ZOOL12009 *Invertebrate Zoology*
Term 1 - 2023

Profile information current as at 04/05/2024 09:46 pm

General Information

Overview
The invertebrates are the largest and most diverse group of animals on Earth, being found in all environments and habitats. This unit provides an overview of the biology, ecology, and taxonomy of the various invertebrate phyla, linking adaptation and evolutionary history to understand the origins and proliferation of this great diversity of life.

Details
Career Level: *Undergraduate*
Unit Level: *Level 2*
Credit Points: *6*
Student Contribution Band: *8*
Fraction of Full-Time Student Load: *0.125*

Pre-requisites or Co-requisites
Prerequisite BIOL11099 Living Systems or BIOL11102 Life Science Laboratory
Important note: Students enrolled in a subsequent unit who failed their pre-requisite unit, should drop the subsequent unit before the census date or within 10 working days of Fail grade notification. Students who do not drop the unit in this timeframe cannot later drop the unit without academic and financial liability. See details in the Assessment Policy and Procedure (Higher Education Coursework).

Offerings For Term 1 - 2023

- Mixed Mode
- Rockhampton

Attendance Requirements
All on-campus students are expected to attend scheduled classes – in some units, these classes are identified as a mandatory (pass/fail) component and attendance is compulsory. International students, on a student visa, must maintain a full time study load and meet both attendance and academic progress requirements in each study period (satisfactory attendance for International students is defined as maintaining at least an 80% attendance record).

Residential Schools
This unit has a Compulsory Residential School for distance mode students and the details are:
Click here to see your Residential School Timetable.

Website
This unit has a website, within the Moodle system, which is available two weeks before the start of term. It is important that you visit your Moodle site throughout the term. Please visit Moodle for more information.

Class and Assessment Overview

Recommended Student Time Commitment

Each 6-credit Undergraduate unit at CQUniversity requires an overall time commitment of an average of 12.5 hours of study per week, making a total of 150 hours for the unit.

Class Timetable

Regional Campuses
Bundaberg, Cairns, Emerald, Gladstone, Mackay, Rockhampton, Townsville

Metropolitan Campuses
Adelaide, Brisbane, Melbourne, Perth, Sydney

Assessment Overview

1. **Written Assessment**
Weighting: 20%
2. **Practical Assessment**
Weighting: 30%
3. **Online Quiz(zes)**
Weighting: 50%

Assessment Grading

This is a graded unit: your overall grade will be calculated from the marks or grades for each assessment task, based on the relative weightings shown in the table above. You must obtain an overall mark for the unit of at least 50%, or an overall grade of 'pass' in order to pass the unit. If any 'pass/fail' tasks are shown in the table above they must also be completed successfully ('pass' grade). You must also meet any minimum mark requirements specified for a particular assessment task, as detailed in the 'assessment task' section (note that in some instances, the minimum mark for a task may be greater than 50%). Consult the University's Grades and Results Policy for more details of interim results and final grades.

CQUniversity Policies

All University policies are available on the CQUniversity Policy site.
You may wish to view these policies:

- Grades and Results Policy
- Assessment Policy and Procedure (Higher Education Coursework)
- Review of Grade Procedure
- Student Academic Integrity Policy and Procedure
- Monitoring Academic Progress (MAP) Policy and Procedure – Domestic Students
- Monitoring Academic Progress (MAP) Policy and Procedure – International Students
- Student Refund and Credit Balance Policy and Procedure
- Student Feedback – Compliments and Complaints Policy and Procedure
- Information and Communications Technology Acceptable Use Policy and Procedure

This list is not an exhaustive list of all University policies. The full list of University policies are available on the CQUniversity Policy site.

Previous Student Feedback

Feedback, Recommendations and Responses

Every unit is reviewed for enhancement each year. At the most recent review, the following staff and student feedback items were identified and recommendations were made.

Feedback from SUTE feedback

Feedback
Students noted that examples used in lecture helped to make the theory much easier to understand and follow.

