



BIOL11102 *Life Science Laboratory*

Term 1 - 2025

Profile information current as at 23/05/2025 06:22 pm

All details in this unit profile for BIOL11102 have been officially approved by CQUniversity 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

Understanding the evolution, anatomy and identification of plants and animals is critical in tackling the scientific study or management of organisms, ecosystems and animal or plant production. In Life Science Laboratory, you will study evolution and phylogeny, and the anatomy of the most common vertebrate and invertebrate animals, plants, algae and fungi, to support the development of your practical skills, which include specimen collection, preparation and curation; microscopic and macroscopic identification; and animal and plant dissection. This unit includes field work where you will use the knowledge and skills developed to study organisms in both terrestrial and marine ecosystems. On conclusion of this unit, you will understand the important role that biology plays in research and innovation in the fields of science, environmental science and agriculture.

Details

Career Level: *Undergraduate*

Unit Level: *Level 1*

Credit Points: 6

Student Contribution Band: 8

Fraction of Full-Time Student Load: 0.125

Pre-requisites or Co-requisites

Anti-requisite 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 - 2025

- 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).

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. **Laboratory/Practical**

Weighting: Pass/Fail

4. **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 UNIT COMMENTS REPORT - T1, 2024

Feedback

Exceptional engaging subject and residential school.

Recommendation

Continue to develop residential school assessments/activities that are engaging and relevant to students.

Feedback from SUTE UNIT COMMENTS REPORT - T1, 2024

Feedback

Lecture videos should have subtitles.

Recommendation

Ensure students are familiar with the captions and transcripts functionality in Echo.

Feedback from SUTE UNIT COMMENTS REPORT - T1, 2024

Feedback

The size of the residential school attendance was too high, this impacted the ability to see demonstrations.

Recommendation

Residential schools require a higher staff-to-student ratio than is currently provided. Laboratories require more/better placement of audio-visual equipment.

Feedback from SUTE UNIT COMMENTS REPORT - T1, 2024

Feedback

The lecturers and technical staff are supportive and offered extra assistance when required.

Recommendation

Staff to continue providing extra support when required.

Feedback from Personal reflection

Feedback

Students are seeking more detailed feedback on assessments, understanding that this contributes significantly to future learning.

Recommendation

Increased marking capacity is needed if students are to receive useful feedback on written assessments.

Feedback from Personal reflection

Feedback

Increase the clarity of expectations regarding residential school assessments.

Recommendation

Develop more detailed rubrics for residential school assessments.

Unit Learning Outcomes

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

1. Distinguish between major taxa of plants and animals using morphological features
2. Discuss evolution and the Hierarchy of Classification in relation to the diversity of living organisms
3. Safely perform laboratory activities, including the use of microscopes and aseptic techniques, and the dissection of plants and animals
4. Collect and curate plant specimens
5. Use dichotomous keys to identify flowering plants and insects.

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 - Laboratory/Practical - 0%			•	•	•
4 - 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%	•	•	•	•						

Assessment Tasks	Graduate Attributes									
	1	2	3	4	5	6	7	8	9	10
2 - Practical Assessment - 30%	•	•	•			•				
3 - Laboratory/Practical - 0%		•	•	•	•					
4 - Online Quiz(zes) - 50%	•	•	•	•						

Textbooks and Resources

Textbooks

BIOL11102

Supplementary

Campbell Biology (Australian and New Zealand Edition)

Edition: 12th (2022)

Authors: Reece, J.B. and others

Pearson Education

ISBN: 9781488626241

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

Guy Carton Unit Coordinator

a.carton@cqu.edu.au

Schedule

Week 1 - 10 Mar 2025

Module/Topic

Unifying Themes of Biology
Mechanisms of Evolution
Evolution of Populations
Tutorial Q and A

Chapter

Evolution, the themes of biology, and scientific inquiry (pg 2 - 26)
Mechanisms of Evolution (pg 471 - 575)
(Note: page references are for the 12th edition and may differ from early editions)

Events and Submissions/Topic

Week 2 - 17 Mar 2025

Module/Topic

Chapter

Events and Submissions/Topic

The Tree of Life and Phylogeny Cell Theory The Prokaryotes Tutorial Q and A	Phylogeny and the Tree of Life (pg 578 to 597) The Cell (pg 94 to 213) Bacteria and Archaea (pg 598 to 617)
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Week 3 - 24 Mar 2025

Module/Topic	Chapter	Events and Submissions/Topic
Protists Fungi Tutorial Q and A	Protists (pg 618 to 642) Fungi (pg 689 to 709)	

Week 4 - 31 Mar 2025

Module/Topic	Chapter	Events and Submissions/Topic
Plant Diversity, Form and Function I Tutorial Q and A	Plant diversity I: How plants colonised land (pg 643 to 662) Plant diversity II: The evolution of seed plants (pg 663 to 688)	

