

## COURSE SYLLABUS

### Clinical Biochemistry

2526-1-I0302D005-I0302D019M

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#### Aims

Students' skills:

- to describe the metabolic features of the main organs and tissues and tests used to assess them;
- to use laboratory materials and small instrumentation.

#### Contents

To provide knowledge about

- metabolic specificities of main organs and tissues and on the biochemical and physio-pathological basis of laboratory analysis alterations
- use of laboratory materials and small instrumentation.

#### Detailed program

Organ profiles:

- glucose, lipid protein, ethanol and bilirubin hepatic metabolism, and relates tests;
- adipose tissue metabolism, Lipid and lipoprotein metabolism;
- muscular and myocardial metabolism. Myocardial markers;
- nervous system metabolism;
- red cells metabolism. Anaemia and hemoglobinopathies;
- kidney metabolism and hydro-electrolytic balance; renal clearances, creatinine and urea. Metabolic

interrelations. Bone and mineral metabolism. Iron balance.

Practical exercises on:

- formulas and calculations for preparing solutions and dilutions;
- recognition and use of laboratory equipment: glassware, pipettes, plates.
- use of small laboratory instrumentation for liquid dispensing and preparation of solutions (from balances to agitators);
- characteristics and use of spectrophotometer and cuvettes.

## **Prerequisites**

Biomedical Sciences

## **Teaching form**

All lectures are conducted in face-to-face mode:

- 8 (2-hour) lectures conducted in delivery mode;
- 1 (2-hour) exercise conducted in interactive mode in the classroom;
- 5 (2-hour) exercises conducted in interactive mode in the laboratory.

## **Textbook and teaching resource**

SILIPRANDI N. TETTAMANTI G. BIOCHIMICA MEDICA ED PICCIN

PRENCIPE I. APPROCCIO ALLA CHIMICA CLINICA

The teachers will provide educational material

## **Semester**

Second semester

## **Assessment method**

Multiple choice test comprising 15 questions with only one correct answer (among 4) aimed at evaluating global comprehension of course program. Each correct answer is scored 2.

## **Office hours**

By appointment

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## **Sustainable Development Goals**

GOOD HEALTH AND WELL-BEING

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