Recommendation
Maintain applied examples within lectures, and develop additional examples where relevant.

Feedback from SUTE feedback

Feedback
It was noted that the companion study guide was useful, with the additional weekly module questions helpful for extra learning.

Recommendation
Maintain the provision of the companion study guide, and update content where relevant.

Feedback from Email correspondence

Feedback
It was suggested that additional help with the practical assessment expectations and purpose would be worthwhile.

Recommendation
While a tutorial for the practical assessment is already prepared and updated each year, additional content can be created focusing on specific issues raised by students as requested.

Unit Learning Outcomes

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

1. Define terminology associated with the study of invertebrate zoology
2. Describe the structural and functional organisation of animals from the various invertebrate phyla
3. Explain the evolutionary history of the invertebrates, including their adaptations to particular environments and their ecology
4. Identify the major invertebrate taxa and explain the evolutionary and physiological basis for the taxonomic classification of these animals
5. Acquire practical skills in the study of invertebrates by conducting basic scientific research on invertebrate abundance, distribution, behaviour, and ecology in both field and laboratory settings.

Alignment of Learning Outcomes, Assessment and Graduate Attributes

— N/A Level • Introductory Level • Intermediate Level • Graduate Level ◦ Professional Level ◦ Advanced Level

Alignment of Assessment Tasks to Learning Outcomes

Assessment Tasks	Learning Outcomes				
	1	2	3	4	5
1 - Written Assessment - 20%	•	•	•		
2 - Practical Assessment - 30%	•	•		•	•

Assessment Tasks	Learning Outcomes				
	1	2	3	4	5
3 - Online Quiz(zes) - 50%	•	•	•	•	

Alignment of Graduate Attributes to Learning Outcomes

Graduate Attributes	Learning Outcomes				
	1	2	3	4	5
1 - Communication	•	•	•	•	•
2 - Problem Solving		•		•	•
3 - Critical Thinking	•	•	•	•	•
4 - Information Literacy	•	•	•	•	•
5 - Team Work					•
6 - Information Technology Competence	•	•	•	•	
7 - Cross Cultural Competence					
8 - Ethical practice					•
9 - Social Innovation					
10 - Aboriginal and Torres Strait Islander Cultures					

Alignment of Assessment Tasks to Graduate Attributes

Assessment Tasks	Graduate Attributes									
	1	2	3	4	5	6	7	8	9	10
1 - Written Assessment - 20%	•		•	•		•				
2 - Practical Assessment - 30%	•	•	•	•	•			•		
3 - Online Quiz(zes) - 50%	•	•	•	•						

Textbooks and Resources

Textbooks

There are no required textbooks.

IT Resources

You will need access to the following IT resources:

- CQUniversity Student Email
- Internet
- Unit Website (Moodle)

Referencing Style

All submissions for this unit must use the referencing style: Harvard (author-date)
For further information, see the Assessment Tasks.

Teaching Contacts

Elizabeth Andrews Unit Coordinator
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Schedule

Week 1 - 06 Mar 2023

Module/Topic	Chapter	Events and Submissions/Topic
1. Unit overview 2. Why study invertebrates?	Study guide chapter 1	

Week 2 - 13 Mar 2023

Module/Topic	Chapter	Events and Submissions/Topic
3. Invertebrates and the environment 4. Taxonomy and evolution of the invertebrates	Study guide chapters 2 & 3	

Week 3 - 20 Mar 2023

Module/Topic	Chapter	Events and Submissions/Topic
5. Protozoans 6. Porifera	Study guide chapters 4 & 5	

Week 4 - 27 Mar 2023

Module/Topic	Chapter	Events and Submissions/Topic
7. Cnidarians 8. Coral reefs	Study guide chapter 6	

Week 5 - 03 Apr 2023

Module/Topic	Chapter	Events and Submissions/Topic
9. Platyhelminthes 10. Of worms and coelomes	Study guide chapters 7 & 8	

