UNIVERSITÀ
DEGLI STUDI DI MILANO-BICOCCA

COURSE SYLLABUS

Human Physiology

2122-2-H4101D253

Aims

Human physiology is the science of the mechanical, physical and biochemical function of humans and serves as the foundation for modern medicine. As a discipline, it connects science, medicine and health and creates a framework for understanding how the human body adjusts to stress, physical activity and disease. It is essential for medical students to receive a broad exposure of the physiologicals concepts underlying the functions of the human body that will prepare them to be critical thinker and provide the necessary foundation for further studies in pharmacology, pathology, pathophysiology and clinical medicine and surgery. The curricular objectives are mainly focused on the normal function of the organism, integrating knowledge on many levels (cell physiology, organ systems and the body as a whole). However, the material is presented in a context that prepares students for their role as physicians. Therefore, when possible, clinical examples will be used to illustrate the basic physiological principles.

Contents

The course systematically presents the concepts underlying the functions of the human body. The mechanism leading to function imbalance cannot be appreciated without a deep understanding of the biophysical and physiological basics. Therefore, such mechanisms that provide functions at the cellular, tissue, organ and apparatus level and at the integrated level will be introduced. In particular, the course will address the physiology of excitable and non-excitable cells, the cardio-circulatory system, the respiratory system, the nervous system, motor functions and higher nervous functions.

Detailed program

Please, refer to the specific module

Prerequisites

Knowledge of the preparatory courses indicated in the guidelines of the degree course

Teaching form

Lectures. In the period of the Covid-19 emergency, lessons will be delivered as online blending learning (webcasting -synchronous and asynchronous- and online video -live and recorded-). In the case of asynchronous lessons, the teacher is committed to provide the recording of the lesson within 48 hours after the scheduled date. If not, it will be notified to the students.

Textbook and teaching resource

Please, refer to the specific module

Semester

Second year, first and second semester

Assessment method

The exam consists in an oral test. Open questions will be posed to the student in order to evaluate the general knowledge of the topics. Moreover, the student will be asked to answer to questions that require the analysis of a complex phenomenon, its rationalization and the application of specific physiology principles and to solve simple exercises. Finally, a clinical case may be presented which will require the analysis of the interconnections between different physiological variables in the light of the theoretical paradigms.

During the Covid-19 emergency period, oral exams will be carried out on-line through the platforms made available by the University (WebEx) and a public link will be shown on the e-learning page of the course to access the exam. possible virtual spectators

Office hours

The professors receive by appointment upon agreement by e-mail