

Unit Outline (Higher Education)

Institute / School:	Institute of Innovation, Science & Sustainability
Unit Title:	Climate and Environmental Issues in a Changing World
Unit ID:	SCENV3500
Credit Points:	15.00
Prerequisite(s):	(SCENV1001 or SCSUS1500)
Co-requisite(s):	Nil
Exclusion(s):	(SCENV3501)
ASCED:	019999

Description of the Unit:

Our climate is now changing in response to an array of anthropogenic impacts. An understanding of the rate, mode and scale of these changes are now of vital importance to society and the environment. In this course we look at historical (ie measured), current and predicted changes linking proposed causes and effects, and also adaptation and mitigation options available to tackle undesirable present and future changes. Wider impacts of environmental change and policy framework at a local and global level to tackle present and future climate scenarios are considered. We investigate national and international case studies of historical and contemporary effects of environmental change on the biophysical environment, including flora and fauna, extreme events, food security and society, new energy futures and climate ready initiatives. This course will help prepare students for the dynamic world of work they are about to enter.

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.** Demonstrate an in-depth knowledge of historical and contemporary natural and human induced physiochemical changes on ecosystems
- K2.** Identify contemporary and historical anthropogenic perturbations and impacts nationally and globally over a long-time frame until present
- K3.** Evaluate the main drivers of global climate change, the responses of natural systems to climate drivers, adaptations, and mitigation options available
- K4.** Investigate options available to tackle undesirable present and future changes, and policy framework at local and global level
- K5.** Discuss contemporary issues of the impacts of change on biophysical environment using both national and international examples

Skills:

- S1.** Source, read and interpret complex climate and environmental change related literature
- S2.** Identify and analyze the scientific, political, and social information that is relevant to climate change associated environmental issues
- S3.** Develop scientific reports related to the impacts of environmental change on biophysical environment
- S4.** Integrate field and site visit data into a technical report and make a presentation

Application of knowledge and skills:

- A1.** Analyse written material, synthesize evidence, write a logical essay and develop a digital poster
- A2.** Express opinion and communicate complex scientific ideas about climate and environmental issues in a clear and convincing manner
- A3.** Evaluate the impacts of climate change on environment and society, and appreciate the value of sustainability initiatives

Unit Content:

The first half of this course is designed to provide a comprehensive overview of the complexity of environmental change by taking a journey through history, assessing the impacts of anthropogenic influences, impacts of climate change, adaptations, and mitigation measures. In the second half, a wide range of emerging issues are covered as case study driven study topics under four themes: Flora and Fauna Responses, Extreme Events, Impacts on Food Security and Society, New Energy Futures and Climate Ready Initiatives Topics may include: Nature of Change Human History, Indigenous and Post-European Circumstances Related Changes Climate Protocols, Agreements & Assessments Adaptations and Mitigation Measures Case Study Driven Study Topics Flora and Fauna Responses Extreme Events Impacts on Food Security and Society New Energy Futures and Climate Ready Initiatives

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, K4, S1, S2, A1, A2	Environmental Policies & Action Plans to Tackle Present and Future Changes	Digital Poster	20-30%
K1, K3, K4, K5, S2, S3, S4, A1, A2, A3	Written and Oral Presentation of Case Study Driven Study Topics: Impacts of Environmental Change	Report and Oral Presentation	30-40%
K1, K2, K3, K4, K5, S1, S2, A2, A3	Review of Learning and Skills Practice on Different Themes Related to Environmental Issues	End of Semester Exam	30-40%

Adopted Reference Style:

APA ()

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

 Fed Cite - [referencing tool](#)