BIOL11100 *Functional Biology*
Term 2 - 2017

Profile information current as at 10/04/2024 08:58 am

General Information

Overview
Successful completion of this unit will provide students with an understanding of the operation of living systems at different levels of organisation, together with an appreciation of a number of major themes in current biology, e.g. in relation to culture of living organisms, inheritance and gene technology, physiological functioning of organisms and their interactions with their environment. 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 Assessment Policy and Procedure (Higher Education Coursework).

Offerings For Term 2 - 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 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. **Online Quiz(zes)**
Weighting: 20%
2. **Written Assessment**
Weighting: 20%
3. **In-class Test(s)**
Weighting: 10%
4. **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 Staff

Feedback
Students who did not take all the quizzes tended to do poorly or not pass the unit.

Recommendation
Each Theory and Practical Quiz will be given minimum pass marks so that students have an incentive to complete ALL quizzes. Practical Quizzes will be left open for 48 hours instead of 24 hours in order to improve completion rates.

Feedback from Student feedback

Feedback
Students who had not taken Living Systems felt that they were "behind" during the unit.

Recommendation
A separate moodle section will be created that contains links to relevant Living Systems lectures.

Feedback from Student Feedback

Feedback
Some students felt the residential school wasted their time.

Recommendation
We will schedule the residential school to better reflect the time being used for actual coursework.

Feedback from Student Feedback

Feedback
Unit "jumps" from plants to animals and that makes it difficult for students to learn.

Recommendation
In the past, the unit has been run with animal and plant form and function presented separately and the students criticised this format as being not engaging. In the end, there is no ideal solution, and we will continue to teach animal and plant form and function together.

Unit Learning Outcomes

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

1. Describe the relationships between structure and function of biological systems at various levels of organization, from sub-cellular, through cell, organ, organism to ecosystem, using relevant examples and appropriate terminology.
2. Explain the basic principles involved in the culture of different types of living organisms, including microbes, plants and animals.
3. Describe the molecular basis of inheritance and recombinant DNA technology and demonstrate its application across the biological and biomedical sciences.
4. Explain the adaptation of living organisms to different environments, especially in terms of the relationships between form and function at the physiological level.
5. Carry out a range of laboratory and practical procedures relating to the functions of living organisms.

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 - Online Quiz(zes) - 20%	•				
2 - Written Assessment - 20%				•	
3 - In-class Test(s) - 10%		•	•		•
4 - 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 - Online Quiz(zes) - 20%				•		•				
2 - Written Assessment - 20%	•		•	•		•				
3 - In-class Test(s) - 10%		•	•							
4 - Examination - 50%	•	•	•							

Textbooks and Resources

Textbooks

BIOL11100

Prescribed

Biology: Australian and New Zealand Version
Edition: 10th (2015)
Authors: Campbell, NA., 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
Students please note that this is the same textbook used for BIOL11099 Living Systems. There is also an eBook available.

View textbooks at the CQUniversity Bookshop

IT Resources

You will need access to the following IT resources:

- CQUniversity Student Email
- Internet
- Unit Website (Moodle)
- Microsoft Word, or any other word processing software

Referencing Style

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

Teaching Contacts

Nathan Brooks-English Unit Coordinator
n.english@cqu.edu.au

Schedule

Week 1 - 10 Jul 2017

Module/Topic	Chapter	Events and Submissions/Topic
General Concepts in Functional Biology	Study Guide Chapter 1	

Week 2 - 17 Jul 2017

Module/Topic	Chapter	Events and Submissions/Topic
Genetics and Reproduction	Study Guide Chapter 2	Practical Quiz 1 (internal Students Only) Theory Quiz A Choose a mythical creature for your Mythical Creature assessment and get email approval from the unit coordinator.

Week 3 - 24 Jul 2017

Module/Topic	Chapter	Events and Submissions/Topic
Development and Dispersal	Study Guide Chapter 3	Practical Quiz 2 (internal Students Only) Zoom Tutorial: Using Microsoft Excel like a pro...

Week 4 - 31 Jul 2017

Module/Topic	Chapter	Events and Submissions/Topic
Energy and Metabolism	Study Guide Chapter 4	Practical Quiz 3 (internal Students Only) Theory Quiz B

Week 5 - 07 Aug 2017

Module/Topic	Chapter	Events and Submissions/Topic
Nutrition and Digestion	Study Guide Chapter 5	Practical Quiz 4 (internal Students Only)

Vacation Week - 14 Aug 2017

Module/Topic	Chapter	Events and Submissions/Topic

Week 6 - 21 Aug 2017

Module/Topic	Chapter	Events and Submissions/Topic
Nutrients, Water and Waste	Study Guide Chapter 6	Practical Quiz 5 (BDG students only) Theory Quiz C

Week 7 - 28 Aug 2017

Module/Topic	Chapter	Events and Submissions/Topic
Circulation and Gas Exchange	Study Guide Chapter 7	

Week 8 - 04 Sep 2017

Module/Topic	Chapter	Events and Submissions/Topic
No lectures this week.		Residential school in Rockhampton for Mixed Mode students (8th - 10th September) *Geraldton WA Mixed Mode students do NOT attend this residential school or attempt the prac quizzes until after their residential school. Check Moodle for details.* Practical Quiz 1-6 (Mixed Mode students only, excluding) Practical Quiz 5 (ROK students only)

