



The University of Southern Queensland

Course specification

Description: Animal Diversity						
Subject	Cat-nbr	Class	Term	Mode	Units	Campus
BIO	2210	50918	1, 2006	ONC	1.00	Toowoomba

Academic group:	FOSCI
Academic org:	FOS002
Student contribution band:	2
ASCED code:	010915

STAFFING

Examiner: Kerry Withers
Moderator: Martine Maron

REQUISITES

Pre-requisite: BIO1101

RATIONALE

A knowledge of the evolution of animals and their adaptations to their environments and practical skills in identifying them is valuable to many professionals, especially biologists, environmental scientists, conservation officers, environmental engineers and teachers.

SYNOPSIS

This course examines the diversity of organisms within the animal kingdom, with an emphasis on Australian examples. Evolutionary relationships and adaptations are examined in the context of key evolutionary shifts; for example water to land to air. Parasitism, reproduction, locomotion, migration and mechanisms which enable animals to cope with environmental stresses are discussed. The course provides practical experience in the identification of major groups of animals (invertebrates, reptiles, amphibians, birds, mammals) and ecophysiological experimentation.

OBJECTIVES

On completion of this course students will be able to:

1. describe the evolution and biogeography of Australian fauna
2. demonstrate skills in classifying a variety of vertebrates and invertebrates;
3. describe the classification, morphology and function of vertebrates and invertebrates, with an emphasis on Australian fauna;
4. understand the development of animal form and function in an evolutionary context;
5. describe adaptations of Australian fauna for coping with fluctuating environments;
6. demonstrate, through active participation in laboratory practical sessions, competence in the use of observation and interpretation in the study of animals.

TOPICS

	Description	Weighting (%)
1.	An Introduction to Animal Diversity and Evolution: Examines animal form and function, animal architecture and classification and phylogeny from an evolutionary perspective and the biogeography of Australian fauna.	15.00
2.	Sponges and Radially Symmetrical Animals: Examines the evolution and characteristics sponges, jellyfish, corals and sea anemones	4.00
3.	Bilaterally Symmetrical Animals: Examines the evolution and characteristics of flatworms, ribbon worms and roundworms.	4.00
4.	Coelomates: Examines the evolution and characteristics of molluscs, segmented worms, arthropods such as insects and crustaceans and echinoderms such as sea urchins and sea stars.	23.00
5.	The Chordates: Examines the three Chordate Subphyla: Urochordata (e.g. sea squirts), Cephalochordata (e.g. lancelets) and Vertebrata (animals with backbones).	4.00
6.	The Vertebrates: Examines the evolution and the structure and functioning of fishes, amphibians, reptiles, birds and mammals.	23.00
7.	Animal Form and Function: The relationships between structure and function in selected animals are examined in the context of key evolutionary shifts and mechanisms to cope with environmental stresses, with an emphasis on Australian fauna.	27.00

TEXT and MATERIALS required to be PURCHASED or ACCESSED

ALL textbooks and materials are available for purchase from USQ BOOKSHOP (unless otherwise stated). Orders may be placed via secure internet, free fax 1800642453, phone 07 46312742 (within Australia), or mail. Overseas students should fax +61 7 46311743, or phone +61 7 46312742. For costs, further details, and internet ordering, use the 'Textbook Search' facility at <http://bookshop.usq.edu.au> click 'Semester', then enter your 'Course Code' (no spaces).

Laboratory coat, Safety glasses and Dissection kit.

Hickman, CP, Roberts, LS and Larson, A 2003, *Animal Diversity*, 3rd edn, McGraw-Hill, Boston.

Withers, KW & Maron, M 2006, *BIO2210 Animal Diversity*, University of Southern Queensland, Toowoomba.

REFERENCE MATERIALS

Reference materials are materials that, if accessed by students, may improve their knowledge and understanding of the material in the course and enrich their learning experience.

Anderson, DT 1996, *An Atlas of Invertebrate Anatomy*, University of New South Wales Press, Sydney.

- Anderson, DT (ed) 2001, *Invertebrate Zoology*, 2nd edn, Oxford University Press, Melbourne.
- Augee, M & Fox, M 2000, *Biology of Australia and New Zealand*, Pearson Education Australia, Sydney.
- Cogger, HG 1994, *Reptiles and Amphibians of Australia*, 5th edn, Reed, Port Melbourne.
- Covacevich, J & Easton, A 1974, *Rats and Mice of Queensland*, Queensland Museum, (Publ. No. 9)
- Hickman, CP, Roberts, LS, Larson, A & I'Anson, H 2004, *Integrated Principles of Zoology*, 12th edn, McGraw-Hill, Boston.
- Hildebrand, M 2001, *Analysis of Vertebrate Structure*, 5th edn, J Wiley & Sons, New York.
- Hume, ID 1999, *Marsupial Nutrition*, Cambridge University Press, Cambridge.
- Pough, FH, Janis, CM & Heiser, JB 2002, *Vertebrate Life*, 6th edn, Prentice Hall, New Jersey.
- Ruppert, EE & Barnes, RD 1994, *Invertebrate Zoology*, 6th edn, Saunders, London.
- Simpson, K, Day, N & Trusler, P 1996, *Field Guide to the Birds of Australia*, 5th edn, Viking, Ringwood, Vic.
- Slater, P, Slater, P & Slater, R 2001, *The Slater Field Guide to Australian Birds (revised edn)*, New Holland, Frenchs Forrest NSW.
(revised edn)
- Strahan, R (ed) 1995, *Mammals of Australia*, Reed Books: The Australian Museum, Chatswood, NSW.
- Withers, PC 1992, *Comparative Animal Physiology*, Saunders College Publishing, Fort Worth, Texas.

