820026 - FIB - Physiology

Coordinating unit: 295 - EEBE - Barcelona East School of Engineering
Teaching unit: 745 - EAB - Department of Agri-Food Engineering and Biotechnology
Academic year: 2017
Degree: BACHELOR'S DEGREE IN BIOMEDICAL ENGINEERING (Syllabus 2009). (Teaching unit Compulsory)
ECTS credits: 6

Teaching staff
Coordinator: Engel Lopez, Elisabet
Others: ANTONIO RAFAEL ALMIRALL MALIVERN - ELISABET ENGEL LOPEZ

Requirements
Have passed the subject of Biologia

Degree competences to which the subject contributes
Specific:
1. 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>Total learning time: 150h</th>
<th>Hours large group: 45h</th>
<th>30.00%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hours medium group: 0h</td>
<td>0.00%</td>
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<tr>
<td>Hours small group: 15h</td>
<td>10.00%</td>
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<td>Guided activities: 0h</td>
<td>0.00%</td>
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<tr>
<td>Self study: 90h</td>
<td>60.00%</td>
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</tbody>
</table>
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## Content

<table>
<thead>
<tr>
<th>Section</th>
<th>Learning time</th>
<th>Theory classes</th>
<th>Laboratory classes</th>
<th>Self study</th>
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</thead>
<tbody>
<tr>
<td>1. Introduction to physiology</td>
<td>6h 30m</td>
<td></td>
<td></td>
<td>3h</td>
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<tr>
<td><strong>Description:</strong></td>
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<tr>
<td>Functional organization.</td>
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<tr>
<td>Communication, integration and</td>
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</tr>
<tr>
<td>homeostasis</td>
<td></td>
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<tr>
<td>2: Cardiovascular System</td>
<td>18h</td>
<td>6h</td>
<td>2h</td>
<td>10h</td>
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<tr>
<td>3: Respiratory System</td>
<td>14h</td>
<td>4h</td>
<td>2h</td>
<td>8h</td>
</tr>
<tr>
<td>4: Digestive System</td>
<td>16h 30m</td>
<td>4h 30m</td>
<td>2h</td>
<td>10h</td>
</tr>
<tr>
<td>5: Excretory System</td>
<td>15h</td>
<td>3h</td>
<td>2h</td>
<td>10h</td>
</tr>
<tr>
<td>6: Endocrine System</td>
<td>16h 30m</td>
<td>4h 30m</td>
<td>2h</td>
<td>10h</td>
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</tbody>
</table>
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%
Working practices: 25%

Generic skills: Effective oral and written communication: 5%

This subject has no revaluation exam

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**Qualification system**

<table>
<thead>
<tr>
<th>Subject</th>
<th>Learning time</th>
<th>Description</th>
</tr>
</thead>
</table>
| 7: Nervous System                            | 16h 30m       | Theory classes: 4h 30m  
Laboratory classes: 2h  
Self study: 10h |
| 8: Tegument System, support and movement     | 14h 30m       | Theory classes: 4h 30m  
Laboratory classes: 2h  
Self study: 8h |
| 9: Immune System                             | 16h 30m       | Theory classes: 4h 30m  
Laboratory classes: 2h  
Self study: 10h |
| 10: Reproductive System                      | 16h           | Theory classes: 3h  
Laboratory classes: 2h  
Self study: 11h |

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

Basic: