

## Aquatic Food Web Ecology (C004491)

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

**Credits 4.0**

**Study time 120 h**

**Course offerings and teaching methods in academic year 2024-2025**

A (semester 1)

English

Gent

lecture

**Lecturers in academic year 2024-2025**

De Troch, Marleen

WE11

lecturer-in-charge

**Offered in the following programmes in 2024-2025**

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

**crdts**

4

**offering**

A

**Teaching languages**

English

**Keywords**

Structural biodiversity, functional biodiversity, biomarkers, primary production, plankton, benthos, marine mammals

**Position of the course**

Advanced course to unravel the biodiversity of aquatic higher organisms operating in crucial units of food webs. This course aims to give insight in structural and functional aspects of biodiversity and is based on knowledge of marine and lacustrine organisms and their environment (Marine and Lacustrine Biology).

**Contents**

Starting from an overall aquatic food web, the course will give: a general approach of actual research topics as

- structural biodiversity (spatial levels) and its calculation
- functional biodiversity with a more detailed approach of key players in aquatic food webs:
  - primary producers: marine photosynthetic organisms (macroalgae, mangroves, seagrasses and scleractinian corals), ecological roles and ecophysiology
  - zooplankton
  - benthos
  - top predators and marine mammals in terms of their function, their organisation and their morphological adaptations.

**Initial competences**

Basic knowledge of the biology of aquatic organisms (both plants and animals).

**Final competences**

- 1 To know how to calculate and interpret biodiversity.
- 2 To get knowledge on the morphological adaptations of aquatic organisms.
- 3 To understand their functioning in order to maintain aquatic biodiversity in their environments.

**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

### **Extra information on the teaching methods**

**Lectures are always followed by short interactive discussion sessions.**

### **Study material**

Type: Slides

Name: course-specific slides

Indicative price: Free or paid by faculty

Optional: no

Available on Ufora : Yes

Online Available : No

Available in the Library : No

Available through Student Association : No

### **References**

Belgrano, B., Scharler, U.M., Dunne, J. & Ulanowicz, R.E., 2005. Aquatic Food Webs. An ecosystem approach. Oxford University Press, 262 p.

Magurran, A.E., 2004. Measuring biological diversity. Blackwell Publishing, 256 p.  
Dring Matthew J. Biology of marine plants.

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

#### **Assessment moments**

end-of-term assessment

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

Oral assessment

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

Oral assessment

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

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

not applicable

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

Oral examination with written preparation. There are typically 2-4 questions. The questions seek an equilibrium between knowledge of the theory (concepts) and understanding of trophic interactions in a food web.

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