



BOTN19001 *Terrestrial Botany*

Term 1 - 2018

Profile information current as at 27/04/2024 05:28 pm

All details in this unit profile for BOTN19001 have been officially approved by CQUUniversity 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

In BOTN19001, you will learn about terrestrial plants – particularly, Australian plants. You will study their evolution, taxonomy, distribution and economic uses. In this Unit, emphasis will be placed on plant identification so you can apply this knowledge in vegetation surveys, ecosystem restoration, remote sensing, assessing responses of native flora to environmental impacts and selecting suitable plant species for economic development. Compulsory practical classes, field visits and herbarium collection will enable you to gain practical skills in plant identification and vegetation surveys.

Details

Career Level: *Undergraduate*

Unit Level: *Level 2*

Credit Points: 6

Student Contribution Band: 8

Fraction of Full-Time Student Load: 0.125

Pre-requisites or Co-requisites

Pre-requisites: BIOL11099 Living Systems 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 - 2018

- 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: 15%

2. **Practical Assessment**

Weighting: 45%

3. **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 Have your say

Feedback

Residential school to be run at the beginning of the Term

Recommendation

This option was explored; however, it was decided to hold the residential schools in week 5 or 6, so that the students can attend two or more residential schools at a time, and minimise the costs.

Feedback from Have your say

Feedback

Study material needs updating

Recommendation

The study guide will be re-written

Feedback from Have your say

Feedback

I really enjoyed being able to regularly put my learnings into practice, and found myself observing nature in a different way.

Recommendation

Thank you and further support will be provided to improve students' experiences in the Unit. This may be attributed to additional resources made available to the students during 2017 via the videos and tutorial sessions.

Feedback from Have your say

Feedback

"I finally approach Botany in a holistic and systematic way...there is so much to observe, record, reexamine in this field! Thank you."

Recommendation

Thank you and I am very pleased to hear this. I have taken into consideration the comments made by the students via 'Have Your Say'. I will continue to seek their comments and further improve their learning experiences in this Unit.

Feedback from Have your say

Feedback

Lecturer's photo covering PPT presentations

Recommendation

Technical help will be sought to allow the students to disable, or minimise the size of the lecturer's photo in the power point presentations.

Feedback from Have your say

Feedback

"I did find the res school very helpful for my learning and helped cement some topics. I do feel I have learnt a lot regarding plant families and identification and Ashwa has been very helpful "

Recommendation

Thank you. Since this is a practical-oriented Unit, residential school activities and tutorials will be continued to allow the students to gain hands on experience.

Unit Learning Outcomes

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

1. Define selected botanical terms
2. Collect and curate specimens and use taxonomic keys to identify native plants
3. Examine characteristic features of terrestrial Australian flora, and describe the use of those features in vegetation management and their economic exploitation
4. Describe how native flora respond to environmental disturbances, and explain how this knowledge can be applied in revegetation and ecosystem reconstruction
5. Undertake vegetation surveys, interpret data and explain the use of GIS and remote sensing techniques in vegetation management.

N/A

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 - Online Quiz(zes) - 15%	•				
2 - Practical Assessment - 45%		•	•		•
3 - Examination - 40%	•		•	•	•

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					

Graduate Attributes

Learning Outcomes

1 2 3 4 5

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) - 15%

2 - Practical Assessment - 45%

3 - Examination - 40%

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•	•	•	•	•			•			
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Textbooks and Resources

Textbooks

BOTN19001

Prescribed

Plant Systematics

Edition: Second (2010)

Authors: Michael G. Simpson

Elsevier Academic Press

Sydney , NSW , Australia

ISBN: 978-0-12-374380-0

Binding: Hardcover

[View textbooks at the CQUniversity Bookshop](#)

IT Resources

You will need access to the following IT resources:

- CQUniversity Student Email
- Internet
- Unit Website (Moodle)
- Lucid software 3.3 (download from www.lucidcentral.org)
- Microsoft Excel
- Microsoft Word

Referencing Style

All submissions for this unit must use the referencing style: [Harvard \(author-date\)](#)

For further information, see the Assessment Tasks.

