

## MEDICINE FUNDAMENTALS I

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Code: 11401

Main Scientific Area: Health, Environment and Industrial Technologies

Lecturer: Teresa Paula Amaral Abreu

Language of Instruction: Portuguese

Regime: S1

Contact Hours: 60h Total Workload: 100h

ECTS: 6,0

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### **Objectives**

The main goal of this subject, as a crucial area in health sciences, is to acquire, develop and consolidate fundamental knowledge on both morphology and function of the human body, as demanded to any professional in health. It is intended to point out the practical interest of this knowledge, avoiding an encyclopedic program, and focusing the real needs of actual medicine that a future professional may need. The curiosity of the students will be challenged in order to stimulate their critical spirit regarding examples of several vital phenomena.

### **Learning Outcomes**

The program under study will reach a considerable scientific level, so that the student may connect themes and understand the functioning of the human body. This will allow the student to face the problems in the future easily, building up solutions on top knowledge obtained in the classroom. Moreover, he will be able to bridge the fundamentals of human body function and application of existing and emergent technologies.

### **Course Contents**

The contents are:

Introduction to the study of human anatomy and physiology;

Levels of organization of the human body;

Chemical composition of the human body;

Metabolism;

The cell;

Genetic code;

Homeostasis;

Nervous system;

Muscle System;

Sensorial system

## **Recommended Bibliography**

E. P. Widmaier, H. Raff, e K. T. Strang, Vander's Human Physiology

Dee Unglaub Silverthorn - Fisiologia Humana - Uma Abordagem Integrada Seeley, Anatomia Fisiologi

## **Learning and Teaching Methods**

The syllabus provides the foundations of Anatomy and Biochemistry to a better understanding of the teaching topics of Physiology. These will be supplemented with laboratory experience of the teacher in the class that will be shared in several ways. At the end of the course, students should have a knowledge that will allow the better resolution of technology problems through the creation of systems based on the knowledge and technology experience obtained in other subjects in the course.

## **Assessment Methods**

· 2 exams (60%)

o Worth 30% each

o 20 multiple choice questions

o Wrong answers subtract 0.25 points

o Minimum score: 9 points

o <9 in one of the exams - Extraordinary evaluation phase (Minimum score 9, doesn't exclude group task evaluation)

· Group tasks (40%)

o 1st task - 25%

o 2nd task (project 50 - 10) - 15%