Week 9 - 11 Sep 2017

Module/Topic	Chapter	Events and Submissions/Topic
Defence and Protection	Study Guide Chapter 8	Theory Quiz D

Week 10 - 18 Sep 2017

Module/Topic	Chapter	Events and Submissions/Topic
Locomotion	Study Guide Chapter 9	Practical Quiz 6 (internal Students Only)

Week 11 - 25 Sep 2017

Module/Topic	Chapter	Events and Submissions/Topic

Signalling and Coordination	Study Guide Chapter 10	Theory Quiz E (opens Sept 30, closes Oct 7) **Note, this quiz is only open for one week.** **Written Assessment (Mythical Creature)** Due: Week 11 Friday (29 Sept 2017) 11:45 pm AEST

Week 12 - 02 Oct 2017

Module/Topic	Chapter	Events and Submissions/Topic
Ecophysiology, a review	Review all chapters	

Review/Exam Week - 09 Oct 2017

Module/Topic	Chapter	Events and Submissions/Topic

Exam Week - 16 Oct 2017

Module/Topic	Chapter	Events and Submissions/Topic

Assessment Tasks

1 Online Theory Quizzes

Assessment Type
Online Quiz(zes)

Task Description
These fortnightly quizzes will test your knowledge from the prior two weeks' lectures and readings.

Number of Quizzes
5

Frequency of Quizzes
Fortnightly

Assessment Due Date

Once per fortnight from week two (see the schedule of topics in this unit profile).

Return Date to Students

Once per fortnight on completion of quiz

Weighting
20%

Minimum mark or grade
40% of available marks averaged over all quizzes.

Assessment Criteria
Correctness of final answers.

Referencing Style

- Harvard (author-date)

Submission
Online

Submission Instructions
Working on their own, students must complete a quiz each fortnight. Students may do the quiz a second time if they wish. If taken, the second attempt will be graded.

Learning Outcomes Assessed

- Describe the relationships between structure and function of biological systems at various levels of organization, from sub-cellular, through cell, organ, organism to ecosystem, using relevant examples and appropriate terminology.

Graduate Attributes

- Information Literacy
- Information Technology Competence

2 Written Assessment (Mythical Creature)

Assessment Type
Written Assessment

Task Description
You will be asked to select and describe the biology of a mythical creature. Your task is to write an essay of approximately 1000 to 1500 words about the creature, using all of the unit content from weeks one to ten. Specifically, we would like you to tell us how the mythical creature could exist on Earth and perform the functions that it does, based on your knowledge of the biological content of this unit.
You are expected to consult the textbook and other resources such as journal articles, credible online web sources and books when preparing your assignment.
Please describe your creature in an email to the unit coordinator in Week 2. The coordinator will confirm your choice of creature by return email. You may not use a creature that is a hybrid of two or more real-life creatures (e.g. centaur, griffin) or a creature too similar to existing or extinct taxa (e.g. Yeti, dinosaur).

Assessment Due Date
Week 11 Friday (29 Sept 2017) 11:45 pm AEST

Return Date to Students
Review/Exam Week Wednesday (11 Oct 2017)

Weighting
20%

Minimum mark or grade
40% of available marks

Assessment Criteria
A comprehensive assessment criteria sheet is available on Moodle.
Students will be assessed on:
1. Information literacy (finding and using resources and references appropriate to the subject matter)
2. Problem solving (your ability to come up with creative and feasible ideas about how the mythical creature functions)
3. Critical thinking (your ability to successfully apply your knowledge of Functional Biology in a new and unfamiliar context).
4. Communication (your ability to write using grammatically correct, clear and concise Australian English and to demonstrate your ability to adhere to discipline-specific academic conventions such as biological nomenclature and referencing of sources).

Referencing Style

- Harvard (author-date)

Submission
Online

Submission Instructions
Upload your MS Word (.doc or .docx) or RTF document with embedded images to the Moodle page.

Learning Outcomes Assessed

- Explain the adaptation of living organisms to different environments, especially in terms of the relationships between form and function at the physiological level.

Graduate Attributes

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

3 Practical quizzes

Assessment Type
In-class Test(s)

Task Description
You must undertake seven, three-hour practical (laboratory) sessions either throughout the term (internal students) or at the residential school (distance/FLEX/Geraldton students). After practicals 1-6, you will be required to undertake a ten-minute, multiple choice quiz on Moodle. Each quiz is worth 1.6% of your final grade, making a total of ten percent of the final grade. Material from all seven practicals may be present on the final exam.

Assessment Due Date

Practical quizzes are administered on Moodle after practical/residential school sessions. Students must attend practical classes or residential school to be eligible to take the quizzes. No second attempts on practical quizzes are allowed.

Return Date to Students

On Moodle gradebook.

Weighting
10%

Minimum mark or grade
40% of available marks averaged over all quizzes.

Assessment Criteria
Correctness of answers to quiz questions.

Referencing Style

- Harvard (author-date)

Submission
Online

Submission Instructions
Quizzes will be taken online after Practical/Residential School sessions. No second attempts on practical quizzes are allowed.

Learning Outcomes Assessed

- Explain the basic principles involved in the culture of different types of living organisms, including microbes, plants and animals.
- Describe the molecular basis of inheritance and recombinant DNA technology and demonstrate its application across the biological and biomedical sciences.
- Carry out a range of laboratory and practical procedures relating to the functions of living organisms.

Graduate Attributes

- Problem Solving
- Critical Thinking

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
30%

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 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