

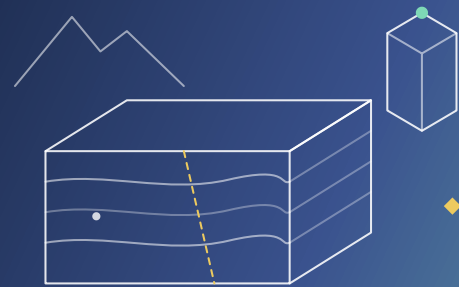
Module code

SPG-3410

Type of module

Undergraduate: Geosciences – Elective

Sustainability and Environmental Geosciences



Modular credits

4

Total student
engagement

56 hours

Prerequisite

SPG-1203 Introduction
to Geology

Anti-requisite

None

Aims

To explore interactions between human activities and the environment, focusing on how geological processes affect society and how humans impact Earth's climate and ecosystems. Topics include natural hazards, climate change, energy, pollution, and sustainability, enabling students to establish sustainable Earth-human relationships.

Module learning outcomes (MLO):

On successful completion of this module, a student will be expected to be able to:

MLO 1

Analyse the basic principles of geohazards, climate change as well as air pollution and how they form.

MLO 2

Analyse the principles of sea level rise, and ocean acidification.

MLO 3

Analyse the principles of the climate crisis.

MLO 4

Propose methods of environmental restoration and the sustainable management of resources.

MLO 5

Apply and analyse renewable and non-renewable resources.

MLO 6

Critically evaluate complex interactions between geological processes, human activities and the climate crisis and develop sustainable solutions for resources management, hazard and climate mitigation.

Module contents

Geohazards	Air Pollution	Climate Change, Ocean Acidification
CO2 Storage	Ocean Acidification	Exploitation of Resources
Habitat reduction and Land use change	Irrigation	Water Pollution

Assessment

60%

Examination

40%

Coursework



■ Examination — 60% ■ Class tests — 20% ■ Assignments — 20%

Formative assessment

Weekly practicals, discussion and feedback

Summative assessment

COMPONENT		WEIGHTING
Examination		60%
Coursework		40%
Individual		40%
Class tests		20%
Assignments		20%

Graduate attributes and skills

Programme learning objectives (PLO) addressed

1	PLO 1 (Fundamental Theoretical Knowledge in Geosciences)	2	PLO 2 (Application of Scientific Methods and Data Analysis)
3	PLO 3 (Integrated Laboratory, Field, and Technical Skills)	5	PLO 5 (Sustainability and Responsible Practice)
6	PLO 6 (Communication and Collaboration Skills)		

Sustainability concept addressed

9	SDG 9 Industry, Innovation, and Infrastructure
11	SDG 11 Sustainable Cities and Communities
13	SDG 13 Climate Action

Digital skills/software used (not limited to)

- Application software (e.g. Microsoft Word, Microsoft Excel, PowerPoint)
- Learning management systems (e.g. Canvas)

Micro-credentialling option

Yes, 4 MCs

Stackable towards GenBESTARI Undergraduate Degree Programme or other relevant Lifelong Learning Programmes

No

Document details

Office **ODVCE** Document date **23 June 2026** Status **New** Approval **GBF (12/02/2006)**