Information about the subject

Degree: Bachelor of Degree in Marine Sciences

Faculty: Faculty of Veterinary Medicine and Experimental Sciences

Code: 273009 **Name:** Fisheries

Credits: 6,00 **ECTS Year:** 3 **Semester:** 2

Module: Professional

Subject Matter: Marine living resources **Type:** Compulsory

Department: Oceanography and Environment

Type of learning: Classroom-based learning

Languages in which it is taught: English, Spanish

Lecturer/-s:

273A	Pablo Jose Sanchis Benlloch **(Responsible Lecturer)**	pj.sanchis@ucv.es

Module organization

Professional

Subject Matter	ECTS	Subject	ECTS	Year/semester
Oceanography	36,00	Chemical Oceanography	6,00	3/1
		Geological Oceanography	6,00	3/1
		Marine Biology and Biological Oceanography	6,00	3/1
		Methods in Oceanography I: Physical and Geological	6,00	3/2
		Methods in Oceanography II: Chemical and Biological	6,00	3/2
		Physical Oceanography	6,00	3/1
Marine living resources	12,00	Aquaculture	6,00	3/2
		Fisheries	6,00	3/2
Marine and Coastal Management	18,00	Coastal Planning and Management	6,00	4/1
		Legislation and Economy	6,00	4/1
		Marine Pollution	6,00	4/1

Learning outcomes

At the end of the course, the student must be able to prove that he/she has acquired the following learning outcomes:

R1	The student identifies the main exploited marine resources and knows their biology.
R2	The student locates and understands the location of the main fishing grounds.
R3	The student knows the main techniques of search and extraction of marine living resources.
R4	The student applies the methods of study in the evaluation of living resources.
R5	The student knows diverse experiences of management of marine living resources.
R6	The student recognises the environmental and socio-economic implications of the fishing activity.
R7	The student understands conceptually and values the importance of the study of marine living resources in the context of today's science and society, and of oceanography in particular.
R8	The student prepares reports and makes valid judgements on various aspects of the study of living marine resources.
R9	The student relates the theoretical and practical contents through works and assigned tasks.

Competencies

Depending on the learning outcomes, the competencies to which the subject contributes are (please score from 1 to 4, being 4 the highest score):

BASIC		Weighting			
		1	2	3	4
CB2	Students are able to apply knowledge to their work in a professional way and have the competences enabling them to state and defend views and opinions as well as perform problem-solving tasks in their field of study.				x
CB4	Command of a foreign language			x	
CB5	Students develop the necessary learning skills to undertake further studies with a high level of autonomy.				x

GENERAL		Weighting			
		1	2	3	4
CG1	Capacity to analyze and synthesize				x
CG2	Capacity to organize and plan				x
CG3	Mastering Spanish oral and written communication			x	
CG5	Knowing and applying Basic ITC skills related to marine science			x	
CG6	Capacity to manage information (capacity to look for and analyze information coming from different types of sources)				x
CG7	Decision making			x	
CG8	Capacity to work in interdisciplinary and multidisciplinary team			x	
CG9	Interpersonal skills			x	
CG10	Critical and self-critical capacity			x	

CG11	Capacity to learn				x
CG12	Capacity to adapt to new situations			x	
CG13	Capacity to produce new ideas (creativity)		x		
CG14	Leadership abilities.	x			
CG16	Capacity to apply theoretical knowledge		x		
CG17	Research skills		x		
CG18	Sensibility to environmental issues.		x		

SPECIFIC		Weighting			
		1	2	3	4
CE1	Knowing and understanding contents, principles and theories related to Oceanography	x			
CE3	Knowing basic market economy techniques related to marine resources				x
CE4	Understanding laws regulating use of marine resources and environment				x
CE5	Applying marine environment use planning techniques as well as resource sustainable management				x
CE8	Identifying and analyzing new problems and proposing solution strategies			x	
CE9	Knowing how to carry out experiments and measurements both in the laboratory and during sample collection				x
CE10	Knowing how to use planning, designing and implementing research tools while surveying and assessing results			x	
CE11	Knowing how to do fieldwork and laboratory experiments in a safe and responsible way, promoting teamwork				x
CE12	Describing, classifying and mapping sea bottoms and coastal areas	x			
CE13	Looking for and assessing different kinds of marine resources				x

