UNIVERSITÀ
DEGLI STUDI DI MILANO-BICOCCA

COURSE SYLLABUS

Biochemistry

2425-1-I0302D002-I0302D006M

Aims

Students must be able:

-to explain structural characteristic of protein and the structure-function ratio

-to describe the role of enzyme in the biochemical reactions, with particular attention to enzymatic kinetic and regulation

-to define bioenergetics concepts, explaining respiratory chain function

-to describe sugars, lipids and proteins mechanisms of digestion and absorption

-to describe the metabolism of glucose, amino acid and fatty acid

-to describe cholesterol, ketone bodies, purines and pyrimidines, hormones metabolism and hormonal regulation of metabolism.

Contents

The course provides the student with the knowledge necessary for the study of compounds present in biological systems and also with knowledge of the main metabolic pathways and cellular biochemical mechanisms.

Detailed program

BIOCHEMISTRY

· Living matter in general.

· Proteins: structure-function ratio, plasmatic protein.

· Biochemical reactions, enzymes, enzymatic kinetic and regulation.

· Bioenergetics, respiratory chain, oxidative phosphorylation.

· Digestion, absorption of sugars, lipids and proteins.

· Glucose, amino acid and fatty acid metabolism.

· Cholesterol, ketone bodies, purines and pyrimidines, hormones metabolism, and hormonal regulation of metabolism.

Prerequisites

Teaching form

All lessons are held in person in delivery mode (8 lessons of 2 hrs).

Textbook and teaching resource

M. Stefani, N. Taddei: Chimica Biochimica e Biologia Applicata Zanichelli.

R. Roberti, G. Alunni Bistocchi: Elementi di Chimica e Biochimica McGrawHil

Semester

First semester

Assessment method

The Biochemistry written test will consist of 10 multiple choice questions to check preparation on the exam program.

Office hours

By appointment required by mai

Sustainable Development Goals

GOOD HEALTH AND WELL-BEING