UNIVERSITÀ
DEGLI STUDI DI MILANO-BICOCCA

COURSE SYLLABUS

Molecular Biology

2627-2-E1302Q083

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

32 Frontal lessons, 2 h each

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

No intermediate exams. The exam is written. There are multiple choice questions, true false questions and there open questions

Office hours

On appointment; mail to: silvia.barabino@unimib.it

Sustainable Development Goals