



UNIVERSITÀ  
DEGLI STUDI DI MILANO-BICOCCA

## COURSE SYLLABUS

### General Pathology

2122-1-I0101D005-I0101D017M

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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. Termoisolation. 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, subject to any ministerial changes following the COVID pandemic situation.

## **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: 60 closed quiz with multiple choice answer and one open ended question. The 60 quiz are subdivided for different subjects: 20 for general pathology, 20 for pharmacology, 10 for clinical biochemistry, 10 for microbiology. The examination will be passed with 36 exact answers.

**Office hours**

By appointment (email request)

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