



UNIVERSITÀ  
DEGLI STUDI DI MILANO-BICOCCA

## SYLLABUS DEL CORSO

### Tirocinio Professionalizzante Area Odontoiatrica 1

2021-2-H4601D029

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#### Aims

Students will accomplish a general knowledge of the main laboratory techniques, in particular nucleic acid and protein analysis, cell culture, PCR, flow cytometry and histological analysis.

As a final goal, the students will be able to read and understand the experimental procedures described in a paper on basic research related to the topics of the course.

#### Contents

The Internship provides the student with basic training on the main cellular, molecular and histological techniques applied in a research laboratory

The course will consist of a series of frontal lessons, followed by laboratory sessions in which the student will have the opportunity to practice some basic methods among those addressed.

In case of COVID-19 emergency extension, the frontal lessons will be delivered through recorded lessons. If possible, the practical part will be carried out in presence

#### Detailed program

- cell cultures: principles, main types and applications with a particular focus on stem cells and tissue engineering
- protein analysis: extraction and electrophoresis and immunoblotting methods
- nucleic acid analysis: extraction and electrophoresis and hybridization assays
- PCR methods

- flow cytometry: principles and applications
- histology: tissue processing, histological staining and immunohistochemistry. Microscopy techniques

The student will have the opportunity to practice some basic techniques among those addressed

## **Prerequisites**

Passing exams in the disciplines relevant to internship.

## **Teaching form**

Lectures on the principles of the different techniques and laboratory training.

In case of COVID-19 emergency extension,, the frontal lessons will be delivered through recorded lessons. If possible, the practical part will be carried out in presence

## **Textbook and teaching resource**

The teachers will provide slides of the lectures.

## **Semester**

Second semester of the second year.

## **Assessment method**

Students must take part at least at 70% of the course.

The final test will be a multiple-choice quiz on the course topics and a interview on the practical laboratory experience.

Final evaluation will be approved/not approved

## **Office hours**

Monday to Friday, by appointment

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