

Management of Marine Living Resources in Practice (C003887)

Course size	<i>(nominal values; actual values may depend on programme)</i>		
Credits 6.0	Study time 150 h	Contact hrs	48.0h
Course offerings in academic year 2022-2023			
A (semester 2)	English	Gent	
Lecturers in academic year 2022-2023			
Rico, Jose	OVIED001	lecturer-in-charge	
Borrell Pichs, Yaisel Juan	OVIED001	co-lecturer	
Garcia Vazquez, Eva	OVIED001	co-lecturer	
Offered in the following programmes in 2022-2023			
International Master of Science in Marine Biological Resources	crdts	offering	
	6	A	

Teaching languages

English

Keywords

biological invasions, populations in captivity, aquaculture, conservation, sustainability

Position of the course

Contents

Module 1 (3 ECTS): Management of marine menaces.
 Biological invasions: Attributes of invasive species. Recipient communities. Factors that favor invasiveness. Introduction vectors in marine ecosystems: ballast water. Fouling. Aquaculture and accidental introductions. Secondary dispersal. Quarantine and management techniques. Marine invasives in Europe. Management of invasives databases. Socioeconomic aspects of marine invasions. Prevention versus eradication. Social perception of invasives. Risk analysis and cost valuation. Genetics of marine invasions. Applications to early detection, identification of cryptic species, monitoring of exotic populations, inference of origin. Genetic variability of invaders. Coevolution of exotic species and recipient communities.
 Module 2 (3 ECTS): Management of populations in captivity.
 Principles of aquaculture. Main species for aquaculture in Europe. Main aquaculture procedures. Culture and reproduction. The relationship between aquaculture and conservation. Biological and ecological criteria for the selection of new species. Practices of culture and breeding in aquaculture. Reproduction: manipulation and induction. Impact of alien species. Environmental impact of marine aquaculture. Sustainable aquaculture. Novel techniques for sustainable aquaculture: sustainable water use, feeding systems, residue treatment. Control of new pathologies and genetic diffusion.

Initial competences

Graduate level in sciences. Basic knowledge in genetics is recommended.

Final competences

Students will be able to apply biological, genetic and ecological knowledge to make decisions about practical aspects of the management of marine resources, such as prevention and/or eradication of marine introductions; the use of new species for aquaculture; sustainable management of aquaculture facilities; the evaluation and prevention of environmental impact of aquaculture.

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

Learning materials and price**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 examination

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

Written examination

Examination methods in case of permanent assessment

Assignment

Possibilities of retake in case of permanent assessment

examination during the second examination period is possible

Extra information on the examination methods

Module 1: Species fact sheet (poster), essay in writing.

Module 2: Short presentation supported by visual material; exam in writing.

Calculation of the examination mark