Vacation Week - 10 Apr 2023

Module/Topic	Chapter	Events and Submissions/Topic

Week 6 - 17 Apr 2023

Module/Topic	Chapter	Events and Submissions/Topic
11. Arthropoda part 1: Introduction 12. Arthropoda part 2: Uniramia	Study guide chapter 9	**Short essay: How do 'lower' invertebrates affect human populations?** Due: Week 6 Friday (21 Apr 2023) 11:45 pm AEST

Week 7 - 24 Apr 2023

Module/Topic	Chapter	Events and Submissions/Topic
13. Arthropoda part 3: Crustaceans 14. Annelida	Study guide chapters 9 & 10	

Week 8 - 01 May 2023

Module/Topic	Chapter	Events and Submissions/Topic
15. Mollusca part 1: Introduction 16. Mollusca part 2: Gastropoda	Study guide chapter 11	

Week 9 - 08 May 2023

Module/Topic	Chapter	Events and Submissions/Topic
17. Mollusca part 3: Cephalopoda	Study guide chapter 11	

Week 10 - 15 May 2023

Module/Topic	Chapter	Events and Submissions/Topic
18. The Lophophorates 19. Echinodermata	Study guide chapters 12 & 13	

Week 11 - 22 May 2023

Module/Topic	Chapter	Events and Submissions/Topic
20. Hemichordates & Chordates	Study guide chapter 14	**Practical report: Invertebrate research project** Due: Week 11 Friday (26 May 2023) 11:45 pm AEST

Week 12 - 29 May 2023

Module/Topic	Chapter	Events and Submissions/Topic
21. Unit review		

Review/Exam Week - 05 Jun 2023

Module/Topic	Chapter	Events and Submissions/Topic
		End-of-term Online Quiz Due: Review/Exam Week Monday (5 June 2023) 9:00 am AEST

Exam Week - 12 Jun 2023

Module/Topic	Chapter	Events and Submissions/Topic

Term Specific Information

This unit comprises a series of lectures and an 'at-home' practical assignment in lieu of a more traditional residential school. in 2023, recordings of all lectures will be provided on the unit's Moodle page, with live Zoom meetings scheduled throughout term for informal Q&A. The practical assignment for this unit will run in conjunction with ad hoc live Zoom sessions and pre-recorded videos, which will provide additional instructions and allow you to get feedback on your progress throughout the term. The unit's Moodle page will be the key access point for all relevant information and communication regarding all aspects of the unit.

Assessment Tasks

1 Short essay: How do 'lower' invertebrates affect human populations?

Assessment Type
Written Assessment

Task Description
This written assignment requires you to complete a concise 1000 word essay, and is worth 20 % of your unit grade. “Lower invertebrates”, so called because they have persisted since the early history of life on Earth, provide many benefits to humans (e.g. medical applications, food and resources, understanding how life on Earth ‘works’, etc.), as well as many detriments (infections, parasites, food spoilage, etc.). Your task is to summarise how a lower invertebrate (as an individual species or a higher taxonomic level) contributes to the benefit OR detriment of human populations. You are free to choose any invertebrate/outcome/field of research that interests you, but ensure your topic is based on a ‘lower’ invertebrate. This includes the protozoans, poriferans, cnidarians, platyhelminthes, nematodes and nemerteans, which will be described in detail in lectures.
Additional information regarding assessment requirements, hints, and submission guidelines will be provided on the unit's Moodle site.

