



UNIVERSITÀ  
DEGLI STUDI DI MILANO-BICOCCA

## SYLLABUS DEL CORSO

### Biochimica

2425-1-I0301D002-I0301D006M

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#### 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 aims to provide the student with: the knowledge of the main metabolic pathways and biochemical cellular mechanisms.

#### Detailed program

- 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**

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## **Teaching form**

The lessons will be delivered and in person (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 mail

## **Sustainable Development Goals**

GOOD HEALTH AND WELL-BEING

