



UNIVERSITÀ  
DEGLI STUDI DI MILANO-BICOCCA

## COURSE SYLLABUS

### Laboratory Sciences

2223-2-I0302D008-I0302D029M

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#### Aims

Student's Skills:

- to recognise the role, limits and aims of laboratory analysis, variability causes and errors
- To describe the plasma proteins study and diagnostic enzymology
- to define the role of diagnostic tests in diabetes, in cardiovascular, thyroid, hepatic diseases,
- To describe Pregnancy and kidney lab monitoring
- To describe electrolytes, acid-base balance study
- To describe Urine exam, proteinuria and CSF tests

#### Contents

The goal of the course is to provide the knowledge about roles, limits and aims of laboratory tests, Good Laboratory Practise, variability and errors, quality control. Fundamentals of protein study and diagnostic enzymology. Lab tests for the study of diabetes, cardiovascular, thyroid pathologies, hepatic, pregnancy, kidney physio-pathology, hydro electrolytic and acid-base balance. CSF and urine exam.

#### Detailed program

- Lab tests: which, how and when.
- Good Laboratory Practice, variability and errors, quality control.
- Diabetes, Obesity e Cardio-vascular risk monitoring.
- AMI diagnostics.
- Thyroid, plasmatic protein, electrolytes, acid-base balance study.

- Kidney physio-pathology.
- Creatinine and GFR.
- Urine exam and proteinuria.
- CSF tests.
- Diagnostic Enzymology.
- Hepatic Diagnostics.
- Pregnancy lab monitoring.

## **Prerequisites**

Objectives of the course of Clinical Biochemical Analysis (these are the courses indicated in Regolamentoo)

## **Teaching form**

In the Covid-19 emergency phase, lectures will be offered in mixed mode:

- asynchronous/synchronous video recorded lessons
- webinars

## **Textbook and teaching resource**

Spandrio L. Biochimica Clinica Ed Sorbona.

Henry JB, et al. Clinical diagnosis and management by laboratory methods. Saunders Elsevier.  
Prencipe L. Approccio alla Chimica Clinica.

Teachers will provide educational material

## **Semester**

First semester

## **Assessment method**

Oral test aimed at evaluating global knowledges about course program

## **Office hours**

By appointment

## **Sustainable Development Goals**

GOOD HEALTH AND WELL-BEING

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