

## Marine Extreme Systems (C004043)

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

**Credits 6.0**

**Study time 180 h**

**Course offerings and teaching methods in academic year 2023-2024**

A (semester 1)

English

Gent

lecture

seminar

independent work

**Lecturers in academic year 2023-2024**

Vanreusel, Ann

WE11

lecturer-in-charge

**Offered in the following programmes in 2023-2024**

[Master of Science in Marine and Lacustrine Science and Management](#)

**crdts**

6

**offering**

A

**Teaching languages**

English

**Keywords**

Deep-sea, margin and polar systems, ecology and biogeochemistry, global change

**Position of the course**

Most important margin, deep-water and polar systems will be studied in an integrated way with focus on biological and bio(geo)chemical processes, including ecosystem dynamics in a context of global change

**Contents**

Structure, origin and evolution of systems that can be found along ocean margins, the deep sea or in polar environments such as cold seeps, mud volcanoes, cold water corals, carbonate mounds, hydrothermal vents, abyssal plains and ice margins. Study of their geological features the ecological and biochemical processes, their ecosystem functions and biodiversity, the most important environmental drivers, their exploration, exploitation, threats (including anthropogenic activities and global change) and management.

**Initial competences**

General knowledge of marine biological, marine geological and biochemical processes.

**Final competences**

- 1 Students have advanced knowledge and insight in the ecology of margin systems and extreme environments, and how they evolve over time.
- 2 Students have insight in the aspects of management and societal context.

**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**

Seminar, Lecture, Independent work

**Extra information on the teaching methods**

Individual study as a preparation for the discussions based on a selection of specialised papers.

Due to COVID 19 other teaching tools may be used when needed

### **Learning materials and price**

Scientific publications from international peer-reviewed journals and specialized handbooks

### **References**

### **Course content-related study coaching**

During the course, students can ask questions at the end of each class or after making an appointment. At the end of the course, special sessions for answering questions can be organised. Questions can also be asked during contact moments of assignments.

### **Assessment moments**

end-of-term and continuous assessment

### **Examination methods in case of periodic assessment during the first examination period**

Written assessment with open-ended questions

### **Examination methods in case of periodic assessment during the second examination period**

Written assessment with open-ended questions

### **Examination methods in case of permanent assessment**

Assignment

### **Possibilities of retake in case of permanent assessment**

not applicable

### **Extra information on the examination methods**

In addition to the exam there is an assignment by means of interactive discussions on specified subjects from the lectures, supplemented with specialized literature.

### **Calculation of the examination mark**

- 60% written exam
- 40% assignment