UNIVERSITÀ
DEGLI STUDI DI MILANO-BICOCCA

# COURSE SYLLABUS

# Metabolic Diseases: Insights From Innovative Therapeutic Approaches

**2627-2-F0902D015**

## Aims

The aim of the Course is to provide the student with a critical knowledge of the technical instruments and strategies normally employed in defining the pathophysiology of the various disorders and possible new therapeutic approaches.

Knowledge and understanding - at the end of the course the student will be able to use the provided information to understand the predisposing genes and molecular mechanisms underlying metabolic disorders.

Ability to apply knowledge and understanding - at the end of the course the student must be able to use the acquired knowledge to understand the molecular basis of new therapeutic approaches.

Independent judgment - at the end of the course, the student will be able to put together information from different fields (biology, medicine, technology) to understand and interpret new therapeutic approaches in the field of metabolic diseases.

Communication skills - at the end of the course the student will have acquired adequate scientific terminology and will be able to explain the topics covered in the course with correct language.

Learning ability - at the end of the course the student will be able to understand and critically evaluate the scientific literature regarding metabolic diseases such as obesity, diabetes and MAFLD..

## Contents

The course aims to present several examples of metabolic diseases, analyzing the pathways that normally regulate metabolism and their alterations that lead to conditions such as obesity, diabetes, and Metabolic Associated Fatty

Liver Disease (MAFLD). The role of biotechnology in their diagnosis and therapeutic approaches will also be assessed. A general introduction to the methodologies used to analyze pathological processes will be provided.

## Detailed program

For the detailed description of the program please refer to the information provided in the specific module

## Prerequisites

Advanced knowledge in genetics, biology and molecular biology.

## Teaching form

24 two-hour classes delivered in presence.
During the course scientific papers will be discussed in class.

## Textbook and teaching resource

Reviews or specific papers published in international journals.

The slides employed during classes will be provided.

## Semester

First semester

## Assessment method

The oral exam (in presence) will consist of an interview on the topics covered in class and described in the provided material. This interview will allow for an in-depth evaluation of the acquired knowledge, as well as of the critical ability and the ability to place individual topics within a broader context (for example, by evaluating possible interactions).

## Office hours

By appointment.
To arrange the appointment please use the email addresses provided in the two modules.

## Sustainable Development Goals

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