

Course Outline (Higher Education)

School / Faculty: Faculty of Science and Technology
Course Title: SEDIMENTOLOGY AND STRATIGRAPHY
Course ID: SCGEO2112
Credit Points: 15.00
Prerequisite(s): SCGEO1102 or SCGEO 1103
Co-requisite(s): Nil
Exclusion(s): (SCGEO2104 and SCGEO3101)
ASCED Code: 010703
Grading Scheme: Graded (HD, D, C, etc.)

Program Level:

AQF Level of Program						
	5	6	7	8	9	10
Level						
Introductory	■	■	■	■	■	■
Intermediate	■	■	✓	■	■	■
Advanced	■	■	■	■	■	■

Learning Outcomes:

Knowledge:

- K1.** Infer the broad processes responsible for the formation of sedimentary rocks
- K2.** Determine the spatial variation in sediment/rock type as influenced by the environment of deposition
- K3.** Cite the principles of stratigraphy

Skills:

- S1.** Describe sedimentary rocks comprehensively
- S2.** Classify sedimentary rocks appropriately

Application of knowledge and skills:

- A1.** Perform elementary stratigraphic correlation
- A2.** Use sedimentary characteristics in the deciphering of structurally complicated terrain
- A3.** Interpret sedimentary rocks in terms of their facies significance

Course Content:

Topics may include:

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- Textural analysis of sedimentary rocks (grain size, shape, sorting, fabric)
- Sedimentary structures, trace fossils and bioturbation
- Classification of sedimentary rocks
- Mechanisms of sedimentary transport and deposition
- Diagenesis of carbonate rocks
- Sedimentary facies analysis
- Principles of stratigraphy
- Correlation

Values and Graduate Attributes:

Values:

- V1.** Comprehend the interconnectedness of sedimentary processes with other processes that operate at and near the Earth's surface
- V2.** Understand the responsibilities of the professional in the use of scientific literature

Graduate Attributes:

FedUni graduate attributes statement. To have graduates with knowledge, skills and competence that enable them to stand out as critical, creative and enquiring learners who are capable, flexible and work ready, and responsible, ethical and engaged citizens.

Attribute	Brief Description	Focus
Knowledge, skills and competence	Develop a basic level of familiarity with the sedimentological and stratigraphic literature that allows a deepening of engagement with the disciplines in the future	High
Critical, creative and enquiring learners	Achieve a basic level of confidence in interpreting sedimentary rocks and processes	High
Capable, flexible and work ready	Not applicable	
Responsible, ethical and engaged citizens	Develop respect for earth materials as worthy of consideration according to principles of sustainability	Medium

Learning Task and Assessment:

Learning Outcomes Assessed	Assessment Task	Assessment Type	Weighting
K1, S1, S2, A2	Laboratory / field practicals	Reports	25%-35%
K1, A2, A3, V2	Poster preparation	Poster presentation	15%-25%
K1, K2, K3, A1, V1	Correlation exercises	Correlation Report	5%-15%
K1, K2, K3, S1, S2, A1, A2, A3	Understanding of lecture material	Final examination	35%-55%

Adopted Reference Style:

Other (Australian Journal of Earth Sciences)