



ZOOL12009 *Invertebrate Zoology*

Term 1 - 2019

Profile information current as at 28/04/2024 09:49 am

All details in this unit profile for ZOOL12009 have been officially approved by CQU University and represent a learning partnership between the University and you (our student). The information will not be changed unless absolutely necessary and any change will be clearly indicated by an approved correction included in the profile.

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

ZOOL11005 Foundation Animal Biology or BIOL11099 Living Systems

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 - 2019

- 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. **Examination**

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 Moodle

Feedback

Two students noted the difficulty in working on a team project (the residential school project report) while geographically separated from their team mates.

Recommendation

Provide additional advice and tools for achieving successful remote collaboration during the residential school and via Moodle.

Feedback from Moodle

Feedback

One student noted that, while they enjoyed the residential school, they felt they didn't learn much more about invertebrates, per se.

Recommendation

As the residential school aims to build the student's skills in experimental design and sampling of invertebrates, it foregoes a general overview of all invertebrate phyla presented in lecture. The 2019 structure of the residential school will aim to redress this through short practical lessons that reinforce lecture content.

Feedback from Moodle

Feedback

Students did not enjoy a new section of the exam - "Fill in the blanks", where a specific Phylum or anatomical feature had to be remembered to complete a sentence. This replaced a more traditional "Provide a definition of...(insert word here)" exam section.

Recommendation

Remove the fill in the blanks section of the exam and either re-instate the definitions section, or develop an alternative.

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 in written and verbal form
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, in written and verbal form, 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



Alignment of Assessment Tasks to Learning Outcomes

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

Amie Anastasi Unit Coordinator
a.anastasi@cqu.edu.au

Schedule

Week 1 - 11 Mar 2019

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

Week 2 - 18 Mar 2019

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 - 25 Mar 2019

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

Week 4 - 01 Apr 2019

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

Week 5 - 08 Apr 2019

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

Vacation Week - 15 Apr 2019

Module/Topic	Chapter	Events and Submissions/Topic
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Week 6 - 22 Apr 2019

Module/Topic	Chapter	Events and Submissions/Topic
11. Annelida 12. Mollusca part 1	Study guide chapters 9 & 10	Contribution of 'lower' invertebrates to human populations. Due: Week 6 Friday (26 Apr 2019) 11:45 pm AEST

Week 7 - 29 Apr 2019

Module/Topic	Chapter	Events and Submissions/Topic
No lectures this week. Let's have fun at the residential school instead!		Residential school: 3 - 5 May

Week 8 - 06 May 2019

Module/Topic	Chapter	Events and Submissions/Topic
13. Mollusca part 2: Gastropods 14. Mollusca part 3: Cephalopods	Study guide chapter 10	

Week 9 - 13 May 2019

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

Week 10 - 20 May 2019

Module/Topic	Chapter	Events and Submissions/Topic
17. Arthropoda part 3: Crustaceans 18. Lophophorates	Study guide chapters 11 & 12	

Week 11 - 27 May 2019

Module/Topic	Chapter	Events and Submissions/Topic
19. Echinodermata 20. Hemichordates & Chordates	Study guide chapters 13 & 14	Residential school practical report Due: Week 11 Friday (31 May 2019) 11:45 pm AEST

Week 12 - 03 Jun 2019

Module/Topic	Chapter	Events and Submissions/Topic
21. Unit review, Q&A		

Review/Exam Week - 10 Jun 2019

Module/Topic	Chapter	Events and Submissions/Topic

Exam Week - 17 Jun 2019

Module/Topic	Chapter	Events and Submissions/Topic

Assessment Tasks

1 Contribution of 'lower' invertebrates to human populations.

Assessment Type

Written Assessment

Task Description

This written assignment comprises a **concise** 500 word essay.

"Lower invertebrates", so called because they generally appeared early in the 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 Moodle site.

Assessment Due Date

Week 6 Friday (26 Apr 2019) 11:45 pm AEST

Return Date to Students

Week 9 Friday (17 May 2019)

Weighting

20%

Minimum mark or grade

40%

Assessment Criteria

The written assessment will be marked against the following criteria:

1. The overall clarity of the essay with respect to structure and presentation (including figures and tables), grammar and spelling.
2. The extent to which the essay demonstrates research of the topic outside of the lecture content.
3. Appropriate acknowledgment of sources in the text and accurate representation in the reference list, using the Harvard referencing style.
4. Effectively summarising information within the 500 word limit.

Referencing Style

- [Harvard \(author-date\)](#)

Submission

Online

Submission Instructions

Submission (and return) will be done 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 in written and verbal form
- Explain the evolutionary history of the invertebrates, including their adaptations to particular environments and their ecology

Graduate Attributes

- Communication
- Problem Solving
- Critical Thinking
- Information Literacy
- Information Technology Competence
- Cross Cultural Competence
- Ethical practice

2 Residential school practical report

Assessment Type

Practical Assessment

Task Description

This practical assessment comprises a written report summarising the practical work you will complete during the residential school. This assessment is worth 30% of your unit grade.

The residential school will require you to sample multiple habitats (including aquatic and terrestrial) to collect a range of invertebrate taxa for subsequent identification and enumeration in the laboratory using provided methods and rationale. As such, the residential school will combine field work and laboratory work to enable you to learn field sampling skills, practice use of laboratory equipment such as microscopes, and further develop your skills in the use of dichotomous taxonomic identification keys.

While we will be travelling to field sites as a group, you will be required to complete your sampling, sample processing, and invertebrate identification and enumeration individually. Additionally, you will be required to write an individual report based on your observations, results and findings for submission to the unit Moodle site by the due date.

Additional information, resources, and assessment instructions will be provided on the unit Moodle site during term, and

at the residential school.

Assessment Due Date

Week 11 Friday (31 May 2019) 11:45 pm AEST

Return Date to Students

Exam Week Friday (21 June 2019)

Weighting

30%

Minimum mark or grade

40%

Assessment Criteria

The report you submit for assessment will require you to provide:

1. A background description of the rationale for doing the research/sampling.
2. A description of the sites sampled and methodology used.
3. A list of invertebrate taxa identified in each habitat sampled.
4. Graphs of the invertebrate abundance and diversity sampled.
5. A summary discussion of the results obtained, placed in the context of current literature.
6. Maximum of 2500 words.
7. Minimum of eight (8) references (no web pages unless of the data repository type).

Referencing Style

- [Harvard \(author-date\)](#)

Submission

Online

Submission Instructions

Submission (and return) will be done 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 in written and verbal form
- Explain the evolutionary history of the invertebrates, including their adaptations to particular environments and their ecology
- Identify the major invertebrate taxa and explain, in written and verbal form, 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
- Cross Cultural Competence
- Ethical practice

Examination

Outline

Complete an invigilated examination.

Date

During the examination period at a CQUniversity examination centre.

Weighting

50%

Length

180 minutes

Minimum mark or grade

40%

Exam Conditions

Closed Book.

Materials

Dictionary - non-electronic, concise, direct translation only (dictionary must not contain any notes or comments).
Calculator - all non-communicable calculators, including scientific, programmable and graphics calculators are authorised

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