STUDENT WORKLOAD REQUIREMENTS

ACTIVITY	HOURS
Assignments	40.00
Examinations	3.50
Field Trips or Excursions	9.00
Laboratory or Practical Classes	21.00
Lectures	26.00
Private Study	64.00

ASSESSMENT DETAILS

Description	Marks out of	Wtg(%)	Due date
PRACTICAL REPORT	100.00	15.00	06 Mar 2006
WRITTEN ASSIGNMENT	100.00	15.00	24 Apr 2006
2HR CLOSED EXAM	120.00	50.00	END S1 (see note 1)
1.5HR RESTRICT. PRAC EXAM	100.00	20.00	END S1 (see note 2)

NOTES

1. Examination dates will be available during the Semester. Please refer to the examination timetable when published.
2. Examination dates will be available during the Semester. Please refer to the examination timetable when published.

IMPORTANT ASSESSMENT INFORMATION

- 1 Attendance requirements:
It is the students' responsibility to attend and participate appropriately in all activities (such as lectures, tutorials, laboratories, field trips/excursions, and practical work) scheduled for them, and to study all material provided to them or required to be accessed by them to maximise their chance of meeting the objectives of the course and to be informed of course-related activities and administration. To maximise their chances of satisfying the objectives of the practical component of the course, students should attend and actively participate in the laboratory sessions in the course and maintain a satisfactory record of practical work.
- 2 Requirements for students to complete each assessment item satisfactorily:
To complete each of the assessment items satisfactorily, students must obtain at least 50% of the marks available for each assessment item. Students do not have to satisfactorily complete each assessment item to be awarded a passing grade in this course. Refer to Statement 4 below for the requirements to achieve a passing grade in this course.
- 3 Penalties for late submission of required work:
If students submit assignments after the due date without prior approval then a penalty of up to 20% of the total marks available for the assignment will apply for each working day late.
- 4 Requirements for student to be awarded a passing grade in the course:
To be assured of receiving a passing grade a student must achieve at least 30% in all of the weighted assessment items, achieve at least 40% in the examination and at least 40% of the total weighted marks available for the course.
- 5 Method used to combine assessment results to attain final grade:
The final grades for students will be assigned on the basis of the weighted aggregate of the marks obtained for each of the summative assessment items in the course.
- 6 Examination information:
Candidates are allowed to bring only writing and drawing instruments into the Closed examination. Candidates are allowed access only to specific materials during a Restricted Examination. The only materials that candidates may use in the restricted examination for this course are: writing materials (non-electronic and free from material which could

give the student an unfair advantage in the examination); calculators which cannot hold textual information (students must indicate on their examination paper the make and model of any calculator(s) they use during the examination). Students whose first language is not English, may, with the Examiner's approval, take an appropriate non-electronic translation dictionary (but not technical dictionary) into the examination. Students who wish to use a translation dictionary MUST request and receive written approval from the Examiner at least one week before the examination date. Translation dictionaries will be subject to perusal and may be removed from the candidate's possession until appropriate disciplinary action is completed if found to contain material that could give the candidate an unfair advantage.

- 7 Examination period when Deferred/Supplementary examinations will be held:
Any Deferred or Supplementary examinations for this course will be held in the fourth week of the semester following this course offering and the examiner will advise students involved in writing of the date time and location of any such examination.
- 8 University Regulations:
Students should read USQ Regulations 5.1 Definitions, 5.6. Assessment, and 5.10 Academic Misconduct for further information and to avoid actions which might contravene University Regulations. These regulations can be found at the URL <http://www.usq.edu.au/corporateservices/calendar/part5.htm> or in the current USQ Handbook.

ASSESSMENT NOTES

- 9 The due date for an assignment is the date by which a student must despatch the assignment to the USQ. The onus is on the student to provide proof of the despatch date, if requested by the Examiner
- 10 In accordance with University Policy, the Examiner may grant an extension of the due date of an assignment in extenuating circumstances.
- 11 The Faculty will normally only accept assessments that have been written, typed or printed on paper-based media.
- 12 The Faculty will NOT accept submission of assignments by facsimile.
- 13 Students who do not have regular access to postal services or who are otherwise disadvantaged by these regulations may be given special consideration. They should contact the examiner of the course to negotiate such special arrangements.
- 14 In the event that a due date for an assignment falls on a local public holiday in their area, such as a Show holiday, the due date for the assignment will be the next day. Students are to note on the assignment cover the date of the public holiday for the Examiner's convenience.
- 15 Students who, for medical, family/personal, or employment-related reasons, are unable to complete an assignment or to sit for an examination at the scheduled time may apply to defer an assessment in a course. Such a request must be accompanied by appropriate supporting documentation. One of the following temporary grades may be awarded IDS (Incomplete - Deferred Examination; IDM (Incomplete Deferred Make-up); IDB (Incomplete - Both Deferred Examination and Deferred Make-up).
- 16 Students may be required to provide a copy of assignments submitted for assessment purposes. Such copies should be dispatched to the USQ within 24 hours of receipt of a request to do so.

OTHER REQUIREMENTS

- 1 In order to attend laboratory classes and practical exam, students must provide and wear appropriate personal protective equipment. This shall include a laboratory coat, closed in shoes, and safety glasses. Such equipment must be approved by supervising staff. Failure to provide and wear the appropriate safety equipment will result in students being excluded from classes.
 - 2 Students can expect that questions in assessment items in this course may draw upon knowledge and skills that they can reasonably be expected to have acquired before enrolling in the course. This includes knowledge contained in pre-requisite courses and appropriate communication, information literacy, analytical, critical thinking, problem solving or numeracy skills. Students who do not possess such knowledge and skills should not expect to achieve the same grades as those students who do possess them.
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