and verbal formats.
CL05 : Critically evaluate aquatic management and conservation strategies and the underlying scientific literature.

Course Learning Outcomes	Assessment Item
CL01 : Explain the relative importance of the major ecological processes structuring marine and freshwater communities.	<ul style="list-style-type: none"> • Moodle Quizzes • Independent field project report • Opinions in Ecology • Exam
CL02 : Design, plan, and conduct ecological field experiments in aquatic habitats.	<ul style="list-style-type: none"> • Independent field project report
CL03 : Collect, analyze and interpret field data using surveys and/ or experiments.	<ul style="list-style-type: none"> • Exam • Independent field project report
CL04 : Communicate scientific knowledge and experimental results using written, visual and verbal formats.	<ul style="list-style-type: none"> • Opinions in Ecology • Exam • Independent field project report
CL05 : Critically evaluate aquatic management and conservation strategies and the underlying scientific literature.	<ul style="list-style-type: none"> • Moodle Quizzes • Opinions in Ecology • Exam • Independent field project report

Learning and Teaching Technologies

Moodle - Learning Management System

Assessments

Assessment Structure

Assessment Item	Weight	Relevant Dates
Moodle Quizzes Assessment Format: Individual	20%	
Independent field project report Assessment Format: Individual	35%	
Opinions in Ecology Assessment Format: Individual	15%	
Exam Assessment Format: Individual	30%	

Assessment Details

Moodle Quizzes

Assessment Overview

You will complete 9 quizzes (one per teaching week) including multiple choice questions to assess your understanding of the content covered during lectures and practical sessions.

Each quiz takes approximately 10 mins, with feedback provided online.

Course Learning Outcomes

- CL01 : Explain the relative importance of the major ecological processes structuring marine and freshwater communities.
- CL05 : Critically evaluate aquatic management and conservation strategies and the underlying scientific literature.

Generative AI Permission Level

Assistance with Attribution

This assessment requires you to write/create a first iteration of your submission yourself. You are then permitted to use generative AI tools, software or services to improve your submission in the ways set out below.

Any output of generative AI tools, software or services that is used within your assessment must be attributed with full referencing.

If outputs of generative AI tools, software or services form part of your submission and are not appropriately attributed, your Convenor will determine whether the omission is significant. If so, you may be asked to explain your submission. If you are unable to satisfactorily demonstrate your understanding of your submission you may be referred to UNSW Conduct & Integrity Office

for investigation for academic misconduct and possible penalties.

For more information on Generative AI and permitted use please see [here](#).

Independent field project report

Assessment Overview

You will join a group to undertake research that can be addressed through field work in local marine and freshwater habitats. A list of topics will be made available and will be discussed in the practicals.

You will gain experience in carrying out independent research, including the formulation of your own hypotheses and sampling designs, data collection, analysis, interpretation, and communication of results.

Before conducting the sampling (week 3 or 4), you will deliver an oral presentation (10 minutes) of your Research Proposal (10% weighting), which will detail the background of the research, the research gap tackled, the methods and experimental design planned, the overall significance and innovation of the research and the required logistics, including a timeline.

At the end of the research (week 9) you will be required to communicate your findings in an individual report in the form of a scientific journal article (word limit 1,500 words, 20% weighting).

Each group is also required to present a final short talk (10 minutes) on your field project (week 9 or 10, weighting 5%). The aim is to educate the rest of the class on what was done and what was found. The presentation should include background information on your project, the specific hypotheses you aimed to test, the methods used to test the hypotheses, plus results and their interpretation.

Marks and written comments from academic staff and demonstrators will be provided during oral presentation sessions or within two weeks of submitting the proposal and or the report.

Course Learning Outcomes

- CL01 : Explain the relative importance of the major ecological processes structuring marine and freshwater communities.
- CL02 : Design, plan, and conduct ecological field experiments in aquatic habitats.
- CL03 : Collect, analyze and interpret field data using surveys and/ or experiments.
- CL04 : Communicate scientific knowledge and experimental results using written, visual and verbal formats.
- CL05 : Critically evaluate aquatic management and conservation strategies and the underlying scientific literature.

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Opinions in Ecology

Assessment Overview

You will select a topic within the marine science literature that has been contentious, write an article that argues for one side of an argument (rather than review both sides of the debate) and participate in a debate. In preparing your arguments, you will need to acknowledge the criticisms of the concept you are supporting, and then argue against those criticisms. To do this successfully, you will need to read the literature critically, and select arguments and examples that support your side of the debate.

The article should be written in the style of a popular science article (word limit: 800 words), and may be illustrated with figures and tables. The topics will emphasise issues that link marine and aquatic ecology to practical problems in conservation and management of coastal environments. It is in these areas that scientists need to be able to clearly argue their point of view.

The selection of topics will occur in the first two weeks of the course. Final submission of the article and participation in the debate will occur on a weekly basis, and you will have the option to select the week in which you present.

