



## 1. General information

Course: BIOLOGY  
Type: BASIC  
Degree: 340 - UNDERGRADUATE DEGREE PROGRAMME IN ENVIRONMENTAL SCIENCES  
Center: 501 - FACULTY OF ENVIRONMENTAL SCIENCES AND BIOCHEMISTRY  
Year: 1  
Main language: Spanish  
Use of additional languages:  
Web site:

Code: 37300  
ECTS credits: 9  
Academic year: 2021-22  
Group(s): 40  
Duration: AN  
Second language:  
English Friendly: Y  
Bilingual: N

Lecturer: LAURA SERNA HIDALGO - Group(s): 40				
Building/Office	Department	Phone number	Email	Office hours
sabatini/030	CIENCIAS AMBIENTALES	5467	laura.serna@uclm.es	The student will request an appointment by email

## 2. Pre-Requisites

None.

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

This subject, within the Plan of Studies of Degree in Environmental Sciences, allows to acquire competences for access to 2nd year subjects (Animal Physiology, Toxicology and Public Health and Plant

## 4. Degree competences achieved in this course

## Course competences

Code	Description
CB01	Prove that they have acquired and understood knowledge in a subject area that derives from general secondary education and is appropriate to a level based on advanced course books, and includes updated and cutting-edge aspects of their field of knowledge.
CB03	Be able to gather and process relevant information (usually within their subject area) to give opinions, including reflections on relevant social, scientific or ethical issues.
CB06	Students have developed the ability to work as a team and lead, direct, plan and supervise multidisciplinary teams
E01	Ability to understand and apply basic knowledge.
E05	Capacity for qualitative data interpretation
E06	Capacity for quantitative data interpretation
G02	Knowledge of Information and Communication Technologies (ICT).
G03	Good oral and written communication

## 5. Objectives or Learning Outcomes

## Course learning outcomes

Description  
To train the student in the understanding and application of the scientific method to the study of biological systems at the molecular and cellular levels.  
To know the concepts and principles that govern molecular and cellular processes and the mechanisms that underlie complex cellular processes, particularly those associated with cellular excitability and signal exchange that allow cells to interact with the external environment.

## 6. Units / Contents

Unit 1: Perpetuation of genetic information.  
Unit 2: Gene expression.  
Unit 3: Protein biosynthesis.  
Unit 4: Origin and evolution of organisms, from the cell to multicellular organisms.  
Unit 5: Structure and membrane transport. Energy production.  
Unit 6: Compartments and intracellular transport.  
Unit 7: Cell cycle control.  
Unit 8: Laboratory classes.

## 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	CB01 CB03 E01 G02	1.8	45	N	-	The concepts will be exposed and the rhythm will be set in the program progress. Will be facilitated schemes used in class.
Progress test [ON-SITE]	Assessment tests	CB01 CB03 E01 E05 E06	0.08	2	Y	-	A progress test will be performed of the first part of the program that will evaluate acquired knowledge until that moment. Will not have liberatory character.
Project or Topic Presentations [ON-SITE]	Group Work	CB01 CB03 CB06 E05 E06 G02 G03	0.4	10	Y	N	The students, organized in groups, will present seminars on related issues with the subject. Will have voluntary character. The content exposed will be valued.
Study and Exam Preparation [OFF-SITE]	Self-study	CB06 E01 E06	5.4	135	N	-	
Class Attendance (practical) [ON-SITE]	Practical or hands-on activities	CB06 E05 E06	1.2	30	Y	Y	Students will go to laboratory in groups of approx. 25 to obtain direct evidence of some concepts exposed in the master class. To overcome the subject it is necessary to perform the Laboratory practices. This activity is mandatory and cannot recuperate. The evaluation of practices will be recoverable, either in resit/retake exam or second resit/retake exam.
Final test [ON-SITE]	Assessment tests	CB01 CB03 E01 E05 E06	0.12	3	Y	Y	Final exam of theory and practice.
Total:			9	225			
Total credits of in-class work: 3.6			Total class time hours: 90				
Total credits of out of class work: 5.4			Total hours of out of class work: 135				

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
Progress Tests	10.00%	0.00%	Progress test to assess theoretical knowledge
Final test	60.00%	80.00%	Final test to assess theoretical knowledge
Final test	20.00%	20.00%	Final test of laboratory sessions
Oral presentations assessment	10.00%	0.00%	Oral presentation
Total:	100.00%	100.00%	

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:

A minimum of 4 out of 10 in the final test to assess theoretical knowledge is required to pass the subject. It is compulsory to pass the laboratory sessions to pass the subject: compulsory attendance and the mark of the final test of laboratory sessions must be equal to or higher than 4/10. The marks of the oral presentation and the progress test will be also used to calculate the mark of this call. To pass the subject, it is mandatory to obtain a score equal to or higher than 5 out of 10.

