COURSE OUTLINE

ENS321 Restoration Ecology

School: School of Science, Technology and Engineering

2023 | 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 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 ecological aspects of environmental restoration using Landscape, site and species specific approaches. You are introduced to the ecology of; landscapes, communities, populations, metapopulations, disturbance and invasive species. You will learn how to apply this to practical scenarios such as translocations, compensatory populations, and provenance for revegetation, landscape defragmentation and climate change. You will develop skills in field assessments, and the analysis and interpretation of data using a variety of statistical and analytical approaches and software.

1.2. How will this course be delivered?

ACTIVITY	HOURS	BEGINNING WEEK	FREQUENCY
BLENDED LEARNING			
Learning materials – pre recorded learning materials content and or other instruction materials available as video recordings	2hrs	Week 1	13 times
Laboratory 1 – On campus computer laboratory/workshop. Self paced tutorial activities. Fieldwork may be incorporated in some of the computer labs for data collection	2hrs	Week 1	13 times
Fieldwork – 1 day field work on or off campus for class data collection for major assignment	8hrs	Week 5	Once Only
Seminar – Face to face guest seminar	1hr	Week 7	2 times

1.3. Course Topics

Landscape ecology and fragmentation; succession, population growth and restoration; metapopulations and invasive species; genetics of restoration and restoration and climate change

2. What level is this course?

300 Level (Graduate)

Demonstrating coherence and breadth or depth of knowledge and skills. Independent application of knowledge and skills in unfamiliar contexts. Meeting professional requirements and AQF descriptors for the degree. May require pre-requisites where discipline specific introductory or developing knowledge or skills is necessary. Normally undertaken in the third or fourth full-time study year of an undergraduate program.

3. What is the unit value of this course?

12 units

4. How does this course contribute to my learning?

COURSE LEARNING OUTCOMES On successful completion of this course, you should be able to...		GRADUATE QUALITIES Completing these tasks successfully will contribute to you becoming...
1	Understand key concepts and theories pertinent to ecological restoration including | genetic theory, metapopulations, succession, demographic parameters, climate change, and population growth and regulation	Knowledgeable Engaged
2	Describe and explain the ecology of weed invasions	Knowledgeable Sustainability-focussed
3	Explain the implication of climate change for species viability and restoration	Empowered Sustainability-focussed
4	Design and formulate restoration strategies and communicate findings in a scientific report format	Creative and critical thinker Sustainability-focussed

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

ENS221 or ENS222 or ENS282 or ENS213 or ENS214 or LFS261

5.2. Co-requisites

Not applicable

5.3. Anti-requisites

ENS361

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

Will have undertaken some scientific writing and data analysis at second year level

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

Students will receive feedback during practical class sessions they will also submit on a weekly basis their completed practical session (in computer lab) worksheets in the week following the class these will be returned the following week in class marked and with comments to provide early feedback on student progress. These then combine to make the total mark for task 3

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, and Written Piece	Individual	40%	3000 words	Week 10	Online Submission
All	2	Examination - Centrally Scheduled	Individual	40%	2 hours	Exam Period	Online Submission
All	3	Artefact - Technical and Scientific, and Written Piece	Individual	20%	200 words	Throughout teaching period (refer to Format)	In Class

All - Assessment Task 1: Restoration project report/paper

GOAL:	This task is designed to allow you to demonstrate your knowledge and theory of restoration ecology by evaluating a real world restoration project using scientific methods. Students will undertake a project to investigate a restoration topic. This will involve the design collection analysis and interpretation of data. Students will write an assignment in the scientific paper format suitable to submit to a restoration journal to present the work.
PRODUCT:	Artefact - Technical and Scientific, and Written Piece
FORMAT:	Scientific paper suitable for a Restoration Ecology Journal

CRITERIA:

No.		Learning Outcome assessed
1	Project design, writing within Scientific format	1 2 4
2	data analysis, presentation and interpretation	1 2 4
3	review of relevant literature and discussion of results in this context	1 2 4
4	ability to apply theoretical concepts to a practical restoration scenario	1 2 4

All - Assessment Task 2: End of semester examination

GOAL:	To asses student understanding of restoration concepts, ability to apply restoration concepts to specific scenarios and analyse and interpret data in terms of restoration concepts.
PRODUCT:	Examination - Centrally Scheduled
FORMAT:	This examination will be based on material covered in lectures and tutorials for the course and will be held in the normal examination period. The exam will contain short answer questions data analysis and interpretation and an essay question

CRITERIA:

No.		Learning Outcome assessed
1	Demonstration of understanding of material covered in lectures and tutorials and ability to apply in a restoration context	1 2 3

All - Assessment Task 3: Tutorial questions

GOAL:	The tutorial question series allows you to review and apply practical l aspects of the science of restoration ecology
PRODUCT:	Artefact - Technical and Scientific, and Written Piece
FORMAT:	Students to complete tutorial data analysis exercises and answer tutorial questions. To be submitted after tutorial completion. Each tutorial submission is of equal weighting and combined will result in 20% of the total marks the specific tutorials to be submitted will be identified and tutorial notes will be available online Submit: from week 1 to week 12.
CRITERIA:	

No.		Learning Outcome assessed
1	Ability to perform required data manipulations and demonstrate ability to interpret data correctly and answer required questions particularly as applied to restoration scenarios.	1 3
2	Design and formulate restoration strategies based on scenario's provided	1 3
3	Understand key ecological concepts and theories pertinent to ecological restoration	1 3

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

Please note that you need to have regular access to the resource(s) listed below. Resources may be required or recommended.

REQUIRED?	AUTHOR	YEAR	TITLE	EDITION	PUBLISHER
Recommended	Margaret A. Palmer,Joy B. Zedler,Donald A. Falk	2017	Foundations of Restoration Ecology	2nd	Island Press

8.2. Specific requirements

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

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.
- The course coordinator may impose lesser penalties. To request an extension you must contact your course coordinator to negotiate an outcome.

10.4. SafeUSC

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 SafeUSC by phone: 07 5430 1168 or using the SafeZone app. For general enquires contact the SafeUSC team by phone 07 5456 3864 or email safe@usc.edu.au.

The SafeUSC 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 or email 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.

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 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 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
- Administration of Central Examinations
- Deferred Examinations
- Student Academic Misconduct
- 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