Teaching Contacts

Nanjappa Ashwath Unit Coordinator
n.ashwath@cqu.edu.au

Schedule

Week 1 - 05 Mar 2018

Module/Topic	Chapter	Events and Submissions/Topic
Introduction Unit Overview Evolution & Diversity of Plants Morphology	Study Guide 1 Plant Systematics; Chapters 1, 6, 9 (also skim Chapters 3, 4, 5).	Independent Practical Work (IPW) 1 IPW is to be completed by the students during each week of the Term. Details on the Moodle site. Familiarise yourself with Herbarium Techniques, site description and plant community description. Use 'Student Forum' on the Moodle site to clarify doubts and to find out new information. Refer to YouTube videos "Herbarium Techniques" (watch all 10 parts); https://tinyurl.com/herbarium-techniques Collect a plant specimen (eg hibiscus) and familiarise with its morphology. Refer to the notes of previous units (eg Living Systems), which show the names of different parts of a plant. Ask your lecturers for assistance. The scheduled official PRACTICAL SESSIONS will be held during residential school, and these sessions also include field trips.

Week 2 - 12 Mar 2018

Module/Topic	Chapter	Events and Submissions/Topic
Collection and Curating Nomenclature Identification & Authentication Herbarium Maintenance	Study Guide 2 Plant Systematics; Chapters 17, 16, 12, 18, Appendix 1, Appendix 2 and the Resources supplied on the Moodle site for this week.	Online Quiz 1 - Closes Sunday 18/03/18 IPW 2 Practice the art of collecting a native plant - choose the right part of the plant, press it as shown on the YouTube, and prepare yourself to dissect the flower of the specimen you collect to observe different parts and then to draw the floral diagram. Warning: Please use a large flower such as hibiscus, as it is easy to see. You can work on the smaller flowers during later part of the Term. Collect and curate at least two specimens this week.

Week 3 - 19 Mar 2018

Module/Topic	Chapter	Events and Submissions/Topic
Diversity and classification Taxonomic evidence History of plant taxonomy.	Study Guide 3 Plant Systematics; Chapters 2, 7 and 14	Online Quiz 2 - Closes Sunday 25/03/18 IPW 3 Use a magnifying lens to draw floral diagrams of two medium-sized flowers (avoid using grasses or tiny flowers at this time). Collect and curate plant specimens.

Week 4 - 26 Mar 2018

Module/Topic	Chapter	Events and Submissions/Topic
Plant families and their spotting characteristics Synoptic keys	Study Guide 4 Plant Systematics; Chapters 7, 8, 15, and the Resources supplied on the Moodle site for this week.	Online Quiz 3 - Closes Sunday 1/04/18 IPW 4 Prepare a table showing characteristic features of selected families Collect and curate plant specimens.

Week 5 - 02 Apr 2018

Module/Topic	Chapter	Events and Submissions/Topic
Soils, climate and plants.	Study Guide 5 Read the Resources supplied on the Moodle site for this week. Familiarise with the soil types and their influence on plant growth. Examine the composition and structure of plant communities (serpentine, limestone, sand dunes, rainforests, mangroves).	Online Quiz 4 - Closes Sunday 8/04/18 IPW 5 Collect and curate plant specimens.

Vacation Week - 09 Apr 2018

Module/Topic	Chapter	Events and Submissions/Topic
Make use of the Term break to collect plant specimens for your assignment.	Prepare for your residential school.	IPW 5a Try to collect as many specimens (technically correct) as possible. Please find an undisturbed natural site, so the chances of you collecting exotic plants (for which you may not find the info in your key) could be minimised. Draw floral diagrams of as many specimens as possible - focussing on large to medium sized specimens.