Week 5 - 07 Apr 2025

Module/Topic	Chapter	Events and Submissions/Topic
Plant Diversity, Form and Function II Tutorial Q and A	Plant form and function (pg 798 to 920)	

Vacation Week - 14 Apr 2025

Module/Topic	Chapter	Events and Submissions/Topic

Week 6 - 21 Apr 2025

Module/Topic	Chapter	Events and Submissions/Topic
Animal Diversity Animal Morphology The Invertebrates Tutorial Q and A	An overview of animal diversity (pg 710 to 724) An introduction to invertebrates (pg 725 to 729)	Media article on an animal recently discovered in Australia Due: Week 6 Tuesday (22 Apr 2025) 9:00 am AEST

Week 7 - 28 Apr 2025

Module/Topic	Chapter	Events and Submissions/Topic
Eumetazoans (Cnidarians) Lophotrochozoans (Platyhelminths, Annelids) Tutorial Q and A	An introduction to invertebrates (pg 730 to 743)	

Week 8 - 05 May 2025

Module/Topic	Chapter	Events and Submissions/Topic
Lophotrochozoans (Molluscs, Arthropods) Introduction to Insects Tutorial Q and A	Ecdysozoans are the most species-rich animal group (pg 744 to 751)	

Week 9 - 12 May 2025

Module/Topic	Chapter	Events and Submissions/Topic
Residential School A		Residential School A - Practical Assessment Due: Monday to Thursday Week 9

Week 10 - 19 May 2025

Module/Topic	Chapter	Events and Submissions/Topic
Residential School B		Residential School B - Practical Assessment Due: Tuesday to Friday Week 10

Week 11 - 26 May 2025

Module/Topic	Chapter	Events and Submissions/Topic

Deuterostomes (Echinoderms)
The Origin and Evolution of
Vertebrates
Tutorial Q and A

Echinoderms and chordates are
deuterostomes (pg 752 to 754)
The origin and evolution of
vertebrates (pg 757 to 797)

Week 12 - 02 Jun 2025

Module/Topic	Chapter	Events and Submissions/Topic
The Origin and Evolution of Vertebrates (cont) Animal Form and Function Unit Recap	Animal Form and Function (pg 921 to 946)	

Review/Exam Week - 09 Jun 2025

Module/Topic	Chapter	Events and Submissions/Topic
End of Unit Assessment		End of Unit Online Test Due: Review/Exam Week Monday (9 June 2025) 7:00 am AEST

Assessment Tasks

1 Media article on an animal recently discovered in Australia

Assessment Type

Written Assessment

Task Description

This assessment requires you to research an **animal** that has been discovered in Australia (including surrounding territories and waters) within the last ten years and write a 500 word article for a popular science magazine. Your article should include a description of the scientific classification (kingdom, phylum etc) and the characteristics associated with the animal in that group (approximately 200 words). In the remaining words (approximately 300), you should describe what is interesting about the animal, what makes it different from other similar animals, the significance of the discovery, or other relevant information that will attract and keep the audience's attention. At the end of the article, you must provide a list of the references you have used, but do not use any in-text referencing except to refer to the scientific paper that describes the species that has been discovered. As well as uploading your assignment as a **Word document**, you must upload a **Adobe pdf** of the original paper where the species is described. Exemplar articles will be available on the unit's Moodle page at the commencement of the term.

The use of Generative Artificial Tools (Gen AI) is permitted in this assessment under the following circumstances, these are;

- Initial idea generation that you then adapted (e.g. brainstorming relevant ideas that can applied to the assessment in focal way)
- Generating a first draft that you then adapted (e.g. construction an initial draft assessment piece which is then repeatedly edited)
- Used to check spelling and grammar, and edit the final document (e.g. enhance your text to improve clarity, expression, and readability)
- Used to modify the written tone/style of the final document (e.g. rewrite a paragraph so that the tone is appropriate)

If you use Gen AI in your assessment its use must be acknowledged.

You should acknowledge that you used Gen AI in your submitted assessment, including where you have directly quoted or paraphrased Gen AI generated content or used tools to summarise readings, brainstorm ideas, or for editing or proofreading purposes. This acknowledgment should be placed after the reference list.

You should include the following information when acknowledging the use of Gen AI tools.

The Gen AI tool (e.g. Copilot, Chat-GPT, Claude, Google AI) used, description of how you used the tool (e.g. edited/corrected/translated/planned/brainstormed), prompt(s) that you used, section or page of the assessment piece. The acknowledgement should follow the format outlined below.

Assessment Due Date

Week 6 Tuesday (22 Apr 2025) 9:00 am AEST

Upload your article as a Word document (.doc or .docx) and the original scientific article where the species is described as an Adobe pdf.

Return Date to Students

Week 9 Monday (12 May 2025)

Article and feedback returned via Moodle.

Weighting

20%

Minimum mark or grade

50%

Assessment Criteria

Assessment Criteria

The complete assessment rubric will be available on the unit's Moodle site at the commencement of the term.

