



BIOX2350

Animals

Session 1, In person-scheduled-infrequent, North Ryde 2025

School of Natural Sciences

Contents

<u>General Information</u>	2
<u>Learning Outcomes</u>	2
<u>General Assessment Information</u>	3
<u>Assessment Tasks</u>	4
<u>Delivery and Resources</u>	6
<u>Policies and Procedures</u>	7
<u>Changes from Previous Offering</u>	9

Disclaimer

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General Information

Unit convenor and teaching staff

John Alroy

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Credit points

10

Prerequisites

Corequisites

Co-badged status

Unit description

This unit offers a comprehensive exploration of the vast range of animal diversity. Students will examine the evolutionary history, evolutionary relationships, and ecological adaptations of animals across aquatic and terrestrial habitats. Topics covered include animal anatomy, physiology, and behaviour. Students will gain a deep understanding of how animals interact with their environment and take on roles in ecosystems. Through hands-on experience with animals and with data analysis, students will develop critical thinking and observational skills while deepening their understanding of animal evolution and ecology.

Learning in this unit enhances student understanding of global challenges identified by the United Nations Sustainable Development Goals ([UNSDGs](#)) Life on Land; Life Below Water

Important Academic Dates

Information about important academic dates including deadlines for withdrawing from units are available at <https://www.mq.edu.au/study/calendar-of-dates>

Learning Outcomes

On successful completion of this unit, you will be able to:

ULO1: Explain the diversity of animal groups, including evolutionary events, phylogenetic patterns, and ecological relationships

ULO2: Explain the anatomical, physiological, and behavioural adaptations that enable animals to survive and thrive in different environments

ULO3: Demonstrate a competency in practical and written skills associated with assessment of animal anatomy, physiology, and behaviour

ULO4: Recognise and reflect on cultural, ethical and welfare considerations in the study

of animal diversity and function, including the responsible treatment of animals in research and conservation

ULO5: Apply hands-on techniques for studying animals and effectively communicate the resulting information to diverse audiences

General Assessment Information

Requirements to Pass this Unit

To pass this unit you need to:

- Achieve a total mark equal to or greater than 50% across all assessments combined

There are no hurdle assessments. It is mathematically possible but unlikely to pass the unit without sitting the final exam because it has a weight of 40%.

Attendance and Participation

We strongly encourage all Animals students to actively participate in all of the 13 workshops. Workshops are offered both weekly and in two blocks during the semester (see below). Regular attendance is crucial for acquiring key knowledge and skills. Interaction with the academic staff during the workshops will be a major benefit of participating in the unit. Assessment of your learning of material explained during the workshops will constitute 40% of your overall mark.

Late Assessment Submission Penalty

Unless a Special Consideration request has been submitted and approved, a 5% penalty (of the total possible mark of the task) will be applied for each day the Media Presentation assessment is not submitted, up until the 7th day (including weekends). After the 7th day, a grade of '0' will be awarded even if the assessment is submitted. The submission time for all uploaded assessments is 11:55 pm. A 1-hour grace period will be provided to students who experience a technical concern. For any late submission of time-sensitive tasks, such as scheduled tests/exams, performance assessments/presentations, and/or scheduled practical assessments/labs, please apply for Special Consideration.

Special Consideration

The Special Consideration Policy aims to support students who have been impacted by short-term circumstances or events that are serious, unavoidable and significantly disruptive, and which may affect their performance in assessment. If you experience circumstances or events that affect your ability to complete the assessments in this unit on time, please inform the convenor and submit a Special Consideration request through <https://connect.mq.edu.au>.

Media Presentation Content

The Media Presentation will be submitted via a Turnitin link on the iLearn site. Presentations may be submitted in a variety of formats, including essays, short live or animated videos, musical recordings, poetry, or even children's book illustrations. Presentations must include a fixed minimum number of factual statements concerning certain animals. Statements must cover a wide range of attributes such as evolution, morphology, behaviour, physiology, development,

ecology, conservation, and biogeography. In preparation for the assessment, the Week 2 workshop will explore online resources such as the Atlas of Living Australia. Exact guidelines for selecting topics will be offered at this time. This is not group work and all presentations must be prepared by individual students.

Media Presentation Assessment Criteria

A draft rubric for marking the Media Presentation will be placed on the iLearn site prior to the deadline for submission.

