



UNIVERSITÀ  
DEGLI STUDI DI MILANO-BICOCCA

## SYLLABUS DEL CORSO

### Physiology

2425-5-H4102D043-H4102D143M

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#### Aims

The course aims to enable medical students to understand the physiological processes underlying the physiology of the gastrointestinal tract. This will provide them with the tools to consciously address the aspects related to the pharmacology and pathology of the GI tract itself.

#### Contents

The course is based on the systematic presentation of physiological concepts underlying the functioning of the digestive tract. The mechanism leading to function imbalance cannot be appreciated without a deep understanding of the underlying biophysical and physiological mechanisms. Therefore, we will present such mechanisms that guarantee functions at the cellular, tissue, organ and apparatus level and at the integrated level.

During the course, the effects of the aging process on the physiology of the gastrointestinal system and the effects due to gender differences will be emphasized.

#### Detailed program

Functions and general characteristics. Structure of the gastro-intestinal tract. Secretion. Motility. Nervous control of the digestive function. Enteric nervous system. Electrophysiology of smooth muscle cells of the gastrointestinal tract. Hormonal control of motility of the gastrointestinal tract (gastrin, CCK, secretin). The oral cavity. The chemical senses of taste: physiology of taste and smell. Salivary secretion. Stomach and gastric secretion (composition and regulation). Intestinal secretions. Pancreatic secretion (composition and regulation). Liver secretion (composition and regulation). Digestion and absorption.

## **Prerequisites**

Fundamentals of Human Physiology.

## **Teaching form**

The schedule includes 8 hours of lectures (didactic mode) and 2 hours of interactive lessons.

## **Textbook and teaching resource**

Guyton & J.E. Hall, *Textbook of Medical Physiology*, Elsevier;  
Boron WF, Boulpaep EL, *Medical Physiology*, Ed. Elsevier.  
Reviews or scientific papers recommended by the Professor During Lectures

## **Semester**

Second semester

## **Assessment method**

The exam will be carried out in an integrated manner according to the modality envisaged by the vertical track

## **Office hours**

The professor receives by appointment upon agreement by e-mail  
ilaria.rivolta@unimib.it

## **Sustainable Development Goals**

GOOD HEALTH AND WELL-BEING | QUALITY EDUCATION | GENDER EQUALITY

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