

Unit Outline (Higher Education)

Institute / School:	Institute of Innovation, Science & Sustainability
Unit Title:	Arid Zone: Ecology, Management and Challenges
Unit ID:	SCENV3204
Credit Points:	15.00
Prerequisite(s):	(SCENV2101)
Co-requisite(s):	Nil
Exclusion(s):	(SCENV3203)
ASCED:	019999

Description of the Unit:

The content of this unit explores the ecology, management and challenges of arid landscapes, both within Australia and internationally. It compares the arid zone of Australia with similar zones in other parts of the world and contrasts the impact of different land uses on the development of rangelands. It considers the threats to rangelands such as overgrazing by indigenous and domesticated animals, soil erosion, rabbits, weeds and feral animals. It evaluates the role of conservation reserves, as well as how to conduct a useful biological survey in a remote arid area. The unit explores species adaptation and survival in arid environments and how that influences their distribution

Grade Scheme: Graded (HD, D, C, P, MF, F, XF)

Work Experience:

No work experience

Placement Component: No

Supplementary Assessment: Yes

Where supplementary assessment is available a student must have failed overall in the Unit but gained a final mark of 45 per cent or above, has completed all major assessment tasks (including all sub-components where a task has multiple parts) as specified in the Unit Description and is not eligible for any other form of supplementary assessment.

Course Level:

Level of Unit in Course	AQF Level of Course					
	5	6	7	8	9	10
Introductory	■	■	■	■	■	■
Intermediate	■	■	■	■	■	■
Advanced	■	■	✓	■	■	■

Learning Outcomes:

Knowledge:

- K1.** Compare and contrast the nature and extent of the arid zone of Australia and other parts of the world
- K2.** Describe the role that climatic conditions play in distribution of natural ecosystems within an arid zone
- K3.** Identify various conflicts and land issues and explain what they are, and why they must be taken into account when managing an arid zone flora and fauna

Skills:

- S1.** Evaluate and distinguish between the patterns of distribution of the major rangeland vegetation types and associated fauna
- S2.** Develop and conduct biological survey techniques in an arid zone flora and fauna
- S3.** Demonstrate the capacity to work effectively both individually and in teams
- S4.** Analyse, summarise and present both the flora and fauna data gathered in the field and the major scientific findings to a relevant audience

Application of knowledge and skills:

- A1.** Critically evaluate data gathered from the field
- A2.** Prepare a scientific paper in an accepted format using appropriate scientific language
- A3.** Apply teamwork skills to the completion of field activities

Unit Content:

Scope:

The content of this unit explores the ecology of arid zones, both within Australia and internationally. It compares the arid zone of Australia with similar zones in other parts of the world and contrasts the impact of different land uses on the development of rangelands. It considers the threats to rangelands such as overgrazing by indigenous and domesticated animals, soil erosion, rabbits, weeds and feral animals. It evaluates the role of conservation reserves, as well as how to conduct a useful biological survey in a remote arid area.

Topics may include:

1. Topics may include:

Comparison of the arid zone flora and fauna of Australia with those in other parts of the world
 The impact of different land uses on the development of rangelands in the arid zone of Australia and other parts of the world
 Threats to rangelands such as overgrazing by indigenous and domesticated animals, soil erosion, rabbits, weeds, feral animals
 Conservation reserves
 Biological survey in remote areas

FEDTASKS

Federation University Federation recognises that students require key transferable employability skills to prepare them for their future workplace and society. FEDTASKS (**T**ransferable **A**tttributes **S**kills and **K**nowledge) provide a targeted focus on five key transferable Attributes, Skills, and Knowledge that are embedded within curriculum, developed gradually towards successful measures and interlinked with cross-discipline and Co-operative Learning opportunities. *One or more FEDTASK, transferable Attributes, Skills or Knowledge must be evident in the specified learning outcomes and assessment for each FedUni Unit, and all must be directly assessed in each Course.*

FEDTASK attribute and descriptor		Development and acquisition of FEDTASKS in the Unit	
		Learning Outcomes (KSA)	Assessment task (AT#)
FEDTASK 1 Interpersonal	Students will demonstrate the ability to effectively communicate, inter-act and work with others both individually and in groups. Students will be required to display skills in-person and/or online in: <ul style="list-style-type: none"> Using effective verbal and non-verbal communication Listening for meaning and influencing via active listening Showing empathy for others Negotiating and demonstrating conflict resolution skills Working respectfully in cross-cultural and diverse teams. 	Not applicable	Not applicable
FEDTASK 2 Leadership	Students will demonstrate the ability to apply professional skills and behaviours in leading others. Students will be required to display skills in: <ul style="list-style-type: none"> Creating a collegial environment Showing self-awareness and the ability to self-reflect Inspiring and convincing others Making informed decisions Displaying initiative 	Not applicable	Not applicable
FEDTASK 3 Critical Thinking and Creativity	Students will demonstrate an ability to work in complexity and ambiguity using the imagination to create new ideas. Students will be required to display skills in: <ul style="list-style-type: none"> Reflecting critically Evaluating ideas, concepts and information Considering alternative perspectives to refine ideas Challenging conventional thinking to clarify concepts Forming creative solutions in problem solving. 	Not applicable	Not applicable
FEDTASK 4 Digital Literacy	Students will demonstrate the ability to work fluently across a range of tools, platforms and applications to achieve a range of tasks. Students will be required to display skills in: <ul style="list-style-type: none"> Finding, evaluating, managing, curating, organising and sharing digital information Collating, managing, accessing and using digital data securely Receiving and responding to messages in a range of digital media Contributing actively to digital teams and working groups Participating in and benefiting from digital learning opportunities. 	Not applicable	Not applicable

FEDTASK attribute and descriptor		Development and acquisition of FEDTASKS in the Unit	
		Learning Outcomes (KSA)	Assessment task (AT#)
FEDTASK 5 Sustainable and Ethical Mindset	Students will demonstrate the ability to consider and assess the consequences and impact of ideas and actions in enacting ethical and sustainable decisions. Students will be required to display skills in: <ul style="list-style-type: none"> • Making informed judgments that consider the impact of devising solutions in global economic environmental and societal contexts • Committing to social responsibility as a professional and a citizen • Evaluating ethical, socially responsible and/or sustainable challenges and generating and articulating responses • Embracing lifelong, life-wide and life-deep learning to be open to diverse others • Implementing required actions to foster sustainability in their professional and personal life. 	Not applicable	Not applicable

Learning Task and Assessment:

Learning Outcomes Assessed	Assessment Tasks	Assessment Type	Weighting
K1, K2, K3	Seminar presentation on a rangeland issue	An oral presentation	10-20%
K2, K3, S1, S2, S3, S4, A1, A2, A3	Aridzone field based research project (Flora or Fauna)	Written report	30-50%
K2, S1, S2, S3, S4, A1, A2, A3	Aridzone vegetation survey report	Written report	30-50%

Adopted Reference Style:

APA ()

 Refer to the [library website](#) for more information

 Fed Cite - [referencing tool](#)