The assessment criteria primarily focuses on the following:

1. Accuracy of the information about the newly discovered species and its classification.
2. Relevance of the material.
3. Clarity of expression and ability to engage an audience.
4. Correct English grammar and punctuation.
5. Accuracy of referencing.

Referencing Style

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

Submission

Online

Submission Instructions

Upload your article as a Word document (.doc or .docx) and the original article where the species is described as an Adobe pdf.

Learning Outcomes Assessed

- Distinguish between major taxa of plants and animals using morphological features
- Discuss evolution and the Hierarchy of Classification in relation to the diversity of living organisms

Graduate Attributes

- Communication
- Problem Solving
- Critical Thinking
- Information Literacy

2 Practical Assessment

Assessment Type

Practical Assessment

Task Description

You will demonstrate a range of biological skills and complete a series of assessments during the Residential School.

Assessment activities will address competence in the use of microscopes and preparation of biological slides, plant and animal dissection, identification of plant and animal organs, tissues, and structures, use of dichotomous and lucid keys for plant and insect identification, and short online quizzes based on the material covered during the practical laboratory session.

The use of Generative Artificial Intelligence (Gen AI) in this assessment is not permitted and is thus unacceptable, if you use Gen AI in this assessment it may be considered Academic Misconduct.

Assessment Due Date

Residential School Week (Residential School A - Week 9, Residential School B - Week 10)

Return Date to Students

Residential School Week

Weighting

30%

Minimum mark or grade

50%

Assessment Criteria

Competency and performance of assessment tasks will be evaluated on the correctness, comprehensiveness and relevance of the response. Specific details regarding each Residential School assessment will be available on the Moodle

two weeks prior to the residential school (see Week 9 and 10) and be explained prior to undertaking the relevant practical laboratory session.

Referencing Style

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

Submission

Offline Online

Learning Outcomes Assessed

- Safely perform laboratory activities, including the use of microscopes and aseptic techniques, and the dissection of plants and animals
- Collect and curate plant specimens
- Use dichotomous keys to identify flowering plants and insects.

Graduate Attributes

- Communication
- Problem Solving
- Critical Thinking
- Information Technology Competence

3 Laboratory/Practical

Assessment Type

Laboratory/Practical

Task Description

During or after each laboratory session, students will present their work to a supervisor for marking and feedback. Students must ensure that all required skills checks are completed and signed off.

The use of Generative Artificial Intelligence (Gen AI) in this assessment is not permitted and is thus unacceptable, if you use Gen AI in this assessment it may be considered Academic Misconduct.

Assessment Due Date

Residential School Week (Residential School A - Week 9, Residential School B - Week 10)

Return Date to Students

Residential School Week

Weighting

Pass/Fail

Minimum mark or grade

Pass

Assessment Criteria

The assessment criteria for each laboratory session will vary, but assessment criteria will generally involve the following: Safety, Accuracy, Completeness, and Concept understanding. After receiving feedback, and at the supervisors discretion students maybe asked to demonstrate proficiency in skills. This assessment is a Pass/Fail.

Referencing Style

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

Submission

Offline

Learning Outcomes Assessed

- Safely perform laboratory activities, including the use of microscopes and aseptic techniques, and the dissection of plants and animals
- Collect and curate plant specimens
- Use dichotomous keys to identify flowering plants and insects.

Graduate Attributes

- Problem Solving
- Critical Thinking
- Information Literacy

- Team Work

4 End of Unit Online Test

Assessment Type

Online Quiz(zes)

Task Description

The unit test is based on lecture and study material covered during Weeks 1-12 (students are asked to revise the lecture and reading material associated with each week). The unit test is limited to 90 minutes for completion and must be submitted after completion. Answers will be automatically submitted after 90 minutes. Test questions will be a combination of multiple choice, short, and long answer questions.

The use of Generative Artificial Intelligence (Gen AI) in this assessment is not permitted and is thus unacceptable, if you use Gen AI in this assessment it may be considered Academic Misconduct.

Number of Quizzes

1

Frequency of Quizzes

Other

Assessment Due Date

Review/Exam Week Monday (9 June 2025) 7:00 am AEST

The assessment will open at 7:00am Monday 9th June and close at 7:00am Tuesday 10th June. The assessment must be completed within this 24 hour window.

Return Date to Students

Exam Week Friday (20 June 2025)

Returned via the unit Moodle site

Weighting

50%

Minimum mark or grade

50%

Assessment Criteria

Answers will be assessed on their completeness, relevance, depth and correct application of biological knowledge.

Referencing Style

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

Submission

Online

Submission Instructions

The end of unit test is limited to 90 minutes and must be completed within this time. The test will automatically self-submit after 90 minutes unless it has been manually submitted prior to the cut-off time.

Learning Outcomes Assessed

- Distinguish between major taxa of plants and animals using morphological features
- Discuss evolution and the Hierarchy of Classification in relation to the diversity of living organisms

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