Assessment Due Date
Week 6 Friday (21 Apr 2023) 11:45 pm AEST
Submit your work as a Word document (.doc or .docx) via Moodle

Return Date to Students
Week 8 Friday (5 May 2023)
Your work will be marked and returned to you via Moodle

Weighting
20%

Minimum mark or grade
50 %

Assessment Criteria
This concise essay assignment will be marked against the following criteria:

- A clear and informative title (5% of marks)
- An informative yet concise background/introduction to the topic (10%)
- A descriptive, well-structured, and clearly resourced (referenced) body section of text, describing the key features/traits of the invertebrate chosen, and how ti affects human populations (25%)
- A concluding paragraph that summarises the essay without repeating the points already presented (15%)
- Ensuring a 'lower' invertebrate is discussed (5%)
- Citing references correctly within the text (5%)
- Providing a reference list in Harvard format, comprising 5 to 10 sources (see instructions on Moodle for additional information about references) (10%)
- Correct spelling and grammar (10%)
- A clear and logical structure and presentation of your points (10%)
- Keeping within word limits (1000 words +/- 10%) (5%)

Referencing Style

- Harvard (author-date)

Submission
Online

Submission Instructions
Submit your work as a Word document (.doc or .docx) via Moodle

Learning Outcomes Assessed

- Define terminology associated with the study of invertebrate zoology
- Describe the structural and functional organisation of animals from the various invertebrate phyla
- Explain the evolutionary history of the invertebrates, including their adaptations to particular environments and their ecology

Graduate Attributes

- Communication
- Critical Thinking
- Information Literacy
- Information Technology Competence

2 Practical report: Invertebrate research project

Assessment Type
Practical Assessment

Task Description
This practical assessment comprises a written report summarising the practical work you will complete during the term. This assessment is worth 30% of your unit grade. This assessment will require you to complete an 'at-home' research project involving invertebrates. You will be given a choice of the type of project to do, but you will need to demonstrate that you have a clear hypothesis with an appropriate test and interpretation, regardless of your final choice. Instruction, guidance and feedback will be available throughout the term via pre-recorded videos uploaded to Moodle as well as regular live Zoom sessions (see Moodle for scheduled dates). This assignment will combine your conceptual and planning skills with further development of skills in practical field sampling, measurement, data analysis and communication.

Assessment Due Date
Week 11 Friday (26 May 2023) 11:45 pm AEST
Submit your work as a Word document (.doc or .docx) via Moodle

Return Date to Students
Review/Exam Week Friday (9 June 2023)
Your work will be marked and returned to you via Moodle

Weighting
30%

Minimum mark or grade
50 %

Assessment Criteria
Your practical report will be assessed against the following criteria:

- Title (short, punchy and informative) (6.67% of marks)
- Abstract (clear, concise summary of context, hypothesis, results and conclusions) (10%)
- Introduction (Relevant context provided, starting with a broad focus of observations and models and narrowing to a clear, well-articulated hypothesis for a manipulative experiment) (16.67%)
- Methods (adequate description and justification of methods used so experiment could be repeated) (16.67%)
- Results (Concise description of results, ordered logically and presented in graphs/tables, as well as basic statistical analyses) (16.67%)
- Discussion (Logical structure that discusses the key results and their meaning before placing results in a broader context and identifying biases/improvements/further fields of study etc) (16.67%)
- References (cited appropriately throughout text, 10 minimum, no web pages unless of the data repository-type) (6.67%)
- Correct spelling and grammar (6.67%)
- Word count (keeping to guidelines in each section) (3.33%)

Referencing Style

- Harvard (author-date)

Submission
Online

Submission Instructions
Submit your work as a Word document (.doc or .docx) via Moodle

Learning Outcomes Assessed

- Define terminology associated with the study of invertebrate zoology
- Describe the structural and functional organisation of animals from the various invertebrate phyla
- Identify the major invertebrate taxa and explain the evolutionary and physiological basis for the taxonomic classification of these animals
- Acquire practical skills in the study of invertebrates by conducting basic scientific research on invertebrate abundance, distribution, behaviour, and ecology in both field and laboratory settings.

