Course Specifications
Valid as from the academic year 2017-2018

Course size

| Credits | Study time 90 h | Contact hrs 20.0 h |

Course offerings and teaching methods in academic year 2019-2020

A (semester 1) English

- lecture 15.0 h
- seminar: coached exercises 5.0 h

Lecturers in academic year 2019-2020

De Troch, Marleen WE11 lecturer-in-charge

Offered in the following programmes in 2019-2020

| Master of Science in Marine and Lacustrine Science and Management |
| 3 crds A offering |

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
oral exam: 100%