EVST13015 *Landscape Ecology & Management*
Term 2 - 2017

Profile information current as at 15/05/2024 01:40 pm

All details in this unit profile for EVST13015 have been officially approved by CQUniversity 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
This unit will cover essential knowledge of landscape features and their management. Students will obtain theoretical and practical understanding of landforms, biogeography, effects of natural and man-made impacts (eg mining) on the sustainability of local ecosystems, erosion control, vegetation surveys, modern techniques of remediation, productive use of degraded land and rehabilitation success criteria. They will gain practical experience through field visits during residential school. Emphasis will be placed on Central Queensland landscapes with a broader understanding of Australian landscapes. All students are required to attend a Residential School.

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
Students must have completed 72 units of credit.
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

- Distance

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. **Written Assessment**
Weighting: 20%
2. **Practical and Written Assessment**
Weighting: 30%
3. **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 Have your say

Feedback
Residential schools were very beneficial

Recommendation
These activities will be continued and real-life examples will be used.

Feedback from Have your say

Feedback
The Moodle site was easy to navigate and it had useful information

Recommendation
The Moodle site will be further improved by adding new lectures and additional information on landscape ecology.

Feedback from Have your say

Feedback
Variety of lectures, practical sessions and experienced lecturers

Recommendation
A good balance will be maintained between restoration practices and restoration assessment techniques.

Feedback from Have your say

Feedback
The assessment items need clear instructions

Recommendation
The assessment instructions will be rewritten to clearly specify the tasks to be performed by the students.

Unit Learning Outcomes

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

1. Describe the key features of the biogeographic landscape
2. Discuss the impacts of various activities such as tree clearing and mining on the sustainability of local ecosystems.
3. Conduct land and vegetation surveys, simulate erosion events and describe land remediation techniques.
4. Analyse techniques used in the remediation of degraded landscapes and discuss those relevant to Australian ecosystems.
5. Design a protocol for remediation and/or sustainable management of a disturbed landscape.
6. Assess the criteria used to determine cost effectiveness and success of remediation process.

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	6
1 - Written Assessment - 20%	•				•	
2 - Practical and Written Assessment - 30%	•	•	•	•	•	•
3 - Examination - 50%	•	•		•		•

Alignment of Graduate Attributes to Learning Outcomes

Graduate Attributes	Learning Outcomes					
	1	2	3	4	5	6
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 - Written Assessment - 20%	•									
2 - Practical and Written Assessment - 30%		•								
3 - Examination - 50%			•	•						

Textbooks and Resources

Textbooks
EVST13015

Prescribed

Restoring Disturbed Landscapes: Putting principles into practice
(2010)
Authors: David J Tongway and John A Ludwig
Island Press
U.S.A.
ISBN: 9781597265812
Binding: Hardcover

Additional Textbook Information
Students please note, if you prefer to purchase the E-Book you may also do so (but not through the CQU bookshop). The E-Book can be purchased from Island Press (http://islandpress.org/restoring-disturbed-landscapes) for the same price as the soft cover text. The E-Book has the ISBN: 9781610910071 and was first published in 2011.

View textbooks at the CQUniversity Bookshop

IT Resources

You will need access to the following IT resources:

- CQUniversity Student Email
- Internet
- Unit Website (Moodle)
- GIS - download free software
- Microsoft Excel or similar
- RUSLE (Universal Soil Loss Equation) software to be downloaded onto Uni computers.

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
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Schedule

Week 1 - 10 Jul 2017

Module/Topic	Chapter	Events and Submissions/Topic
Landscape ecology, biogeography and restoration approaches. Tools to assess vegetation and ecosystem condition. Indicators of ecosystem functions.	Tongway & Ludwig, Chapters 13 and 16 Online Readings.	

Week 2 - 17 Jul 2017

Module/Topic	Chapter	Events and Submissions/Topic

Geology, soils and impacts of disturbance on soil systems.
Tools to assess vegetation and ecosystem condition.
Indicators of ecosystem functions (except erosion).

Tongway & Ludwig, Chapter 14
Readings online.

