



1. General information

Course: BIOLOGY

Type: BASIC

Degree: 332 - UNDERGRADUATE DEGREE PROGRAMME IN MEDICINE

Center: 9 - FACULTY OF MEDICINE OF CIUDAD REAL

Year: 1

Main language: Spanish

Use of additional
languages:

Web site:

Code: 34303

ECTS credits: 6

Academic year: 2023-24

Group(s): 20

Duration: First semester

Second language:

English Friendly: Y

Bilingual: N

Lecturer: MARIO DURAN PRADO - Group(s): 20				
Building/Office	Department	Phone number	Email	Office hours
Facultad de Medicina Ciudad Real/2.05	CIENCIAS MÉDICAS	926295300/6836	mario.duran@uclm.es	Monday and Wednesday 16:00-18:00
Lecturer: YOANA RABANAL RUIZ - Group(s): 20				
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Facultad de Medicina Ciudad Real/2.05	CIENCIAS MÉDICAS	926052871	Yoana.Rabanal@uclm.es	Monday and Wednesday 16:00-18:00

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 0. Biology introduction

Unit 2: Module 1. Cellular membranes

Unit 3: Module 2. Protein and vesicular trafficking

Unit 4: Module 3. Energetic conversion and cytoskeleton

Unit 5: Module 4. Cell signalling

Unit 6: Module 5. Nucleous 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%	Module Exams
Final test	20.00%	72.50%	Theoretical evaluation
Assessment of active participation	5.00%	5.00%	Participation and attitude
Practicum and practical activities reports assessment	10.00%	0.00%	Papers and practical exams
Final test	12.50%	22.50%	Practical Exam at the end of the semester
Test	2.50%	0.00%	Practical Exam Module 0
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 is entitled to two calls during the academic year:

1. Ordinary call: it comprises the continuous evaluation of all theoretical and practical activities reflected in the timetable attending to 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 exclusively of the failed part of the subject in the ordinary call. It consists of a theoretical exam and/or a practical exam. The rest of the marks of the practical part will be those obtained during the course in reports, seminars, presentations, assignments, participation and attitude or OSCE.

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

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

a. Attendance mode: It includes the continuous evaluation of all theoretical and practical activities reflected in the timetable, complying with the conditions

described in the teaching guide of the subject, as if the subject was taken for the first time. Thus, 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 in the previous course through a theoretical exam and/or a practical exam per semester on the same date as the final exam of each semester. The marks for practical exams other than the practical exam will be kept from the previous course. This modality can only be chosen in the case of having taken the subject in the ordinary call in the previous academic year.

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

3. Special final exam: This includes the evaluation of only the failed part of the subject in the previous academic year. This call can only be requested in key subjects. It will consist of a theoretical exam and/or a practical exam. The rest of the marks of the practical part will be those of the previous course. In the case of not having taken the ordinary on-site exam in the current or previous course, the grades of previous exams will not be taken into account since only one course will be kept.

These conditions will only be maintained in the academic year consecutive to the ordinary on-site call of a subject. The grade 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.

If 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 followed in the third and successive odd numbered years of enrollment.

ORDINARY CALL:

Theoretical evaluation:

70% distributed in:

- 50% module exams
- 20% final semester exams

To pass the course it will be necessary to obtain 40% of this 70%, which means, at least, 2.8 points in the theoretical part of the 10 total points of the course and to fulfill the requirements of the section "Evaluation criteria".

For the module exams (50% of the grade, i.e. 5 points) no minimum grade is established, so all grades obtained will be added together.

For the final exams (20% of the grade, i.e. 2 points) a minimum grade equal to 40% of the maximum grade to be achieved in each final exam is established.

In order to favor the weight of the continuous evaluation in the final grade, not reaching the minimum grade established will not mean the impossibility to pass the course, but the points of that final exam will not be added to the rest of the points obtained.

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

30% valued jointly as follows:

- Practical exam Module 0: 2,5%.
- Practical exams at the end of the semester: 12,5%.
- Papers and practical exams: 10%.
- Participation and attitude: 5%.

To pass the course it will be necessary to obtain 40% of the 30%, which represents at least 1.2 points in the practical part of the 10 total points of the course and to fulfill the requirements of the section "Evaluation Criteria" that appears in the electronic guide.

The indispensable requirement for the student to be able to take the OSCE test in a course is to be enrolled in at least 75% of the subjects of that course that participate in this OSCE. test. Otherwise, an alternative practical test will be given independently for each subject.

EXTRAORDINARY CALL, SPECIAL FINAL CALL, ORDINARY NON-ATTENDANCE CALL:

Theoretical evaluation: exam with a weight of 70%. To pass the course it will be necessary to obtain 40% of this 70%, which means at least 2.8 points in the theoretical part of the 10 total points of the course and meet the requirements of the section "Evaluation criteria". In case of having passed the theoretical part of the course in the current or previous year, the grade obtained in the last exam will be maintained.

Practical evaluation: to pass the course it will be necessary to obtain 40% of the 30%, which means at least 1.2 points in the practical part of the 10 total points of the course and to fulfill the requirements of the section "Evaluation criteria". In case of having passed the practical part in the current or previous course, the grade obtained in the last exam will be maintained.

There will be a Practice Exam and the results obtained in the OSCE of the previous ordinary on-site exam, either of the current or previous year, will be taken into account.

Non-continuous evaluation:

See what is described in the previous point.

Specifications for the resit/retake exam:

See what is described in the previous point.

Specifications for the second resit / retake exam:

See what is described in the previous point.

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 6): Module 0. Biology introduction	

Group 20:	
Initial date: 12-09-2023	End date: 15-09-2023
Comment: Module 0. Biology introduction	
Unit 2 (de 6): Module 1. Cellular membranes	
Group 20:	
Initial date: 18-09-2023	End date: 06-10-2023
Comment: Module 2. Cellular membranes	
Unit 3 (de 6): Module 2. Protein and vesicular trafficking	
Group 20:	
Initial date: 09-10-2023	End date: 27-10-2023
Comment: Module 2. Protein and vesicular trafficking	
Unit 4 (de 6): Module 3. Energetic conversion and cytoskeleton	
Group 20:	
Initial date: 30-10-2023	End date: 17-11-2023
Comment: Module 3. Energetic conversion and cytoskeleton	
Unit 5 (de 6): Module 4. Cell signalling	
Group 20:	
Initial date: 20-11-2023	End date: 05-12-2023
Comment: Module 4. Cell signalling	
Unit 6 (de 6): Module 5. Nucleous and cell division	
Group 20:	
Initial date: 11-12-2023	End date: 09-01-2024
Comment: Module 5. Nucleous and cell division	
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	