School of Environmental and Life Sciences

MARI3410: Coral Reef Biology, Ecology and Sustainability

Ourimbah

Semester 2 - 2023

THE UNIVERSITY OF NEWCASTLE AUSTRALIA

COURSE OUTLINE

The Field component of this course will be undertaken at Norfolk Island in 2023.

OVERVIEW

Course Description

Coral reefs are ecologically diverse and extremely complex habitats, supporting thousands of marine species, and are considered to be the richest and most complex of all marine ecosystems. This course will examine the biological, ecological and sustainability aspects of coral reefs in order to gain a better understanding of this complex and unique environment. In a small group setting students will develop and execute a research project to be conducted at Hideaway Island, Vanuatu. Students will gain an in-depth appreciation of the professional requirements to conduct a research project in a remote location. This course will be particularly beneficial to those students pursuing careers in Marine Science, Environmental Science and/or Sustainable Resource Management.

The field component of this course, at Hideaway Island, Vanuatu, requires a significant up-front fee, not covered by HECS. This may vary with each offering of the course, so interested students should contact the course coordinator for more information.

Requisites

Students must have successfully completed MARI1000 to enrol in this course.

Assumed Knowledge

MARI2300, plus either BIOL1040 or BIOL1070 or BIOL1002 or BIOL1003 or SCIE1002

Contact Hours

Ourimbah

Field Study *
Face to Face Off Campus
72 hour(s) per Term Full Term
The field study will take place at Hideaway Island, Vanuatu in December after the semester.

Lecture *
Face to Face On Campus
48 hour(s) per Term Full Term
The lectures will take place during the mid-semester break at the Ourimbah Campus.
Seminar
Face to Face On Campus
7 hour(s) per Week for 1 Weeks

* This contact type has a compulsory requirement.

Unit Weighting

10

Workload

Students are required to spend on average 120-140 hours of effort (contact and non-contact) including assessments per 10 unit course.

CONTACTS

Course Coordinator

Ourimbah
A/Pr Bill Leggat
Bill.Leggat@newcastle.edu.au
(02) 43484021
Consultation: By appointment

Teaching Staff

Other teaching staff will be advised on the course Canvas site.

School Office

School of Environmental and Life Sciences
SO-104 Science Offices
OURIMBAH
Science-SELS@newcastle.edu.au
4349 4568 / 4348 4115
9am-5pm (Mon-Fri)

SYLLABUS

Course Content

The course will be carried out over a two-week period & will be divided into 2 parts: Part 1 the snorkelling assessment, lecture & information component will take place during semester & for 1 week at the Ourimbah Campus & Part 2, the practical component lasting 1 week, & will take place on Norfolk Island.

Part 1 (Ourimbah Campus): will consist of the compulsory snorkelling assessment, lectures, tutorials & discussion on the following topics:

- Current issues in coral reef ecology
- Issues relating to the sustainability of coral reefs
- Guidelines to developing a risk assessment for work in a remote location
- Experiment design & analysis
- Proposal design & presentation

Part 2 (1 week at Norfolk Island): In the practical component of the course, in small groups, students will conduct their proposed research projects. In addition, students are required to attend an Island tour. The course consists of both peer & academic assessment as well as group and individual assessment.

Course Learning Outcomes

On successful completion of this course, students will be able to:

1. Explain the complex ecology of coral reefs.
2. Critically evaluate and explain sustainability issues relating to coral reefs.
3. Assess the relevant literature and develop a research proposal on a current issue of coral reef ecology or sustainability.
4. Work in a small group to collaboratively plan, problem solve and execute a research project.
5. Evaluate scientific data and literature and present verbal and written summaries on a current issue of coral reef ecology or sustainability.
6. Prepare and write a risk assessment for a field-based project in a coral reef environment to ensure the safety of themselves and other group members.

Course Materials

Lecture Materials:

- Lecture material and relevant paper will be available through Canvas

COMPULSORY REQUIREMENTS

In order to pass this course, each student must complete ALL of the following compulsory requirements:

Contact Hour Requirements:

- Field Study Induction Requirement - Students must attend and pass the induction requirements before attending these sessions. Compulsory Safety Induction
- Lecture Induction Requirement - Students must attend and pass the induction requirements before attending these sessions. In order to participate in this course students must complete a compulsory safety induction.