Marks and written comments from academic staff and demonstrators will be provided within two weeks of assignment submission.

Course Learning Outcomes

- CL01 : Explain the relative importance of the major ecological processes structuring marine and freshwater communities.
- CL04 : Communicate scientific knowledge and experimental results using written, visual and verbal formats.
- CL05 : Critically evaluate aquatic management and conservation strategies and the underlying scientific literature.

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Exam

Assessment Overview

The final exam occurs in the official examination period and assesses student comprehension of all material covered in lectures and practical classes. It includes multiple choice questions and short essay questions. The exam is 2 hours in duration. Feedback available upon request with the convenor.

Course Learning Outcomes

- CL01 : Explain the relative importance of the major ecological processes structuring marine and freshwater communities.
- CL03 : Collect, analyze and interpret field data using surveys and/ or experiments.
- CL04 : Communicate scientific knowledge and experimental results using written, visual and verbal formats.
- CL05 : Critically evaluate aquatic management and conservation strategies and the underlying scientific literature.

Generative AI Permission Level

No Assistance

This assessment is designed for you to complete without the use of any generative AI. You are not permitted to use any generative AI tools, software or service to search for or generate information or answers.

For more information on Generative AI and permitted use please see [here](#).

General Assessment Information

Grading Basis

Standard

Course Schedule

Attendance Requirements

Students are strongly encouraged to attend all classes and review lecture recordings.

Staff Details

Position	Name	Email	Location	Phone	Availability	Equitable Learning Services Contact	Primary Contact
	Adriana Verge s					Yes	Yes

Other Useful Information

Academic Information

Upon your enrolment at UNSW, you share responsibility with us for maintaining a safe, harmonious and tolerant University environment.

You are required to:

- Comply with the University’s conditions of enrolment.
- Act responsibly, ethically, safely and with integrity.
- Observe standards of equity and respect in dealing with every member of the UNSW community.
- Engage in lawful behaviour.
- Use and care for University resources in a responsible and appropriate manner.
- Maintain the University’s reputation and good standing.

For more information, visit the [UNSW Student Code of Conduct Website](https://student.unsw.edu.au/conduct).

Academic Honesty and Plagiarism

Referencing is a way of acknowledging the sources of information that you use to research your assignments. You need to provide a reference whenever you draw on someone else's words, ideas or research. Not referencing other people's work can constitute plagiarism.

Further information about referencing styles can be located at <https://student.unsw.edu.au/referencing>

Academic integrity is fundamental to success at university. Academic integrity can be defined as a commitment to six fundamental values in academic pursuits: honesty, trust, fairness, respect, responsibility and courage. At UNSW, this means that your work must be your own, and others' ideas should be appropriately acknowledged. If you don't follow these rules, plagiarism may be detected in your work.

Further information about academic integrity, plagiarism and the use of AI in assessments can be located at:

- The [Current Students site](#),
- The [ELISE training site](#), and
- The [Use of AI for assessments](#) site.

The Student Conduct and Integrity Unit provides further resources to assist you to understand your conduct obligations as a student: <https://student.unsw.edu.au/conduct>

Submission of Assessment Tasks

Penalty for Late Submissions

UNSW has a standard late submission penalty of:

- 5% per day,
- for all assessments where a penalty applies,
- capped at five days (120 hours) from the assessment deadline, after which a student cannot submit an assessment, and
- no permitted variation.

Any variations to the above will be explicitly stated in the Course Outline for a given course or assessment task.

Students are expected to manage their time to meet deadlines and to request extensions as

early as possible before the deadline.

Special Consideration

If circumstances prevent you from attending/completing an assessment task, you must officially apply for special consideration, usually within 3 days of the sitting date/due date. You can apply by logging onto myUNSW and following the link in the My Student Profile Tab. Medical documentation or other documentation explaining your absence must be submitted with your application. Once your application has been assessed, you will be contacted via your student email address to be advised of the official outcome and any actions that need to be taken from there. For more information about special consideration, please visit: <https://student.unsw.edu.au/special-consideration>

Important note: UNSW has a “fit to sit/submit” rule, which means that if you sit an exam or submit a piece of assessment, you are declaring yourself fit to do so and cannot later apply for Special Consideration. This is to ensure that if you feel unwell or are faced with significant circumstances beyond your control that affect your ability to study, you do not sit an examination or submit an assessment that does not reflect your best performance. Instead, you should apply for Special Consideration as soon as you realise you are not well enough or are otherwise unable to sit or submit an assessment.

Faculty-specific Information

Additional support for students

- [The Current Students Gateway](#)
- [Student Support](#)
- [Academic Skills and Support](#)
- [Student Wellbeing, Health and Safety](#)
- [Equitable Learning Services](#)
- [UNSW IT Service Centre](#)
- Science EDI Student [Initiatives](#), [Offerings](#) and [Guidelines](#)