



UNIVERSITÀ  
DEGLI STUDI DI MILANO-BICOCCA

## SYLLABUS DEL CORSO

### Biologia Molecolare

2122-2-E1301Q083

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#### 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 nucleic 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., Biologia 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: [silvia.barabino@unimib.it](mailto:silvia.barabino@unimib.it)

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