



## Course Outline

**Code: ANM104**

### **Title: Marine Vertebrates: Sharks, Seabirds, Fish, Turtles and Whales**

<b>School of:</b>	Science & Engineering
<b>Teaching Session:</b>	Semester 2
<b>Year:</b>	2020
<b>Course Coordinator:</b>	Dr Kathy Townsend (USC Fraser Coast)
<b>Course Moderator:</b>	Dr Andrew Olds

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 marine vertebrates include all bony fish, sharks, reptiles (turtles, sea snakes and crocodiles), birds (seabirds, shorebirds, raptors, penguins) and mammals (seals, dolphins, whales and dugong) that live in, or on, the ocean. These charismatic animals are of immense public interest and provide focal points for conservation, fisheries and scientific research. This exciting course will introduce you to the identification, evolution, biology and ecology of marine vertebrates, with emphasis on the species of eastern Australia. Your studies will include two days of hands-on field research.

##### **1.2 Course topics**

In this course you will:

1. Learn to identify the major groups of marine vertebrates (fish, reptiles, birds and mammals);
2. Discover the origins and evolutionary history of the major groups of marine vertebrates;
3. Appreciate the unique adaptations (i.e., body morphology, behaviour, physiology) of marine vertebrates to their environments;
4. Understand global and local threats to marine vertebrates and key issues for their conservation and management;
5. Apply modern techniques for studying marine vertebrates in the wild in a hands-on fashion; and
6. Learn field skills that will help you to answer fundamental questions about marine vertebrate ecology.
7. Be exposed to global experts in the field through on-line, pre-recorded interviews.

#### **2. What level is this course?**

100 level Introductory - Discipline knowledge and skills at foundational level, broad application of knowledge and skills in familiar contexts and with support. Normally associated with the first full-time year of an undergraduate program

#### **3. Unit Value**

12 Units

#### 4. How does this course contribute to my learning?

<b>Specific Learning Outcomes</b> On successful completion of this course you should be able to:	<b>Assessment Tasks</b> You will be assessed on the learning outcome in task/s:	<b>Graduate Qualities or Professional Standards mapping</b> Completing these tasks successfully will contribute to you becoming:
<u>Communicate</u> effectively and professionally	Task 1 – Kahoot quizzes Task 2 – Field Course Report Task 3 – Exam	Empowered
<u>Demonstrate and apply knowledge</u> about the evolution, diversity and ecology of marine vertebrates and key issues for their conservation and management.	Task 1 – Kahoot quizzes Task 2 – Field Course Report Task 3 – Exam	Knowledgeable
<u>Critically analyse and evaluate:</u> a) local and global threats to marine fish, reptiles, birds and mammals, and b) field data to investigate basic ecology of marine vertebrates.	Task 2 – Field Course Report	Sustainability focused

#### 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 Enrolment restrictions

The course is restricted to students enrolled in SC320 Bachelor of Animal Ecology or ED112 Diploma in Outdoor Environmental Studies or UU301 or XU301 or SC012.

##### 5.2 Pre-requisites

Nil

##### 5.3 Co-requisites

Nil

##### 5.4 Anti-requisites

Nil

##### 5.5 Specific assumed prior knowledge and skills (where applicable)

Nil

#### 6. How am I going to be assessed?

##### 6.1 Grading scale

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

##### 6.2 Details of early feedback on progress

Task 1 quizzes will offer ongoing, formative feedback on progress. Computer workshops in week 9 are designed for focused formative feedback and development of Task 2, Field Course Report.

