GHENT UNIVERSITY

Course Specifications

Valid as from the academic year 2024-2025

Spatial Distribution of Genetic Biodiversity (C004240)

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

Credits 3.0 **Study time 75 h**

Course offerings in academic year 2026-2027

A (semester 2) English Gent

Lecturers in academic year 2026-2027

Machado Schiaffino, Gonzalo OVIEDO01 lecturer-in-charge

Offered in the following programmes in 2026-2027	crdts	offering
International Master of Science in Marine Biological Resources	3	A

Teaching languages

English

Keywords

biodiversity, distribution, populations, genetics

Position of the course

Contents

- Theory: Population genetic structure and gene flow. Population differentiation, F analysis. Indicators of population mixture. Wahlund effect. Distribution of genetic variation within a species and its determining factors.
- Populations and stocks. Molecular applications to the management of exploited populations. Identification of biological and management units. Estimates of effective population size through genetic variation. Inference of bottlenecks. Genetic signatures and examples of marine metapopulations.
- Practical work: Research-based of a case study comprising field, laboratory, analytical work using modern software. Critical analysis of a relevant quality publication; analysis of a real dataset with state of the art software.

Initial competences

Graduate level in sciences. Basic knowledge in molecular biology is recommended.

Final competences

1 Students should be acquainted with state of the art methodologies currently applied in the analysis of spatial structure of marine populations.
2 They should also be able to design complete protocols for analysis of genetic biodiversity, population and stock structure.

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

Course content-related study coaching

Assessment moments

continuous assessment

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

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

Examination methods in case of permanent assessment

Peer and/or self assessment, Assignment

Possibilities of retake in case of permanent assessment

examination during the second examination period is possible

Extra information on the examination methods

Presentation of the results of the case study supported by visual material. Team working is encouraged and peer evaluation will represent 20% final score.

Calculation of the examination mark