COURSE OUTLINE

ANM103 Animal Form, Function and Evolution

School: School of Science, Technology and Engineering

2026 | Trimester 2

UniSC Sunshine Coast
UniSC Moreton Bay
UniSC Fraser Coast

BLENDED LEARNING

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

Please go to unisc.edu.au 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

In this course you will learn the principles of evolution as relates to animal ecology. This course will introduce you to major concepts underlying the study of animal biology, including molecular and population genetics, selection, adaptation, physiology, and how these concepts among others contribute to our understanding of the diversity of animal life. You will learn about the history of experimental evolution, and design and perform your own experimental simulations in a laboratory context.

1.2. How will this course be delivered?

ACTIVITY	HOURS	BEGINNING WEEK	FREQUENCY
BLENDED LEARNING			
Learning materials – Online learning materials	2hrs	Week 1	12 times
Laboratory 1 – Fortnightly on-campus computer labs	2hrs	Week 3	5 times
Laboratory 2 – Fortnightly on-campus wet labs	2hrs	Week 2	6 times
Seminar – On-campus seminar	1hr	Week 1	4 times

1.3. Course Topics

1. Learn the fundamentals of genetics (on molecular, organismal and population levels) as they relate to animal evolution;
1. Gain an understanding of evolutionary theory and its role in explaining animal diversity;
1. Compare various physiological and behavioural adaptations that have enabled different taxa to survive in a range of environments;
1. Perform experiments demonstrating processes of evolution and learn how to analyse them.

2. What level is this course?

100 Level (Introductory)

Engaging with discipline knowledge and skills at foundational level, broad application of knowledge and skills in familiar contexts and with support. Limited or no prerequisites. Normally, associated with the first full-time study year of an undergraduate program.

3. What is the unit value of this course?

12 units

4. How does this course contribute to my learning?

COURSE LEARNING OUTCOMES On successful completion of this course, you should be able to...		GRADUATE QUALITIES Completing these tasks successfully will contribute to you becoming...
1	Demonstrate and apply knowledge in the discipline of comparative animal physiology	Knowledgeable Creative and critical thinker
2	Critically analyse and solve problems in physiology by collecting, accurately recording, interpreting, drawing conclusions from and presenting data, according to scientific conventions.	Creative and critical thinker
3	Research, organise, scientifically communicate and present information about comparative physiology in a creative and informative way.	Creative and critical thinker Empowered

5. Am I eligible to enrol in this course?

Refer to the UniSC Glossary of terms for definitions of “pre-requisites, co-requisites and anti-requisites”.

5.1. Pre-requisites

Enrolled in Program SC012, SC107, ED112, UC103, SC201, SB303, SC301, SC320, SB301, SC319, SA301 or SC316

5.2. Co-requisites

Not applicable

5.3. Anti-requisites

Not applicable

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

High School level science

5.5. Microcredential Information

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

From week 2 there are graded online quizzes that need to be completed before each lab. By week 5 you will have handed in 4 of these, which will have been marked, so you know if you are on the right track. There are also additional optional weekly online quizzes to test your knowledge on each topic. You will also submit a group plan for you second assessment task in week 5 and receive feedback on your chosen topic.

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	1a	Practical / Laboratory Skills	Individual	20%	11 x 4 questions	Throughout teaching period (refer to Format)	Online Test (Quiz)
All	1b	Report	Individual	20%	1200 words	Week 12	Online Assignment Submission with plagiarism check
All	2a	Plan	Group	5%	100-500 words	Week 5	Online Assignment Submission with plagiarism check
All	2b	Activity Participation	Group	25%	5 min narration 350 - 500 words	Week 10	Online Assignment Submission with plagiarism check
All	3	Examination - Centrally Scheduled	Individual	30%	2 hr (1000 words)	Exam Period	Exam Venue

All - Assessment Task 1a: Pre-laboratory quizzes

GOAL:	Demonstrate and apply knowledge of the topic and methods of each laboratory before the scheduled laboratory classes.
PRODUCT:	Practical / Laboratory Skills
AUTHORSHIP STATEMENT:	
FORMAT:	You will individually complete 11 pre-laboratory quizzes online in Canvas. Quizzes may include questions related to the topic of the laboratory or the methodology that will be used. The quizzes for each laboratory will close on Monday each week.
CRITERIA:	**No.** — **Learning Outcome assessed** 1 Solve problems in zoology — 1 2 2 Communicate your understanding of theoretical concepts or your interpretation of experimental results in an accurate manner. — 1 3
GENERIC SKILLS:	Problem solving, Applying technologies, Information literacy

All - Assessment Task 1b: Laboratory Report

GOAL:	Synthesise and communicate one of the laboratory experiments the the format of a formal scientific report.
PRODUCT:	Report
AUTHORSHIP STATEMENT:	
FORMAT:	You will choose one (1) of the appropriate laboratory experiments done throughout the trimester and write a scientific report (Title, Introduction, Methods, Results, Discussion, References) on that experiment and its results. You may use your own results or those of the combined class (provided to you).
CRITERIA:	**No.** / **Learning Outcome assessed** 1 You will be assessed on the accuracy and completeness of your background research on the topic, your interpretation of the results, synthesising those results with the wider literature and your communication/presentation of the whole experiment. — 1 2 3
GENERIC SKILLS:	Communication, Problem solving, Organisation, Information literacy

