

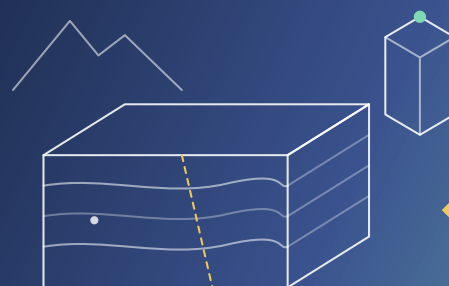
Module code

SPG-3412

Type of module

Undergraduate: Geosciences – Elective

Advanced Sedimentology



Modular credits

4

Total student
engagement

56 hours

Prerequisite

SPG-1203 Introduction
to Geology

Anti-requisite

None

Aims

To equip students with advanced knowledge of sedimentary processes and environments, enhancing skills in interpreting sequences in the field and literature. It prepares students for sedimentology-related industries, includes industry-style assessments and features three to four fieldwork sessions for practical application.

Module learning outcomes (MLO):

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

MLO 1

Determine flow velocities and sea-level changes from sedimentary profiles (core and outcrop).

MLO 2

Correlate sedimentary facies and successions to assess their evolution in terms of energy and environment changes.

MLO 3

Interpret sedimentary geometries and sequences through time and space.

MLO 4

Relate sequence stratigraphic processes to depositional environments, considering geometry, energy and accommodation.

MLO 5

Correlate profiles across intra- and extra-basin systems to construct stratigraphic frameworks.

Module contents

Flow processes and sedimentary movement dynamics

Continental sedimentary environments

Transitional sedimentary environments

Marine sedimentary environments

Carbonate sedimentary environments

Sequence stratigraphy

3 to 4 fieldwork sessions focused on intensive sedimentological analysis

Assessment

60%

Examination

40%

Coursework



■ Examination — 60%

■ Weekly practicals — 15%

■ Fieldwork report — 10%

■ Class test — 10%

■ Collaborative activity — 5%

Formative assessment

Weekly practicals, discussion and feedback

Summative assessment

COMPONENT	WEIGHTING
Examination	60%
Coursework	40%
Individual	35%
Weekly practicals	15%
Fieldwork report	10%
Class test	10%
Group	5%
Collaborative activity	5%

Graduate attributes and skills

Programme learning objectives (PLO) addressed

3	PLO 3 (Integrated Laboratory, Field and Technical Skills)	4	PLO 4 (Critical Thinking and Problem-Solving Skills)
6	PLO 6 (Communication and Collaborations Skills)		

Sustainability concept addressed

4	SDG 4 Quality Education
14	SDG 14 Life below Water

Digital skills/software used (not limited to)

■	Word processing software (e.g. Microsoft Word)
■	Image digitising softwares (e.g. Adobe Photoshop, Adobe Illustrator, SedLog)
■	Slide generation software (e.g. Microsoft PowerPoint)
■	Data organisation software (e.g. Microsoft Excel)
■	File sharing platforms (e.g. OneDrive, online Whiteboard)

Micro-credentialling option

No

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

No

Document details

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