



COURSE OUTLINE

ENS500

Coastal and Marine Ecology

Course Coordinator: Thomas Schlacher (tschlach@usc.edu.au) **School:** School of Science, Technology and Engineering

2021 | Semester 1

USC Sunshine Coast
USC Moreton Bay
USC Fraser Coast

ON CAMPUS

Most of your course is on campus but you may be able to do some components of this course online.

Please go to the USC website for up to date information on the teaching sessions and campuses where this course is usually offered.

1. What is this course about?

1.1. Description

The oceans harbour a greater diversity of life than any other biome of the planet. In this course you will learn about the diversity of marine habitats, the species inhabiting them, and the physical and chemical factors influencing marine ecosystems. We shall explore rocky shores, sandy beaches, estuaries, mangrove wetlands, reefs and open-water ecosystems. We will emphasize the seminal contributions that marine ecology has made to the broader field of ecology, and teach you fundamental skills in the scientific investigation of coastal ecosystem.

1.2. How will this course be delivered?

ACTIVITY	HOURS	BEGINNING WEEK	FREQUENCY
ON CAMPUS			
Lecture – LECTURES will be online only (i.e. there are no face-to-face, physical lectures on campus) in the form of pre-recorded videos. All lecture videos will be available to all students, irrespective of their mode of enrolment.	2hrs	Week 1	13 times
Fieldwork – FIELD TRIPS to K'gari (Fraser Island) are three days long. The field trips are primarily designed to provide students with hands-on learning experiences and skills development, collecting data on animal distributions in relation to variation in habitat features. Each field trip includes a substantial number of on-site tutorials.	24hrs	Week 1	Once Only

1.3. Course Topics

- Evolution of the Global Ocean Basins;
- The Ocean in Motion (circulation, gyres, tides);
- The Ecology of High-Energy Ocean Beaches;
- Cradles of Ecology: Rocky Shores;
- The Plankton (small things drifting through the oceans);
- The Nekton (big animals with big teeth swimming through the oceans);
- Estuaries (murky waters rich in biological productivity);
- Shorebirds (cool stuff about bird biology and evolution, ecology, and conservation)

2. What level is this course?

500 Level (Advanced)

Engaging with new discipline knowledge and skills at an advanced level or deepening existing knowledge and skills within a discipline. Independent application of knowledge and skills in unfamiliar contexts.

3. What is the unit value of this course?

12 units

4. How does this course contribute to my learning?

COURSE LEARNING OUTCOMES	GRADUATE QUALITIES
On successful completion of this course, you should be able to...	Completing these tasks successfully will contribute to you becoming...
1 Identify, analyse, and evaluate seminal sources of credible, robust, and peer-reviewed information on a topic that is of contemporary relevance in coastal and marine science and conservation.	Creative and critical thinker
2 Synthesise the salient concepts and mechanisms underlying ecological structures in the marine domain.	Creative and critical thinker
3 Examine the design and reported effect sizes of field studies and formulate critiques of existing paradigms with respect to robust, empirical evidence and unambiguous attribution.	Creative and critical thinker Empowered

5. Am I eligible to enrol in this course?

Refer to the [USC Glossary of terms](#) for definitions of “pre-requisites, co-requisites and anti-requisites”.

5.1. Pre-requisites

Enrolled in program SC523

5.2. Co-requisites

Not applicable

5.3. Anti-requisites

Not applicable

5.4. Specific assumed prior knowledge and skills (where applicable)

Not applicable

6. How am I going to be assessed?

6.1. Grading Scale

Standard Grading (GRD)

High Distinction (HD), Distinction (DN), Credit (CR), Pass (PS), Fail (FL).

6.2. Details of early feedback on progress

Students can make an appointment for feedback any time via email; the feedback can be via email, in person, or using zoom (i.e. virtual office hours).