Week 6 - 16 Apr 2018

Module/Topic	Chapter	Events and Submissions/Topic
Australian plant communities: origin, evolution and unique features. Residential School 21st April to 24th April.	Study Guide 6 Read the Resources supplied on the Moodle site for this week. Examine how Australian flora has changed over time in response to continental drift, Circum Antarctic Current, and human inhabitation.	Online Quiz 5 - Closes Sunday 22/04/18 IPW 6 Prepare for the Residential School Pack your specimens and carry them to the residential school, so you could use them in practical sessions and also key them out to genus level.

Week 7 - 23 Apr 2018

Module/Topic	Chapter	Events and Submissions/Topic
Field trip will occur during Residential School: 21st Apr to 24th April	Study Guide 7 Study the Resources supplied on the Moodle site for this week. On Day 3 of the residential school, we will go on a field trip to inspect selected plant communities that are found around Rockhampton. Read about unique features of the following plant communities: Brigalow, serpentine flora, limestone flora, woodlands, coastal heaths, rain forests, grasslands, wetlands, mine sites and mangroves. Read the Resources supplied on the Moodle site for this week.	IPW 7 Please come prepared for the trip. Query as to why the composition and structure of plant communities found around Rockhampton vary from one location to the other, and why some of the plant communities are unique, in that they are found only around Rockhampton, but no where else in the world. Practical test during residential school - 24th April, 2018 Hand-in your Practical Note Book - 24th April, 2018

Week 8 - 30 Apr 2018

Module/Topic	Chapter	Events and Submissions/Topic
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Vegetation Survey	Study Guide 8 Understand various methods of surveying plant communities, and classifying the vegetation into regional ecosystems (RE's) and land zones. Read the Resources supplied on the Moodle site for this week.	IPW 8 Collect and curate plant specimens.
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Week 9 - 07 May 2018

Module/Topic	Chapter	Events and Submissions/Topic
Data analysis and display - basic and modern methods of data analysis and presentation	Study Guide 9 Plant Systematics; Chapters 2, 19 and Appendix 4 Comparison of different plant communities. Preparation of dendrograms and PCA plots to show interrelationships between different species or plant communities. Read the Resources supplied on the Moodle site for this week.	IPW 9 Finalise the field sample collection part of your assignment

Week 10 - 14 May 2018

Module/Topic	Chapter	Events and Submissions/Topic
Economic uses of plants- plant species, and plant parts used in daily life. Bush food and medicinal plants. Techniques used in the development of new cultivars of plants	Study Guide 10 Plant Systematics; Chapters 13 and 14 Read the Resources supplied on the Moodle site for this week.	IPW 10 Ensure that you have collected, curated and identified required number of specimens. Inspect the specimens and make sure that they are all clean (fungus-free) and intact. Replace, if you can, the damaged or fungus-infected ones with good specimens.

Week 11 - 21 May 2018

Module/Topic	Chapter	Events and Submissions/Topic
Environmental effects on plants Identification of stress tolerant plants	Study Guide 11 Understand the responses of plants to environmental and edaphic stresses (fluoride, sulphur, acid rain, drought, salinity, waterlogging and heavy metals), and the impacts of climate change on Australian plants. Read the Resources supplied on the Moodle site for this week.	IPW 11 Finalise your specimen collection - and ensure that you have satisfactorily observed the following: 1. Preparing the species list with family names 2. Maintaining the quality 3. Completing the labelling details 4. Drawing floral diagrams and 5. Keying to family and then to genus levels.

Week 12 - 28 May 2018

Module/Topic	Chapter	Events and Submissions/Topic
Ecosystem reconstruction- principles of matching plants to site conditions to achieve long term sustainability.	Study Guide 12 Examine the strategies for revegetation, and note the importance of using native plants in mine site revegetation and restoration programs. Read the Resources supplied on the Moodle site for this week.	IPW 12 Dispatch or hand-in your plant samples by Friday of week 12. See the Moodle site for details

Review/Exam Week - 04 Jun 2018

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

Most native plants flower during rainy season. This could range from February to April/May. Please make sure to collect as many specimens as possible during this time.

