Universitat Autònoma de Barcelona

2019/2020

Function of the Human Body

Code: 102992
ECTS Credits: 9

Degree	Type	Year	Semester
2500892 Physiotherapy	FB	1	A

Contact

Name: Esther Udina Bonet
Email: Esther.Udina@uab.cat

Use of Languages

Principal working language: catalan (cat)
Some groups entirely in English: No
Some groups entirely in Catalan: Yes
Some groups entirely in Spanish: No

Teachers

Joaquim Hernández Martín
Raquel Moral Cabrera
Mireia Herrando Grabulosa

Prerequisites

No official prerequisites are defined for this subject. However, it is recommended that the student has acquired the basic knowledge and competences of the subjects corresponding to Cell Biology, Biochemistry and Molecular Biology, and Biophysics.

Objectives and Contextualisation

The Function of the Human Body subject is programmed during the first course of the Degree of Physiotherapy and develops the knowledge of the basic principles of the function of systems of the human organism. The acquisition of the competences of this subject will allow the student to understand the function of normal systems and be well prepared to confront the mechanisms of the pathologies that afect these systems, and the therapeutic strategies that could improved it.

The general training objectives of the subject are:

- To know the basic concepts of the Physiology of the different functional systems of the healthy human organism.
- To acquire an integrated vision of the interrelations of the different systems of the organism
- To integrate the Physiology knowledge with concepts learned in other basic subjects, that deal with the structure and the cellular and molecular aspects of the organism.
- To train the student to apply the physiological knowledge in deducting the consequences of the diseases.
- To acquire practical skills for performing the most frequent functional tests in the biomedical and physiotherapy field.
- To acquire attitudes aimed at the promotion of health and the prevention of disease, oriented towards health medicine, and appropriate for a medical practice based on scientific evidence.

Competences

- Analyse and synthesise.
- Develop independent learning strategies
- Display knowledge of the morphology, physiology, pathology and conduct of both healthy and sick people, in the natural and social environment.
- Display knowledge of the sciences, models, techniques and instruments around which physiotherapy is structured and developed.
- Solve problems.

Learning Outcomes

1. Analyse and synthesise.
2. Develop independent learning strategies
3. Explain the functioning of the the human body in health in order to have a sound basis for understanding the processes that induce disease.
4. Explain the fundamental biochemical principles of the functioning of the human body.
5. Identify life-threatening situations and perform basic and advanced life support manoeuvres.
6. Identify physiological and structural changes that can take place as a result of the injury and/or disease process in the different systems.
7. Solve problems.

Content

General and Cellular Physiology (Esther Udina)

Physiology of blood and haematopoietic organs (Mireia Herrando)

Physiology of the cardiovascular system (Joaquim Hernàndez i Esther Udina)

Pysiology of the respiratory system (Joaquim Heràndez)

Pysiology of the renal system and body liquids (Mireia Herrando)

Physiology of the digestive system and nutrition (Mireia Herrando)

Physiology of the endocrine system (Raquel Moral)

Physiology of the reproductive system (Raquel Moral)

Neurophysiology and physiology of the special senses (Esther Udina)

Adaptation of the organism to environmental changes (Joaquim Hernàndez)

Methodology

Directed activitiesS(35%=74,5h)	Theoretical classes with audiovisual support
	Laboratori Practicals
Superised activities (10%=22,5h)	Resolution of clinical cases

Autonomous activities (55%= 114 hores)	Research and treatment of complementary information to the theoretical knowledgments of the directed activities
	Preparation of the clinical cases and practicals
	Study of the contents and realization of schemes, conceptual maps, reviews...

Activities

Title	Hours	ECTS	Learning Outcomes
Type: Directed			
LAB PRACTICE	14.5	0.58	1, 2, 3, 4, 6, 5, 7
THEORY	64	2.56	1, 3, 4, 5
Type: Supervised			
SUPERVISED	22.5	0.9	1, 2, 3, 4, 6, 5, 7
Type: Autonomous			
SELF STUDY	114	4.56	1, 2, 3, 4, 6, 7

Assessment

The competences of this subject will be evaluated through written objective tests and on-site assessment of laboratory practices. The different functional systems detailed in the program will be evaluated.

Three exam sessions will be made during the course, which will have a weight of 33.33% each, where the part of the subject (both theoretical, practical and case related) corresponding to that period (block) will be evaluated. Each exam will consist of an objective test section with multiple choice questions about the acquired knowledge (75%) and a section of short questions that will assess the knowledge acquired in the preparation of the cases and in the practical sessions, as well as the ability to integrate these with theoretical knowledge (25%). To overcome each block and thus to be able to pass this subject, the student must take a minimum of 4 in each sub-part (test and short questions) and an average grade of 5 for EACH block. In the event that the student does not meet the two requirements (minimum grade of 4 in each sub-part and a a minimum of 5 for the block), the student would have to recover that block in a final exam. The recovery exam will also consist of three blocks, with a format equivalent to that of the partial examinations, and the student will have to attend only to the blocks that they have not passed or attended in the continuous evaluation of the same academic course.

.To pass the subject, the student must draw a minimum score of 4 from each sub-part of each block, and a final average grade greater than 5. For the students that have passed the subject, the average mark obtained will suppose 95% of the final mark and the other 5% will be the mark obtained in the different evaluations that will have been done in the practical sessions.

It is important to emphasize that, to pass the subject, students must meet the requirements mentioned above for

In this case, the final mark will be the weighted average (for the extension of the system) of the marks obtained in each of the approved systems. If the two systems are not passed, the maximum mark obtained will be 4.8.

In no case will the note of any block of one year be kept for the other.

The student will be considered "non-evaluable" if they did not take any of the examinations sessions programme

Assessment Activities

Title	Weighting	Hours	ECTS	Learning Outcomes
Evaluation of the acquired knowledge and practical skills through lab questioners	5% (only when passing the other evaluations)	2	0.08	1, 2, 3, 4, 6, 5, 7
Evaluation of the acquired knowledge and practical skills through short questions	10%	1	0.04	1, 2, 3, 4, 6, 5, 7
Evaluation of the preparation and resolution of the cases and problems and their integration with theroretical -practical knowledges of the subject	15%	1	0.04	1, 2, 3, 4, 6, 5, 7
Objective test of multiple choice. Partial and final tests of theory and practical	75%	6	0.24	1, 2, 3, 4, 6, 5, 7

Bibliography

- Constanzo LS, Fisiología (6a Ed). Elsevier-Saunders, 2018

- Tortora GJ, Derrickson B. *Principios de Anatomía y Fisiología*. (15ª ed). Editorial Médica Panamericana, 2018.

- Thibodeau GA, Patton KT. *Anatomía y Fisiología* (6ª ed). Elsevier, 2007.

- Tresguerres AF, Villanúa MA, López-Calderón A. *Anatomía y fisiología del cuerpo humano*. Mc Graw HIll, 2009

- Koeppen B and Stanson B. *Berne and Levy physiology* (7th ed). Elsevier 2017.

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- Koeppen B and Stanson B. *Berne and Levy physiology* (7th ed). Elsevier 2017.

- Guyton AC, Hall JE. *Tratado de Fisiología Médica* (13ª ed.). Elsevier-Saunders, 2016.

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