CE14	Designing patterns of marine protected areas management	x		
CE17	Developing training programs for marine and coastal areas		x	
CE19	Deeply understanding operating systems of maritime orientated companies, identifying their problems and proposing solutions			x
CE20	Mastering practical use of models, including new data for validation, improvement and development of models	x		

Assessment system for the acquisition of competencies and grading system

Assessed learning outcomes	Granted percentage	Assessment method
R1, R2, R3, R4, R5, R6, R7, R8	50,00%	Written test with theoretical and practical questions
R1, R2, R4, R7, R8, R9	30,00%	Delivery of guided assignments, whose objectives and contents will be proposed by the teacher
R1	10,00%	Laboratory test
R1, R2, R6, R7, R8, R9	10,00%	Oral presentation

Observations

This course is not eligible for single evaluation. According to the general evaluation and qualification regulations, the preferred evaluation system will be by means of continuous evaluation. Specifically: The item, 'Delivery of assignments whose objectives and contents will be proposed by the teacher' will follow a continuous assessment that will be developed through activities and work (individual and group) throughout the semester.
Attendance at practical sessions is mandatory.
* In order to pass the subject the student must pass every test and activity separately.
The use of artificial intelligence (AI)-based tools is subject to the discretion of the teacher, who may establish specific limits or conditions depending on the training or assessment activity.

MENTION OF DISTINCTION:

In accordance with the regulations governing the assessment and grading of subjects in force at UCV, the distinction of "Matrícula de Honor" (Honours with Distinction) may be awarded to students who have achieved a grade of 9.0 or higher. The number of "Matrículas de Honor" (Honours with Distinction) may not exceed five percent of the students enrolled in the group for the corresponding academic year, unless the number of enrolled students is fewer than 20, in which case a single "Matrícula de Honor" (Honours with 9 Distinction) may be awarded. Exceptionally, these distinctions may be assigned globally across different groups of the same subject. Nevertheless, the total number of distinctions awarded will be the same as if they were assigned by group, but they may be distributed among all students based on a common criterion, regardless of the group to which they belong. The criteria for awarding "Matrícula de Honor" (Honours with Distinction) will be determined according to the guidelines stipulated by the professor responsible for the course, as detailed in the "Observations" section of the evaluation system in the course guide.

Learning activities

The following methodologies will be used so that the students can achieve the learning outcomes of the subject:

M1   Teacher presentation of contents, analysis of competences, explanation and in-class display of skills, abilities and knowledge.

M2   Group work sessions supervised by the professor. Case studies, diagnostic tests, problems, field work, computer room, visits, data search, libraries, on-line, Internet, etc. Meaningful construction of knowledge through interaction and student activity.

M3   Activities carried out in spaces with specialized equipment.

M4   Supervised monographic sessions with shared participation.

M5   Application of multidisciplinary knowledge.

M6   Personalized and small group attention. Period of instruction and/or guidance carried out by a tutor to review and discuss materials and topics presented in classes, seminars, readings, papers, etc.

M8   Set of oral and/or written tests used in initial, formative or additive assessment of the student.

M9   Group preparation of readings, essays, problem-solving, seminars, papers, reports, etc. to be presented or submitted in theoretical , practical and/or small-group tutoring sessions. Work done on the university e-learning platform (www.plataforma.ucv.es)

M10   Student's study: Individual preparation of readings, essays, problem-solving, seminars, papers, reports, etc. to be presented or submitted in theoretical, practical and/or small-group tutoring sessions. Work done on the university e-learning platform (www.plataforma.ucv.es).

