

BIOS 3035 SUSTAINABLE ENVIRONMENTS

Credit Points 10

Legacy Code 301409

Coordinator Mark Tjoelker ([https://directory.westernsydney.edu.au/search/name/Mark Tjoelker/](https://directory.westernsydney.edu.au/search/name/Mark_Tjoelker/))

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 HECS Band contribution amount via the Fees (https://www.westernsydney.edu.au/currentstudents/current_students/fees/) page.

Level Undergraduate Level 3 subject

Pre-requisite(s) BIOS 2008

Restrictions Students must successfully complete 40 credit points at Level 2

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.

| Item | Length | Percent | Threshold | Individual/ Group Task |
|-------------------------------|----------------|---------|-----------|------------------------|
| Frameworks and Application | 500 words (x3) | 30 | N | Individual |
| Vision Reports | 500 words (x3) | 30 | N | Individual |
| Sustainability Presentation | 15 minutes | 20 | N | Group |
| Reflections on Sustainability | 1000 words | 20 | N | Individual |

Teaching Periods

Spring Hawkesbury

Day

Subject Contact Mark Tjoelker ([https://directory.westernsydney.edu.au/search/name/Mark Tjoelker/](https://directory.westernsydney.edu.au/search/name/Mark_Tjoelker/))

View timetable (https://classregistration.westernsydney.edu.au/even/timetable/?subject_code=BIOS3035_22-SPR_HW_D#subjects)