



UNIVERSITÀ  
DEGLI STUDI DI MILANO-BICOCCA

## SYLLABUS DEL CORSO

### Genetic Mechanisms of Human Disease

2122-1-F0601Q092

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#### Aims

The general objective of the course is to develop the ability to read, understand and discuss original scientific papers and seminars concerning genetics, with an emphasis on the mechanisms of gene regulation and their relevance for disease.

#### 1. Knowledge and understanding

Understanding scientific papers and seminars

#### 2. Applying knowledge and understanding

To be able to apply methods and concepts of advanced genetics

#### 3. Making judgements

Critically discuss scientific papers

#### 4. Communication skills

To be able to present and discuss the subjects addressed in papers and seminars with an appropriate language

## 5.Learning skills

Understanding the logic and methods of advanced genetics

## Contents

The course will consist of research seminars and discussion in class of research papers concerning subjects that are part of the courses of Genetics of Development and differentiation and Human Molecular genetics.

## Detailed program

The papers will address subjects that are part of the courses of Genetics of Development and differentiation and Human Molecular genetics, in particular:

- the development and differentiation of the hematopoietic, muscular, and nervous systems.
- genetic disease, with special regard to these systems, and their modelling in mice and cells (e.g. iPS cells)
- genome editing approaches to the therapy of genetic disease

## Prerequisites

A good understanding of basic genetics and molecular biology is required

## Teaching form

Seminars and discussion in class of scientific papers

## Textbook and teaching resource

Original scientific papers

## Semester

First semester

## Assessment method

Oral exam. During the course, each student will prepare and present to the class a powerpoint presentation relative

to a seminar and the related literature (3-4 papers and review), with the aim to identify important and problematic points, and bring them to discussion. The class will ask questions. At the end of the course, the exam will be completed by general questions on a different seminar.

## **Office hours**

by appointment

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