



UNIVERSITÀ  
DEGLI STUDI DI MILANO-BICOCCA

## COURSE SYLLABUS

### Molecular Biology of Eukaryotic Cells

2122-1-F0601Q049

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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 understand scientific papers
3. Making judgements  
to apply the basic principles of molecular biology in order to solve molecular problems
5. Learning skills  
to acquire the methodological and scientific skills required in the advanced courses

#### Contents

Two major areas of active cellular and molecular biological research will be emphasized:  
Section 1: advance techniques cellular and molecular techniques  
Section 2: The cellular response to DNA damage; DNA damage and repair

#### Detailed program

Eucaryotic vectors  
Cell culture and cell based approaches  
Genomic and proteomics methods

Light and confocal microscopy  
Approaches for the study of the DNA damage response  
Mechanisms of DNA damage and repair  
Cellular response to DNA damage  
DDR and cell cycle  
How to read and analyse a scientific paper

## **Prerequisites**

Genetics, Molecular Biology, Biochemistry

## **Teaching form**

Frontal lessons

## **Textbook and teaching resource**

The course will use review articles as a starting point, and original recent work. PDF files of the slides will be provided. Will be available on the elearning Platform.

## **Semester**

First semester

## **Assessment method**

The oral test will consist in the discussion of a scientific article chosen by the student from those provided at the end of the course and concerning section 2 of the program of the second module, and on questions concerning the general theoretical part discussed in section 1

## **Office hours**

Upon appointment writing to: [silvia.barabino@unimib.it](mailto:silvia.barabino@unimib.it)

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