Submission of the Media Presentation

The Media Presentation will be submitted via a Turnitin link on the iLearn site. The deadline will be on the Friday of Week 4.

Practical Skills Demonstration

This task is to demonstrate understanding of the intellectual content of the practical exercises undertaken during the workshops. Results will be recorded by tutors working with you in person during certain workshops, and submitted on the iLearn site during others. Submitting results to the site will only be possible during the workshop hours. In accordance with University policy, no separate marks will be released prior to the end of the semester. Instead, a single mark will summarise assessment of all practical skills learning.

Final Exam

The final exam will be on-campus and invigilated. The exam will include questions in a variety of formats. Questions will be based both on the iLearn recordings and on the workshop activities.

Assessment Tasks

Name	Weighting	Hurdle	Due
Final examination	40%	No	Examination Period
Media presentation	20%	No	21/03/25
Practical skills demonstration	40%	No	Completed during Week 12

Final examination

Assessment Type ¹: Examination

Indicative Time on Task ²: 30 hours

Due: **Examination Period**

Weighting: **40%**

Written examination

On successful completion you will be able to:

- Explain the diversity of animal groups, including evolutionary events, phylogenetic patterns, and ecological relationships
- Explain the anatomical, physiological, and behavioural adaptations that enable animals to survive and thrive in different environments
- Recognise and reflect on cultural, ethical and welfare considerations in the study of animal diversity and function, including the responsible treatment of animals in research and conservation

Media presentation

Assessment Type ¹: Media presentation

Indicative Time on Task ²: 20 hours

Due: **21/03/25**

Weighting: **20%**

Media presentation demonstrating knowledge of animals

On successful completion you will be able to:

- Demonstrate a competency in practical and written skills associated with assessment of animal anatomy, physiology, and behaviour
- Recognise and reflect on cultural, ethical and welfare considerations in the study of animal diversity and function, including the responsible treatment of animals in research and conservation

Practical skills demonstration

Assessment Type ¹: Practice-based task

Indicative Time on Task ²: 25 hours

Due: **Completed during Week 12**

Weighting: **40%**

Demonstration in class of having met activity-based learning goals

On successful completion you will be able to:

- Demonstrate a competency in practical and written skills associated with assessment of animal anatomy, physiology, and behaviour
 - Apply hands-on techniques for studying animals and effectively communicate the resulting information to diverse audiences
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¹ If you need help with your assignment, please contact:

- the academic teaching staff in your unit for guidance in understanding or completing this type of assessment
- the [Writing Centre](#) for academic skills support.

² Indicative time-on-task is an estimate of the time required for completion of the assessment task and is subject to individual variation

Delivery and Resources

Week 1 Classes

Week 1 will focus on introducing the unit and general information about animals that will serve as context for the rest of the unit. You are strongly encouraged to attend in person. The Week 2 workshop will focus on the Media Presentation task, and it will be difficult for you to complete it without attending. Commencing with Week 3, the weekly workshops will focus on practical laboratory exercises.

Workshop Content

The workshops will begin with general discussions of the weekly iLearn recordings and other intellectual content. Following this, a substantial amount of time will be spent on practical exercises. Assessment of skills learning will progress during the workshops but no marks will be released until the end of the semester (see the above).

The workshops will emphasise evolution, anatomy, physiology, and development. Topics will include the diversity of invertebrates in general and arthropods in particular; microscopy and imaging; thermal relations; performance and climate; developmental biology; dissection of sharks or rays and of possums; and the morphology of skulls and teeth.

Workshop Logistics

In-person workshops will be held each Wednesday throughout the semester. Depending on enrolment, there will be between three and four offerings each day. If there are four, the first two will be offered concurrently on Wednesday morning starting at 9 AM, one in 14EaR 120 Science Lab and the other in the adjacent 14EaR 160 Science Lab. The second pair of concurrent workshops will commence at 1 PM the same day and will be held in the same two labs.

