

# BIOL11099 Living Systems Term 1 - 2017

#### Profile information current as at 28/04/2024 07:28 am

All details in this unit profile for BIOL11099 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

Successful completion of this unit will provide students with an understanding of the diversity of life at the level of cells and whole organisms, together with an appreciation of a range of fundamental themes in contemporary biology, including biodiversity, ecology, heredity and evolution. In the practical component, students will gain hands-on experience of relevant laboratory and practical procedures.

### 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

There are no requisites for this unit.

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 <u>Assessment Policy and</u> <u>Procedure (Higher Education Coursework)</u>.

### Offerings For Term 1 - 2017

- Bundaberg
- Distance
- 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 <u>Residential School Timetable</u>.

### 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

Online Quiz(zes)
 Weighting: 10%
 Practical Assessment
 Weighting: 20%
 Written Assessment
 Weighting: 20%
 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 <u>University's Grades and Results Policy</u> for more details of interim results and final grades.

# **CQUniversity Policies**

#### All University policies are available on the <u>CQUniversity Policy site</u>.

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 <u>CQUniversity Policy site</u>.

# 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 course evaluation.

#### Feedback

Students found the time limit on the quizzes was too short and some of the questions were too hard.

#### Recommendation

Time limit on the quizzes will be increased and questions will be reviewed

#### Action

The questions were revised and a Question Bank of 20 questions were created for each quiz. The students were randomly allocated 5 questions from each Question Bank

### Feedback from Moodle course evaluation and personal communication with students.

#### Feedback

Students found seeing living organisms in their natural environment during the field trip increased their understanding of the course material.

#### Recommendation

Continue to include a field trip as part of the practical work.

#### Action

The field trip to NKI for Bundaberg, Rockhampton and res school students, and to Ellendale Pool in Geraldton for WA students was highly beneficial with potential collaboration and partnership with NKIEEC arising for future educational placements.

### Feedback from Moodle course evaluation.

#### Feedback

Students enjoyed the lectures and found the laboratory sessions a very valuable learning experience.

#### Recommendation

Lectures and laboratory sessions will be continued in the same format.

#### Action

lectures and laboratory sessions were followed in the same format as Term 1 2016

### Feedback from Moodle course evaluation.

#### Feedback

Changing the practical tests from inclass tests to online quizzes to accomodate unavoidable changes in the timing of some of the field trips was confusing.

#### Recommendation

Practical tests will be changed to online tests in future offerings of the course.

#### Action

The online quizzes were easier for the students to access in their own time and more efficient to mark.

# Unit Learning Outcomes

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

- 1. Describe the organization of living organisms at the cellular and whole organism level
- 2. Explain the fundamentals of selected core themes, including cell theory, emergent properties, heredity, evolution and biodiversity and demonstrate their application across the biological and environmental sciences
- 3. Describe the concepts underlying current understanding of the diversity and systematics of living organisms, using appropriate sources and terminology
- 4. Carry out a range of laboratory and practical procedures relating to the diversity of life

# Alignment of Learning Outcomes, Assessment and Graduate Attributes

N/A Level Level

Introductory Level

Intermediate Level Graduate Level •



Alignment of Assessment Tasks to Learning Outcomes

Assessment Tasks	Learning Outcomes			
	1	2	3	4
1 - Online Quiz(zes) - 10%	•	•	•	
2 - Practical Assessment - 20%	•	•		•
3 - Written Assessment - 20%	•	•	•	
4 - Examination - 50%	•	•	•	

# Alignment of Graduate Attributes to Learning Outcomes

Graduate Attributes	Learning Outcomes					
	1	2	3	4		
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
2 - Practical Assessment - 20%	•		•	•						
3 - Written Assessment - 20%	•	•		•		•				
4 - Examination - 50%	•	•	•	•						

# Textbooks and Resources

### Textbooks

BIOL11099

#### Prescribed

#### Campbell Biology: Australian and New Zealand Edition

Edition: 10th (2015) Authors: Reece, JB., Meyers, N., Urry, LA., Cain, ML., Wasserman, SA., Minorsky, PV., Jackson, RB & Cooke, BN. Pearson Australia Melbourne , Victoria , Australia ISBN: 9781486007042 Binding: Hardcover

#### Additional Textbook Information

Copies of the previous edition will be acceptable. The textbook is also available as Campbell Biology Australian and New Zealand Edition VitalSource eText (10e) ISBN 9781486012299.Pearson Australia. However, current edition paper copies are still available at the CQUni Bookshop here: <u>http://bookshop.cqu.edu.au</u>

#### View textbooks at the CQUniversity Bookshop

### **IT Resources**

#### You will need access to the following IT resources:

- CQUniversity Student Email
- Internet
- Unit Website (Moodle)
- Electronic copies of the textbook will be available as an alternative to the hard copy.

