Course guide
820026 - FIB - Physiology

Last modified: 02/10/2025

Unit in charge: Barcelona East School of Engineering
Teaching unit: 702 - CEM - Department of Materials Science and Engineering.
745 - DEAB - Department of Agri-Food Engineering and Biotechnology.

Degree: BACHELOR'S DEGREE IN BIOMEDICAL ENGINEERING (Syllabus 2009). (Compulsory subject).

Academic year: 2025 **ECTS Credits:** 6.0 **Languages:** Catalan, Spanish

LECTURER

Coordinating lecturer:

Others:

REQUIREMENTS

BIOLOGIA - Prerequisit

DEGREE COMPETENCES TO WHICH THE SUBJECT CONTRIBUTES

Specific:
2. Understand physiology and biology.
CEBIO-210. Identify the physical bases of biological processes.

Transversal:
1. EFFICIENT ORAL AND WRITTEN COMMUNICATION - Level 1. Planning oral communication, answering questions properly and writing straightforward texts that are spelt correctly and are grammatically coherent.

TEACHING METHODOLOGY

The course uses expository methodology (theory) in 29%, individual or group classroom (lab) in 10%, individual distance in a 47% non-attendance and work in another group 14 %.

LEARNING OBJECTIVES OF THE SUBJECT

That the student is able to integrate the functioning of organs and systems responsible for maintaining homeostatic balance within relatively narrow limits that determine the physical activity

STUDY LOAD

Type	Hours	Percentage
Self study	90,0	60.00
Hours small group	15,0	10.00
Hours large group	45,0	30.00

Total learning time: 150 h

CONTENTS

1. Introduction to physiology

Description:
Functional organization. Communication, integration and homeostasis

Full-or-part-time: 6h 30m
Theory classes: 1h 30m
Laboratory classes: 2h
Self study : 3h

2: Cardiovascular System

Full-or-part-time: 18h
Theory classes: 6h
Laboratory classes: 2h
Self study : 10h

3: Respiratory System

Full-or-part-time: 14h
Theory classes: 4h
Laboratory classes: 2h
Self study : 8h

4: Digestive System

Full-or-part-time: 16h 30m
Theory classes: 4h 30m
Laboratory classes: 2h
Self study : 10h

5: Excretory System

Full-or-part-time: 15h
Theory classes: 3h
Laboratory classes: 2h
Self study : 10h

6: Endocrine System

Full-or-part-time: 16h 30m
Theory classes: 4h 30m
Laboratory classes: 2h
Self study : 10h

7: Nervous System

Full-or-part-time: 16h 30m
Theory classes: 4h 30m
Laboratory classes: 2h
Self study : 10h

8: Tegument System, support and movement

Full-or-part-time: 14h 30m
Theory classes: 4h 30m
Laboratory classes: 2h
Self study : 8h

9: Immune System

Full-or-part-time: 16h 30m
Theory classes: 4h 30m
Laboratory classes: 2h
Self study : 10h

10: Reproductive System

Description:
Spermatogenesis, oogenesis, fertilization process, embryo implantation and hormonal control

Full-or-part-time: 16h
Theory classes: 3h
Laboratory classes: 2h
Self study : 11h

GRADING SYSTEM

The evaluation will be conducted through the assessment by teachers of student work, individual and / or group performed on a face and, appropriately weighting the following activities:
2 tests conducted individual face-off during the year.
guided laboratory exercises.
Weight in the final evaluation:
Two partial checks: 35% + 35%
Lab practices exam: 15%
Oral presentation: 15%

This subject has revaluation exam. The students will be able to access the re-assessment test that meets the requirements set by the EEBE in its Assessment and Permanence Regulations (The students will be able to access the re-assessment test that meets the requirements set by the EEBE in its Assessment and Permanence Regulations).

BIBLIOGRAPHY

Basic:
- Guyton, Arthur C.; Hall, John E. Tratado de fisiología médica. 11ª ed. Madrid [etc.]: McGraw-Hill Interamericana, cop. 2006. ISBN 8481749265.