Animal Physiology

Code: 100932
ECTS Credits: 6

2025/2026

Degree	Type	Year
Biotechnology	FB	2

Contact

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Teachers

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Teaching groups languages

You can view this information at the end of this document.

Prerequisites

It is recommended to refresh concepts learnt at the subjects of the first course 'Cellular Biology' and 'Biochemistry', and first semestre second course 'Probability and Statistics'.

Objectives and Contextualisation

To gain knowledge of the organization, the anatomical bases and the functional aspects of animal physiological systems, focused in humans.

To identify the role and importance of the main regulatory or control systems.

To know the biophysical, cellular, molecular and biochemical bases of the physiological systems to better understand how they work.

To understand the different physiological systems as highly interrelated and integrated entities.

To be able to understand the basics of physiology as a necessary basis for the development of biotechnological applications.

Learning Outcomes

1. CM01 (Competence) Integrate the function and regulation mechanisms of the cardiovascular, respiratory, excretory, digestive, endocrine and male and female reproductive systems.
2. CM02 (Competence) Assess sex/gender inequalities at experimental level in the fields of human physiology and genetics.
3. CM03 (Competence) Work collaboratively in teams to solve problems and case studies in the field of biology.
4. KM01 (Knowledge) Describe the physiological basis of the organisation and functioning of living organisms.
5. KM03 (Knowledge) Recognise the differentiating elements between animals and plants, both from the cellular point of view and from the point of view of their physiology and functioning.
6. SM01 (Skill) Analyse the behaviour of biological systems from an integrated perspective.
7. SM03 (Skill) Relate relevant scientific data in different areas of biology.

Content

Introduction to Physiology

Body Fluid Compartments and Blood

Electrical Excitability

Cardiovascular Physiology

Respiratory Physiology

Renal Function

Gastrointestinal Physiology

Endocrine System

Reproduction

Nervous System

Activities and Methodology

Title	Hours	ECTS	Learning Outcomes
Type: Directed			
Lectures	30	1.2	
Seminars	15	0.6	
Type: Supervised			
Case/problem-solving	15	0.6	
Type: Autonomous			
Personal study	55	2.2	
Preparation of works	25	1	

Lectures

Master classes given by the Lecturer about the basic skills and knowledge on a particular physiological subject to be acquired by the students, with the support of audiovisual teaching material, previously accessible at the Campus Virtual. It is highly recommended to attend the Lectures, and must necessarily be accompanied by the personal study.

Problems / Seminars

In these classes, students will normally work in small groups and sometimes individually, in: 1. solving questions, cases and physiological problems, 2. reading and critical analysis of news, scientific dissemination texts and / or scientific literature, 3. resolution of doubts that arise as the course progresses, 4. workshop on scientific communication, 5. preparation and public presentation of topics that the teachers will indicate.

Annotation: Within the schedule set by the centre or degree programme, 15 minutes of one class will be reserved for students to evaluate their lecturers and their courses or modules through questionnaires.

Assessment

Continous Assessment Activities

Title	Weighting	Hours	ECTS	Learning Outcomes
Evaluation of seminars/problems	20%	6	0.24	CM01, CM02, CM03, SM03
Exams of theory	80%	4	0.16	CM01, KM01, KM03, SM01

This course follows a continuous assessment process throughout the academic year and does not include a single final assessment option.
Assessment consists of more than three evaluable activities of different types, distributed throughout the course, and none of these activities accounts for more than 50% of the final grade.

Theory. This will be assessed individually through two midterm exams, each consisting of 30-50 multiple-choice questions. Each midterm will contribute 50% to the theory grade. The two midterms can be averaged only if each exam has a minimum score of 4.5. The theory component accounts for 80% of the final course grade, and a minimum score of 5.0 is required to be averaged with the grade for seminars/problems.

Seminars/Problems. Each student will receive an individual grade based on both individual and group evaluations, which may include solving problems in animal physiology, written commentary on news/scientific articles, preparation and presentation of assignments, etc. Each of these activities will be graded, and the final grade will be the weighted average of all activities. This part accounts for 20% of the final course grade, and there is no minimum grade required to average it with the theory grade.

The course will be passed with a final weighted average grade of 5.0 or higher.

Final Considerations: To participate in the resit/recovery assessment, students must have been previously assessed in a set of activities that together account for at least two-thirds (67%) of the total course or module grade. Therefore, students will receive a "Not Assessable" (No Avaluable) grade if the weight of the assessment activities they have completed is less than 67% of the final grade.

Bibliography

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· Silbernagl S, Despopoulos A. Fisiología. Texto y Atlas. Editorial Médica Panamericana, 7a ed, 2009.

· Tortora GJ, Derrickson BH. Principles of Anatomy and Physiology. Médica Panamericana, 15a ed, 2021.

· Tresguerres J.A.F. Fisiología Humana. McGraw-Hill Interamericana de España SL, 4a ed, 2010.

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Software

None.

Groups and Languages

Please note that this information is provisional until 30 November 2025. You can check it through this link. To consult the language you will need to enter the CODE of the subject.

Name	Group	Language	Semester	Turn
(PAUL) Classroom practices	421	Catalan/Spanish	second semester	afternoon
(PAUL) Classroom practices	422	Catalan/Spanish	second semester	afternoon
(TE) Theory	42	Catalan/Spanish	second semester	afternoon