GHENT UNIVERSITY

Course Specifications

Valid as from the academic year 2024-2025

Concepts and Practices in Biological Oceanography and Marine Ecology - Part 3 (C004292)

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

Credits 6.0 **Study time 150 h**

Course offerings in academic year 2026-2027

A (semester 2) English Gent

Lecturers in academic year 2026-2027

Lantoine, François	PARIS64	lecturer-in-charge
Orignac, Jadwiga	PARIS64	co-lecturer

Offered in the following programmes in 2026-2027	**crdts**	**offering**
International Master of Science in Marine Biological Resources	6	A

Teaching languages

English

Keywords

Mediterranean pelagic and benthic ecology, ecosystems diversity, Mediterranean coastal lagoon, microbial ecology, methodology in oceanography, sampling strategy, data analysis, modelling, Environmental Surveys.

Position of the course

CPOB-Part 3 is a Practical Course, implementing with field works and concepts that were acquired in the first semester and previous CPOB unit. Part 3 is devoted to field work, data analyses and modeling. Transfer of the theoretical background in biological oceanography and marine ecology into conceptual and practical knowledge.

Contents

The purpose is to show to the student how to study different ecosystems from the ampling strategy, on board work to collect samples, samples analysis, data analysis up to the conceptualization of ecosystems through initiation to simple model. Students will have an understanding of the coastal ecosystem functioning using all knowledge acquired during the different CPOB units.

Initial competences

Having completed CPOB-Part 1 and 2 / general knowledge in marine biology and oceanography.

Final competences

1 Develop a sampling strategy (conception and application).
2 Work at sea (cruise organization and work on board).
3 Oceanographic instrumentation for benthic and pelagic studies.
4 Basic Laboratory Practices for Biological Oceanography and Marine Ecology.
5 Data acquisition / Data analyses.
6 Handle big data basis (SOMLIT data basis).
7 Learning how to identify biodiversity patterns from different samples.
8 Learning how to build simple models in marine ecology.
9 Oral communication.
10 Work in group.

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

Seminar, Lecture

Extra information on the teaching methods

This course will emphasis on both theoretical and practical approaches. Starting from lectures the students will have to plan, organize and realize a sampling of benthic and pelagic ecosystems. Coming back to the laboratory they will analyze the samples to finally practice data analysis and modelisation. During practical works a wide diversity of techniques and methods used in oceanography will be developed. After data acquisition a strong personal investment of the students working in small groups will be require in order to present the final analysis in oral presentations or written reports.

Study material

None

References

Course content-related study coaching

Assessment moments

end-of-term and continuous assessment

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

Written assessment

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

Written assessment

Examination methods in case of permanent assessment

Oral assessment, Assignment

Possibilities of retake in case of permanent assessment

examination during the second examination period is possible

Extra information on the examination methods

- Written examination: individual restitution of acquired knowledge and understanding of the course.
- Oral presentation in small group of the results and analysis based on the practical works.

Calculation of the examination mark

- 50% Written Exam
- 50% Oral exam and Practical Assignments