



UNIVERSITÀ  
DEGLI STUDI DI MILANO-BICOCCA

## COURSE SYLLABUS

### Disease Gene Mutagenesis

2223-1-F0601Q116-F0601Q117M

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#### Aims

The course will be multidisciplinary and organized in modules in order to offer an overview of genetic, molecular, biochemical, physiological and pharmacological aspects of a human disease.

The focus of the course will be the study, from different perspectives, of a genetic disease, from diagnosis to treatment.

In particular, at the end of the course the student will have acquired the following skills:

1. knowledge and understanding: complete overview with different integrated approaches of a specific human genetic disease
2. applied knowledge and understanding: apply what has been learned to the study of numerous human genetic diseases
3. self-judgment: capacity to critically evaluate what has been learned
4. oral competences: oral communication of what has been learned using the correct scientific terminology
5. ability to learn: critical learning and understanding of scientific literature on different aspects of a human disease.

In the academic year 2022-2023 the genetic disease studied will be Cystic Fibrosis

For the Molecular Biology module (1 CFU), the student will learn how design expression construct of specific pathogenic mutations

#### Contents

Site-specific mutagenesis approaches and in silico design of expression constructs

## **Detailed program**

The Molecular Biology module is organized as follows:

- discussion of mutagenesis approaches
- design of mutagenic strategy

## **Prerequisites**

basic Molecular Biology knowledge

## **Teaching form**

Lectures, group assignments, students presentations

## **Textbook and teaching resource**

Powerpoint presentations will be available on e-learning.

## **Semester**

second semester

## **Assessment method**

Written exam.

The exam of the Molecular Biology module is part of the general exam of the course that will assess the learning of the material discussed in all the modules

## **Office hours**

Upon appointment

## **Sustainable Development Goals**