Course Assessment Requirements:

- Assessment 1 - In Term Test: Pass Requirement - Students must pass this assessment item to pass the course. Students who do not pass this assessment will not be allowed to continue in the course.

SCHEDULE

Week	Week Begins	Topic	Learning Activity	Assessment Due
1	17 Jul			
2	24 Jul			
3	31 Jul			
4	7 Aug	Introductory lecture	Introduction to course Assessment outline Introduction to coral reefs	
5	14 Aug	Snorkelling assessment	Snorkelling training/assessment. To be conducted at ProDive Central Coast - 163 Wyong Road, Killarney Vale	Snorkelling assessment 14th August
6	21 Aug			
7	28 Aug			
8	4 Sep			
9	11 Sep			
10	18 Sep	Lectures to be held in the Mid-semester break 26th, 28th, 30th September	Understanding threats to coral reef Formulate research projects in small groups for Norfolk Island	
Mid Term Break				
Mid Term Break				
11	9 Oct			
12	16 Oct			
13	23 Oct			Seminar – Oral group presentation of field project 25th October. Literature review project proposal & risk assessment 27th October
Examination Period				
Examination Period				Class participation 15th December Final report 16th December

ASSESSMENTS

This course has 5 assessments. Each assessment is described in more detail in the sections below.

	Assessment Name	Due Date	Involvement	Weighting	Learning Outcomes
1	Commercial snorkelling assessment*	14th August 2023	Individual	Formative	6
2	Oral presentation of research project	25th October	Group	20%	1, 2, 3, 4, 6
3	Literature review project proposal and risk assessment	27th October	Individual	30%	1, 2, 3, 4, 6
4	Contribution to the group assignment	15th December	Individual	10%	4
5	Final report	16th December	Combination	40%	1, 2, 3, 5

* This assessment has a compulsory requirement.

Late Submissions The mark for an assessment item submitted after the designated time on the due date, without an approved extension of time, will be reduced by 10% of the possible maximum mark for that assessment item for each day or part day that the assessment item is late. Note: this applies equally to week and weekend days.

Assessment 1 - Commercial snorkelling assessment

Assessment Type In Term Test
Description This is a commercial snorkelling assessment to ensure competency for field work
Weighting This is a formative assessment and will not contribute to your final grade.
Compulsory Requirements Pass Requirement - Students must pass this assessment item to pass the course.
Due Date 14th August 2023
Submission Method In Class
Assessment Criteria Competent in snorkel assessment
Return Method Not Returned
Feedback Provided No Feedback.
Opportunity to Reattempt Students WILL be given the opportunity to reattempt this assessment.
Students who have failed on their first attempt to pass the commercial snorkelling assessment, will be allowed to repeat the exam on one occasion only. If the student fails a second time they will not be allowed to continue in the course.

Assessment 2 - Oral presentation of research project

Assessment Type Presentation
Description Group presentation of field project
Weighting 20%
Length 10-minute presentation
Due Date 25th October
Submission Method In Class
Assessment Criteria Rubric to be posted on Canvas
Return Method In Class
Feedback Provided In Class - To be discussed in timetabled session

Assessment 3 - Literature review project proposal and risk assessment

Assessment Type Written Assignment
Description A literature review based on reading, interpretation, and synthesis of the published literature on coral reef systems and a risk assessment for a field-based project in a coral reef environment. This assessment meets course learning objectives 5 and 6
Weighting 30%
Length 2500 words +- 10% - excluding references, SOPs, RA
Due Date 27th October

Submission Method	Online
Assessment Criteria	Rubric to be posted on Canvas
Return Method	Online
Feedback Provided	Online - . Through Turnitin

Assessment 4 - Contribution to the group assignment

Assessment Type	Participation
Description	Your contribution to the group project will be assessed by both academics and your peers.
Weighting	10%
Due Date	15th December
Submission Method	In Class Rubrics to be completed by each member of the group for everyone else in group. Rubric to be completed by academic.
Assessment Criteria	Rubric to be posted on Canvas
Return Method	Not Returned
Feedback Provided	In Class.

