UNIVERSIDAD DE CASTILLA - LA MANCHA

GUÍA DOCENTE

1. General information

Course: BIOLOGY
Code: 34303
Type: BASIC
ECTS credits: 6
Degree: 332 - UNDERGRADUATE DEGREE PROGRAMME IN MEDICINE
Academic year: 2022-23
Center: 9 - FACULTY OF MEDICINE OF CIUDAD REAL
Group(s): 20
Year: 1
Duration: First semester
Main language: Spanish
Second language:
Use of additional languages:
English Friendly: Y
Web site:
Bilingual: N

Lecturer: **MARIO DURAN PRADO** - Group(s): **20**

Building/Office	Department	Phone number	Email	Office hours
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Lecturer: **JAVIER FRONTIÑAN RUBIO** - Group(s): **20**

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Lecturer: **JUAN RAMON PEINADO MENA** - Group(s): **20**

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Lecturer: **YOANA RABANAL RUIZ** - Group(s): **20**

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2. Pre-Requisites

According to the Table of Prerequisites and Incompatibilities of the Faculty of Medicine: "It is necessary to have passed Biology in order to pass Histology".

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

The subject of Biology belongs to Module I and Subject 1.1 of the Teaching Plan of Medicine. It has a basic character; it consists of 6 ECTS and is taught during the first semester of the 1st year.

The cell is a point of integration and coordination fundamental to understand the processes that occur at more complex, macroscopic levels, and also the simplest, molecular ones. Thus, Cell Theory, on which this subject is based, is a basic conceptual pillar that will allow the student to understand and integrate the information obtained not only in this subject, but also in others that study biochemical, genetic, microbiological and physiological processes, also providing necessary aspects for the basis of the diagnosis of cellular, tissue, organic lesions, their structural and functional consequences and therefore, the repercussions on the organism. For all these reasons, Biology is considered essential for the knowledge and understanding of the fundamental processes in life and therefore, essential for the training of physicians and for their professional projection.

4. Degree competences achieved in this course

Course competences

Code	Description
1.1	Knowledge of cell structure and function.
1.10	Information, expression and gene regulation.
1.11	Inheritance.
1.13	To know the morphology, structure and function of the skin, blood, circulatory, digestive, locomotor, reproductive, excretory and respiratory apparatus and systems; endocrine system, immune system and central and peripheral nervous system.
1.15	Homeostasis
1.17	Handling basic laboratory material and techniques.
1.19	Recognize with macroscopic and microscopic methods and imaging techniques the morphology and structure of tissues, organs and systems.
1.2	Biomolecules.
1.3	Metabolism.
1.4	Metabolic regulation and integration.
1.5	To know the basic principles of human nutrition.
1.6	Cellular communication.
1.7	Excitable membranes.
1.8	Cell cycle.
1.9	Cell differentiation and proliferation.

CT01	Proficiency in a second foreign language at level B1 of the Common European Framework of Reference for Languages.
CT03	Good oral and written communication skills.
G07	Understand and recognize the normal structure and function of the human body, at the molecular, cellular, tissue, organic and system levels, in the different stages of life and in both sexes.
G11	Understand and recognize the effects of growth, development and aging on the individual and their social environment.
G36	To be able to formulate hypotheses, collect and critically evaluate information for problem solving, following the scientific method.
G37	To acquire the basic training for research activity.

5. Objectives or Learning Outcomes

Course learning outcomes

Description

Learning to design and organize the work. Acquiring habits of perseverance in the study.

Acquisition of oral and/or written presentation and communication skills.

To know the cellular structure and function. Biomolecules. Metabolism. Metabolic regulation and integration. To know the basic principles of human nutrition. Cell communication. Excitable membranes. Cell cycle. Cell differentiation and proliferation. Gene information, expression and regulation. Inheritance. Embryonic development and organogenesis. Homeostasis. Adaptation to the environment.

