

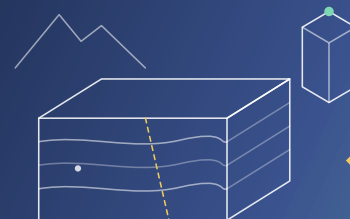
Module code

**SPG-1202**

Type of module

**Undergraduate: Geosciences – Major Core**

# Introduction to Sedimentology and Stratigraphy



Modular credits

**4**

Total student  
engagement

**56** hours

Prerequisite

**None**

Anti-requisite

**None**

## Aims

To examine the formation and alteration of clastic and chemical sedimentary rocks from deposition to lithification, including microscopic analysis. It covers secondary processes, sedimentary structures, and basin-scale integration of sedimentology and stratigraphy.

## Module learning outcomes (MLO):

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

### MLO 1

Interpret sedimentary and stratigraphic features in thin sections, hand specimens and outcrops to distinguish depositional characteristics.

### MLO 2

Evaluate how sedimentary structures and textures reflect the physical, chemical and biological processes that formed them.

### MLO 3

Relate observable sedimentary features with processes involved in its formation and associated depositional environment.

### MLO 4

Integrate fundamental sediment components with stratigraphic frameworks and analyse their evolution across a basin scale.

## Module contents

|                                                                      |                                      |                                                                                       |
|----------------------------------------------------------------------|--------------------------------------|---------------------------------------------------------------------------------------|
| Definition of sediment and types of weathering that produce sediment | Sediment transport and settling      | Grain texture, composition, classification and diagenesis of clastic sedimentary rock |
| Types of sedimentary structures                                      | Sedimentary depositional environment | Carbonate sedimentary rock                                                            |
| Principles of stratigraphy and facies change                         | Sequence stratigraphy                |                                                                                       |

## Assessment

60%

Examination

40%

Coursework



Examination — 60%

Class tests — 20%

Weekly practical — 10%

Fieldwork report — 10%

### Formative assessment

Weekly discussion  
and feedback

### Summative assessment

| COMPONENT        | WEIGHTING |
|------------------|-----------|
| Examination      | 60%       |
| Coursework       | 40%       |
| Individual       | 30%       |
| Class tests      | 20%       |
| Weekly practical | 10%       |
| Group            | 10%       |
| Fieldwork report | 10%       |

## Graduate attributes and skills

### Programme learning objectives (PLO) addressed

1

PLO 1 (Fundamental Theoretical Knowledge in Geosciences)

6

PLO 6 (Communication and Collaboration Skills)

3

PLO 3 (Integrated Laboratory, Field and Technical Skills)

### Sustainability concept addressed

4

SDG 4 Quality Education

### Digital skills/software used (not limited to)

- Word processing software (e.g. Microsoft Word)
- Image digitising software (Adobe Photoshop, Adobe Illustrator, SedLog)
- Slide generation software (Microsoft PowerPoint)
- Data organisation software (Microsoft Excel)

Micro-credentialling option

No

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

No

### Document details

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