
COURSE: PHARMACOLOGY AND PHARMACOTHERAPY

ACADEMIC YEAR: 2019-2020

TYPE OF EDUCATIONAL ACTIVITY: : Characterizing

TEACHER: Dott. Luigi Milella

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website:

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Language: **ITALIAN**

ECTS: **10 (9 lessons and
1 tutorials/practice)**n. of hours: **84 (72 lessons
and 12 tutorials/practice)**Campus: **Potenza**
Dept./School: **Department of
Sciences**
Program: **Pharmacy (LM-13)**Semester: **I**
(from 1 october 2019
to 20 december 2019
-20 January 2020)

EDUCATIONAL GOALS AND EXPECTED LEARNING OUTCOMES

o The course aims to provide:

- knowledge of mechanisms of endogenous molecules and drugs actions;
- specific skills of pharmacology and pharmacotherapy starting from pharmacokinetic and pharmacodynamics. Moreover classification, information about the effects and the correct use of drugs, as well as adverse reactions and toxic effects. An outline of the development of new therapeutic strategies.
- specific tools for the knowledge of biologically and therapeutically active molecules and of drug activity.

Learning outcomes will be

- the acquisition of a scientific language appropriate to the specialized discipline;
- the ability to apply knowledge and understanding of the subject.

The student will be able to sustain specialized seminars concerning both the study of the mechanisms of action of drugs and their interaction with the body, both the undesirable effects and their toxicity.

PRE-REQUIREMENTSBiochemistry and Physiology

SYLLABUS**GENERAL PHARMACOLOGY (20 h)**

Definitions of pharmacology, drug, medicine, poison or toxic. Branches of pharmacology. Drug pharmacodynamics and pharmacokinetic. Origin and nature of the drugs. Pharmaceutical forms. The practical significance of delayed absorption. First pass effects. Bioavailability. Kinetics of the first order (linear) and the zero-order (non-linear). Influence of dose schedule on the state of the system. Drug distribution. Drug binds serum proteins. Blood-brain barrier. Volume of distribution. Elimination of drugs: the routes of elimination (renal, biliary, lung, etc. Clearance. Half-life. The pharmacological action of drugs in relation to the association. Variations in sensitivity of the organism to drugs: habit, drug allergy, abnormal responses to drugs. Pharmacogenetics.

PHARMACOLOGY AND PHARMACOTHERAPY (52 h + 12 h of laboratory)

Direct cholinergic agonists, cholinergic agonists indirect (anticholinesterase), muscarinic antagonists, adrenergic agonists, adrenergic antagonists, alpha and beta blockers, neuromuscular blocking agents. Drugs acting on the central nervous system: general anesthetics, anxiolytics, sedatives, hypnotics, anticonvulsants, antiparkinson, opioid analgesics and their antagonists, antipsychotics (neuroleptics), antidepressants, stimulants of the central nervous system.

General and local anesthetics.

Autocoids, Cardiovascular Drugs, Diuretics, Drugs acting on blood and blood-forming organs, Drugs acting on the gastrointestinal system, Drugs acting on the respiratory system, Lipid metabolism,

ant inflammatory drugs.

TEACHING METHODS

Theoretical lessons, classroom tutorials, laboratory tutorials, project works, technical visits.

EVALUATION METHODS

The objective of exam consists to verify the achievement of the previously indicated educational objectives.

The exam consists of:

- o written test with open and close answers. The minimum score to pass the test is 18/30.
- o oral examination to verify the ability to connect different aspects of course topics. The minimum score to pass the test is 18/30;

The final vote is the average of two scores of written and oral examination.

TEXTBOOKS AND ON-LINE EDUCATIONAL MATERIAL

- o B.G. Katzung "Farmacologia generale e clinica" Piccin VII last edition
 - o Goodman & Gilman "Le basi farmacologiche della terapia" McGraw-Hill last edition
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INTERACTION WITH STUDENTS

Email contacts will be used for communication

EXAMINATION SESSIONS

- 19/02/2020
 - 19/03/2020
 - 14/05/2020
 - 18/06/2020
 - 9/07/2020
 - 17/09/2020
 - 15/10/2020
 - 9/12/2020
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SEMINARS BY EXTERNAL EXPERTS YES X NO

FURTHER INFORMATION
