



Information about the subject

Degree: Bachelor of Science Degree in Marine Sciences

Faculty: Faculty of Veterinary Medicine and Experimental Sciences

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

Credits: 6,00 **ECTS Year:** 2, 3, 4 **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: Spanish

Lecturer/-s:

OPM4

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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 21/22
Sea Food Technology	6,00	Sea Food Technology	6,00	0, 2, 3, 4/1
Genetic Engineering	6,00	Gene Techniques	6,00	This elective is not offered in the academic year 21/22
Food Technology	6,00	Food Technology II	6,00	2, 3, 4/1
Food Hygiene and Safety	6,00	Food Hygiene and Safety	6,00	2, 3, 4/1

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:

According to Article 22 of the Regulations governing the Evaluation and Qualification of UCV Courses, the mention of "Distinction of Honor" may be awarded by the professor responsible for the course to students who have obtained, at least, the qualification of 9 over 10 ("Sobresaliente"). The number of "Distinction of Honor" mentions that may be awarded may not exceed five percent of the number of students included in the same official record, unless this number is lower than 20, in which case only one "Distinction of Honor" may be awarded.

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	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
TOTAL		60,00	2,40

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
TOTAL		90,00	3,60



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

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

European Comssion about Health and Food Safety:
http://ec.europa.eu/dgs/health_food-safety/index_en.htm

Boletín Oficial del Estado: 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/>



Addendum to the Course Guide of the Subject

Due to the exceptional situation caused by the health crisis of the COVID-19 and taking into account the security measures related to the development of the educational activity in the Higher Education Institution teaching area, the following changes have been made in the guide of the subject to ensure that Students achieve their learning outcomes of the Subject.

Situation 1: Teaching without limited capacity (when the number of enrolled students is lower than the allowed capacity in classroom, according to the security measures taken).

In this case, no changes are made in the guide of the subject.

Situation 2: Teaching with limited capacity (when the number of enrolled students is higher than the allowed capacity in classroom, according to the security measures taken).

In this case, the following changes are made:

1. Educational Activities of Onsite Work:

All the foreseen activities to be developed in the classroom as indicated in this field of the guide of the subject will be made through a simultaneous teaching method combining onsite teaching in the classroom and synchronous online teaching. Students will be able to attend classes onsite or to attend them online through the telematic tools provided by the university (videoconferences). In any case, students who attend classes onsite and who attend them by videoconference will rotate periodically.

In the particular case of this subject, these videoconferences will be made through:

Microsoft Teams

Kaltura



Situation 3: Confinement due to a new State of Alarm.

In this case, the following changes are made:

1. Educational Activities of Onsite Work:

All the foreseen activities to be developed in the classroom as indicated in this field of the guide of the subject, as well as the group and personalized tutoring, will be done with the telematic tools provided by the University, through:

Microsoft Teams

Kaltura

Explanation about the practical sessions:

In cases where the type of practice allows it, an adaptation will be carried out. Otherwise, there will be an active seminar with the content to be covered in practice.



2. System for Assessing the Acquisition of the competences and Assessment System

ONSITE WORK

Regarding the Assessment Tools:

The Assessment Tools will not be modified. If onsite assessment is not possible, it will be done online through the UCVnet Campus.

The following changes will be made to adapt the subject's assessment to the online teaching.

Course guide		Adaptation	
Assessment tool	Allocated percentage	Description of the suggested changes	Platform to be used
written test with theoretical and practical questions	30		Microsoft Teams
Delivery of directed works whose objectives and contents will be proposed by the teacher	40		Microsoft Teams
Laboratory practical test	10	Realization of active seminars	Microsoft Teams
Exhibition of works	20		Microsoft Teams

The other Assessment Tools will not be modified with regards to what is indicated in the Course Guide.

Comments to the Assessment System:

