

## Numerical Ecology: Multivariate Methods for Marine Community Ecology (C004305)

Due to Covid 19, the education and assessment methods may vary from the information displayed in the schedules and course details. Any changes will be communicated on Ufora.

**Course size** *(nominal values; actual values may depend on programme)*  
**Credits 4.0**                      **Study time 100 h**                      **Contact hrs**                      32.0h

### Course offerings in academic year 2021-2022

A (semester 1)                      English                      Gent

### Lecturers in academic year 2021-2022

Gauthier, Olivier                      BREST02      lecturer-in-charge  
Boyé, Aurélien                      BREST02      co-lecturer

### Offered in the following programmes in 2021-2022

	<b>crdts</b>	<b>offering</b>
<a href="#">International Master of Science in Marine Biological Resources</a>	4	A

### Teaching languages

English

### Keywords

Nature of multidimensional data; Matrix algebra; Similarities, dissimilarities and distances; Clustering; Ordination; Canonical analysis; Spatial and temporal modelling.

### Position of the course

### Contents

Nature of multidimensional data; Matrix algebra; Similarities, dissimilarities and distances; Clustering; Ordination; Canonical analysis; Spatial and temporal modelling.

### Initial competences

QMMS, Marine ecology

### Final competences

- 1 Students will understand the theoretical foundation of advanced methods for the study of community change over space and time.
- 2 They will be able to carry out these analysis using state of the art methods and tools using the R language.
- 3 They will also acquire the knowledge necessary to properly design experiments to study beta diversity in space and time.

### 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

Demonstration, Online discussion group, Group work, Guided self-study, Seminar, Lecture, Project, Seminar: practical pc room classes

### Learning materials and price

### References

Borcard, D., F. Gillet & P. Legendre. 2018. Numerical Ecology with R.  
Legendre, P. & L. Legendre. 2012. Numerical Ecology

## **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**

Oral examination

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

Oral examination

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

Report

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

examination during the second examination period is possible

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