Graduate Attributes

- Communication
- Problem Solving
- Critical Thinking

- Information Literacy
- Team Work
- Ethical practice

3 End-of-term Online Quiz

Assessment Type
Online Quiz(zes)

Task Description
You are required to complete and end-of-term online quiz that is worth 50 % of your unit grade. The quiz will be akin to a traditional examination where you will be asked multiple questions that may relate to any element of the unit content presented during term. During the scheduled University review/exam weeks, the quiz will be available for 24 hours during which you must begin and complete the assessment within a 3-hour time period. The exact 24 hours that the quiz will be available will be advertised during term (note that the Monday 5th June identified in this unit profile is a placeholder date only). The quiz will automatically close at the end of your 3 hours, or at the end of the 24-hour opening period, whichever is sooner. Additional details and practice questions will be provided throughout term and on Moodle.

Number of Quizzes
1

Frequency of Quizzes
Other

Assessment Due Date
Review/Exam Week Monday (5 June 2023) 9:00 am AEST
Complete your quiz on Moodle by clicking the appropriate assessment link

Return Date to Students
Exam Week Friday (16 June 2023)
Your quiz will be marked and returned to you on Moodle

Weighting
50%

Minimum mark or grade
50 %

Assessment Criteria
Your grade in this assignment will be determined through your written demonstration of your grasp of the entire unit's content. Each question in the quiz will have a certain number of marks allocated to it. Questions will be a combination of short- and long-answer format, as well as short-essay style questions that give you the chance to show your deeper understanding of a particular topic.

Referencing Style

- Harvard (author-date)

Submission
Online

Submission Instructions
Complete your quiz on Moodle by clicking the appropriate assessment link

Learning Outcomes Assessed

- Define terminology associated with the study of invertebrate zoology
- Describe the structural and functional organisation of animals from the various invertebrate phyla
- Explain the evolutionary history of the invertebrates, including their adaptations to particular environments and their ecology
- Identify the major invertebrate taxa and explain the evolutionary and physiological basis for the taxonomic classification of these animals

Graduate Attributes

- Communication
- Problem Solving
- Critical Thinking
- Information Literacy

Academic Integrity Statement

As a CQUniversity student you are expected to act honestly in all aspects of your academic work.

Any assessable work undertaken or submitted for review or assessment must be your own work. Assessable work is any type of work you do to meet the assessment requirements in the unit, including draft work submitted for review and feedback and final work to be assessed.

When you use the ideas, words or data of others in your assessment, you must thoroughly and clearly acknowledge the source of this information by using the correct referencing style for your unit. Using others' work without proper acknowledgement may be considered a form of intellectual dishonesty.

Participating honestly, respectfully, responsibly, and fairly in your university study ensures the CQUniversity qualification you earn will be valued as a true indication of your individual academic achievement and will continue to receive the respect and recognition it deserves.

As a student, you are responsible for reading and following CQUniversity's policies, including the **Student Academic Integrity Policy and Procedure**. This policy sets out CQUniversity's expectations of you to act with integrity, examples of academic integrity breaches to avoid, the processes used to address alleged breaches of academic integrity, and potential penalties.

What is a breach of academic integrity?
A breach of academic integrity includes but is not limited to plagiarism, self-plagiarism, collusion, cheating, contract cheating, and academic misconduct. The Student Academic Integrity Policy and Procedure defines what these terms mean and gives examples.

Why is academic integrity important?
A breach of academic integrity may result in one or more penalties, including suspension or even expulsion from the University. It can also have negative implications for student visas and future enrolment at CQUniversity or elsewhere. Students who engage in contract cheating also risk being blackmailed by contract cheating services.

Where can I get assistance?
For academic advice and guidance, the Academic Learning Centre (ALC) can support you in becoming confident in completing assessments with integrity and of high standard.

What can you do to act with integrity?

Be Honest
If your assessment task is done by someone else, it would be dishonest of you to claim it as your own

Seek Help
If you are not sure about how to cite or reference in essays, reports etc, then seek help from your lecturer, the library or the Academic Learning Centre (ALC)

Produce Original Work
Originality comes from your ability to read widely, think critically, and apply your gained knowledge to address a question or problem