For those unable to attend during week days, workshops will also be offered in two blocks. Two workshops will take place each day during these blocks. The first block will run on Saturday, 22

March and Sunday, 23 March from 9 AM until 4 PM with a lunch break. It will cover the workshop material offered to internal students during weeks 3 through 6. The second block will run from Tuesday, 15 April through Thursday, 17 April and will also start at 9 AM and end at 4 PM. It will cover the remaining workshops offered to internals during weeks 7 through 12.

iLearn Recordings

This unit strongly emphasises acquisition of specific scientific knowledge concerning animals, which will be tested during the Final Exam. To enhance your learning, a set of short videos will be released on the iLearn site each week that will introduce all aspects of both invertebrate and vertebrate biology. The videos will run to a total of approximately two hours each week.

Topics will include phylogenetics; Earth history and the fossil record; major patterns in animal evolution; biogeography; biodiversity; multicellularity and compartmentalisation; the invasion of land; the return to the sea; flight; terrestrial locomotion; endothermy and climate tolerance; pregnancy, reproduction, and mating; growth and development; body size and scaling; sensory systems; life at night; diet and morphology; and predation and defense.

Policies and Procedures

Macquarie University policies and procedures are accessible from [Policy Central](https://policies.s.mq.edu.au) (<https://policies.s.mq.edu.au>). Students should be aware of the following policies in particular with regard to Learning and Teaching:

- [Academic Appeals Policy](#)
- [Academic Integrity Policy](#)
- [Academic Progression Policy](#)
- [Assessment Policy](#)
- [Fitness to Practice Procedure](#)
- [Assessment Procedure](#)
- [Complaints Resolution Procedure for Students and Members of the Public](#)
- [Special Consideration Policy](#)

Students seeking more policy resources can visit [Student Policies](https://students.mq.edu.au/support/study/policies) (<https://students.mq.edu.au/support/study/policies>). It is your one-stop-shop for the key policies you need to know about throughout your undergraduate student journey.

To find other policies relating to Teaching and Learning, visit [Policy Central](https://policies.mq.edu.au) (<https://policies.mq.edu.au>) and use the [search tool](#).

Student Code of Conduct

Macquarie University students have a responsibility to be familiar with the Student Code of Conduct: <https://students.mq.edu.au/admin/other-resources/student-conduct>

Results

Results published on platform other than [eStudent](#), (eg. iLearn, Coursera etc.) or released directly by your Unit Convenor, are not confirmed as they are subject to final approval by the University. Once approved, final results will be sent to your student email address and will be made available in [eStudent](#). For more information visit connect.mq.edu.au or if you are a Global MBA student contact globalmba.support@mq.edu.au

Academic Integrity

At Macquarie, we believe [academic integrity](#) – honesty, respect, trust, responsibility, fairness and courage – is at the core of learning, teaching and research. We recognise that meeting the expectations required to complete your assessments can be challenging. So, we offer you a range of resources and services to help you reach your potential, including free [online writing and maths support](#), [academic skills development](#) and [wellbeing consultations](#).

Student Support

Macquarie University provides a range of support services for students. For details, visit <http://students.mq.edu.au/support/>

Academic Success

[Academic Success](#) provides resources to develop your English language proficiency, academic writing, and communication skills.

- [Workshops](#)
- [Chat with a WriteWISE peer writing leader](#)
- [Access StudyWISE](#)
- [Upload an assignment to Studiosity](#)
- [Complete the Academic Integrity Module](#)

The Library provides online and face to face support to help you find and use relevant information resources.

- [Subject and Research Guides](#)
- [Ask a Librarian](#)

Student Services and Support

Macquarie University offers a range of [Student Support Services](#) including:

- [IT Support](#)
- [Accessibility and disability support](#) with study
- Mental health [support](#)
- [Safety support](#) to respond to bullying, harassment, sexual harassment and sexual assault

- [Social support including information about finances, tenancy and legal issues](#)
- [Student Advocacy](#) provides independent advice on MQ policies, procedures, and processes

Student Enquiries

Got a question? Ask us via the [Service Connect Portal](#), or contact [Service Connect](#).

IT Help

For help with University computer systems and technology, visit http://www.mq.edu.au/about_us/offices_and_units/information_technology/help/.

When using the University's IT, you must adhere to the [Acceptable Use of IT Resources Policy](#). The policy applies to all who connect to the MQ network including students.

Changes from Previous Offering

This is a new unit for 2025 and there have been no previous offerings.

Unit information based on version 2025.05 of the [Handbook](#)