Course guide  
**820026 - FIB - Physiology**

Unit in charge: Barcelona East School of Engineering  
Teaching unit: 745 - DEAB - Department of Agri-Food Engineering and Biotechnology.  
702 - CEM - Department of Materials Science and Engineering.  
Degree: BACHELOR’S DEGREE IN BIOMEDICAL ENGINEERING (Syllabus 2009). (Compulsory subject).  
Academic year: 2023  
ECTS Credits: 6.0  
Languages: Catalan, Spanish  

**LECTURER**

Coordinating lecturer: ELISABET ENGEL LOPEZ  
Segon quadrimestre:  
ELISABET ENGEL LOPEZ - Grup: M31, Grup: M32, Grup: M33, Grup: M34, Grup: M35  
Others:  
Segon quadrimestre:  
ELISABET ENGEL LOPEZ - Grup: M31, Grup: M32, Grup: M33, Grup: M34, Grup: M35  
SOLEDAD GRACIELA PEREZ AMODIO - Grup: M31, Grup: M35  
MARCEL SORRIBAS OLIVERA - Grup: M33, Grup: M34  

**REQUIREMENTS**

BIOLOGIA - Prerequisite

**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

<table>
<thead>
<tr>
<th>Type</th>
<th>Hours</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self study</td>
<td>90,0</td>
<td>60.00</td>
</tr>
<tr>
<td>Hours small group</td>
<td>15,0</td>
<td>10.00</td>
</tr>
<tr>
<td>Hours large group</td>
<td>45,0</td>
<td>30.00</td>
</tr>
</tbody>
</table>

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
<table>
<thead>
<tr>
<th>Course</th>
<th>Full-or-part-time</th>
<th>Theory classes</th>
<th>Laboratory classes</th>
<th>Self study</th>
</tr>
</thead>
<tbody>
<tr>
<td>6: Endocrine System</td>
<td>16h 30m</td>
<td>4h 30m</td>
<td>2h</td>
<td>10h</td>
</tr>
<tr>
<td>7: Nervous System</td>
<td>16h 30m</td>
<td>4h 30m</td>
<td>2h</td>
<td>10h</td>
</tr>
<tr>
<td>8: Tegument System, support and movement</td>
<td>14h 30m</td>
<td>4h 30m</td>
<td>2h</td>
<td>8h</td>
</tr>
<tr>
<td>9: Immune System</td>
<td>16h 30m</td>
<td>4h 30m</td>
<td>2h</td>
<td>10h</td>
</tr>
<tr>
<td>10: Reproductive System</td>
<td>16h</td>
<td>3h</td>
<td>2h</td>
<td>11h</td>
</tr>
</tbody>
</table>

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

The evaluation will be conducted through the assessment by teachers of student work, individual and/or group performed on a face-to-face basis, and appropriately weighting the following activities:
- 2 tests conducted individually during the year.
- Guided laboratory exercises.

Weight in the final evaluation:
- Two partial checks: 35% + 35%
- Lab practices exam: 15%
- Oral presentation: 10%
- Generic skills: Effective oral and written communication: 5%

This subject has revaluation exams. 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: