



BIOL11102 *Life Science Laboratory*

Term 1 - 2019

Profile information current as at 29/04/2024 04:05 am

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 - 2019

- Bundaberg
- 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](#).

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 - 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%		•			•					

Assessment Tasks	Graduate Attributes									
	1	2	3	4	5	6	7	8	9	10
3 - Examination - 50%	•	•	•							

Textbooks and Resources

Textbooks

BIOL11102

Prescribed

Campbell Biology: Australian and New Zealand Version

11th Edition (2018)

Authors: Urry, LA, Meyers, N, Cain, ML, Wasserman, SA, Minorsky, PV, Reece, JB

Pearson Australia

Melbourne , Victoria , Australia

ISBN: 9781488613715

Binding: Hardcover

Additional Textbook Information

Copies of the previous edition of the textbook is acceptable.

The electronic version of the textbook is an acceptable and economical option. It is available from the publisher website here: <http://www.pearson.com.au/9781488613722>

Paper copies are available from the CQUni Bookshop here: <http://bookshop.cqu.edu.au> (search on the Unit code)

[View textbooks at the CQUniversity Bookshop](#)

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

Judith Wake Unit Coordinator

j.wake@cqu.edu.au

Schedule

Week 1 - 11 Mar 2019

Module/Topic	Chapter	Events and Submissions/Topic
Understanding biological diversity Hierarchy of classification Taxonomy		

Week 2 - 18 Mar 2019

Module/Topic	Chapter	Events and Submissions/Topic

Evolution by natural selection
Cell theory
Animal morphology

Study Guide Module 2

Week 3 - 25 Mar 2019

Module/Topic	Chapter	Events and Submissions/Topic
Humans and other vertebrates Chordates Echinoderms		

Week 4 - 01 Apr 2019

Module/Topic	Chapter	Events and Submissions/Topic
Molluscs Annelids Arthropods		

Week 5 - 08 Apr 2019

Module/Topic	Chapter	Events and Submissions/Topic
Focus on insects Nematodes		Media article on an organism recently discovered in Australia Due: Week 5 Monday (8 Apr 2019) 11:45 pm AEST

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
Platyhelminths Porifera Cnidarians		

Week 7 - 29 Apr 2019

Module/Topic	Chapter	Events and Submissions/Topic
Plant morphology Flowering plants		Block practicals including field trip for Bundaberg Students 29th April - 3rd May in Bundaberg

Week 8 - 06 May 2019

Module/Topic	Chapter	Events and Submissions/Topic
Gymnosperms Monilophytes		

Week 9 - 13 May 2019

Module/Topic	Chapter	Events and Submissions/Topic
Bryophytes Fungi Protists		

Week 10 - 20 May 2019

Module/Topic	Chapter	Events and Submissions/Topic
No lectures		Residential school including field trip for Distance Students 20th - 24th May in Rockhampton Field trip for Rockhampton Students 23rd May

Week 11 - 27 May 2019

Module/Topic	Chapter	Events and Submissions/Topic
Algae Prokaryotes		

Week 12 - 03 Jun 2019

Module/Topic	Chapter	Events and Submissions/Topic
Endosymbiosis Origin of life Unit review		

Review/Exam Week - 10 Jun 2019

Module/Topic	Chapter	Events and Submissions/Topic
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Exam Week - 17 Jun 2019

Module/Topic	Chapter	Events and Submissions/Topic
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Term Specific Information

Rockhampton students will attend internal practicals during the term and a field trip to North Keppel Island on 23rd May. Bundaberg students will attend a block practical session (including a field trip) in Bundaberg from 29th April to 3rd May. Mixed mode students will attend a five day residential school (including a field trip) in Rockhampton from 20th to 24th May.

Assessment Tasks

1 Media article on an organism recently discovered in Australia

Assessment Type

Written Assessment

Task Description

This assessment requires you to research an organism that has been discovered in Australia (including surrounding 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 organisms in that group (approximately 200 words). In the remaining words (approximately 300), you should describe what is interesting about the organism, what makes it different from other similar organisms, 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 pdf of the original paper where the species is described.

Assessment Due Date

Week 5 Monday (8 Apr 2019) 11:45 pm AEST

Return Date to Students

Week 7 Monday (29 Apr 2019)

Weighting

20%

Minimum mark or grade

40%

Assessment Criteria

The complete assessment rubric will be available on the Moodle site and the criteria will include:

- Accuracy of the information about the newly discovered species and its classification
- Relevance of the material
- Accuracy of referencing
- Correct English grammar, clarity of expression and ability to engage an audience.

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 a 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
- Critical Thinking

2 Practical tests

Assessment Type

Practical Assessment

Task Description

You will complete six (6) short tests (5% each) based on practical material covered during your practical sessions. The timing of these will vary according to your enrolment mode (On-campus or Mixed mode). A full schedule of practical work and associated tests will be available on the Moodle site for each enrolment mode.

Three tests will be conducted during practical classes. These tests will be based on a combination of practical skills and relevant theoretical knowledge in:

1. Practical 3 (Identifying insects),
2. Practical 5 (Flowering plants) and
3. Practical 8 (Protists and bacteria).

There will also be three on-line tests that will be available after the field trip and relevant practical sessions and will close at the end of week 12.

These on-line tests will be based on the material covered in:

4. Field trip (untimed; short answer)
5. Practicals 1 - 4 (15 minutes; multiple choice questions; one attempt only) and
6. Practicals 5 - 8 (15 minutes; multiple choice questions; one attempt only).

Assessment Due Date

In-class tests will be held during the relevant practical and on-line tests will be due Friday 11:45pm of Week 12

Return Date to Students

In-class results will be returned two weeks after the test and on-line tests will be made available in exam review week.

Weighting

30%

Minimum mark or grade

40%

Assessment Criteria

In-class tests will be assessed on level of skills demonstrated and correctness of theoretical answers.

Answers to on-line tests will be assessed on the correctness, comprehensiveness and relevance of your answers.

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

- Problem Solving
- Team Work

Examination

Outline

Complete an invigilated examination.

Date

During the examination period at a CQUniversity examination centre.

Weighting

50%

Length

120 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).

No calculators permitted

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