All - Assessment Task 2a: Group task plan and contract

GOAL:	Create a plan and contract for your group task: 2b - Animal adaptation presentation.
PRODUCT:	Plan
AUTHORSHIP STATEMENT:	
FORMAT:	In groups of 3-4 students you will create a plan for your group task (2b - Animal adaptation presentation) including the topic, the style of your presentation, tasks for each group member and milestones including dates you will reach these milestones. This will also form your group contract that will be signed by each group member.
CRITERIA:	**No.** / **Learning Outcome assessed** 1 Use your knowledge of animal physiology to choose an appropriate topic. — 1 2 Demonstrate collaborative skills by developing a project plan in a group. — 3
GENERIC SKILLS:	Communication, Collaboration, Problem solving, Organisation

All - Assessment Task 2b: Animal adaptation presentation

GOAL:	Compare and contrast the adaptations of two or more animals to a shared environmental challenge.
PRODUCT:	Activity Participation
AUTHORSHIP STATEMENT:	
FORMAT:	In groups of 2-3 students, you will produce a digital presentation comparing a behavioural or physiological adaptation for survival or reproduction between two animal groups that share a specific environmental challenge, e.g., salt-excretion methods in marine fish and sea turtles, or wings in butterflies and bats. You will produce a 5-minute movie (you can use software such as iMovie or Windows Movie maker) that is informative, interesting and scientifically based. A written copy of your referenced narration (approximately 350-500 words, Harvard style referencing) must be submitted to Turnitin on Canvas by the due date. The movie file will also be uploaded to Canvas. You will also upload your original contract that has again been signed by each group member confirming they have completed their tasks and include any comments/feedback you have on your group work. Further instructions and resource material will be supplied on Canvas.
CRITERIA:	**No.** / **Learning Outcome assessed** 1 Research a scientific topic and understand the relevant content — 2, 3 2 Demonstrate and communicate your scientific understanding in a professional manner. — 3
GENERIC SKILLS:	Communication, Collaboration, Applying technologies, Information literacy

All - Assessment Task 3: Examination

GOAL:	Complete a final examination testing knowledge and application of theory.
PRODUCT:	Examination - Centrally Scheduled
AUTHORSHIP STATEMENT:	
FORMAT:	The final exam is a comprehensive, two (2) hour final examination, consisting of multiple choice questions. The examination is closed book. Formative multiple choice style quizzes will be available on Canvas to help you to gauge your progress with your learning in the course and familiarise yourself with the level of expectation of content knowledge.
CRITERIA:	**No.** / **Learning Outcome assessed** 1 Demonstrate and communicate knowledge of evolutionary theory as relates to animal ecology. — 1
GENERIC SKILLS:	Problem solving, Information literacy

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. Student workload is calculated at 12.5 learning hours per one unit.

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 Canvas site– Please log in as soon as possible.

8.1. Prescribed text(s) or course reader

You need regular access to the resource(s) below. Many texts are available as ebooks through the Library at no additional cost.

REQUIRED?	AUTHOR	YEAR	TITLE	EDITION	PUBLISHER
Required	Carl Zimmer	2013	The Tangled Bank	Any	Roberts & Company
Recommended	HICKMAN,Susan L. Keen,David J. Eisenhour,Allan Larson,Helen l'Anson	2020	Integrated Principles of Zoology 18e	18	McGraw-Hill

8.2. Specific requirements

You must wear a lab coat, enclosed shoes, and safety glasses during laboratory classes. You must purchase and bring to lab classes a copy of the ANM103 laboratory manual. The lab manual is available for purchase from Print Services. Some labs will utilise both student's own mobile devices, and/or on-site computers.

9. How are risks managed in this course?

Risk assessments have been performed for all laboratory classes and a moderate level of health and safety risk exists. Moderate risks are those associated with laboratory work such as working with chemicals and hazardous substances. You will be required to undertake laboratory induction training and it is also 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 Canvas, are electronically checked through Turnitin. This software allows for text comparisons to be made between your submitted assessment item and all other work to which Turnitin has access.

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%; and
(b) The course is graded using the Standard Grading scale

10.3. Assessment: Submission penalties

Late submissions may be penalised up to and including the following maximum percentage of the assessment task's identified value, with weekdays and weekends included in the calculation of days late:
(a) One day: deduct 5%;
(b) Two days: deduct 10%;
(c) Three days: deduct 20%;
(d) Four days: deduct 40%;
(e) Five days: deduct 60%;
(f) Six days: deduct 80%;
(g) Seven days: A result of zero is awarded for the assessment task.

The following penalties will apply for a late submission for an online examination:
Less than 15 minutes: No penalty
From 15 minutes to 30 minutes: 20% penalty
More than 30 minutes: 100% penalty

10.4. 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
- Central Examinations
- Deferred Examinations
- Student Conduct
- Students with a Disability

For more information, visit https://www.usc.edu.au/explore/policies-and-procedures#academic-learning-and-teaching

10.5. Student Charter

UniSC is committed to excellence in teaching, research and engagement in an environment that is inclusive, inspiring, safe and respectful. The Student Charter sets out what students can expect from the University, and what in turn is expected of students, to achieve these outcomes.

10.6. General Enquiries

For course-specific questions, contact your teaching staff or Course Coordinator.

For other enquiries or to access support, please contact Student Central:

- UniSC Student Central
- UniSC Adelaide Student Central