IN-CLASS LEARNING ACTIVITIES

	LEARNING OUTCOMES	HOURS	ECTS
ON-CAMPUS CLASS M1	R1, R2, R3, R4, R5, R6, R7, R8	28,00	1,12
PRACTICAL CLASSES M2	R1, R2, R3, R7, R8, R9	12,00	0,48
LABORATORY M3	R1, R4, R8, R9	10,00	0,40
SEMINAR M4	R5, R6, R7, R8	2,00	0,08
GROUP PRESENTATION OF ASSIGNMENTS M5	R1, R2, R3, R7, R8	4,00	0,16
TUTORIAL M6	R1, R2, R3, R4, R5, R6, R7	2,00	0,08
ASSESSMENT M8	R1, R2, R3, R4, R5, R6, R7	2,00	0,08
TOTAL		**60,00**	**2,40**

LEARNING ACTIVITIES OF AUTONOMOUS WORK

	LEARNING OUTCOMES	HOURS	ECTS
GROUP WORK M9	R1, R2, R7, R8, R9	40,00	1,60
INDEPENDENT WORK M10	R1, R2, R3, R4, R5, R6, R7	50,00	2,00
TOTAL		**90,00**	**3,60**

Description of the contents

Description of the necessary contents to acquire the learning outcomes.

Theoretical contents:

Content block	Contents
DIDACTIC UNIT I.- PRINCIPLES OF FISHERY SCIENCE	Chapter 1. Living marine resources: Definition of exploitable living resource. Importance of living marine resources. Diversity of living marine resources. Characteristics of exploited marine species. Chapter 2. Fishing activity: Definition of fishing. Fishing kind classification. Exploited biological communities by fishing. Socioeconomic considerations from fishing activity.
DIDACTIC UNIT II.- FISH CATCHING METHODS. CLASSIFICATION AND DESCRIPTION. TECHNOLOGIC AIDS.	Chapter 3. Fishing hook methods; classification and description of main fishing hook gear. Chapter 4. Fishing trawl methods: classification and description of main dragging gear. Chapter 5. Seining and surrounding methods; classification and description of main seining and surrounding gears. Chapter 6. Gillnets methods; classification and description of main gillnets gear. Chapter 7. Other fishing methods.
DIDACTIC UNIT III.- MAIN LIVING MARINE RESOURCES. EXPLOITED SPECIES BIOLOGY.	Chapter 8. Ground species. Chapter 9. Pelagic species. Chapter 10. Molluscs. Chapter 11. Decapods crustaceans.
DIDACTIC UNIT IV.- MANAGEMENT OF LIVING MARINE RESOURCES EXPLOITATION.	Chapter 12. Research methods in living marine resources biology. Research on feeding, growth and reproduction. Chapter 13. Population dynamics in exploited living marine resources. Stock assessment. Chapter 14. Main patterns of management systems for exploited living marine resources. Chapter 15. Fishing ecologic effects. Ecosystem management.

Organization of the practical activities:

	Content	Place	Hours
PR1.	Technical visit to a fishing port: study of different types of boats according to the fishing gear used; socio-economic organization of fishing activity.	Technical visit	2,00
PR2.	Identification of marine living resources	Laboratory	20,00

Temporary organization of learning:

Block of content	Number of sessions	Hours
DIDACTIC UNIT I.- PRINCIPLES OF FISHERY SCIENCE	2,00	4,00
DIDACTIC UNIT II.- FISH CATCHING METHODS. CLASSIFICATION AND DESCRIPTION. TECHNOLOGIC AIDS.	6,00	12,00
DIDACTIC UNIT III.- MAIN LIVING MARINE RESOURCES. EXPLOITED SPECIES BIOLOGY.	12,00	24,00
DIDACTIC UNIT IV.- MANAGEMENT OF LIVING MARINE RESOURCES EXPLOITATION.	10,00	20,00

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