GHENT UNIVERSITY

Course Specifications

Valid as from the academic year 2024-2025

Field Practices in Marine Monitoring (C004350)

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

Lo Martire, Marco	ANCONA01	lecturer-in-charge
Gorbi, Stefania	ANCONA01	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

Monitoring, sampling strategy and techniques

Position of the course

This aims at providing the students with the expertise for field work at sea, enabling the students to acquire the skills needed for the monitoring activities. The field course deals with practical issues on monitoring the marine environment, through both remote and direct techniques, i.e., the use of sampling devices (niskin water samples, benthic grabs, splash cameras). It will offer the opportunity to experience the design of a sampling strategy using the main techniques and protocols that marine biologists apply in the field. The course will include either sample collection from a vessel (e.g. water, sediments, plankton, benthos, nekton), either experimental activities, i.e., on the hard (e.g. rocky) and/or soft (e. g. Beach) marine habitats (mussel watch and translocation experiments, caging). The course includes lectures (2, 16 hours) and practical training in the field and in the lab (4 ECTS, 32 hours). The students will acquire practical skills for monitoring strategies. The peculiarity of the practical activities will require developing skills of interaction and coordination within a workgroup.

Contents

Description of the main sampling techniques for environmental monitoring. Sampling from the research vessel using van Veen grabs, Niskin bottles, box-corer or multiple corer, and splash camera. Practical experiences for the samples treatment, preservation, preparation and sorting of samples of seawater, sediments, benthos, intertidal and coastal organisms, mussel watch monitoring. Use of multi-parametric probe (e.g. CTD), and sampling nets for zooplankton and macro and micro plastics, sediment corer, caging experiments.

Initial competences

Graduate level in sciences.
No specific pre-requisites are requested, although basic knowledge in marine biology and ecology are recommended.

Final competences

1 The students know the main techniques and methodologies for specific case studies, in either research activities, monitoring or conservation issues.
2 The scope of the course is to offer students the theoretical and practical

knowledge on more common sampling methodologies for the marine environment.

3 They learn, touching by hands, the requirements needed to become a marine biologist both in the field, acquiring good competences in sampling and monitoring techniques, and in the lab.

4 All the activities are focussed on the 11 descriptors required the European Marine Strategy Directive to define the Good Environmental Status.

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

Study material

None

References

Notes taken during the lecturers and presentations given by the lecturers. State of the art articles, reports, books.

Course content-related study coaching

Assessment moments

end-of-term assessment

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

Written assessment with multiple-choice questions, Written assessment with open-ended questions

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

Written assessment with multiple-choice questions, Written assessment with open-ended questions

Examination methods in case of permanent assessment

Possibilities of retake in case of permanent assessment

not applicable

Extra information on the examination methods

Short presentation supported by visual material describing the sampling strategy, the sample or data collection, the lab analysis performed during the course. The students must demonstrate that they have acquired the basic knowledge presented during the course; with regard to the practical part, the student will be asked to conceptually apply the methods learned in the field to specific case studies. The final grade is mainly allocated according to the ability to set the answer complete and schematic, to the level of knowledge and the exposition of the proper terminology.

Calculation of the examination mark

The final examination consists of a multiple-choice test (30 questions) and two open questions-responses. Each question of the multiple-choice test can have one or more right responses and is worth 1 point if all the responses are right. The open responses are worth 2 points. The mark is calculated on the basis of the number of right responses. The highest score is 30 cum laude.