Week 3 - 24 Jul 2017

Module/Topic	Chapter	Events and Submissions/Topic
The soil-water interface: soil loss and planning to reduce erosion. Landform design and erosion control, and tools to assess erosion.	Tongway & Ludwig, Chapter 15 Readings online	

Week 4 - 31 Jul 2017

Module/Topic	Chapter	Events and Submissions/Topic
Restoration of mine sites - with a particular focus on open-cut mining.	Tongway & Ludwig, Chapters 4 and 8.	**Landscape Impact Assessment** Due: Week 4 Friday (4 Aug 2017) 11:45 pm AEST

Week 5 - 07 Aug 2017

Module/Topic	Chapter	Events and Submissions/Topic
Restoration of mine sites - waste-rock dumps and tailings storage.	Tongway & Ludwig, Chapters 6 and 7.	

Vacation Week - 14 Aug 2017

Module/Topic	Chapter	Events and Submissions/Topic

Week 6 - 21 Aug 2017

Module/Topic	Chapter	Events and Submissions/Topic
Restoring damaged rangelands, with a particular focus on those rangelands with an overabundance of woody shrubs and trees.	Tongway & Ludwig, Chapters 5 and 9.	**Submit Draft Report for review by the lecturer** **Due: 21st August 2017; 11.30 PM AEST**

Week 7 - 28 Aug 2017

Module/Topic	Chapter	Events and Submissions/Topic
Restoration of farmland to enhance biodiversity and productivity. Restoration of former farmlands and forests in the peri-urban development zone.	Tongway & Ludwig, Chapters 10 and 11	**Compulsory Residential School Rockhampton:** **28 AUG - 30 Aug 2017**

Week 8 - 04 Sep 2017

Module/Topic	Chapter	Events and Submissions/Topic
Restoration of roadside verges after road construction. Restoration of managed native vegetation transition zones.	Tongway & Ludwig, Chapter 12 Readings online (Spooner and Lunt).	

Week 9 - 11 Sep 2017

Module/Topic	Chapter	Events and Submissions/Topic
Restoration of waste management facilities, dumps and other zones requiring capping, burial or removal.	Online readings	

Week 10 - 18 Sep 2017

Module/Topic	Chapter	Events and Submissions/Topic

Criteria used in determining cost effectiveness and success of rehabilitation - budgets, scoping, planning, monitoring and evaluation when working on a restoration project.

Online readings

Week 11 - 25 Sep 2017

Module/Topic	Chapter	Events and Submissions/Topic
GIS and mapping in integrated landscape assessment and planning.	Online readings	

Week 12 - 02 Oct 2017

Module/Topic	Chapter	Events and Submissions/Topic
Statistical analysis of landscape level attributes. Summary and conclusions.	Online readings	**Submit Technical Report** **Due: 6th October 2017; 11.30 PM AEST**

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 Landscape Impact Assessment

Assessment Type
Written Assessment

Task Description
Landscape Impact Assessment (20% of unit marks).
You are required to identify impacts of commercial activities, such as mining, smelting, industrial development, agriculture, aquaculture, tourism, etc on landscapes of the place where you currently live (within a radius of 100 km), and choose any FOUR of these activities for this assignment, by giving preference to those activities that will be studied in the residential school.
You may use Google Earth/Queensland Globe maps, on-line information, news articles, company reports, of your choice, to describe the impacts of such commercial activities on local landscapes.
You will then explain the way those impacts/disturbances are being managed at present, with some indication of their effectiveness. Finally, you will research suitable remediation plans (historic and ideal), and suggest possible improvements to reduce or avoid those impacts (report size: 2000 words).
Journal articles and other credible sources of information would be helpful in finding solutions to remediating impacted sites (see the Moodle site for details).

Assessment Due Date
Week 4 Friday (4 Aug 2017) 11:45 pm AEST
Assignment 1 Landscape Impact Assessment

Return Date to Students
Week 7 Friday (1 Sept 2017)

Weighting
20%

Minimum mark or grade
45% of the marks allocated for this assignment

Assessment Criteria
The marker will assess the following skills and attributes of your work:

1. Identification of appropriate sources of impacts, provision of photos and explanation of the impacts (30%).
2. Information literacy skills - evidence that you have referred to a minimum of five credible sources of information, such as journal articles (15%).
3. Communication skills - write clearly and succinctly within the word count, and use appropriate referencing and

formatting skills (20%).
4. Critical thinking skills - consider several possible scenarios that might mitigate the impacts, and discuss positive and negative aspects of each scenario (35%).

