



## Information about the subject

**Degree:** Bachelor of Degree in Marine Sciences

**Faculty:** Faculty of Veterinary Medicine and Experimental Sciences

**Code:** 270230 **Name:** Food Hygiene and Safety

**Credits:** 6,00 **ECTS Year:** The course is not offered this academic year **Semester:** 1

**Module:** Optional Itinerary: Marine Biotechnology

**Subject Matter:** Food Hygiene and Safety **Type:** Elective

**Department:** Animal Production and Public Health

**Type of learning:** Classroom-based learning

**Languages in which it is taught:**

**Lecturer/-s:**



## Module organization

### Optional Itinerary: Marine Biotechnology

Subject Matter	ECTS	Subject	ECTS	Year/semester
Marine Biotechnology	6,00	Marine Biotechnology	6,00	2, 3, 4/1
Instrumental Techniques	6,00	Instrumental techniques	6,00	This elective is not offered in the academic year 24/25
Sea Food Technology	6,00	Sea Food Technology	6,00	2, 3, 4/1
Genetic Engineering	6,00	Gene Techniques	6,00	This elective is not offered in the academic year 24/25
Food Technology	6,00	Food Technology II	6,00	This elective is not offered in the academic year 24/25
Food Hygiene and Safety	6,00	Food Hygiene and Safety	6,00	This elective is not offered in the academic year 24/25

## Recommended knowledge

It is recommended to have studied the subject of technology seafood



## 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 understands the relevant concepts of food hygiene, inspection and control.
- R2        The student uses food safety and quality management tools.
- R3        The student applies risk assessment mechanisms in food handling.



## 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				X
CB3				X
CB5				X

GENERAL	Weighting			
	1	2	3	4
CG1				X
CG2				X
CG3				X
CG5			X	
CG6				X
CG7				X
CG8				X
CG10				X





## Assessment system for the acquisition of competencies and grading system

Assessed learning outcomes	Granted percentage	Assessment method
R1, R2, R3	50,00%	Written test with theoretical and practical questions
R1, R2, R3	30,00%	Delivery of guided assignments, whose objectives and contents will be proposed by the teacher
R1, R2, R3	20,00%	Oral presentation

### Observations

The written test with theoretical and practical questions will consist of a multi-choice multiple choice test, of which only one is true (the poorly answered answers will be subtracted) and short questions that will include aspects seen in class as well as those seen in practices or in seminars. This part will also include questions to assess the knowledge acquired in the laboratory.

The delivery of directed works, whose objectives and contents will be proposed by the teacher will consist of a series of activities of group or individual work and rapid classroom tests.

In the case of the exhibition of works, a continuous evaluation of the team will be carried out regarding meetings carried out, advance in the contents. Valuing the content of the work, attitude and participation of each one of the members with respect to the rest, exhibition orally jointly and individually. The written part of the work will also be valued.

Students who for justified reason can not attend class, not participating in the activities that may arise during the classroom sessions, must communicate before the day in question to find an alternative to these works. In the case of absence is not justified there will be no possibility of recovery.

The tasks and activities proposed throughout the course will be corrected and evaluated, and there is no possibility of recovering them



## 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](http://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](http://www.plataforma.ucv.es) ).

## IN-CLASS LEARNING ACTIVITIES

	LEARNING OUTCOMES	HOURS	ECTS
ON-CAMPUS CLASS M1	R1, R2, R3	35,00	1,40
PRACTICAL CLASSES M2	R1, R2, R3	6,00	0,24
LABORATORY M3	R1, R2, R3	8,00	0,32
SEMINAR M4	R1	2,00	0,08
GROUP PRESENTATION OF ASSIGNMENTS M5	R2, R3	4,00	0,16
TUTORIAL M6	R1	3,00	0,12
ASSESSMENT M8	R3	2,00	0,08
<b>TOTAL</b>		<b>60,00</b>	<b>2,40</b>

## LEARNING ACTIVITIES OF AUTONOMOUS WORK

	LEARNING OUTCOMES	HOURS	ECTS
GROUP WORK M9	R1, R2, R3	30,00	1,20
INDEPENDENT WORK M10	R1, R2, R3	60,00	2,40
<b>TOTAL</b>		<b>90,00</b>	<b>3,60</b>





## Description of the contents

Description of the necessary contents to acquire the learning outcomes.

### Theoretical contents:

Content block	Contents
UD1 INTRODUCTION	Lesson 1.1. Introduction to hygiene and food safety. hygienic and sanitary inspection. Lesson 1.2. Definitions and basic concepts of hygiene and food safety
UD2 FOOD SYSTEM. ORGANIZATION AND LEGISLATION	Lesson 2.1. Public health in the food sector Lesson 2.2. Agencies and legislation related to the food industry on risk management and food safety: EFSA, AECOSAN, White Paper on Food Safety, Codex Alimentarius, CAE ...
UD 3 TOILET HEALTH QUALITY PRODUCTS. FISHERY PRODUCTS, AQUACULTURE AND DERIVATIVES	Lesson 3.1. Protection of the consumer. food alerts Lesson 3.2. health, nutritional and organoleptic quality of the products and in particular those of marine origin. Product quality certification: IGP, DOP, organic product. Lesson 3.3. Abiotic contamination of food: pesticides, hydrocarbons, heavy metals, drugs, food additives and processing aids, packaging food contact Lesson 3.4. Biotic contamination: bacteria, viruses, fungi and parasites. Lesson 3.5. Foodborne diseases. toxiinfecciones Lesson 3.6. Product labeling. GMO, irradiated foods, functional foods Lesson 3.7. Food allergies and intolerances



## UD 4 MANAGEMENT TOOLS FOOD SAFETY AND QUALITY

Lesson 4.1. sanitary inspections. Self-control in the food industry: fisheries and aquaculture. RGSEAA, official sampling.

