BOTN13002 *Plants and the Environment*
Term 1 - 2017

Profile information current as at 21/05/2024 03:56 pm

Corrections

General Information

Overview
This unit is concerned with the in vivo responses of plants to the environment. There is coverage of structure and function of the whole plant.

Details
Career Level: *Undergraduate*
Unit Level: *Level 3*
Credit Points: *6*
Student Contribution Band: *8*
Fraction of Full-Time Student Load: *0.125*

Pre-requisites or Co-requisites
BOTN11004 Foundation Plant Biology or BIOL11100 Functional Biology
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 - 2017

- 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: 10%
2. **Written Assessment**
Weighting: 25%
3. **Practical Assessment**
Weighting: 25%
4. **Examination**
Weighting: 40%

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 Student comments.

Feedback
Lecturer needs to speak more slowly.

Recommendation
When lecturing, I'll be more conscious of my speaking pace.

Action
I spoke more slowly and there were no complaints this year about my caffeine intake.

Feedback from Student comments.

Feedback
Students felt there was too much content in the residential school.

Recommendation
Remove the hydroponics project from next year's residential school. This will allow students to focus more on the diurnal experiment and growth analysis without having them miss out on content.

Action
The hydroponics unit was removed with the results that there was more time to focus effectively on the other components of residential school.

Feedback from Student comments.

Feedback
Exams were fair and students liked having a second go at quizzes — this gave them incentive to study more.

Recommendation
Maintain the two attempt quiz and length/point structure of final exam.

Action
This was maintained and I continue to receive positive feedback about this approach to quizzes.

Feedback from Student comments.

Feedback
Text book, online readings and course materials need to be more closely aligned.

Recommendation
I recommend investigating a new textbook for students. In the meantime, keep the online textbook (students appreciate a free text) but more closely align the lectures, readings and practicals through better signposting in all three and on moodle.

Action
The online textbook was kept, but my reasoning for keeping it was better explained at the beginning of the unit.

Unit Learning Outcomes

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

1. Describe and illustrate the principal physiological processes of angiosperms as an integrated system.
2. Apply knowledge of plant physiology in real life situations in agriculture, forestry and vegetation management.
3. Conduct plant physiology experiments, write experimental reports in the correct format and critique existing reports.

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
1 - Online Quiz(zes) - 10%	•	•	
2 - Written Assessment - 25%	•	•	
3 - Practical Assessment - 25%	•	•	•
4 - Examination - 40%	•	•	

Alignment of Graduate Attributes to Learning Outcomes

Graduate Attributes	Learning Outcomes		
	1	2	3
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) - 10%	•	•	•			•				
2 - Written Assessment - 25%	•	•	•	•						
3 - Practical Assessment - 25%		•	•		•	•	•	•		

Assessment Tasks	Graduate Attributes									
	1	2	3	4	5	6	7	8	9	10
4 - Examination - 40%	•	•	•							

Textbooks and Resources

Textbooks

BOTN13002

Prescribed

Plants in Action
Edition: 1st (1999)
Authors: Atwell, Kriedeman, turnbull
on line at http://plantsinaction.science.uq.edu.au/edition1/?q=content/title-page
Australia
Binding: Paperback
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Supplementary

Plant Physiology
Edition: 4th (1992)
Authors: Salisbury and Ross
Wadsworth
Belmont , CA , USA
Binding: Hardcover

Additional Textbook Information
The text Salisbury and Ross 1992 (4th Edition, Wadsworth Publishing) is a highly recommended reading (it was a prescribed text in previous years).
The text 'Plants in Action' is produced by the Australian Society of Plant Scientists and is available on-line (at http://plantsinaction.science.uq.edu.au/edition1/?q=content/title-page). It is no longer available for purchase in hardcopy form. Its strength is in its Australian examples and authors, while its weakness is its electronic formatting and lesser 'detail'.

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

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

Schedule

Week 1 - 06 Mar 2017

Module/Topic	Chapter	Events and Submissions/Topic
Introduction & Overview	Plants in Action: Preamble, A Plant Science Manifesto Plant Science Applied: case study cotton	

Week 2 - 13 Mar 2017

Module/Topic	Chapter	Events and Submissions/Topic
Seed dormancy and germination	Study Guide Module 1 Plants in Action: Chapters 8.1.1, 8.1.2 and case study 8.1 (pp 254-256 and 596-598)	Week 1 Quiz closes Monday night.

Week 3 - 20 Mar 2017

Module/Topic	Chapter	Events and Submissions/Topic
Water potential	Study Guide Module 2 Plants in Action: Chapters 4.3.1, 5.1 and 5.2.1 to 5.2.6 and 15.1 (over the next three weeks) Skim 4.3.2 and 4.3.3	Week 2 Quiz closes Monday night.

