



## IDENTIFYING DATA

### Conservation Biology

Subject	Conservation Biology			
Code	V02M098V01204			
Study programme	Máster Universitario en Biología Marina			
Descriptors	ECTS Credits	Choose	Year	Quadmester
	3	Optional	1st	2nd
Teaching language	Spanish			
Department				
Coordinator	García Estévez, José Manuel Domínguez Conde, Jesús			
Lecturers	Domínguez Conde, Jesús Fernández Rodríguez, Nuria García Estévez, José Manuel Muiño Boedo, Ramón			
E-mail	jesus.dominguez@usc.es jestevez@uvigo.es			
Web	<a href="http://masterbiologiamarina.uvigo.es/">http://masterbiologiamarina.uvigo.es/</a>			
General description	(*)Form to the student in the basic principles of the Biology of the Conservation, providing him tools of knowledge that allow him the resolution of relative practical cases to the marine environment			

## Training and Learning Results

Code	
A1	(*)Posuír e comprender coñecementos que acheguen unha base ou oportunidade de ser orixinais no desenvolvemento e/ou aplicación de ideas, adoito nun contexto de investigación.
B1	Utilización de criterios y métodos científicos en el planteamiento y resolución de problemas aplicando los conocimientos adquiridos
B2	Búsqueda, análisis e integración de información a partir de diferentes fuentes y capacidad para su interpretación y evaluación
B5	Desarrollo de la habilidad de elaboración, presentación y defensa de trabajos e informes técnicos
B6	Desarrollo de la curiosidad científica, de la iniciativa y la creatividad
B7	Entendimiento de la proyección social de la ciencia
C2	Conocimiento de la diversidad de organismos marinos y sus estrategias adaptativas
C3	Conocimiento y comprensión de las interacciones de los organismos marinos y los ecosistemas marinos y costeros
C5	Conocimiento de los principios de explotación y sostenibilidad del medio marino y planificación y supervisión de su gestión
C6	Conocimiento, identificación y evaluación de la calidad ambiental del medio marino y de la legislación vigente. Dirección de consultorías ambientales
C7	Catalogación, evaluación, conservación, restauración y gestión de áreas marinas y litorales protegidos. Elaboración, asesoramiento legal y ejecución de planes de ordenación del litoral
C13	Divulgación de conocimientos de la biología y el medio marinos: programas de formación y docencia; planificación y dirección de acuarios, museos, centros de interpretación ambiental, parques naturales y espacios naturales protegidos
C15	Gestión de actividades de ocio y turismo en el medio marino y litoral
D1	Desarrollo de las capacidades comprensivas, de análisis y síntesis
D2	Desarrollo de la capacidad de razonamiento crítico y autocrítico
D3	Desarrollo de las capacidades de trabajo en equipo, enriquecidas por la pluridisciplinariedad
D6	Desarrollo de las capacidades de reflexión sobre responsabilidades sociales y éticas

## Expected results from this subject

Expected results from this subject	Training and Learning Results
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(*)Knowledge of the diversity of the alive organisms in the marine ecosystems, his genetic diversity and his adaptative strategies.	A1 B1 B2 B5 B6 B7 C2 C3 C5 C6 C7 C13 C15 D1 D2 D3 D6
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Knowledge of the nature, causes and consequences of the loss of genes, populations, species and habitats	A1 B1 B2 C3 C5 C6 C7 D1 D2 D6
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## Contents

