

# AGEN 7010

## SUSTAINABILITY THROUGH

## TRANSDISCIPLINARY

## APPROACHES

### Credit Points 10

**Description** Water sustainability faces enormous social, cultural, ecological, technological, economic, gender and political challenges in an era of climate induced drought and floods, water scarcity, over exploitation and increasing pollution and deepening social inequities. Professionals working in the water management grappling with these challenges usually have disciplinary specific training. To lead positive change requires working in and understanding complexity and communicating with a wide range of different people in varying capacities. This unit will equip participants with critical thinking, self-reflexivity and systemic thinking competences that are required beyond technical and discipline specific knowledge. The subject will cover aspects of transdisciplinary thinking and approaches for sustainable development and resources management, the role of people, culture, society in environmental sustainability and transdisciplinary leadership and professional practice. The subject will include social hydrology, gender equity diversity and social inclusion (GEDSI) water challenges and global Indigenous and traditional water perspectives and practices.

### School Science

#### Student Contribution Band HECS Band 2 10cp

Check your fees via the Fees ([https://www.westernsydney.edu.au/currentstudents/current\\_students/fees/](https://www.westernsydney.edu.au/currentstudents/current_students/fees/)) page.

#### Level Postgraduate Coursework Level 7 subject

#### Restrictions

Must be enrolled in a post-graduate program

## Learning Outcomes

After successful completion of this Unit, students will be able to:

1. Articulate the nature and benefits of transdisciplinary approaches to sustainability.
2. Evaluate sustainability challenges through transdisciplinary and systems thinking perspectives
3. Reflect and improve on own professional practice and leadership skills in promoting sustainability outcomes.
4. Collaborate effectively and ethically with stakeholders including local and global indigenous communities on a real-world project to tackle sustainability challenges.
5. Work effectively in a team environment.

## Subject Content

The subject comprises four major topic areas:

#### 1. Transdisciplinary thinking and approaches for sustainable development

Different approaches to understanding and tackling complex problematic situation; what is transdisciplinary approach; why use transdisciplinary approach; designing and implementing transdisciplinary approaches to addressing complex environmental problems; Case studies of transdisciplinary problematic situations from a different areas will be examined.

#### 2. Transdisciplinary approaches for resources management

Complexity of managing natural resources under climate change scenarios and competing demands for resources; why and how of implementing transdisciplinary approaches for managing natural resources; Case studies of applying transdisciplinary approaches to managing from different areas (water, health etc.) will be examined.

#### 3. People, culture, society, environmental sustainability through the lens of transdisciplinarity

Environmental sustainability, society and community engagement; Principles of gender equity, diversity, social inclusion, and indigenous knowledge for environmental sustainability; and managing and sustaining natural resources use from multiple perspectives.

#### 4. Transdisciplinary leadership and professional practice

This workshop will focus on transdisciplinary practices that helps to build leadership, perspectives and knowledge from different disciplines, stakeholders and situations. The participants will explore transdisciplinary leadership required in dynamic and complex world and how to best to thrive as professional and bring about sustainable change. Participant will work on real world examples and gain experiences in collective learning environments and develop their professional practice to innovate.

## Assessment

The following table summarises the standard assessment tasks for this subject. Please note this is a guide only. Assessment tasks are regularly updated, where there is a difference your Learning Guide takes precedence.

Type	Length	Percent	Threshold	Individual/Group Task
Portfolio	3000 words or equivalent content	35	N	Individual
Case Study	3000 words	35	N	Individual
Presentation	15 minutes	30	N	Group