GHENT UNIVERSITY

Course Specifications

Valid as from the academic year 2020-2021

Advanced Sedimentology (C003337)

Due to Covid 19, the education and evaluation methods may vary from the information displayed in the schedules and course details. Any changes will be communicated on Ufora.

Course size *(nominal values; actual values may depend on programme)*

Credits 6.0 **Study time 156 h** **Contact hrs** 66.5 h

Course offerings and teaching methods in academic year 2022-2023

A (semester 1)	English	Gent	seminar	12.5 h
			lecture	25.0 h
			group work	15.0 h
			practicum	15.0 h

Lecturers in academic year 2022-2023

Van Daele, Maarten	WE13	lecturer-in-charge
Meyer, Inka	WE13	co-lecturer

Offered in the following programmes in 2022-2023	**crdts**	**offering**
Master of Science in Teaching in Science and Technology (main subject Geology)	6	A
Master of Science in Geology	6	A
Master of Science in Geology	6	A
Exchange programme in Geology (master's level)	6	A

Teaching languages

English

Keywords

Sediment sampling equipment, analytical techniques in sedimentology, sedimentological case-studies

Position of the course

This course builds on the principles of sediment production, transport, and deposition that were introduced in Sedimentology. It is focused on the use of sediments for research purposes.

Contents

Sediment sampling techniques, in-situ sediment monitoring instruments, coring equipment.
Analytical techniques in sedimentology.
Core logging instrumentation: Multi-sensor core loggers, XRF and CT core scanners, including applications.
Interpretation of multi-proxy sediment records, including age-depth modeling.
Grain-size analysis and end-member modelling
Turbidite sedimentology and turbidite paleoseismology.
Recent advances in sedimentology.
Challenges in sedimentology.

Initial competences

Advanced sedimentology builds on the concepts and skills learned in Sedimentology. To follow this course, students must have passed course C003342.

Final competences

1 The student can design a research project based on sediments and sedimentary archives.
2 He/she is able to select the most appropriate techniques to analyze sediments for specific

purposes, as well as combine and interpret data obtained using several independent techniques.

Conditions for credit contract

Access to this course unit via a credit contract is determined after successful competences assessment

Conditions for exam contract

This course unit cannot be taken via an exam contract

Teaching methods

Group work, lecture, practicum, seminar

Extra information on the teaching methods

Teaching methods may need to be adjusted, should the COVID19 situation demand this.

Learning materials and price

Course notes, hand-outs, and scientific articles available on Ufora

References

Specific scientific articles given during the course.

Course content-related study coaching

Discussion of problems and questions during and after the lectures and seminars. Continued support by teaching assistants during the practical exercises.

Evaluation methods

end-of-term evaluation and continuous assessment

Examination methods in case of periodic evaluation during the first examination period

Written examination with open questions, assignment, skills test, report

Examination methods in case of periodic evaluation during the second examination period

Written examination with open questions, written examination with multiple choice questions, skills test, report

Examination methods in case of permanent evaluation

Assignment

Possibilities of retake in case of permanent evaluation

examination during the second examination period is possible

Calculation of the examination mark

Theoretical exam, including conception, presentation, and discussion of sediment-based mock research project: 75%
Group project report: 25%