6. Units / Contents

Unit 1: Module 1: Cellular membranes

Unit 2: Module 2: Protein and vesicular trafficking

Unit 3: Module 3: Energetic conversion and cytoskeleton

Unit 4: Module 4: Cell signalling

Unit 5: Module 5: Nucleus and cell division

7. Activities, Units/Modules and Methodology

Training Activity	Methodology	Related Competences (only degrees before RD 822/2021)	ECTS	Hours	As	Com	Description
Class Attendance (practical) [ON-SITE]	Practical or hands-on activities		0.6	15	Y	Y	
Class Attendance (theory) [ON-SITE]	Lectures		0.6	15	Y	Y	
Progress test [ON-SITE]	Assessment tests		0.1	2.5	Y	Y	
Final test [ON-SITE]	Assessment tests		0.1	2.5	Y	Y	
Project or Topic Presentations [ON-SITE]	Guided or supervised work		0.6	15	Y	Y	
Problem solving and/or case studies [ON-SITE]	Problem solving and exercises		0.4	10	Y	Y	
Writing of reports or projects [OFF-SITE]	Group Work		0.24	6	Y	N	
Study and Exam Preparation [OFF-SITE]	Self-study		2.56	64	Y	N	
Other off-site activity [OFF-SITE]	Self-study		0.8	20	Y	N	
		Total:	**6**	**150**			
		Total credits of in-class work: 2.4					**Total class time hours: 60**
		Total credits of out of class work: 3.6					**Total hours of out of class work: 90**

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	50.00%	0.00%	
Final test	20.00%	70.00%	
Assessment of active participation	5.00%	5.00%	
Practicum and practical activities reports assessment	10.00%	0.00%	
Final test	15.00%	25.00%	
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 student enrolled for the first time in a subject has two calls during the academic year:

1. Ordinary presential call: it comprises the continuous evaluation of all theoretical and practical activities reflected in the schedule fulfilling the conditions described in the teaching guide of the subject and the minimum attendance requirements to pass the subject.

2. Extraordinary call: It includes the evaluation of the failed part of the subject in the ordinary call. It will consist of a theoretical exam and/or practical exam,

the rest of the scores of the practical part will be those obtained during the course in reports, seminars, presentations, work, participation and attitude or OSCE (Objective Structured Clinical Examination).

In case of failing the subject the first time it is taken, the options for the following academic year will be two of the following three options:

1. Ordinary call: within this call, two modalities can be chosen:

a. Classroom mode: Includes the continuous evaluation of all theoretical and practical activities reflected in the schedule fulfilling the conditions described in the teaching guide of the subject, as if the subject was taken fort the first time, and the grades obtained in the previous year will not be taken into account.

b. Non-attendance mode: It includes the evaluation of only the failed part of the subject during the previous course with a theoretical exam and/or practical exam per semester on the same date as the final exam of each semester. The scores for practical exams other than the practical exam will be those kept from the previous course. This modality can only be chosen in the case of having taken the subject in the ordinary presential call exam in the previous academic year.

2. Extraordinary call: It includes the evaluation of the failed part of the subject in the ordinary call either of the current academic year, if the student has opted for the ordinary presential call, or of the previous academic year, in the rest of the cases. It will consist of a theoretical and/or practical exam, the rest of the evaluation of the practical part will be those of the current or previous course. In the case of not having taken the ordinary presential exam in the current or previous academic year, the scores of previous exams will not be taken into account, since they will be kept only for one academic year.

3. Special final call: This includes the evaluation of the failed part of the subject in the previous year. This call can only be requested in the case of key subjects. It will consist of a theoretical and/or practical exam, the rest of the scores of the practical part will be those of the previous course. In the case of not having taken the ordinary presential exam in the current or previous course, the scores of previous exams will not be considered, since they will be kept only for one academic course.

These conditions will only be maintained in the academic year consecutive to the ordinary presential exam of a subject. The scores of the practical or theoretical part passed will only be kept if the minimum attendance requirements to pass the subject described in the electronic guide have been met.

In case that the subject is not passed in the second academic year, the same biannual cycle criteria described for the first and second year of enrollment will be the same in the third and successive odd numbered years of enrollment.

