UNIVERSITÀ
DEGLI STUDI DI MILANO-BICOCCA

COURSE SYLLABUS

General Pathology

2425-1-I0101D005-I0101D017M

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. Sex and gender diferences in tumoral and non-tumoral pathogenesis

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.
- Impact of sex and gender in the development of acute, chronic and tumor diseases. Study of hormone- and non-hormone-related differential mechanisms in pathogenetic mechanisms.

Prerequisites

Positive evaluation in Biomedical Sciences 1.

Teaching form

The 16 hours of lessons take place in delivery mode (DE). Students based in Monza will take lessons in person, while those from remote locations will take lessons in tele-learning mode

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: Le Basi Patologiche delle Malattie. X edizione. Edizioni Edra
- Pontieri-Russo-Frati: Patologia Generale. Edizioni Piccin
- Abbas A.K.: Fondamenti di Immunologia. Funzioni e alterazioni del Sistema Immunitario. Edizioni Edra

Semester

First year, II semester

Assessment method

Written examination composed of multiple choice questions and open questions.
In the exam of Biomedical Sciences 2 it is necessary to reach the sufficiency in all 4 disciplines that compose it: Pharmacology, General Pathology, Microbiology, Clinical Biochemistry and Molecular Biology

Office hours

By appointment
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Sustainable Development Goals

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