

# ENS221 Plant Diversity and Ecology

**School:** School of Science, Technology and Engineering

2025 | Semester 1

UniSC Sunshine Coast  
UniSC Moreton Bay

**BLENDED  
LEARNING**

Most of your course is on campus but you may be able to do some components of this course online.

*Please go to [usc.edu.au](http://usc.edu.au) for up to date information on the teaching sessions and campuses where this course is usually offered.*

## 1. What is this course about?

### 1.1. Description

This course explores the evolution, diversity and historical biogeography of Australian plants and vegetation communities as well as the biology, ecology, physiology and adaptations of Australian plants. It includes an introduction to plant classification featuring major Australian plant families. The ecology of Australian plant communities is explored; including effects of fire and nutrient levels on community structure, composition and diversity. Practical sessions develop skills in plant identification, field surveys and data analysis and incorporates several field trips.

### 1.2. How will this course be delivered?

ACTIVITY	HOURS	BEGINNING WEEK	FREQUENCY
<b>BLENDED LEARNING</b>			
<b>Learning materials</b> – weekly pre-recorded learning materials including, lectures, instructions, and field videos of various lengths with an average total length of 1.5 hrs per week across the semester	1.5hrs	Week 1	13 times
<b>Laboratory 1</b> – Wet labs	2hrs	Week 1	8 times
<b>Fieldwork</b> – First field trip starts in Week 5 - 1 time for 5 hours, followed by field trips in Weeks 10 - 13 for 3 hours each- Total 17 hours	17hrs	Week 5	Once Only

### 1.3. Course Topics

Phytogeography, biogeography, evolution and speciation of the Australian vegetation; Plant Adaptations to fire and community diversity and composition; Plant: classification, evolution and taxonomy, morphology and identification; structure and function; Community ecology plant life history and succession; Environmental effects on vegetation structure and composition; Plant mating systems; Pollination and dispersal.

## 2. What level is this course?

200 Level (Developing)

Building on and expanding the scope of introductory knowledge and skills, developing breadth or depth and applying knowledge and skills in a new context. May require pre-requisites where discipline specific introductory knowledge or skills is necessary. Normally, undertaken in the second or third full-time year of an undergraduate programs.

## 3. What is the unit value of this course?

12 units

## 4. How does this course contribute to my learning?

COURSE LEARNING OUTCOMES	GRADUATE QUALITIES
On successful completion of this course, you should be able to...	Completing these tasks successfully will contribute to you becoming...
1 Understand and explain the key elements of the historical biogeography of Australian plants.	Knowledgeable Engaged
2 Have knowledge of the major vegetation types in Australia and describe them. Understand the major determinants of vegetation community structure, composition, diversity and distribution.	Knowledgeable Empowered
3 Be familiar with some of the major plant families in Australia and be able to use a variety of methods to identify plants.	Empowered Engaged
4 Become familiar with a variety of field methods to study vegetation.	Knowledgeable Empowered Sustainability-focussed
5 Carry out a field study and undertake data analysis and write a scientific report on the results.	Creative and critical thinker Empowered Engaged Sustainability-focussed
6 Have an understanding of some of the major adaptations of aquatic and terrestrial plants to their environment. Have an understanding of the reproductive biology and major dispersal mechanisms in plants. Understand the responses to fire of plants.	Knowledgeable Ethical Engaged Sustainability-focussed
7 Understand plant life history variations and population ecology	Knowledgeable
8 Have knowledge of angiosperm evolution and speciation	Knowledgeable Empowered

## 5. Am I eligible to enrol in this course?

Refer to the [UniSC Glossary of terms](#) for definitions of “pre-requisites, co-requisites and anti-requisites”.

### 5.1. Pre-requisites

SCI102

### 5.2. Co-requisites

Not applicable

### 5.3. Anti-requisites

ENS201

### 5.4. Specific assumed prior knowledge and skills (where applicable)

Not applicable

## 6. How am I going to be assessed?

### 6.1. Grading Scale

Standard Grading (GRD)

High Distinction (HD), Distinction (DN), Credit (CR), Pass (PS), Fail (FL).

### 6.2. Details of early feedback on progress

Tutorial assessment; Students will be given feedback during class on their participation during the laboratory sessions during the first 4 weeks of semester to gain experience in interpreting plant anatomy in relation to structure and function necessary for plant identification and classification they will complete tasks during class that test their developing skills

### 6.3. Assessment tasks

DELIVERY MODE	TASK NO.	ASSESSMENT PRODUCT	INDIVIDUAL OR GROUP	WEIGHTING %	WHAT IS THE DURATION / LENGTH?	WHEN SHOULD I SUBMIT?	WHERE SHOULD I SUBMIT IT?
All	1	Artefact - Technical and Scientific	Individual	15%	10 Species profiles	Week 6	Online Submission
All	2	Artefact - Technical and Scientific, and Written Piece	Individual	35%	4000 words	Week 10	To Supervisor
All	3	Examination - Centrally Scheduled	Individual	50%	2 hours	Exam Period	Online Submission


