

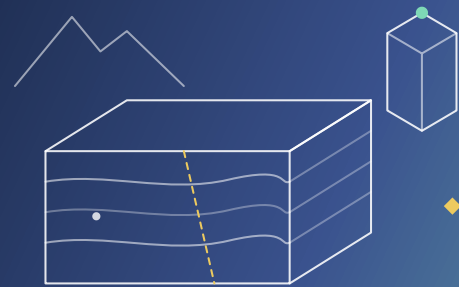
Module code

SPG-2203

Type of module

Undergraduate: Geosciences – Major Core

Geological Mapping



Modular credits

4

Total student
engagement

56 hours

Prerequisite

None

Anti-requisite

None

Aims

To equip students with essential skills in geological mapping, field observation, and data interpretation. It integrates traditional field mapping with modern digital techniques, emphasizing the significance of accurate geological maps for understanding Earth's processes, resources, and hazards.

Module learning outcomes (MLO):

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

MLO 1

Analyse and record lithologies and geological structures in the field using standard mapping tools (e.g. compass-clinometer, GPS, tablet).

MLO 2

Apply principles of map reading, cross-section construction, and the Rule of Vs to represent geological data accurately.

MLO 3

Construct geological maps and cross-sections both digitally and on paper using appropriate geospatial tools.

MLO 4

Interpret and integrate field, remote sensing, and GIS datasets to analyse stratigraphic and structural relationships.

MLO 5

Evaluate and communicate geological maps and field results through professional reports and oral presentations.

Module contents

Principles of geological mapping and map projections	Use of compass, GPS, digital tablets	Lithological identification and boundary mapping
Rule of Vs and topographic map interpretation	Stratigraphic and structural field relationships	Cross-section construction
Mapping of folds, faults, and unconformities	Remote sensing and aerial photograph interpretation	GIS applications in field mapping
Geological report writing and presentation	Extended field camp (7–10 days)	

Assessment

50% Examination
50% Coursework



■ Examination — 50% ■ Field notebook and daily records — 10% ■ Geological map and cross-sections — 10%
■ Field report — 10% ■ Field presentation — 10% ■ Group interpretation report — 10%

Formative assessment	Summative assessment	
Weekly discussion and feedback	COMPONENT	WEIGHTING
	Examination	50%
	Coursework	50%
	Individual	30%
	Field notebook and daily records	10%
	Geological map and cross-sections	10%
	Field report	10%
	Group	20%
	Field presentation	10%
	Group interpretation report	10%

Graduate attributes and skills

Programme learning objectives (PLO) addressed

1	PLO 1 (Fundamental Theoretical Knowledge in Geosciences)	3	PLO 3 (Integrated Laboratory, Field, and Technical Skills)
4	PLO 4 (Critical Thinking and Problem-Solving Skills)	6	PLO 6 (Communication and Collaboration Skills)
7	PLO 7 (Independent Learning and Professional Development)		

Sustainability concept addressed

13	SDG 13 Climate Action
15	SDG 15 Life on Land

Digital skills/software used (not limited to)

Geological mapping and visualization software (ArcGIS/QGIS)
Digital field mapping tools (e.g. FieldMove, StraboSpot)
Word and presentation software (e.g. MS Office)

Micro-credentialling option No	Stackable towards GenBESTARI Undergraduate Degree Programme or other relevant Lifelong Learning Programmes No
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Document details

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