6.3. Assessment tasks

DELIVERY MODE	TASK NO.	ASSESSMENT PRODUCT	INDIVIDUAL OR GROUP	WEIGHTING %	WHAT IS THE DURATION / LENGTH?	WHEN SHOULD I SUBMIT?	WHERE SHOULD I SUBMIT IT?
All	1	Literature Review (or component)	Individual	50%	Minimum: 3000 words Maximum: 4000 words	Week 7	Online Assignment Submission with plagiarism check
All	2	Literature Review (or component)	Individual	50%	Minimum: 3000 words; Maximum: 4000 words	Week 12	Online Assignment Submission with plagiarism check

All - Assessment Task 1: Thematic, Ecological Concept Synthesis

GOAL:	Students will be provided with publications that are considered to be of seminal influence for the discovery and development of a particular ecological theme in coastal and marine science. Under the course co-ordinator's guidance, students will further identify modern literature to form a focused and up-to-date collection of literature pertaining to a particular field, question, or environmental issues. Based on this, students will create a concise (3000 to 4000 words) summary of the literature, that provides a synthetic and modern view of key scientific developments, pivotal ecological processes, and challenges of a particular topic. Note: topics will generally be related to contemporary management and conservation challenges in the coastal and nearshore environments of the region and beyond.		
PRODUCT:	Literature Review (or component)		
FORMAT:	The written synthesis will mimic a literature review published in a peer-reviewed scientific journal in the field of coastal and marine ecology (teaching staff will give you a few examples).		
CRITERIA:	No.		Learning Outcome assessed
	1	Identification of the relevant literature	1
	2	Analysis and evaluation of the currency and coverage of a topic in the peer-reviewed literature	1
	3	Synthesis of concepts and mechanisms	2
	4	Presentation of the written work, including appropriate style and prose, correct punctuation and grammar, and consistent use of discipline-based vocabulary.	1 2 3

All - Assessment Task 2: Systematic Literature Analysis

GOAL:	The second assessment item builds, thematically and conceptually, on the curated collation of the literature in the first half of the semester. Students will not only deepen and broaden their immersion in a theme, but further this by undertaking a quantitative analysis of key findings reported in the peer-reviewed literature. This will create a type of meta-analysis that critically examines the coverage of the topic, the prevalent methods and designs, the direction and magnitude of effects, and the open questions remaining.
PRODUCT:	Literature Review (or component)
FORMAT:	The literature review mimics a review in a scientific journal which has a clear emphasis on empirical assessments of reported effects and which undertakes a constructive, but critical, analysis of established paradigms (teaching staff will give you a few examples).

CRITERIA:	No.	Learning Outcome assessed
	1	Analysis of quantitative effect sizes reported in the literature. 1
	2	Assessment of the quality of study designs and execution. 3
	3	Critique of existing paradigms. 3
	4	Presentation of the written work, including appropriate style and prose, correct punctuation and grammar, and consistent use of discipline-based vocabulary. 1 2 3

7. Directed study hours

A 12-unit course will have total of 150 learning hours which will include directed study hours (including online if required), self-directed learning and completion of assessable tasks. Directed study hours may vary by location. Student workload is calculated at 12.5 learning hours per one unit.

7.1. Schedule

PERIOD AND TOPIC	ACTIVITIES
various teaching weeks (see under 'Activities' for exact dates)	<p>FIELD TRIPS to K'gari (Fraser Island) are three days long. The field trips are primarily designed to provide students with hands-on learning experiences and skills development, collecting data on animal distributions in relation to variation in habitat features.</p> <p>For the field trips please note that:</p> <p>1) off-road travel on the island's ocean beaches is governed by tides and by weather and sea conditions, sometimes necessitating short-term changes. Should this be the case, your course coordinator will be in touch with all students who may be affected by changes to trip dates;</p> <p>2.) The logistics of transporting 200+ students is quite a logistical challenge, particularly in terms of limits on the number of passengers we can take per trip; these constraints require us to split the class into five cohorts, nominally categorised by surname (see below under 'activities').</p> <p>Students' actual assignment to trips will be communicated to students at the start of teaching week 1. As a guide to what the likely field trip groups may be are, the list below may be helpful (please bear in mind though, that the final group assignment depends on enrolments which can continue well into week 1).</p> <p>1 - K'gari (Fraser Island) Trip 1: 05 to 07 March 2021; Surnames starting: Aardvark to Chri...;</p> <p>2 - K'gari (Fraser Island) Trip 2: 09 to 11 March 2021; Surnames starting: Cin...to Hail...;</p> <p>3 - K'gari (Fraser Island) Trip 3: 21 to 23 March 2021; Surnames starting: Hain... to Man...;</p> <p>4 - K'gari (Fraser Island) Trip 4: 25 to 27 March 2021; Surnames starting: McC... to Sears...;</p> <p>5 - K'gari (Fraser Island) Trip 5: 21 to 23 April 2021: Surnames starting: Shan...to Zebra...</p>

8. What resources do I need to undertake this course?

Please note: Course information, including specific information of recommended readings, learning activities, resources, weekly readings, etc. are available on the course Blackboard site– Please log in as soon as possible.

