Course Specifications
Valid as from the academic year 2017-2018

Course size
Credits 3.0  Study time 90 h  Contact hrs 20.0 h

Course offerings and teaching methods in academic year 2017-2018
A (semester 1)  seminar: coached exercises 5.0 h
lecture 15.0 h

Lecturers in academic year 2017-2018
De Troch, Marleen  WE11  lecturer-in-charge

Offered in the following programmes in 2017-2018
Master of Science in Marine and Lacustrine Science and Management

3  A

Teaching languages
English

Keywords
Structural diversity, functional diversity, large-scale biodiversity patterns, tropical ecosystems

Position of the course
This course aims to convey students to ecological (structural), functional and evolutionary aspects of marine biodiversity. Starting from basic biological knowledge, these aspects are taught at different levels of organisation (population, community, ecosystem). This course results in a broad knowledge of marine biodiversity that is essential to understand its role in the sustainable use and management of the marine environment.

Contents
Ecological (structural), functional and evolutionary aspects of marine biodiversity at different levels of organisation (population, community, ecosystem) are explained by means of up-to-date case-studies from marine ecosystems worldwide. Specific topics of the course include, amongst others:
• biodiversity: definitions, factors and gradients
• biodiversity patterns at different spatial levels, with emphasis on large-scale patterns
• use of biodiversity for conservation management: need for indices
• calculating and interpretation of biodiversity indices (practical exercises)
• functional diversity
• diversity versus productivity
• diversity versus stress; stability of a community
The practical part includes (1) guided exercises on calculating biodiversity and (2) critical report (2 pages) on an actual scientific paper on marine biodiversity.

Initial competences
Basic knowledge in biology

Final competences
To understand large-scale patterns of biodiversity and the underlying processes from an ecological and functional point of view.

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

Conditions for exam contract

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

**Teaching methods**
- Lecture, seminar: coached exercises

**Extra information on the teaching methods**
- On a regular basis additional recent literature is cited during the course and is made available by the lecturers.

**Learning materials and price**
- Printed course notes
- On a regular basis additional recent literature is cited during the course and is made available by the lecturers.

**References**

**Course content-related study coaching**
- Discussion sessions

**Evaluation methods**
- end-of-term evaluation

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

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

**Examination methods in case of permanent evaluation**

**Possibilities of retake in case of permanent evaluation**
- not applicable

**Extra information on the examination methods**
- Written examination with (1) one biodiversity exercise and (2) open questions related to the interpretation of the outcome of this exercise. The interpretation of the exercise requires insight in the theory content of the course. Oral examination after the written preparation, feedback on the report.

**Calculation of the examination mark**

(Approved)