

Integrated Biomedicine II (20342)

Qualification/course: Bachelor's Degree in Human Biology

Year: 2

Term: 1

Number of ECTS credits: 4

Number of study hours: 100

Course Language(s): Catalan / Spanish

Teaching staff: Eulàlia de Nadal (coordinadora), Fernando Berrendero, David Comas, Blanca Rubí, Carme Solè, Marta Lloret.

1. Presentation of the course

This subject forms part of the Integrated Biomedicine I, II and III block that is taught during the first three years of the Human Biology Degree course. In this block, problems of biomedicine will be approached progressively from three levels of complexity: the cellular and molecular basis of organisms and systems (first year), the basis of human health and illness (second year), and population-related and social consequences (third year).

Thus, Integrated Biomedicine II is designed to present prototypical problems and situations arising in biomedicine. It will deal with problems concerning the biological basis of the human organism and of human health. Students will be required to work towards educational objectives associated with both basic and research-related subject matter simultaneously.

The Integrated Biomedicine subjects are conceived as a specific framework in which to apply the Problem-Based Learning (ABP) method by using the material taught in each year's subjects (horizontal integration) and the material from the entire course (vertical integration). Students will therefore be required to work towards educational objectives associated with both basic and applied subject matter simultaneously.

2. Competences to be achieved

The teaching activity developed through these subjects has the following aims:

- To integrate and establish a correlation between the molecular basis of life, human biology, health, illness and its treatment.
- To solve complex contextualized problems, from a monodisciplinary and a multidisciplinary viewpoint.
- To integrate basic and applied knowledge.
- To acquire general skills related to scientific thought: To construct arguments based on evidence, To collect, analyze and interpret data, To construct models, To encourage critical thinking.
- To develop basic transversal skills: Teamwork, Oral expression, Written expression, Searching and critical reading of information.

The specific skills of the Integrated Biomedicine II will be attained through the solving of problems focus in What is health and illness?: Biology of the human organism, Bases of human health and Physiopathology of falling ill.

In addition to the acquisition of the specific skills referred to, the Integrated Biomedicine subjects will emphasize the development of a number of transversal skills that are essential for the professional activity and scientific thought of human

biologists: construction of arguments based on evidence; ability to formulate the best questions for the research, analysis and interpretation of data; experiments design or models. Emphasis will also be placed on generic self-learning skills such as teamwork, group leadership, oral and written communication, critical reading and searching for information; and the use of new information technologies.

3. Contents

Specific skills will be developed in the following areas of expertise:

- Biology of the human organism o Structure and functioning of the human organism: organs and bodily systems
- Physiopathology of falling ill o Changes in the structure and functioning of the human organism
- Bases of human health

4. Assessment

The assessment of the course will include the assessment of the Problem Based Learning (APB) activities, especially the solution for each of the problems and the assessment of the specific learning objectives (specific biology content) arising from the problems in a final examination.

ABP projects (60%):

- ABP1: written group projects
- ABP2: oral group presentation
- ABP3: oral group examination

"Triple jump" test (30%)

Participation (10%)

5. Bibliography and teaching resources

6. Methodology

As indicated above, these subjects will be studied according to the Problem Based Learning (APB) method. At the beginning of the Human Biology course the students will be divided into six groups, with a lecturer acting as supervising tutor. To assist in these subjects, a learning support telematics system has been conceived and is being prepared by lecturers of the UPF's Department of Information and Communications Technology, with the assistance of an MQD (Improvement of Teaching Quality) grant from the Government of Catalonia (Appendix 3).

7. Activities schedule