# **Referencing Style**

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

# **Teaching Contacts**

Sarah Mcnicol Unit Coordinator s.mcnicol@cqu.edu.au

### Schedule

#### Week 1 - 06 Mar 2017

Module/Topic

**Events and Submissions/Topic** 

Introduction to living systems Heirarchy of classification Evolution by natural selection	Study Guide Topics 1, 2, 3	
Week 2 - 13 Mar 2017		
Module/Topic	Chapter	<b>Events and Submissions/Topic</b>
Cell theory Prokaryotes Endosymbiosis	Study Guide Topics 4, 5, 6	
Week 3 - 20 Mar 2017		
Module/Topic	Chapter	<b>Events and Submissions/Topic</b>
Protists and multicelluarity Algae	Study Guide Topic 7	
Week 4 - 27 Mar 2017		
Module/Topic	Chapter	<b>Events and Submissions/Topic</b>
Plants move to land Bryophytes, pterophytes and gymnosperms	Study Guide Topics 8, 9	
Week 5 - 03 Apr 2017		
Module/Topic	Chapter	<b>Events and Submissions/Topic</b>
Angiosperms		Lady Musgrave Field trip - Bundaberg Internal students only: Wednesday 5th April. Time to be advised.
Aquatic macrophytes and the move	Study Guide Tonics 9, 10	
back to water		<b>Online Theory Quizzes (1 and 2)</b> Due: Week 5 Friday (7 Apr 2017) 11:45 pm AEST
Vacation Week - 10 Apr 2017	Study Suide Topics 5, 10	<b>Online Theory Quizzes (1 and 2)</b> Due: Week 5 Friday (7 Apr 2017) 11:45 pm AEST
Vacation Week - 10 Apr 2017 Module/Topic	Chapter	Online Theory Quizzes (1 and 2) Due: Week 5 Friday (7 Apr 2017) 11:45 pm AEST Events and Submissions/Topic
Vacation Week - 10 Apr 2017 Module/Topic Week 6 - 17 Apr 2017	Chapter	Online Theory Quizzes (1 and 2) Due: Week 5 Friday (7 Apr 2017) 11:45 pm AEST Events and Submissions/Topic
Vacation Week - 10 Apr 2017 Module/Topic Week 6 - 17 Apr 2017 Module/Topic	Chapter Chapter	Online Theory Quizzes (1 and 2) Due: Week 5 Friday (7 Apr 2017) 11:45 pm AEST Events and Submissions/Topic Events and Submissions/Topic
Vacation Week - 10 Apr 2017 Module/Topic Week 6 - 17 Apr 2017 Module/Topic Fungi Before the Bilateria	Chapter Chapter Study Guide Topics 11, 12	Online Theory Quizzes (1 and 2) Due: Week 5 Friday (7 Apr 2017) 11:45 pm AEST Events and Submissions/Topic Events and Submissions/Topic
Vacation Week - 10 Apr 2017 Module/Topic Week 6 - 17 Apr 2017 Module/Topic Fungi Before the Bilateria Week 7 - 24 Apr 2017	Chapter Chapter Study Guide Topics 11, 12	Online Theory Quizzes (1 and 2) Due: Week 5 Friday (7 Apr 2017) 11:45 pm AEST Events and Submissions/Topic Events and Submissions/Topic
Vacation Week - 10 Apr 2017 Module/Topic Week 6 - 17 Apr 2017 Module/Topic Fungi Before the Bilateria Week 7 - 24 Apr 2017 Module/Topic	Chapter Chapter Study Guide Topics 11, 12 Chapter	Online Theory Quizzes (1 and 2)       Due: Week 5 Friday (7 Apr 2017)         Due: Week 5 Friday (7 Apr 2017)       Due: Week 5 Friday (7 Apr 2017)         Events and Submissions/Topic       Events and Submissions/Topic         Events and Submissions/Topic       Events and Submissions/Topic
Vacation Week - 10 Apr 2017 Module/Topic Week 6 - 17 Apr 2017 Module/Topic Fungi Before the Bilateria Week 7 - 24 Apr 2017 Module/Topic Platyhelminths Nematodes Annelids	Chapter Chapter Study Guide Topics 11, 12 Chapter Study Guide Topics 13, 14	Online Theory Quizzes (1 and 2)         Due: Week 5 Friday (7 Apr 2017)         11:45 pm AEST         Events and Submissions/Topic         Events and Submissions/Topic         Events and Submissions/Topic
Vacation Week - 10 Apr 2017 Module/Topic Week 6 - 17 Apr 2017 Module/Topic Fungi Before the Bilateria Week 7 - 24 Apr 2017 Module/Topic Platyhelminths Nematodes Annelids Week 8 - 01 May 2017	Chapter Chapter Study Guide Topics 11, 12 Chapter Study Guide Topics 13, 14	Online Theory Quizzes (1 and 2)   Due: Week 5 Friday (7 Apr 2017)   11:45 pm AEST   Events and Submissions/Topic Events and Submissions/Topic
Vacation Week - 10 Apr 2017 Module/Topic Week 6 - 17 Apr 2017 Module/Topic Fungi Before the Bilateria Week 7 - 24 Apr 2017 Module/Topic Platyhelminths Nematodes Annelids Week 8 - 01 May 2017 Module/Topic	Chapter Chapter Study Guide Topics 11, 12 Chapter Study Guide Topics 13, 14 Chapter	Online Theory Quizzes (1 and 2)         Due: Week 5 Friday (7 Apr 2017)         11:45 pm AEST         Events and Submissions/Topic         Events and Submissions/Topic         Events and Submissions/Topic         Events and Submissions/Topic
Vacation Week - 10 Apr 2017 Module/Topic Week 6 - 17 Apr 2017 Module/Topic Fungi Before the Bilateria Week 7 - 24 Apr 2017 Module/Topic Platyhelminths Nematodes Annelids Week 8 - 01 May 2017 Module/Topic Arthropods Molluscs	Chapter Chapter Study Guide Topics 11, 12 Chapter Study Guide Topics 13, 14 Chapter Study Guide Topics 15, 16	Online Theory Quizzes (1 and 2)         Due: Week 5 Friday (7 Apr 2017)         11:45 pm AEST         Events and Submissions/Topic
Vacation Week - 10 Apr 2017 Module/Topic Week 6 - 17 Apr 2017 Module/Topic Fungi Before the Bilateria Week 7 - 24 Apr 2017 Module/Topic Platyhelminths Nematodes Annelids Week 8 - 01 May 2017 Module/Topic Arthropods Molluscs Week 9 - 08 May 2017	Chapter Chapter Study Guide Topics 11, 12 Chapter Study Guide Topics 13, 14 Chapter Study Guide Topics 15, 16	Online Theory Quizzes (1 and 2)   Due: Week 5 Friday (7 Apr 2017)   11:45 pm AEST   Events and Submissions/Topic Events and Submissions/Topic Events and Submissions/Topic