Assessment 5 - Final report

Assessment Type	Report
Description	This report is based on the field work project designed, implemented and completed by each group, demonstrating assimilation, analysis and interpretation of data to produce an articulate and concise document which conveys evidence-based understanding of a coral reef system.
Weighting	40%
Length	10 minutes
Due Date	16th December
Submission Method	In Class
Assessment Criteria	Rubric to be posted on Canvas
Return Method	Online
Feedback Provided	Returned Work - 30/12/2023. By academic

ADDITIONAL INFORMATION

Grading Scheme

This course is graded as follows:

Range of Marks	Grade	Description
85-100	High Distinction (HD)	Outstanding standard indicating comprehensive knowledge and understanding of the relevant materials; demonstration of an outstanding level of academic achievement; mastery of skills*; and achievement of all assessment objectives.
75-84	Distinction (D)	Excellent standard indicating a very high level of knowledge and understanding of the relevant materials; demonstration of a very high level of academic ability; sound development of skills*; and achievement of all assessment objectives.
65-74	Credit (C)	Good standard indicating a high level of knowledge and understanding of the relevant materials; demonstration of a high level of academic achievement; reasonable development of skills*; and achievement of all learning outcomes.
50-64	Pass (P)	Satisfactory standard indicating an adequate knowledge and understanding of the relevant materials; demonstration of an adequate level of academic achievement; satisfactory development of skills*; and achievement of all learning outcomes.
0-49	Fail (FF)	Failure to satisfactorily achieve learning outcomes. If all compulsory course components are not completed the mark will be zero. A fail grade may also be awarded following disciplinary action.

*Skills are those identified for the purposes of assessment task(s).

Communication Methods

Communication methods used in this course include:

- Canvas Course Site: Students will receive communications via the posting of content or announcements on the Canvas course site.
- Email: Students will receive communications via their student email account.
- Face to Face: Communication will be provided via face to face meetings or supervision.

The approximate cost for the field trip is $2,100.00

Course Evaluation

Each year feedback is sought from students and other stakeholders about the courses offered in the University for the purposes of identifying areas of excellence and potential improvement.

Oral Interviews (Vivas)

As part of the evaluation process of any assessment item in this course an oral examination (viva) may be conducted. The purpose of the oral examination is to verify the authorship of the material submitted in response to the assessment task. The oral examination will be conducted in accordance with the principles set out in the Oral Examination (viva) Procedure. In cases where the oral examination reveals the assessment item may not be the student's own work the case will be dealt with under the Student Conduct Rule.

Academic Misconduct

All students are required to meet the academic integrity standards of the University. These standards reinforce the importance of integrity and honesty in an academic environment. Academic Integrity policies apply to all students of the University in all modes of study and in all locations. For the Student Academic Integrity Policy, refer to https://policies.newcastle.edu.au/document/view-current.php?id=35.

Adverse Circumstances

The University acknowledges the right of students to seek consideration for the impact of allowable adverse circumstances that may affect their performance in assessment item(s). Applications for special consideration due to adverse circumstances will be made using the online Adverse Circumstances system where:

1. the assessment item is a major assessment item; or
2. the assessment item is a minor assessment item and the Course Co-ordinator has specified in the Course Outline that students may apply the online Adverse Circumstances system;
3. you are requesting a change of placement; or
4. the course has a compulsory attendance requirement.

Before applying you must refer to the Adverse Circumstance Affecting Assessment Items Procedure available at:
https://policies.newcastle.edu.au/document/view-current.php?id=236

Important Policy Information

The Help button in the Canvas Navigation menu contains helpful information for using the Learning Management System. Students should familiarise themselves with the policies and procedures at
https://www.newcastle.edu.au/current-students/no-room-for/policies-and-procedures
that support a safe and respectful environment at the University.

This course outline was approved by the Head of School. No alteration of this course outline is permitted without Head of School approval. If a change is approved, students will be notified and an amended course outline will be provided in the same manner as the original.