### Topic

1. Introduction to the Biology of the Conservation	1.1. What is and how arises the discipline. 1.2. *Biodiversidad Marine
2. Diversity in the half marine	2.1. History and current state of the knowledge 2.2. General patterns of geographic distribution 2.3. Means *pelágico and *bentónico 2.4. The means *estuarinos
3. Species loomed. Extinctions	3.1. Definitions 3.2. Temporary patterns of *biodiversidad 3.3. Human development and extinctions 3.4. Half aquatic: current state and estimate of taxes of extinction
4. Overexploitation of resources	4.1. Exploitation of natural resources *vs sustainability 4.2 Half marine: Evolution, current state and tendency of the *pesquerías world-wide 4.3. Ecological effects of the fishing: (to) direct Effects on species (*b) Effects on the ecosystems 4.4. Biological theory of the sustainable exploitation and models of management of the *pesquerías: Models of production *vs management *ecosistémica of the *pesquerías 4.5. The marine reservations like tool of management *pesquera: marine Reservations of interest *pesquero in Galicia: You *miñarzos
5. Species *invasoras	5.1. To what call species *invasoras. 5.2. Effects on the environment. 5.3. Roads of introduction of *invasoras in the half marine. 5.4. Spanish catalogue of Species *Invasoras.
6. Climatic change	6.1. Concept. 6.2. Changes observed in the last 100 years. 6.3. Climatic change in Galicia. 6.4. Changes in the half physicist and biotic.
7. The parasitism in the half marine	7.1. Parasitic system/*hospedador: biological Cycles and specificity 7.2. Biological cycles and transmission of the marine parasites 7.3. *Ecoparasitología
8. The *biodiversidad parasitic	8.1. Main parasitic groups presents in the half marine 8.2. Technicians of preparation, conservation and identification of marine parasites

## 9. Parasitism and conservation

- 9.1. Dynamics of parasitic populations-\*hospedador: populational regulation of parasites and \*hospedadores  
 9.1.1. Massive mortalities  
 9.1.2. Parasites and biological control  
 9.2. Parasites like \*biomarcadores

### Planning

	Class hours	Hours outside the classroom	Total hours
Lecturing	20	53	73
Seminars	1	0	1
Objective questions exam	1	0	1

\*The information in the planning table is for guidance only and does not take into account the heterogeneity of the students.

### Methodologies

	Description
Lecturing	The student receives the contents and essential concepts for a correct understanding of the matter
Seminars	The student resolves relative doubts to the contents of the masterclasses and to the bibliographic work entrusted

### Personalized assistance

#### Methodologies Description

Lecturing	The professor will attend in the course of the session *magistral to the doubts and comments formulated by the students. Also it will answer to the questions formulated by email or in visits realised to the dispatch.
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### Assessment

Description	Qualification	Training and Learning Results
Lecturing They will evaluate by means of ad hoc proof the knowledge of the contents transmitted in the sessions *magistrales	40	A1 C2 C3 C5 C6
	20	C7
	20	C13 C15
	20	

### Other comments on the Evaluation

### Sources of information

#### Basic Bibliography

Ausden, M., **Habitat management for conservation: a handbook of techniques**, Oxford University Press, 2007

Bush, A.O.; Fernández, J.C.; Esch, G. & Seed J.R., **Parasitism. The diversity and ecology of animal parasites**, Cambridge University Press, 2001

Doody, J.P., **Coastal Conservation and Management - An Ecological Perspective**, Kluwer Academics Publishers, 2000

Primack, R.B. & Ros, J., **Introducción a la biología de la conservación**, Ariel Ciencia, 2002

Sinclair, M. & Valdimarsson, G, **Responsible fisheries in the marine ecosystem**, CABI Publishing, 2003

#### Complementary Bibliography

Bower, S.M., **Synopsis of Infectious Diseases and Parasites of Commercially Exploited Shellfish**, 2001

Grabda, S., **Marine Fish Parasitology. An outline**, . Weinhein; Basel (Switzerland): Cambrige, NY. VCH, 1991

Jennings, S. & Kaiser, M., **The effects of fishing on marine ecosystems and communities**, Academic Press, 2008

Roberts, L.S. & Janovy, J.S., **Foundations of Parasitology**, McGraw-Hill Science, 2005

Sodhi, N.S. & Ehrlich, P.R., **Conservation Biology for All**, Oxford University Press, 2010

### Recommendations