Week 4 - 27 Mar 2017

Module/Topic	Chapter	Events and Submissions/Topic
Water uptake and transport	Study Guide Module 3 Plants in Action: Chapters 4.3.1, 5.1 and 5.2.1 to 5.2.6 and 15.1 Skim 4.3.2 and 4.3.3	Week 3 Quiz closes Monday night.

Week 5 - 03 Apr 2017

Module/Topic	Chapter	Events and Submissions/Topic
Water relations (No Lecture this week)	Plants in Action: Chapters 4.3.1, 5.1 and 5.2.1 to 5.2.6 and 15.1 Skim 4.3.2 and 4.3.3	Week 4 Quiz closes Monday night. Compulsory Residential School is scheduled in Rockhampton April 6 to 9, 2017. (Optional) Hardcopy draft of Discussing and Quantifying Plant Processes due at beginning of Res School.

Vacation Week - 10 Apr 2017

Module/Topic	Chapter	Events and Submissions/Topic

Week 6 - 17 Apr 2017

Module/Topic	Chapter	Events and Submissions/Topic
Mineral nutrition	Study Guide Module 4 Plants in Action: Chapters 4 and 16	**Practical Reports** Due: Week 6 Friday (21 Apr 2017) 11:45 pm AEST

Week 7 - 24 Apr 2017

Module/Topic	Chapter	Events and Submissions/Topic
Nitrogen and sulphur	Study Guide Module 5 Plants in Action: Chapters 4 and 16	Week 6 Quiz closes Monday night.

Week 8 - 01 May 2017

Module/Topic	Chapter	Events and Submissions/Topic
Photosynthesis	Study Guide Module 6 Plants in Action: Chapters 2.1 to 2.3, 12.1 to 12.6, 13.1, 13.2 and 13.5	Week 7 Quiz closes Monday night.

Week 9 - 08 May 2017

Module/Topic	Chapter	Events and Submissions/Topic
Carbohydrate metabolism	Study Guide Module 7 Plants in Action: Chapters 2.4 and 11.3 to 11.7	Week 8 Quiz closes Monday night.

Week 10 - 15 May 2017

Module/Topic	Chapter	Events and Submissions/Topic
		Week 9 Quiz closes Monday night.
Plant growth regulation	Study Guide Module 8 Plants in Action: Chapter 6	**Discussing and Quantifying Plant Processes** Due: Week 10 Friday (19 May 2017) 11:45 pm AEST

Week 11 - 22 May 2017

Module/Topic	Chapter	Events and Submissions/Topic
Plant growth modelling - bringing it all together	Plants in Action: Chapters 14 and 15.2 to 15.5	Week 10 Quiz closes Monday night.

Week 12 - 29 May 2017

Module/Topic	Chapter	Events and Submissions/Topic
Review		Week 11 Quiz closes Monday night.

Review/Exam Week - 05 Jun 2017

Module/Topic	Chapter	Events and Submissions/Topic

Exam Week - 12 Jun 2017

Module/Topic	Chapter	Events and Submissions/Topic

Assessment Tasks

1 Online Quizzes

Assessment Type
Online Quiz(zes)

Task Description
On-line quizzes are associated with most weeks of activity in Moodle. The quizzes are designed to test that you have done the reading and understood the concepts associated with the previous weeks' learning. As items of continuous assessment, each quiz is of small ‘value', but understanding each week’s material will lead to better assessment and exam scores!
For each quiz: there is no time limit; 1 reattempt of a quiz is allowed but not required; there is a 20 minute enforced time period between attempts; an average of your attempts will be recorded as the grade for that quiz.
The questions in each quiz are taken from a question bank, so you may not get the same questions the second time you take the quiz.

Number of Quizzes
10

Frequency of Quizzes
Weekly

Assessment Due Date

Quizzes open Monday from Week 2 to Week 12 and close before midnight the following Monday.

Return Date to Students

Automated marking - but I expect some discussion each week of uncertain answers.

Weighting
10%

Minimum mark or grade
40% overall average of all 10 quizzes.

Assessment Criteria
Each quiz (except Quiz 1) is composed of multiple choice questions and will be automatically marked as correct or incorrect. There are some essay questions in the Week 1 Quiz, but these will be marked for completeness, not the correct answer.

Referencing Style

- Harvard (author-date)

Submission
Online

Submission Instructions
Undertake the quiz where attached to a weekly module in Moodle.