Echinoderms	Study Guide Topics 17	Compulsory residential school and field trip for Geraldton (distance) students: 11th - 14th May, Geraldton. Compulsory residential school (including North Keppel Island field trip on 15th or 16th May) for all other distance/mixed mode students: 14th - 17th May, Rockhampton
		Explanatory report on a recently discovered invertebrate Due: Week 9 Friday (12 May 2017) 11:45 pm AEST
Week 10 - 15 May 2017		
Module/Topic	Chapter	<b>Events and Submissions/Topic</b>
No lectures - own revision	Revision of topics	Continued compulsory residential school (including North Keppel Island field trip on 15th or 16th May) for all other distance/mixed mode students: 14th - 17th May, Rockhampton. North Keppel Island Field trip - Rockhampton internal students: 15th or 16th May.
Week 11 - 22 May 2017		
Module/Topic	Chapter	<b>Events and Submissions/Topic</b>
Chordates and vertebrates Mammals to humans	Study Guide Topics 18, 19	Online Practical test A (Field trip test) Due Friday 26th May 11.45 PM AEST
Week 12 - 29 May 2017		
Module/Topic	Chapter	<b>Events and Submissions/Topic</b>
Biomes and biodiversity Origin of living systems and life beyond our planet Review	Study Guide Topics 20, 21	Online Practical tests B and C (laboratory practicals) Due Friday 2nd June 11.45 PM AEST
Review/Exam Week - 05 Jun 2017		
Module/Topic	Chapter	Events and Submissions/Topic
Exam Week - 12 Jun 2017		
Module/Topic	Chapter	<b>Events and Submissions/Topic</b>

## Term Specific Information

#### Teaching team members:

Sarah McNicol E: s.mcnicol@cqu.edu.au Nathan Brooks-English E: n.english@cqu.edu.au Glenn Varley E: glenn.varley@crtafe.wa.edu.au Leigh Stitz E: l.stitz@cqu.edu.au

# Assessment Tasks

# 1 Online Theory Quizzes (1 and 2)

### Assessment Type

Online Quiz(zes)

#### **Task Description**

There will be two multiple choice online quizzes based on the lecture material from the first four weeks of term. Theory Quiz 1 will open in Week 2 and Theory Quiz 2 will open in Week 4. Both quizzes will close at the end of Week 5 on Friday

7th April at 23.45 AEST. Quiz 1 and Quiz 2 will each be worth 5% of the total course mark.

