UNIVERSITÀ
DEGLI STUDI DI MILANO-BICOCCA

COURSE SYLLABUS

Medical Genetics

2627-1-I0301D002-I0301D008M

Aims

The student must be able:

- to recognize the mode of inheritance of Mendelian characters;
- to know the structure of human chromosomes;
- to know the sources of genetic variation;
- to know the mechanisms of epigenetic regulation of gene expression;
- to know basic concepts of quantitative genetics and population genetics.

Contents

The course aims to provide the student with the basis of formal human genetics, introducing the student to the most basic laboratory techniques used for the diagnostic approach and research of hereditary disease.

Detailed program

- Mitosis and meiosis in relation to conventional cytogenetics.
- Mendelian genetics, extensions, recombination and linkage, genetic and physical maps.
- Mendelian Inheritance in man, pedigree reconstruction.
- Sex determination and X chromosome inactivation.
- Fundamentals of epigenetics.
- Polymorphisms and mutations in the context of genetic variability.
- Basic principles of population and quantitative genetics.

Prerequisites

Teaching form

Lectures.

Textbook and teaching resource

Peter J. Russel Genetica Fondamenti

Supplementary material will be provided by teacher

Semester

First semester

Assessment method

10 questions (multiple choice) and open questions to check preparation on exam program

Office hours

On appointment by e-mail request

Sustainable Development Goals

GOOD HEALTH AND WELL-BEING