

# BIOS 3035 SUSTAINABLE ENVIRONMENTS

**Credit Points** 10

**Legacy Code** 301409

**Coordinator** Manuel Esperon-Rodriguez ([https://directory.westernsydney.edu.au/search/name/Manuel Esperon-Rodriguez/](https://directory.westernsydney.edu.au/search/name/Manuel%20Esperon-Rodriguez/))

**Description** As a student in Sustainable Environments you will synthesize and apply your knowledge about how ecological systems are responding to human impacts in the Anthropocene and how adaptation and mitigation can moderate these impacts. You will demonstrate knowledge of the role of biological and physical processes in provision of ecosystem services. You will apply analytical skills to identify sustainable solutions in social-ecological systems. You will incorporate social and cultural contexts, including relevant Aboriginal perspectives, in communicating science-based knowledge related to the United Nations sustainable development goals in an independent, problem-based sustainability project.

**School** Science

**Discipline** Ecology and Evolution

**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** Undergraduate Level 3 subject

**Pre-requisite(s)** BIOS 2008

**Restrictions**

Successful completion of 120 credit points

**Assumed Knowledge**

Students will be expected to apply previous knowledge in ecology and environmental assessment.

## Learning Outcomes

On successful completion of this subject, students should be able to:

1. Explain how social, biological and physical processes interact to maintain sustainable ecological systems.
2. Apply frameworks of sustainability and ecosystem services to an ecological system.
3. Identify risks and opportunities for sustainability in an ecological system.
4. Using evidence, effectively communicate the social and ecological contexts of an environmental problem and sustainable solutions.

## Subject Content

Sustainability in a changing world

- sustainability frameworks
- Ecosystem services and valuation

Guided case studies (anchored in the United Nations Sustainable Development Goals)

- climate action
- Clean water
- sustainable cities and communities
- life on land

Sustainability project design and application

- modelling and analysis
- team-based sustainability Project

## 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	Mandatory
Short Answer	500 words (x3)	30	N	Individual	N
Essay	500 words (x3)	30	N	Individual	N
Presentation	5 minutes	20	N	Group	N
Reflection	1000 words	20	N	Individual	N

Teaching Periods

## Spring (2025) Hawkesbury

**On-site**

**Subject Contact** Manuel Esperon-Rodriguez ([https://directory.westernsydney.edu.au/search/name/Manuel Esperon-Rodriguez/](https://directory.westernsydney.edu.au/search/name/Manuel%20Esperon-Rodriguez/))

View timetable ([https://classregistration.westernsydney.edu.au/odd/timetable/?subject\\_code=BIOS3035\\_25-SPR\\_HW\\_1#subjects](https://classregistration.westernsydney.edu.au/odd/timetable/?subject_code=BIOS3035_25-SPR_HW_1#subjects))