## Non-continuous evaluation:

To pass the subject, it is mandatory to obtain a score equal to or higher than 4 out of 10 in the final test to assess theoretical knowledge and in the final test of laboratory sessions. Laboratory practices are mandatory to pass the subject. To pass the subject, it is mandatory to obtain a score equal to or higher than 5 out of 10.

## Specifications for the resit/retake exam:

## Continuous assessment:

Only the final test to assess theoretical knowledge and the final test of laboratory sessions can be re-taken, as long as its/their mark/s is/are lower than 4/10. If the mark of one of these tests is equal to or higher than 4/10, this mark will be used to calculate the mark of this call. The marks of the oral presentation and the progress test will be also used to calculate the mark of this call. Laboratory practices are mandatory to pass the subject. To pass the subject, it is mandatory to obtain a score equal to or higher than 5 out of 10.

## Non-continuous evaluation:

Only the final test to assess theoretical knowledge and the final test of laboratory sessions can be re-taken, as long as its/their mark/s is/are lower than 4/10. If the mark of one of these tests is equal to or higher than 4/10, this mark will be used to calculate the mark of this call. Laboratory practices are mandatory to pass the subject. To pass the subject, it is mandatory to obtain a score equal to or higher than 5 out of 10.

## Specifications for the second resit / retake exam:

To pass this examination there will be only a final test that will represent 100% of the mark. It will be an essential requirement to have previously performed the laboratory sessions.

9. Assignments, course calendar and important dates	
Not related to the syllabus/contents	
Hours	hours
Progress test [PRESENCIAL][Assessment tests]	2
Project or Topic Presentations [PRESENCIAL][Group Work]	10
Final test [PRESENCIAL][Assessment tests]	3
Unit 1 (de 8): Perpetuation of genetic information.	
Activities	Hours
Class Attendance (theory) [PRESENCIAL][Lectures]	7
Study and Exam Preparation [AUTÓNOMA][Self-study]	18
Unit 2 (de 8): Gene expression.	
Activities	Hours
Class Attendance (theory) [PRESENCIAL][Lectures]	7
Study and Exam Preparation [AUTÓNOMA][Self-study]	18
Unit 3 (de 8): Protein biosynthesis.	
Activities	Hours
Class Attendance (theory) [PRESENCIAL][Lectures]	7
Study and Exam Preparation [AUTÓNOMA][Self-study]	18
Unit 4 (de 8): Origin and evolution of organisms, from the cell to multicellular organisms.	
Activities	Hours
Class Attendance (theory) [PRESENCIAL][Lectures]	5
Study and Exam Preparation [AUTÓNOMA][Self-study]	14
Unit 5 (de 8): Structure and membrane transport. Energy production.	
Activities	Hours
Class Attendance (theory) [PRESENCIAL][Lectures]	7
Study and Exam Preparation [AUTÓNOMA][Self-study]	18
Unit 6 (de 8): Compartments and intracellular transport.	
Activities	Hours
Class Attendance (theory) [PRESENCIAL][Lectures]	6
Study and Exam Preparation [AUTÓNOMA][Self-study]	16
Unit 7 (de 8): Cell cycle control.	
Activities	Hours
Class Attendance (theory) [PRESENCIAL][Lectures]	6
Study and Exam Preparation [AUTÓNOMA][Self-study]	16
Unit 8 (de 8): Laboratory classes.	
Activities	Hours
Study and Exam Preparation [AUTÓNOMA][Self-study]	17
Class Attendance (practical) [PRESENCIAL][Practical or hands-on activities]	30
Global activity	
Activities	hours
Progress test [PRESENCIAL][Assessment tests]	2
Class Attendance (theory) [PRESENCIAL][Lectures]	45
Project or Topic Presentations [PRESENCIAL][Group Work]	10
Class Attendance (practical) [PRESENCIAL][Practical or hands-on activities]	30
Final test [PRESENCIAL][Assessment tests]	3
Study and Exam Preparation [AUTÓNOMA][Self-study]	135
Total horas: 225	

10. Bibliography and Sources						
Author(s)	Title/Link	Publishing house	Citv	ISBN	Year	Description
Alberts et al.	Introducción a la biología celular	EDITORIAL MÉDICA PANAMERICANA			2011	
Alberts et al.	Molecular Biology of the Cell	HARDCOVER			2016	
H. Curtis y N. S. Barnes	Biología.	EDITORIAL MÉDICA PANAMERICANA			2008	