Referencing Style

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

Submission
Online

Submission Instructions
Upload a word document via the Moodle site

Learning Outcomes Assessed

- Describe the key features of the biogeographic landscape
- Design a protocol for remediation and/or sustainable management of a disturbed landscape.

Graduate Attributes

- Communication

2 Evaluation of a Restored Landscape - Technical Report

Assessment Type
Practical and Written Assessment

Task Description
Evaluation of a Restored Landscape (30% of the unit marks).
Landscape restoration can occur in three steps, viz **planning, execution** (on-site restoration) and **evaluation** of restoration success. In this assignment, you will gain experience in evaluating the success of a restored landscape. First, you will collect recent literature on the topic and then prepare a protocol for collecting data. You will then visit the field site to collect data. Finally, you will combine all the work you have done to produce a Technical Report.
The Technical Report is prepared in two phases.
Phase 1 activity: Draft Report
Phase 1 is a planning exercise wherein you will collect information on restoration practices via literature search, and consulting your text book for various approaches used in restoring disturbed sites, and evaluating the success of such restoration efforts.
You will then develop a protocol to collect suitable data from a restored field site according to Landscape Function Analysis (LFA). This draft report (approx 1500 words) must be submitted on-line by 21st August 2017. The lecturer will review the report and return the hard copy of the report to students on day 1 of the residential school. Protocols contained in this report, including those added by the lecturer (considering site conditions) are to be used in carrying out Phase 2 activities.
Phase 2 activity: Final Report
You will undertake LFA task on a restored site during residential school, based on the protocols developed in Phase 1 (lecturer-amended draft report). You will collect the data from field sites, as a GROUP activity, but will analyse the data, and write up the results, discussion and conclusions INDIVIDUALLY. The write up of Phase 2 activity should include abstract, contents page, results, discussion, conclusions, acknowledgments and references (1000 words excluding tables, photos and figures).
Technical Report is produced by incorporating the draft report (Phase 1) into the final report (Phase 2). This report is due in week 12.

Assessment Due Date

Draft Report due on 21st August 2017, 11.30 pm AEST. Technical Report due on 6th October 2017, 11.30 pm AEST

Return Date to Students
Exam Week Friday (20 Oct 2017)
Returned via the Moodle site.

Weighting
30%

Minimum mark or grade
45% of allocated marks

Assessment Criteria
The marker will assess the following skills and attributes of your work when reading your submission:

1. Planning of restoration evaluation tasks - how well the plan has been prepared taking into consideration the requirements of the project and the availability of resources.
2. Communication skills - did you write clearly, succinctly, within the word count and using appropriate referencing and formatting skills? Did you present and communicate data as recommended in unit lectures and tutorials? Did you describe your restoration plan to lecturing staff clearly and succinctly before/during the residential school?
3. Information literacy skills - is there evidence in your submission that you referred to a broad range of credible sources of information, and represented these sources accurately (including description of how certain aspects of the information within the sources might have turned out to be technically incorrect/scientifically inappropriate?)
4. Information technology competence - did you use the various computer packages and tools appropriately to produce quality graphs, images, tables and statistical results?
5. Critical thinking skills - have you considered the likely outcomes (both positive and negative) of your restoration attempt within your initial project plan?, and have you critiqued your management/restoration options appropriately including positive and negative aspects of your approach and the likely outcomes of the approach?

Referencing Style

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

Submission
Online

Submission Instructions
Students should upload a doc, docx or rft file via the Moodle site.

Learning Outcomes Assessed

- Describe the key features of the biogeographic landscape
- Discuss the impacts of various activities such as tree clearing and mining on the sustainability of local ecosystems.
- Conduct land and vegetation surveys, simulate erosion events and describe land remediation techniques.
- Analyse techniques used in the remediation of degraded landscapes and discuss those relevant to Australian ecosystems.
- Design a protocol for remediation and/or sustainable management of a disturbed landscape.
- Assess the criteria used to determine cost effectiveness and success of remediation process.

Graduate Attributes

- Problem Solving

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
45%

Exam Conditions
Open 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