Please watch the videos on the Moodle site, which show **where to go** for specimen collection and **how to prepare** quality specimens.

Try to visit undisturbed sites, away from the built up areas, so as to increase the chances of finding native plants. This will also assist in minimising collection of exotic species.

Please pay attention to the details, as such detailed observation is necessary to successfully identify an unknown specimen to Genus level using the Plant Identification Key.

Assessment Tasks

1 On-line botanical terms and concepts quiz

Assessment Type

Online Quiz(zes)

Task Description

There will be a total of 5 on-line quizzes, weekly from weeks 2 to 6.

These quizzes are mostly multiple choice questions and they will help you familiarise yourself with various botanical terms used in the Unit.

Choose a correct answer (s) from multiple choice. There are 10 questions in each quiz

Duration 30 minutes; Attempts allowed 3

Number of Quizzes

5

Frequency of Quizzes

Other

Assessment Due Date

On scheduled weeks, the Quiz opens on Thursday and closes by midnight on Sunday.

Return Date to Students

Quiz results will be made available on-line, one week after the expiry of each quiz.

Weighting

15%

Minimum mark or grade

40% of overall average of all quizzes

Assessment Criteria

A correct answer will score one mark.

Attempts allowed 3; Grading method: highest grade

Referencing Style

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

Submission

Online

Learning Outcomes Assessed

- Define selected botanical terms

Graduate Attributes

- Communication

- Problem Solving
- Critical Thinking
- Information Technology Competence
- Ethical practice

2 Practical Assessment

Assessment Type

Practical Assessment

Task Description

This assessment has two components. They are:

Part 1. Specimen collection (30% of Unit total)

Submit 20 plant specimens, ensuring that there is **no more than one specimen** in each genus. The specimens must contain essential parts that are used in the identification (eg flowers), they must be pressed, dried (see <https://www.qld.gov.au/environment/assets/documents/plants-animals/herbarium/collecting-manual.pdf>), labelled and keyed out to genus level, by drawing floral diagrams (where applicable).

Part 2. Plant identification test (15% of Unit total)

Identify, using keys provided, 5 plant specimens that are supplied by the lecturer during residential school (in-class test).

Both Rockhampton and Flex students must attend the residential school to satisfactorily complete this Unit.

Assessment Due Date

Plant identification test will be conducted during the last day of residential school (24th April 2018). Completed plant specimens must be dispatched or handed in on Friday of week 12.

Return Date to Students

Please see the Moodle site for further details

Weighting

45%

Minimum mark or grade

40% of the marks allocated for practical assessment

Assessment Criteria

Part 1.

Number of botanically acceptable (eg presence of flowers) specimens

Quality of specimens - mounting, drying and labelling

Quality and accuracy of floral diagrams

Correctness of plant identification, including details of the steps taken to assign the specimen to a genus.

Part 2.

Accuracy of evidence provided, including floral diagrams, steps taken in keying and other observations recorded to help assign the specimen to genus.

Referencing Style

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

Submission

Offline

Submission Instructions

Students should submit 20 botanically acceptable specimens along with a LIST showing the names of the specimens collected (genus level only), and the families to which they belong. Please pack the specimens using an A3 size card board box (eg 'PostPac') and mail or hand-in the box to the Admin officer, School of Health, Medical and Applied Sciences, Level 1, Bldg 6, CQUniversity, Rockhampton, Qld 4702. The post-mark will be used to assess the date posted.

Learning Outcomes Assessed

- Collect and curate specimens and use taxonomic keys to identify native plants
- Examine characteristic features of terrestrial Australian flora, and describe the use of those features in vegetation management and their economic exploitation

- Undertake vegetation surveys, interpret data and explain the use of GIS and remote sensing techniques in vegetation management.

Graduate Attributes

- Communication
- Problem Solving
- Critical Thinking
- Information Literacy
- Team Work
- Cross Cultural Competence

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% of the marks allocated for examination

Exam Conditions

Closed Book.

Materials

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