Course Specifications
Valid as from the academic year 2016-2017

Advanced Sedimentology (C003816)

Lecturers in academic year 2017-2018
Bertrand, Sebastien

Course offerings and teaching methods in academic year 2017-2018
A (semester 1)
A (semester 1)
practicum 15.0 h
lecture 25.0 h
seminar 12.5 h
group work 15.0 h

Offered in the following programmes in 2017-2018

Master of Science in Marine and Lacustrine Science and Management

6 crdts
A offering

Teaching languages
English

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

Position of the course
This course is focused on the use of sediments for research purposes. It builds on the general principles of sediment production, transport, and deposition that were introduced at the Bachelor level.

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.
Interpretation of multi-proxy sediment records, including age-depth modeling.
Recent advances in sedimentology.
Case-studies (seminars given by guest speakers).

Initial competences
The student knows the basic concepts of sedimentology and stratigraphy, such as sediment production, transport and deposition. He/she knows the main depositional environments.

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.
3 He/she can 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

(Approved)
Conditions for exam contract
This course unit cannot be taken via an exam contract

Teaching methods
Group work, lecture, practicum, seminar

Learning materials and price
Course notes, hand-outs, and scientific articles available on Minerva.

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

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

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

Examination methods in case of permanent evaluation
Written examination, report

Possibilities of retake in case of permanent evaluation
not applicable

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