8.1. Prescribed text(s) or course reader

There are no required/recommended resources for this course.

8.2. Specific requirements

none

9. How are risks managed in this course?

Risk assessments have been performed for all field activities and low to moderate levels of health and safety risk exists. Moderate risks may include working in an Australian bush setting, working with people, working outside normal office hours for example. It is your responsibility to review course material, search online, discuss with lecturers and peers and understand the health and safety risks associated with your specific course of study and to familiarise yourself with the University's general health and safety principles by reviewing the [online induction training for students](#), and following the instructions of the University staff.

10. What administrative information is relevant to this course?

10.1. Assessment: Academic Integrity

Academic integrity is the ethical standard of university participation. It ensures that students graduate as a result of proving they are competent in their discipline. This is integral in maintaining the value of academic qualifications. Each industry has expectations and standards of the skills and knowledge within that discipline and these are reflected in assessment.

Academic integrity means that you do not engage in any activity that is considered to be academic fraud; including plagiarism, collusion or outsourcing any part of any assessment item to any other person. You are expected to be honest and ethical by completing all work yourself and indicating in your work which ideas and information were developed by you and which were taken from others. You cannot provide your assessment work to others. You are also expected to provide evidence of wide and critical reading, usually by using appropriate academic references.

In order to minimise incidents of academic fraud, this course may require that some of its assessment tasks, when submitted to Blackboard, are electronically checked through SafeAssign. This software allows for text comparisons to be made between your submitted assessment item and all other work that SafeAssign has access to.

10.2. Assessment: Additional Requirements

Eligibility for Supplementary Assessment

Your eligibility for supplementary assessment in a course is dependent of the following conditions applying:

The final mark is in the percentage range 47% to 49.4%

The course is graded using the Standard Grading scale

You have not failed an assessment task in the course due to academic misconduct

10.3. Assessment: Submission penalties

There is a 1% penalty for every day a submission is late.

10.4. Study help

For help with course-specific advice, for example what information to include in your assessment, you should first contact your tutor, then your course coordinator, if needed.

If you require additional assistance, the Learning Advisers are trained professionals who are ready to help you develop a wide range of academic skills. Visit the [Learning Advisers](#) web page for more information, or contact Student Central for further assistance: +61 7 5430 2890 or studentcentral@usc.edu.au.

10.5. Wellbeing Services

Student Wellbeing provide free and confidential counselling on a wide range of personal, academic, social and psychological matters, to foster positive mental health and wellbeing for your academic success.

To book a confidential appointment go to [Student Hub](#), email studentwellbeing@usc.edu.au or call 07 5430 1226.

10.6. AccessAbility Services

Ability Advisers ensure equal access to all aspects of university life. If your studies are affected by a disability, learning disorder mental health issue, injury or illness, or you are a primary carer for someone with a disability or who is considered frail and aged, [AccessAbility Services](#) can provide access to appropriate reasonable adjustments and practical advice about the support and facilities available to you throughout the University.

To book a confidential appointment go to [Student Hub](#), email AccessAbility@usc.edu.au or call 07 5430 2890.

10.7. Links to relevant University policy and procedures

For more information on Academic Learning & Teaching categories including:

- Assessment: Courses and Coursework Programs
- Review of Assessment and Final Grades
- Supplementary Assessment
- Administration of Central Examinations
- Deferred Examinations
- Student Academic Misconduct
- Students with a Disability

Visit the USC website: <http://www.usc.edu.au/explore/policies-and-procedures#academic-learning-and-teaching>

10.8. General Enquiries

In person:

- **USC Sunshine Coast** - Student Central, Ground Floor, Building C, 90 Sippy Downs Drive, Sippy Downs
- **USC Moreton Bay** - Service Centre, Ground Floor, Foundation Building, Gympie Road, Petrie
- **USC SouthBank** - Student Central, Building A4 (SW1), 52 Merivale Street, South Brisbane
- **USC Gympie** - Student Central, 71 Cartwright Road, Gympie
- **USC Fraser Coast** - Student Central, Student Central, Building A, 161 Old Maryborough Rd, Hervey Bay
- **USC Caboolture** - Student Central, Level 1 Building J, Cnr Manley and Tallon Street, Caboolture

Tel: +61 7 5430 2890

Email: studentcentral@usc.edu.au