Lesson 4.2. Hygienic design of facilities of the food industry. Fishing industry

Lesson 4.3. Good practices manipulated and hygiene in the fishing industry

Lesson 4.4. General hygiene requirements and traceability.

Lesson 4.5. Hazard analysis and critical control points.

Risks evaluation

Lesson 4.6. Quality standards

### Organization of the practical activities:

	Content	Place	Hours
PR1.	Microbiological analysis	Laboratory	2,00
PR2.	Microbiological analysis	Laboratory	2,00
PR3.	Microbiological analysis	Laboratory	2,00
PR4.	Microbiological analysis	Laboratory	2,00

### Temporary organization of learning:

Block of content	Number of sessions	Hours
UD1 INTRODUCTION	1,00	2,00
UD2 FOOD SYSTEM. ORGANIZATION AND LEGISLATION	3,00	6,00
UD 3 TOILET HEALTH QUALITY PRODUCTS. FISHERY PRODUCTS, AQUACULTURE AND DERIVATIVES	14,00	28,00
UD 4 MANAGEMENT TOOLS FOOD SAFETY AND QUALITY	12,00	24,00



## References

### **BASIC:**

#### **BÁSICA:**

Buncic, ES.(2009) Seguridad alimentaria integrada y salud pública veterinaria. Acribia

Calvo Carrillo, MC., Méndez Martínez (2012) Toxicología de los alimentos. Mc graw-hill

Codex alimentarius. Norma general del Código para los aditivos alimentarios. CÓDEX STAN

Eduardo Montes, Irene Lloret y Miguel Ángel López. (2009). Diseño y gestión de cocinas. manual de higiene alimentaria y aplicada al sector de la restauración. Díaz de Santos

Elay, RA.(1994) Intoxicaciones alimentarias de etiología microbiana. Acribia

Hobbs, BC, Roberts DE. (1997) Higiene y toxicología de los alimentos. Acribia

Jay, JM., (2009) Microbiología moderna de los alimentos. Acribia

Madrid, A. (2021). Trazabilidad y seguridad alimentaria: con ejercicios prácticos resueltos. AMV

Morcillo, G., Cortés, E., García, J.L. (2013). Biotecnología y alimentación. UNED

Mortimore, S. HACCP. (2001) Enfoque práctico. Acribia

Watson, HD. (1995) Migración de sustancias químicas desde el envase al alimento. Acribia

Horst-Dieter T 2001. Fundamentos de la tecnología de los alimentos. ACRIBIA

Luten J.B. 2003. Quality of fish from catch to consumer. WANENINGEN.

Luten J.B. 2006. Seafood research from fish to dish. WANENINGEN.

Marquez A. 2013. Recepción, almacenaje, y expedición de productos de la pesca. IC.

Nollet L. 2010. Handbook of seafood and seafood product analysis. CRC PRESS

VV.AA. 2006. APPCC aplicado a la comercialización de la pesca. IDEAS PROPIAS.

### **COMPLEMENTARIA:**

ICMSF. (2004) Microorganismos de los alimentos. 7, análisis microbiológico en la gestión de la seguridad alimentaria. Zaragoza: Acribia



I.C.M.S.F. (2016). Microorganismos de los alimentos: 8. Uso de datos para evaluar el control del proceso y la aceptación del producto. Acribia.

Couto, I. (2008) Auditoría del Sistema APPCC. Como verificar los sistemas de gestión de inocuidad alimentaria HACCP. Díaz de Santos

### URLs OF INTEREST:

OMS: <http://www.who.int/fsf>

Codex Alimentarius: <http://www.codexalimentarius.net>

Autoridad Europea de Seguridad Alimentaria: <http://www.efsa.eu.int>

Agencia Española de Consumo, Seguridad Alimentaria y Nutrición:  
[http://www.aecosan.msssi.gob.es/AECOSAN/web/home/aecosan\\_inicio.htm](http://www.aecosan.msssi.gob.es/AECOSAN/web/home/aecosan_inicio.htm)

Dirección General de Salud Pública de Valencia: <https://www.sp.san.gva.es/>

European Commission about Health and Food Safety:  
[http://ec.europa.eu/dgs/health\\_food-safety/index\\_en.htm](http://ec.europa.eu/dgs/health_food-safety/index_en.htm)

Boletín Oficial del Estado: [https://www.boe.es/diario\\_boe/](https://www.boe.es/diario_boe/)

Diario Oficial de la Unión europea: <http://eur-lex.europa.eu/oj/direct-access.html?locale=es>

Federación de Asociaciones de celíacos de España (FACE): <http://www.celiacos.org/>

Asociación Española de Alérgicos a Alimentos y al Látex (AEPNAA): <http://www.aepnaa.org/>

MAPAMA: <http://www.mapama.gob.es/es/ministerio/servicios/empleo-publico/>