**6.3 Assessment tasks**

Task No.	Assessment Tasks	Individual or Group	Weighting %	What is the duration / length?	When should I submit?	Where should I submit it?
1	Weekly Kahoot quiz	Individual	0%	20 multiple choice questions	Week 2-12	Kahoot.it
2	Field Course Report	Individual	50	Max 2000 ± 10% words	Week 10	Blackboard (Safe Assign)
3	End-of-semester Examination	Individual	50	2 hr (100 randomised, multiple choice questions)	Centrally scheduled exam period	Blackboard (On-line quiz)
			100%			

**Assessment Task 1 – Kahoot quiz, 0%**

<b>Goal:</b>	Demonstrate your knowledge and understanding of the ecology, biology and diversity of marine vertebrates.
<b>Product:</b>	On-line Kahoot quiz
<b>Format:</b>	You will individually participate in a game show-like online quiz consisting of 20 multiple choice questions that reviews the key points from the previous week's lecture. This will be held within the normal weekly lecture time slot.
<b>Criteria</b>	You will be assessed on your ability to: <ol style="list-style-type: none"> <li>1. Demonstrate and communicate knowledge of the diversity and ecology of marine vertebrates; and</li> <li>2. Apply knowledge from lectures and readings to solve unseen problems.</li> </ol>

**Assessment Task 2 – Field Course Report, 50%**

<b>Goal:</b>	Demonstrate knowledge and basic analytical skills in the scientific investigation of marine vertebrates and of key issues for their conservation and management.
<b>Product:</b>	A report based on information obtained during the field course.
<b>Format:</b>	You will compile a short (max. 2000 ± 10% words) report using the template provided (which follows the format of a standard scientific paper) to test ecological hypotheses by analyzing data collected during the field course.
<b>Criteria</b>	You will be assessed on your ability to: <ol style="list-style-type: none"> <li>1. Collect and analyse data to answer a scientific question pertaining to the ecology and conservation of marine vertebrates;</li> <li>2. Interpret and contextualise findings in the light of available scientific literature regarding the biology of the selected animal, the threats it faces, and the tools available for its conservation; and</li> <li>3. Communicate your understanding in a professional and scientific manner.</li> </ol>

**Assessment Task 3 – End-of-semester Examination, 50%**

<b>Goal:</b>	Demonstrate your understanding of and ability to communicate knowledge regarding marine vertebrates.
<b>Product:</b>	On-line open book exam
<b>Format:</b>	A two (2) hour written examination, comprising of multi-choice questions. The questions will be based mainly on the material covered in the theory component of the course (i.e., lectures), supplemented with material presented during the field exercises and expert interviews.
<b>Criteria:</b>	You will be assessed on your ability to: <ol style="list-style-type: none"> <li>1. Demonstrate and communicate knowledge of the diversity and ecology of marine vertebrates; and</li> <li>2. Apply knowledge from lectures and readings to solve unseen problems.</li> </ol>

**7. What are the course activities?****7.1 Directed study hours**

The directed study hours listed here are a portion of the workload for this course. A 12 unit course it 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.

*This course will be delivered via technology-enabled learning and teaching. All lectures will remain in this mode for Semester 2 2020. When government guidelines allow, students that elected on-campus study via the class selection process will be advised when on campus tutorials and practical sessions will resume.*

<b>Location: Specific Campus(es) or online:</b>	<b>Directed study hours for location:</b>
USC Sunshine Coast	2-hr Lecture (Weeks 1-11)
USC Moreton Bay	2-day Intensive field course (Week 7)
USC Fraser Coast	Computer Lab (Week 8)

**7.2 Course content**

<b>Week # / Module#</b>	<b>What key concepts / content will I learn?</b>
1	Identification and evolution of marine fish, reptiles, birds and mammals Lecture to introduce and critically examine key concepts, theoretical underpinnings, and practical applications.
2	Diversity and adaptations in marine fish, reptiles, birds and mammals Lectures to introduce and critically examine key concepts, theoretical underpinnings, and practical applications. Prepare for Final Exam (Task 3).
3	Bony fish, sharks and rays Lectures to introduce and critically examine key concepts, theoretical underpinnings, and practical applications. Prepare for Final Exam (Task 3).
4	Seabirds, shorebirds and raptors Lectures to introduce and critically examine key concepts, theoretical underpinnings, and practical applications. Prepare for Final Exam (Task 3).
5	Marine Reptiles: Evolution, physiology and ecology Lectures to introduce and critically examine key concepts, theoretical underpinnings, and

