UNIVERSITÀ
DEGLI STUDI DI MILANO-BICOCCA

# COURSE SYLLABUS

## Molecular Biology

**2425-2-E1301Q083**

### Aims

1. Knowledge and understanding
to know the basic concepts of Molecular biology
2. Applying knowledge and understanding
to use the acquired knowledge to genetics and cellular biology
3. Making judgements
to apply the basic principles of molecular biology in order to solve molecular problems
5. Learning skills

### Contents

Structure and function of nuceic acids and proteins

### Detailed program

Structure of nucleic acids
DNA replication
Transcription and transcriptional control
RNA splicing
Translation
Gene regulation in prokaryotes and eukaryotes
Transcription adjustment
Alternative splicing
MRNA stability

Nucleus-cytoplasm transport
Recombination and Transposition mechanisms
DNA repair
Molecular biology techniques

## Prerequisites

It is recommended to have passed the exams of general chemistry, organic chemistry and biochemistry

## Teaching form

Frontal lessons

## Textbook and teaching resource

PDF files of the slides and one of the following books:
Watson, JD et al., Biologia Molecolare del gene, ed. Zanichelli
Craig, NL. Cohen-Fix, O, et al. Biologia Molecolare, ed. Pearson
Capranico et al., Biologa Molecolare, ed. EDISES

## Semester

Second semester

## Assessment method

The exam is written. There are multiple choice questions, true false questions and there open questions

## Office hours

On appointment; mail to:

## Sustainable Development Goals