Learning Outcomes Assessed

- Describe and illustrate the principal physiological processes of angiosperms as an integrated system.
- Apply knowledge of plant physiology in real life situations in agriculture, forestry and vegetation management.

Graduate Attributes

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

2 Discussing and Quantifying Plant Processes

Assessment Type
Written Assessment

Task Description
The Discussing and Quantifying Plant Processes assessment is comprised of short tasks, including calculations and descriptive/interpretive short answers. It will cover material presented in Weeks 1 - 10. The specific questions will be posted on the Moodle site by the end of Week 2. Start this assessment right away and keep on top of it. Don't wait for the last week to do it!

Assessment Due Date
Week 10 Friday (19 May 2017) 11:45 pm AEST

Return Date to Students
Week 12 Friday (2 June 2017)

Weighting
25%

Minimum mark or grade
40%

Assessment Criteria
This assessment is meant to check and demonstrate your progress in various plant topics covered in the course to the point of submission.
For *calculation based tasks*, marks are awarded for:
1. a statement of the principle and key relationship (20%);
2. clear step by step calculations, with explanation and unit analysis (60%);
3. the correct numerical answer (20%).
For *descriptive/interpretative tasks* cite and reference relevant supporting information and interpret it in the context of your response to the question asked. Marks are awarded for:
1. the quality of the background review, including a definition of the topic (30%);
2. the discussion of this information in context of the question asked (50%);
3. and the clarity of English expression, spelling, grammar, accuracy of referencing, appropriate length (20%).
Please submit your answers in a Word document (doc, docx or rtf). PDF documents will **NOT** be accepted. You can perform calculations or draw figures by hand and insert them as images (e.g. jpegs) in the word document. If you don’t have a scanner – take a photo on your mobile phone. You must make sure we know what question you're answering by putting the question number in front of the text. Please consider redrafting your calculations for clarity before photographing/scanning them. Blurred or blank images are not acceptable.

Referencing Style

- Harvard (author-date)

Submission
Online

Submission Instructions
Please submit your assignment as a doc, docx or rtf file with images of your calculations/figures embedded in the document.

Learning Outcomes Assessed

- Describe and illustrate the principal physiological processes of angiosperms as an integrated system.
- Apply knowledge of plant physiology in real life situations in agriculture, forestry and vegetation management.

Graduate Attributes

- Communication
- Problem Solving
- Critical Thinking
- Information Literacy

3 Practical Reports

Assessment Type
Practical Assessment

Task Description
Two practical reports (1000 words each, excluding references, figure captions, tables and title page) are required in the format of scientific papers/technical reports and each describing one of the experiments undertaken at residential school (*i.e.* two reports, each one detailing one of the experiments undertaken at res school). You may select which two experiments you report on. They are stand alone reports, but should be submitted as one document (with one section for each report).

Assessment Due Date
Week 6 Friday (21 Apr 2017) 11:45 pm AEST

Return Date to Students
Week 8 Friday (5 May 2017)

Weighting
25%

Minimum mark or grade
40%

Assessment Criteria
The reports will not be assessed on the 'success' of the experiment. Assessment will be based on:
1. structure (as a scientific report, with Title, Abstract, Intro, Materials and Methods, Results and Discussion);
2. demonstration and explanation of calculations, with explanation of units in each step;
3. interpretation of data in the discussion section, with reference to existing knowledge.
Please submit your answers in a Word document (doc, docx or rtf). PDF documents will **NOT** be accepted. You can perform calculations or draw figures by hand and insert them as images (e.g. jpegs) in the word document. If you don’t have a scanner – take a photo on your mobile phone. You must make sure we know what question you're answering by putting the question number in front of the text. Please consider redrafting your calculations for clarity before photographing/scanning them. Blurred or blank images in the word document are not acceptable.

Referencing Style

- Harvard (author-date)

Submission
Online

Submission Instructions
Please submit your assignment as a doc, docx or rtf file with images of your calculations/figures embedded in the document.

Learning Outcomes Assessed

- Describe and illustrate the principal physiological processes of angiosperms as an integrated system.
- Apply knowledge of plant physiology in real life situations in agriculture, forestry and vegetation management.

- Conduct plant physiology experiments, write experimental reports in the correct format and critique existing reports.

Graduate Attributes

- Problem Solving
- Critical Thinking
- Team Work
- Information Technology Competence
- Cross Cultural Competence
- Ethical practice

Examination

Outline
Complete an invigilated examination.

Date
During the examination period at a CQUniversity examination centre.

Weighting
40%

Length
180 minutes

Minimum mark or grade
40%

Exam Conditions
Closed Book.

Materials
Calculator - non-programmable, no text retrieval, silent only
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