Week # / Module#	What key concepts / content will I learn?
	practical applications. Prepare for Final Exam (Task 3).
6	Marine Mammals: Cetaceans (Whales and Dolphins) Lectures to introduce and critically examine key concepts, theoretical underpinnings, and practical applications. Prepare for Final Exam (Task 3).
7  3-day Field course	Marine Vertebrate Ecology and Behaviour plus Field Course prep Lectures to introduce and critically examine key concepts, theoretical underpinnings, and practical applications. Prepare for Final Exam (Task 3). Field course: Marine vertebrates in the coastal zone (2 of 3 days Friday – Sunday) Supervised field training in animal ecology research techniques in marine and coastal habitats. Develop field skills and collect data. Prepare Field Course Report (Task 2).
8	Fish movement, connectivity and conservation Lectures to introduce and critically examine key concepts, theoretical underpinnings, and practical applications. Prepare for Final Exam (Task 3). Tutorial to provide practical skills required for Task 3. Workshop: How to analyse and interpret field data Prepare Field Course Report (Task 2).
9	Marine vertebrates as climate sentinels Lectures to introduce and critically examine key concepts, theoretical underpinnings, and practical applications. Prepare for Final Exam (Task 3). Prepare Field Course Report (Task 2).
10	Human interactions: fisheries and conservation Lectures to introduce and critically examine key concepts, theoretical underpinnings, and practical applications. Prepare for Final Exam (Task 3). Prepare and submit Field Course Report (Task 2).
11	Marine Mammals: Seals and Sea Lions Lectures to introduce and critically examine key concepts, theoretical underpinnings, and practical applications. Prepare for Final Exam (Task 3).
12	Independent study for Final Exam (Task 3)
13	Independent study for Final Exam (Task 3)

Please note that the course content may be subject to variation.

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

Please note that 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)

N/A

### 8.2 Specific requirements

You will be required to undertake field studies during this course. When conducting fieldwork you will need to wear covered footwear, hat, long-sleeved shirt and long trousers for field safety. Activity costs will be covered; however, students are expected to make their own way to the relevant harbour or jetty to participate in field activities. Details of management and costs for food will be set out at the beginning of the semester. Discuss any financial hardship that might be associated with the field studies with the Course Coordinator.

## 9. Risk management

Risks will be managed in accordance with the relevant risk management policies and procedures, including those that apply to work/ activities in science laboratories and in the field.

It is your responsibility as a student 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. It is also your responsibility to familiarise yourself with the University's general health and safety principles by reviewing the [online Health Safety and Wellbeing training module 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:

- a) The final mark is in the percentage range 47% to 49.4%
- b) The course is graded using the Standard Grading scale
- c) You have not failed an assessment task in the course due to academic misconduct

### 10.3 Assessment: Submission penalties

Late submission of assessment tasks will be penalised at the following maximum rate:

- 5% (of the assessment task's identified value) per day for the first two days from the date identified as the due date for the assessment task.
- 10% (of the assessment task's identified value) for the third day
- 20% (of the assessment task's identified value) for the fourth day and subsequent days up to and including seven days from the date identified as the due date for the assessment task.
- A result of zero is awarded for an assessment task submitted after seven days from the date identified as the due date for the assessment task.

Weekdays and weekends are included in the calculation of days late.

To request an extension, you must contact your Course Coordinator and supply the required documentation to negotiate an outcome.

### 10.4 Study help

In the first instance, you should contact your tutor, then the Course Coordinator. Additional assistance is provided to all students through Academic Skills Advisers. To book an appointment or find a drop-in session go to [Student Hub](#).

Contact Student Central for further assistance: +61 7 5430 2890 or [studentcentral@usc.edu.au](mailto:studentcentral@usc.edu.au)

### 10.5 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>

### 10.6 General Enquiries

In person:

- **USC Sunshine Coast** - Student Central, Ground Floor, Building C, 90 Sippy Downs Drive, Sippy Downs
- **USC South Bank** - 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 Moreton Bay** - Service Centre, Building A – Ground Floor, 1 Moreton Bay Parade, Petrie
- **USC Caboolture** - Student Central, Level 1 Building J, Cnr Manley and Tallon Street, Caboolture

Tel: +61 7 5430 2890

Email: [studentcentral@usc.edu.au](mailto:studentcentral@usc.edu.au)