

COURSE SYLLABUS

Clinical Biochemistry

2425-1-I0302D005-I0302D019M

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

Bulbarelli Tel. 026448 8221

alessandra.bulbarelli@unimib.it

Raimondo Tel. 0264488106

francesca.raimondo@unimib.it

Sustainable Development Goals

GOOD HEALTH AND WELL-BEING
