GHENT UNIVERSITY

# Course Specifications

Valid as from the academic year 2020-2021

## Marine Biodiversity (C004047)

**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** 3.0 | **Study time** 90 h | **Contact hrs** | 20.0 h |

**Course offerings and teaching methods in academic year 2022-2023**

| | | | | |
|---|---|---|---|---|
| A (semester 1) | English | Gent | seminar: coached exercises | 5.0 h |
| | | | lecture | 15.0 h |

**Lecturers in academic year 2022-2023**

| | | |
|---|---|---|
| De Troch, Marleen | WE11 | lecturer-in-charge |

| **Offered in the following programmes in 2022-2023** | **crdts** | **offering** |
|---|---|---|
| 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 teached 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

This course unit cannot be taken via an exam contract

**Teaching methods**

Lecture, seminar: coached exercises

**Extra information on the teaching methods**

due to COVID19 on campus lectures can be replaced by alternatives in case this is necessary.

**Learning materials and price**

all course notes are available on the online platform Ufora.

**References**


- Magurran, A.E. (2003). Measuring Biological Diversity. Blackwell Publishing.
- Brown, J.H., Riddle, B.R. & Lomolino, M.V. (2005). Biogeography. Third edition. Sinauer Asoociates, Inc. Publishers, Sunderland, Massachusetts.


On a regular basis additional recent literature is cited during the course and is made available by the lecturers.

**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%