

# UNIVERSITÀ DEGLI STUDI DI MILANO-BICOCCA

### **COURSE SYLLABUS**

## **Physiology**

2223-1-I0301D003-I0301D012M

#### **Aims**

The student will learn to know and describe the functional mechanism of the integrated biological processes in conditions of normality and the fundamental tools for the pathologic alteration comprehension

#### **Contents**

The course provides students with the fundamental theoretical knowledge of physiology, with a view to their subsequent professional application. The following concepts will be examined: the functional mechanisms of the biological phenomenon integrated in normal conditions and the basic tools to interpret pathological changes

### **Detailed program**

Physiology of the cardiocirculatory system: viscosity and density of the blood; the heart; ventricular pressure-volume relation; conduction system; electrocardiogram; arterial blood pressure and its determinants; blood pressure measurement. Respiratory physiology: oxygen transport-utilization system; transport of O2 and CO2 in the blood; principles of mechanics. Acid-base balance. Maintenance of water-salt balance: Homeostasis and internal environment. Renal physiology. Digestive system physiology. Nervous system physiology. Muscle physiology. Principles of sport physiology.

### **Prerequisites**

### **Teaching form**

Lectures and exercises

### Textbook and teaching resource

VV.AA.: Fisiologia dell'uomo. Edizioni Edi.Ermes, Milano. Guyton A.C.: Elementi di fisiologia umana. Piccin Editore. Teacher will provide other educational material.

#### Semester

First semester

#### **Assessment method**

Multiple choice final test comprising 30 questions with only one correct answer among 2, 3, 4 or 5, aimed at evaluating global comprehension of course program. Each correct answer is scored 1. At the discretion of the professor, the oral examination will be held.

### Office hours

By appointment required by mail

### **Sustainable Development Goals**

GOOD HEALTH AND WELL-BEING