GHENT UNIVERSITY

Course Specifications

Valid as from the academic year 2025-2026

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 2025-2026

A (semester 1)	English	Gent	lecture
B (semester 1)	English	Gent	

Lecturers in academic year 2025-2026

De Troch, Marleen	WE11	lecturer-in-charge
Vafeiadou, Anna-Maria	WE11	co-lecturer

Offered in the following programmes in 2025-2026	crdts	offering
Master of Science in Biology	3	B
Master of Science in Marine and Lacustrine Science and Management	4	A
Exchange Programme in Biology (master's level)	4	B

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
- toppredators 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