UNIVERSIDAD DE CASTILLA - LA MANCHA

GUÍA DOCENTE

1. General information

Course: FOOD BIOTECHNOLOGY
Type: ELECTIVE
Degree: 341 - UNDERGRADUATE DEGREE PROGRAMME IN BIOCHEMISTRY
Center: 501 - FACULTY OF ENVIRONMENTAL SCIENCES AND BIOCHEMISTRY
Year: 4
Main language: Spanish
Use of additional languages:
Web site:

Code: 13342
ECTS credits: 4.5
Academic year: 2023-24
Group(s): 40
Duration: C2
Second language:
English Friendly: Y
Bilingual: N

Lecturer: **SUSANA SESEÑA PRIETO** - Group(s): **40**

Building/Office	Department	Phone number	Email	Office hours
ICAM. Despacho 0.19	Q. ANALÍTICA Y TGIA. ALIMENTOS	5791	Susana.SPrieto@uclm.es	Flexible timetable from Monday to Friday by prior arrangement by mail.

2. Pre-Requisites

Not established

3. Justification in the curriculum, relation to other subjects and to the profession

The production and management of food resources has gained great importance in recent years. There is no doubt that this has always been a topic of general interest for humanity and for the industry, but the current circumstances, both social and technological, ha

Biotechnology applied to the food sector and, especially, microbial biotechnology, can play a crucial role in achieving these objectives. Thus, in the processing and manufacturing stages, microorganisms allow not only the improvement in the production systems of r

Training in Biotechnology must allow students to acquire the necessary skills to know how to apply their theoretical knowledge on an industrial production scale, bridging the gap that now exists between training at the cellular and molecular level and the biotechnolo

Not established

4. Degree competences achieved in this course

Course competences

Code	Description
E01	Express themselves correctly in basic biological, physical, chemical, mathematical and computer terms.
E21	Understand the chemical and thermodynamic principles of biocatalysis and the role of enzymes and other biocatalysts in the functioning of cells and organisms.
G03	Be able to collect and interpret relevant data, information and results, draw conclusions and issue reasoned reports on relevant social, scientific or ethical issues in connection with advances in Biochemistry and Molecular Biology.
G04	To know how to transmit information, ideas, problems and solutions in the field of Biochemistry and Molecular Biology to a specialized and non-specialized public.
T03	A correct oral and written communication
T10	Ability to self-learn and to obtain and manage bibliographic information, including Internet resources

5. Objectives or Learning Outcomes

Course learning outcomes

Not established.

Additional outcomes

6. Units / Contents

Unit 1: History of industrial microbiology
Unit 2: General processes
Unit 3: Industrial microorganisms
Unit 4: Culture media
Unit 5: Growth of microorganisms
Unit 6: Starter cultures
Unit 7: Alcoholic beverages
Unit 8: Vinegar
Unit 9: Milk foods
Unit 10: Bread
Unit 11: Pickles
Unit 12: Meat food
Unit 13: Coffee, tea and cocoa
Unit 14: Aditives
Unit 15: Practise

7. Activities, Units/Modules and Methodology

Training Activity	Methodology	Related Competences (only degrees before RD 822/2021)	ECTS	Hours	As	Com	Description
Class Attendance (theory) [ON-SITE]	Lectures	E01 E21	0.92	23	N	-	
Project or Topic Presentations [ON-SITE]	Workshops and Seminars	G03 G04 T03 T10	0.24	6	Y	N	
Study and Exam Preparation [OFF-SITE]	Self-study	G03 T10	2	50	N	-	
Class Attendance (practical) [ON-SITE]		T10	0.56	14	Y	N	
Final test [ON-SITE]		E01 E21 G03 G04 T03	0.08	2	Y	Y	
Other off-site activity [OFF-SITE]	Combination of methods	E01 G03 T03 T10	0.7	17.5	Y	N	
		Total:	**4.5**	**112.5**			
		Total credits of in-class work: 1.8	**Total class time hours: 45**				
		Total credits of out of class work: 2.7	**Total hours of out of class work: 67.5**				

As: Assessable training activity
Com: Training activity of compulsory overcoming (It will be essential to overcome both continuous and non-continuous assessment).

8. Evaluation criteria and Grading System

Evaluation System	Continuous assessment	Non-continuous evaluation*	Description
Other methods of assessment	10.00%	0.00%	You have to use "peer wise" platform to work questions. If you decide that you don¿t do this activity you can¿t recover this part.
Oral presentations assessment	10.00%	0.00%	The quality of oral expresion and power point will be evalulated.
Assessment of active participation	5.00%	0.00%	You have to evaluate your classmate¿s oral exposition. If you do not participate in this activity you can¿t obtain this puntuation
Final test	70.00%	85.00%	You have to answer questions getting minimum mark of 4, to sum the rest of activities and to pass 5 in the global mark.
Other methods of assessment	5.00%	5.00%	Your apptitude in practical lesson will be assassed.
Total:	**100.00%**	**90.00%**	

According to art. 4 of the UCLM Student Evaluation Regulations, it must be provided to students who cannot regularly attend face-to-face training activities the passing of the subject, having the right (art. 12.2) to be globally graded, in 2 annual calls per subject , an ordinary and an extraordinary one (evaluating 100% of the competences).

Evaluation criteria for the final exam:

Continuous assessment:

By default, if the contrary is not communicated, it is considered that the student accepts the continuous evaluation. The exam will assess the theoretical knowledge presented in lectures, practices and seminars. A grade greater than or equal to 4 (out of 10) is required in the exam in order to pass the subject. Attendance at technical visits is mandatory to pass the course. To pass the course you must get a minimum global grade of 5.

Non-continuous evaluation:

The final test will be broader and more exhaustive to ensure that the student has acquired the skills that have not been worked on in the continuous assessment. To pass the course you must get a minimum global grade of 5.

Specifications for the resit/retake exam:

Identical criteria to those of the ordinary call, as long as the technical visits have been carried out. To pass the course you must get a minimum global grade of 5.

Specifications for the second resit / retake exam:

The same criteria, you need to obtain at least 4 in the exam and to obtain 5 in the global mark to pass this subject.

9. Assignments, course calendar and important dates

Not related to the syllabus/contents

Hours	hours

10. Bibliography and Sources

Author(s)	Title/Link	Publishing house	Citv	ISBN	Year	Description
Bamforth, Charles W.	Alimentos, fermentación y microorganismos	Acribia		978-84-200-1088-5	2007	
Crueger, Wulf	Biotecnología : manual de microbiología industrial	Acribia		84-200-0743-9	1993	
Lee, Byong H.	Fundamentos de biotecnología de los alimentos	Acribia		84-200-0922-9	2000	
Okafor, Nduka	Modern industrial microbiology and biotechnology	Science Publishers		978-1-57808-434-0	2007	
	Lactic Acid Bacteria : microbiology and functional aspects	Marcel Dekker		0-8247-0133-X	1998	
	Microbiología industrial : los microorganismos de interés i	Acribia		84-200-0920-2	2000	