#### All - Assessment Task 1: Plant species profiles

<b>GOAL:</b>	To improve plant identification skills and knowledge of plant biology							
<b>PRODUCT:</b>	Artefact - Technical and Scientific							
<b>FORMAT:</b>	Each student is required to collect and present a specified number of plant specimens as species profile sheets suitable for web site publication							
<b>CRITERIA:</b>	<table border="1"> <thead> <tr> <th>No.</th> <th></th> <th>Learning Outcome assessed</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Correct identification of specimens as per instructions; presentation of specimens</td> <td>3 8</td> </tr> </tbody> </table>	No.		Learning Outcome assessed	1	Correct identification of specimens as per instructions; presentation of specimens	3 8	
No.		Learning Outcome assessed						
1	Correct identification of specimens as per instructions; presentation of specimens	3 8						
<b>GENERIC SKILLS:</b>	Communication, Problem solving, Organisation, Information literacy							

#### All - Assessment Task 2: Scientific paper

<b>GOAL:</b>	Undertake scientific research							
<b>PRODUCT:</b>	Artefact - Technical and Scientific, and Written Piece							
<b>FORMAT:</b>	Each student is required to write a scientific report based on ecological data collected and compiled by the class during class time.							
<b>CRITERIA:</b>	<table border="1"> <thead> <tr> <th>No.</th> <th></th> <th>Learning Outcome assessed</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Ability to write in scientific paper format as defined in instructions; ability to complete assignment addressing each of the criteria identified in the instructions; ability to present data, analyse and interpret data according to instructions</td> <td>2 4 5 6 7</td> </tr> </tbody> </table>	No.		Learning Outcome assessed	1	Ability to write in scientific paper format as defined in instructions; ability to complete assignment addressing each of the criteria identified in the instructions; ability to present data, analyse and interpret data according to instructions	2 4 5 6 7	
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1	Ability to write in scientific paper format as defined in instructions; ability to complete assignment addressing each of the criteria identified in the instructions; ability to present data, analyse and interpret data according to instructions	2 4 5 6 7						
<b>GENERIC SKILLS:</b>	Communication, Collaboration, Problem solving, Organisation, Applying technologies, Information literacy							

### All - Assessment Task 3: Examination (multiple choice and short answer)

<b>GOAL:</b>	The exam will assess understanding of key knowledge gained from undertaking this course	
<b>PRODUCT:</b>	Examination - Centrally Scheduled	
<b>FORMAT:</b>	This examination will be based on material covered in lectures and tutorials and will be held in the normal examination period. The exam format will consist of multiple choice questions enabling material covered in tutorials to be assessed and short answer questions which will focus on material covered in lectures.	
<b>CRITERIA:</b>	<b>No.</b>	<b>Learning Outcome assessed</b>
	1	Ability to correctly answer questions asked based on material covered during the course
		
<b>GENERIC SKILLS:</b>	Communication, Problem solving, Organisation, Information literacy	

## 7. Directed study hours

A 12-unit course will have total of 150 learning hours which will include directed study hours (including online if required), self-directed learning and completion of assessable tasks. Student workload is calculated at 12.5 learning hours per one unit.

## 8. What resources do I need to undertake this course?

Please note: Course information, including specific information of recommended readings, learning activities, resources, weekly readings, etc. are available on the course Canvas site– Please log in as soon as possible.

### 8.1. Prescribed text(s) or course reader

There are no required/recommended resources for this course.

### 8.2. Specific requirements

Students are expected to wear appropriate protective clothing as specified in course handouts whilst on field trips and in the laboratory

## 9. How are risks managed in this course?

Risk assessments have been performed for all field activities and low to moderate levels of health and safety risk exists. Moderate risks may include working in an Australian bush setting, working with people, working outside normal office hours for example. It is your responsibility to review course material, search online, discuss with lecturers and peers and understand the health and safety risks associated with your specific course of study and to familiarise yourself with the University's general health and safety principles by reviewing the [online induction training for students](#), and following the instructions of the University staff.

## 10. What administrative information is relevant to this course?

### 10.1. Assessment: Academic Integrity

Academic integrity is the ethical standard of university participation. It ensures that students graduate as a result of proving they are competent in their discipline. This is integral in maintaining the value of academic qualifications. Each industry has expectations and standards of the skills and knowledge within that discipline and these are reflected in assessment.

Academic integrity means that you do not engage in any activity that is considered to be academic fraud; including plagiarism, collusion or outsourcing any part of any assessment item to any other person. You are expected to be honest and ethical by completing all work yourself and indicating in your work which ideas and information were developed by you and which were taken from others. You cannot provide your assessment work to others. You are also expected to provide evidence of wide and critical reading, usually by using appropriate academic references.

