

Marine Science

General senior subject – MRN (possible 4 QCE credits)



Marine Science provides opportunities for students to study an interdisciplinary science focusing on marine environments and the consequences of human influences on ocean resources.

Students develop their understanding of oceanography. They engage with the concept of marine biology. They study coral reef ecology, changes to the reef and the connectivity between marine systems. This knowledge is linked with ocean issues and resource management where students apply knowledge to consider the future of our oceans and techniques for managing fisheries.

Students learn and apply aspects of the knowledge and skills of the discipline (thinking, experimentation, problem-solving and research skills), understand how it works and how it may impact society.

Pathways

A course of study in Marine Science can establish a basis for further education and

employment in the fields of marine sciences, biotechnology, aquaculture, environmental rehabilitation, biosecurity, quarantine, conservation and sustainability.

Objectives

By the conclusion of the course of study, students will:

- describe and explain scientific concepts, theories, models and systems and their limitations
- apply understanding of scientific concepts, theories, models and systems within their limitations
- analyse evidence
- interpret evidence
- investigate phenomena
- evaluate processes, claims and conclusions
- communicate understandings, findings, arguments and conclusions.

Structure

Unit 1	Unit 2	Unit 3	Unit 4
Oceanography <ul style="list-style-type: none">• An ocean planet• The dynamic shore	Marine biology <ul style="list-style-type: none">• Marine ecology and biodiversity• Marine environmental management	Marine systems — connections and change <ul style="list-style-type: none">• The reef and beyond• Changes on the reef	Ocean issues and resource management <ul style="list-style-type: none">• Oceans of the future• Managing fisheries

Assessment

In Units 1 and 2 students will complete formative assessment items including a data test, a student experiment and a research investigation.

In Units 3 and 4 students complete four summative assessments. The results from each of the assessments are added together to provide a subject score out of 100. Students will also receive an overall subject result (A–E).

Summative assessments

Unit 3		Unit 4	
Summative internal assessment 1 (IA1): • Data test	10%	Summative internal assessment 3 (IA3): • Research investigation	20%
Summative internal assessment 2 (IA2): • Student experiment	20%		
Summative external assessment (EA): 50% • Examination			

Additional Requirements

Study Requirements	Special Requirements
<p>This is a General subject and as such requires a significant commitment of time and energy to complete the course successfully. This includes:</p> <ul style="list-style-type: none"> • Three lessons per week face to face teaching. • Individual/study group/tutorial sessions 1-2 hours per week. <p>Students may be required to complete experimental work in their own time in order to complete their assessment.</p>	<p>Students must have access to the internet at home or at a local library. Students must also be able to borrow texts from the school library at all times.</p> <p>Due to the large amount of technologically based assessment and classwork it is recommended that students are participants in the College's BYOx program.</p>