



UNIVERSITÀ  
DEGLI STUDI DI MILANO-BICOCCA

## COURSE SYLLABUS

### Medical Genetics

2425-1-I0303D002-I0303D008M

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#### Aims

The student must know:

- How to recognize the mode of inheritance of Mendelian traits.
- The structure of human chromosomes.
- The sources of genetic variability.
- The mechanisms of epigenetic regulation of gene expression.
- The basic concepts of quantitative genetics and population genetics.

#### Contents

The course topics enable the student to understand the basics of human formal genetics, introducing them to the elementary methodologies used to comprehend hereditary diseases.

#### Detailed program

- Meiosis
- Mendelian Genetics and its extensions
- Human inheritance, pedigree analysis
- Sex determination and X chromosome inactivation
- Epigenetic regulation of gene expression
- Basics of quantitative genetics
- Basics of population genetics

## Prerequisites

no

## Teaching form

### Monza

Lectures will be delivered in Italian, with no remote teaching activities planned.

The teaching methodology includes a mix of expository and interactive frontal teaching:

- 5 lectures of 2 hours each delivered in an expository format in person.
- 3 lectures with 1 hour of expository teaching and 1 hour of interactive activity in person (for a total of 3 hours in an interactive format).

Attendance is mandatory for 70% of each activity.

### Bergamo

8 frontal lessons of 2 hours carried out in attendance

## Textbook and teaching resource

- Materials provided by the instructor.
- Peter J. Russell, "Genetica Fondamenti"

## Semester

First semester

## Assessment method

### Monza

There are no midterm exams.

- Written exam: 10 closed-ended questions (True/False, Matching, Multiple Choice, etc.)
- Optional oral exam (at the request of the instructor or the student) discussing the written test.  
The evaluation will consider the knowledge acquired during the lectures, including simple genetic tests with basic statistical applications.  
The final grade will encompass all modules and will be expressed in thirtieths (0 points for incorrect or incomplete answers).  
Note: Guidelines also allow for open-ended questions if only a written exam is conducted.

### Bergamo

The Genetics written test will consist of 30 multiple choice questions to check preparation on the exam program.

### **Office hours**

On appointment by e-mail request

### **Sustainable Development Goals**

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

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