In order to minimise incidents of academic fraud, this course may require that some of its assessment tasks, when submitted to Canvas, are electronically checked through Turnitin. This software allows for text comparisons to be made between your submitted assessment item and all other work to which Turnitin has access.

## 10.2. Assessment: Additional Requirements

### Eligibility for Supplementary Assessment

Your eligibility for supplementary assessment in a course is dependent of the following conditions applying:

The final mark is in the percentage range 47% to 49.4%

The course is graded using the Standard Grading scale

You have not failed an assessment task in the course due to academic misconduct

## 10.3. Assessment: Submission penalties

Late submission of assessment tasks may be penalised at the following maximum rate:

- 5% (of the assessment task's identified value) per day for the first two days from the date identified as the due date for the assessment task.

- 10% (of the assessment task's identified value) for the third day - 20% (of the assessment task's identified value) for the fourth day and subsequent days up to and including seven days from the date identified as the due date for the assessment task.

- A result of zero is awarded for an assessment task submitted after seven days from the date identified as the due date for the assessment task. Weekdays and weekends are included in the calculation of days late. To request an extension you must contact your course coordinator to negotiate an outcome.

## 10.4. SafeUniSC

UniSC is committed to a culture of respect and providing a safe and supportive environment for all members of our community. For immediate assistance on campus contact SafeUniSC by phone: [07 5430 1168](tel:0754301168) or using the [SafeZone](#) app. For general enquires contact the SafeUniSC team by phone [07 5456 3864](tel:0754563864) or email [safe@usc.edu.au](mailto:safe@usc.edu.au).

The SafeUniSC Specialist Service is a Student Wellbeing service that provides free and confidential support to students who may have experienced or observed behaviour that could cause fear, offence or trauma. To contact the service call [07 5430 1226](tel:0754301226) or email [studentwellbeing@usc.edu.au](mailto:studentwellbeing@usc.edu.au).

## 10.5. Study help

For help with course-specific advice, for example what information to include in your assessment, you should first contact your tutor, then your course coordinator, if needed.

If you require additional assistance, the Learning Advisers are trained professionals who are ready to help you develop a wide range of academic skills. Visit the [Learning Advisers](#) web page for more information, or contact Student Central for further assistance: +61 7 5430 2890 or [studentcentral@usc.edu.au](mailto:studentcentral@usc.edu.au).

## 10.6. Wellbeing Services

Student Wellbeing provide free and confidential counselling on a wide range of personal, academic, social and psychological matters, to foster positive mental health and wellbeing for your academic success.

To book a confidential appointment go to [Student Hub](#), email [studentwellbeing@usc.edu.au](mailto:studentwellbeing@usc.edu.au) or call 07 5430 1226.

## 10.7. AccessAbility Services

Ability Advisers ensure equal access to all aspects of university life. If your studies are affected by a disability, learning disorder mental health issue, injury or illness, or you are a primary carer for someone with a disability or who is considered frail and aged, [AccessAbility Services](#) can provide access to appropriate reasonable adjustments and practical advice about the support and facilities available to you throughout the University.

To book a confidential appointment go to [Student Hub](#), email [AccessAbility@usc.edu.au](mailto:AccessAbility@usc.edu.au) or call 07 5430 2890.

## 10.8. Links to relevant University policy and procedures

For more information on Academic Learning & Teaching categories including:

- Assessment: Courses and Coursework Programs
- Review of Assessment and Final Grades
- Supplementary Assessment
- Central Examinations
- Deferred Examinations
- Student Conduct
- Students with a Disability

For more information, visit <https://www.usc.edu.au/explore/policies-and-procedures#academic-learning-and-teaching>

## 10.9. Student Charter

UniSC is committed to excellence in teaching, research and engagement in an environment that is inclusive, inspiring, safe and respectful. The [Student Charter](#) sets out what students can expect from the University, and what in turn is expected of students, to achieve these outcomes.

## 10.10.General Enquiries

### In person:

- **UniSC Sunshine Coast** - Student Central, Ground Floor, Building C, 90 Sippy Downs Drive, Sippy Downs
- **UniSC Moreton Bay** - Service Centre, Ground Floor, Foundation Building, Gympie Road, Petrie
- **UniSC SouthBank** - Student Central, Building A4 (SW1), 52 Merivale Street, South Brisbane
- **UniSC Gympie** - Student Central, 71 Cartwright Road, Gympie
- **UniSC Fraser Coast** - Student Central, Student Central, Building A, 161 Old Maryborough Rd, Hervey Bay
- **UniSC Caboolture** - Student Central, Level 1 Building J, Cnr Manley and Tallon Street, Caboolture

**Tel:** +61 7 5430 2890

**Email:** [studentcentral@usc.edu.au](mailto:studentcentral@usc.edu.au)