ORDINARY PRESENTIAL CALL:

Theoretical evaluation:

70% distributed in:
- 50% module exams
- 20% final semester exams

To pass the course it will be necessary to obtain half of the 70%, which represents at least 3.5 points in the theoretical part of the 10 total points of the course.

Evaluation of practices, presentations, problems, work, participation, and attitude:

30% valued jointly as follows:

- Practical reports: 15%.
- Practical exam: 10%.
- Participation and attitude: 5%.

To pass the subject it will be necessary to obtain half of the 30%, which represents at least 1.5 points in the practical part of the 10 total points of the course.

Non-continuous evaluation:

Evaluation criteria not defined

Specifications for the second resit / retake exam:

Theoretical evaluation: exam with 70% value. To pass the subject it will be necessary to obtain half of the 70%, which represents at least 3.5 points in the theoretical part of the 10 total points of the course.

In case of having passed the theoretical part in the previous course, the score obtained in the last exam will be maintained.

Practical evaluation: to pass the subject it will be necessary to obtain half of the 30%, which represents at least 1.5 points in the practical part of the 10 total points of the course.

There will be a practical exam and the results of the rest of the practical exams of the ordinary presential exam, either from the current year or the previous year, will be taken into account.

9. Assignments, course calendar and important dates

Not related to the syllabus/contents	
Hours	**hours**
Class Attendance (practical) [PRESENCIAL][Practical or hands-on activities]	15
Class Attendance (theory) [PRESENCIAL][Lectures]	15
Progress test [PRESENCIAL][Assessment tests]	2.5
Final test [PRESENCIAL][Assessment tests]	2.5
Project or Topic Presentations [PRESENCIAL][Guided or supervised work]	15
Problem solving and/or case studies [PRESENCIAL][Problem solving and exercises]	10
Writing of reports or projects [AUTÓNOMA][Group Work]	6
Study and Exam Preparation [AUTÓNOMA][Self-study]	64
Other off-site activity [AUTÓNOMA][Self-study]	20
Unit 1 (de 5): Module 1: Cellular membranes	

Group 20:	
Initial date: 19-09-2022	**End date:** 07-10-2022
Unit 2 (de 5): Module 2: Protein and vesicular trafficking	
Group 20:	
Initial date: 10-10-2022	**End date:** 28-10-2022
Unit 3 (de 5): Module 3: Energetic conversion and cytoskeleton	
Group 20:	
Initial date: 31-10-2022	**End date:** 18-11-2022
Unit 4 (de 5): Module 4: Cell signalling	
Group 20:	
Initial date: 21-11-2022	**End date:** 09-12-2022
Unit 5 (de 5): Module 5: Nucleus and cell division	
Group 20:	
Initial date: 12-12-2022	**End date:** 13-01-2023

Global activity

Activities	**hours**
Class Attendance (practical) [PRESENCIAL][Practical or hands-on activities]	15
Progress test [PRESENCIAL][Assessment tests]	2.5
Final test [PRESENCIAL][Assessment tests]	2.5
Project or Topic Presentations [PRESENCIAL][Guided or supervised work]	15
Problem solving and/or case studies [PRESENCIAL][Problem solving and exercises]	10
Writing of reports or projects [AUTÓNOMA][Group Work]	6
Other off-site activity [AUTÓNOMA][Self-study]	20
Study and Exam Preparation [AUTÓNOMA][Self-study]	64
Class Attendance (theory) [PRESENCIAL][Lectures]	15
Total horas:	150

10. Bibliography and Sources

Author(s)	Title/Link	Publishing house	Citv	ISBN	Year	Description
Bruce Alberts, Alexander Johnson, Julian Lewis, David Morgan, Martin Raff, Keith Roberts, Peter Walter	Molecular Biology of the Cell	Garland Science		978-0-8153-4432-2	2015	
Bruce Alberts	Biología molecular de la célula	Omega,		978-84-282-1638-8	2016	
Cooper and Hausman	La célula	Marban		9788471019479	2014	
Alfonso Calvo	Biología celular biomédica	Elsevier		9788490220368	2015	