#### Number of Quizzes

2

**Frequency of Quizzes** 

#### Assessment Due Date

Week 5 Friday (7 Apr 2017) 11:45 pm AEST

### **Return Date to Students**

Week 6 Friday (21 Apr 2017)

#### Weighting

10%

Minimum mark or grade 30%

#### Assessment Criteria

These quizzes will be assessed on the correctness of the answers.

#### **Referencing Style**

• Harvard (author-date)

#### Submission

Online

#### Learning Outcomes Assessed

- Describe the organization of living organisms at the cellular and whole organism level
- Explain the fundamentals of selected core themes, including cell theory, emergent properties, heredity, evolution and biodiversity and demonstrate their application across the biological and environmental sciences
- Describe the concepts underlying current understanding of the diversity and systematics of living organisms, using appropriate sources and terminology

#### **Graduate Attributes**

- Communication
- Information Literacy
- Information Technology Competence

### 2 Online Practical Tests

#### Assessment Type

Practical Assessment

#### **Task Description**

Three tests based on the material covered in the field trip (Practical Test A) and the practical laboratory sessions (Practical Tests B and C) will be conducted online and close after the last field trip and the last practical session, respectively. However you may submit anytime after the relevant quiz opens (date to be advised) and you have completed the relevant sessions. In total this assessment is worth 20%. The test based on the field trip (Practical Test A) will be a short answer question and is worth 6% of the total marks for the unit and the tests based on the practical laboratory sessions (Practical Tests B and C) are multiple choice questions and are worth 7% each (total 14% of unit marks).

#### Assessment Due Date

Practical Test A (Field trip test) Due week 11 on Friday 26th May at 23.45 AEST; Practical Tests B and C (Laboratory Practicals) Due week 12 Friday 2nd June at 23.45 AEST

#### **Return Date to Students**

Monday (5 June 2017)

Weighting 20%

Minimum mark or grade 40%

Assessment Criteria Answers will be assessed on correctness, comprehensiveness and relevance.

#### **Referencing Style**

• Harvard (author-date)

#### Submission

Online

#### Learning Outcomes Assessed

- Describe the organization of living organisms at the cellular and whole organism level
- Explain the fundamentals of selected core themes, including cell theory, emergent properties, heredity, evolution and biodiversity and demonstrate their application across the biological and environmental sciences
- Carry out a range of laboratory and practical procedures relating to the diversity of life

#### **Graduate Attributes**

- Communication
- Critical Thinking
- Information Literacy

# 3 Explanatory report on a recently discovered invertebrate

#### Assessment Type

Written Assessment

#### **Task Description**

This assessment requires you to research and describe an invertebrate that has recently been discovered anywhere in the world. More details will be provided on the Moodle site.

In your explanatory paper you are required to:

- Name the scientific classification of the organism (kingdom, phylum etc).
- Describe the biological characteristics of the organism in relation to its classification into the particular taxonomic group.
- Rationalise the classification based on relevant literature.

Suggested length: 1000 words max (excluding title page, references, figure and table labels) Use Harvard (author, date) referencing format.

#### **Assessment Due Date**

Week 9 Friday (12 May 2017) 11:45 pm AEST

#### **Return Date to Students**

Week 11 Friday (26 May 2017)

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 cited material
- Accuracy of referencing
- Correct English grammar and clarity of expression.

#### **Referencing Style**

• Harvard (author-date)

#### Submission

Online

#### Submission Instructions

Upload your assignment as a word document

#### Learning Outcomes Assessed

- Describe the organization of living organisms at the cellular and whole organism level
- Explain the fundamentals of selected core themes, including cell theory, emergent properties, heredity, evolution and biodiversity and demonstrate their application across the biological and environmental sciences

• Describe the concepts underlying current understanding of the diversity and systematics of living organisms, using appropriate sources and terminology

#### **Graduate Attributes**

- Communication
- Problem Solving
- Information Literacy
- Information Technology Competence

### 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

No calculators permitted Dictionary - non-electronic, concise, direct translation only (dictionary must not contain any notes or comments).

# 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 <u>Academic Learning Centre (ALC)</u> can support you in becoming confident in completing assessments with integrity and of high standard.

#### What can you do to act with integrity?





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