



UNIVERSITÀ  
DEGLI STUDI DI MILANO-BICOCCA

## COURSE SYLLABUS

### General Pathology

2324-1-I0102D005-I0102D017M

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#### Aims

The course aims to introduce the student to the knowledge of the causes of human diseases, understanding pathogenetic and pathophysiological mechanisms relevant for their professional field.

#### Contents

Homeostasis and disease. Etiology and pathogenesis: disease-causing agents. Acquired and innate immunity. The immune response. Cell and tissue damage. Inflammation and tissue repair. Oncology.

#### Detailed program

- General Pathology. Etiology. Pathogenesis. Concept of homeostasis and disease. Onset and course of disease. Acute and chronic diseases. General etiology. Physiological and pathological predisposing factors.
- Causes of disease. Physical causes, chemical causes, biological causes: bacteria, viruses, protozoa, fungi, metazoans. Virulence. Pathogenicity. Transmission of infections. Spread of infectious agents. Pathogenic action.
- General properties of the immune system. Innate immunity and adaptive immunity. The cells of the immune system. The soluble mediators. Antigens. The immune response
- Acute and chronic inflammation. Phases of the inflammatory process. Chemical mediators. The cells of inflammation.
- Pathophysiology of thermoregulation. Generalities. Thermogenesis: basal metabolism, regulation of thermogenesis. Termodispersion. Alterations in body temperature. Not fever hyperthermia. Fever hyperthermia: pathogenesis, course, types of fever.
- Cellular homeostasis disorders. atrophy, hypertrophy, metaplasia, dysplasia, cellular anaplasia. Cell injury

and death. Oncology.

## **Prerequisites**

Positive evaluation in Biomedical Sciences 1.

## **Teaching form**

Lectures through presentations in electronic form of drawings and diagrams explaining concepts and functions of the organism. The lessons of some disciplines will be provided by teledidattica. Lessons will be in attendance.

## **Textbook and teaching resource**

Learning material (slides of the lessons) is available at the e-learning platform of the course.

Recommended textbooks:

- Robbins e Cotran: The pathological bases of diseases. Elsevier
- Pontieri-Russo-Frati: General Pathology. Piccin
- Abbas A.K.: Foundations of Immunology. Functions and alterations of the Immune System. Piccin

## **Semester**

First year, II semester

## **Assessment method**

Written examination: 14 multiple-choice questions and one open-ended question on the course topics

There will not be in itinere examinations.

The questions are aimed at ascertaining the effective acquisition of theoretical knowledge presented during the course.

The evaluation criteria are the followings: the correctness of the answers, the ability to understand the text of the open question, to argue the answer and to synthesize.

## **Office hours**

By appointment (email request)

**Sustainable Development Goals**

GOOD HEALTH AND WELL-BEING

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