



UNIVERSITÀ DEGLI STUDI DI PALERMO

DEPARTMENT	Scienze e Tecnologie Biologiche, Chimiche e Farmaceutiche		
ACADEMIC YEAR	2023/2024		
MASTER'S DEGREE (MSC)	MOLECULAR AND HEALTH BIOLOGY		
SUBJECT	PHARMACOLOGY		
TYPE OF EDUCATIONAL ACTIVITY	B		
AMBIT	50505-Discipline del settore biomedico		
CODE	03137		
SCIENTIFIC SECTOR(S)	BIO/14		
HEAD PROFESSOR(S)	POMA PAOLA	Professore Associato	Univ. di PALERMO
OTHER PROFESSOR(S)			
CREDITS	6		
INDIVIDUAL STUDY (Hrs)	102		
COURSE ACTIVITY (Hrs)	48		
PROPAEDEUTICAL SUBJECTS			
MUTUALIZATION			
YEAR	1		
TERM (SEMESTER)	2° semester		
ATTENDANCE	Mandatory		
EVALUATION	Out of 30		
TEACHER OFFICE HOURS	POMA PAOLA Wednesday 10:00 - 12:00 Studio Pt 35, Dip. STEBICEF, viale delle Scienze, Ed. 16, piano terra		

DOCENTE: Prof.ssa PAOLA POMA

PREREQUISITES	The student must have knowledge about biology, physiology and general chemistry
LEARNING OUTCOMES	Knowledge and understanding of molecular mechanisms of different drugs classes and knowledge and understanding of molecular mechanisms of toxic substances. Knowledge of action mechanisms of principal drugs and their pharmacokinetic; ability to apply methodologies to study interactions drug-receptor. Ability to apply knowledge about therapeutic and toxic features of natural drugs and of environmental toxics. Independent judgement Ability to express judgement on the subjects of the course. Oral ability Ability to explain studies about drugs mechanisms and xenobiotics with correct language. Learning ability Autonomy to study and to refer to scientific publications.
ASSESSMENT METHODS	The student must answer to three questions about general pharmacology, special pharmacology and toxicology. The student must shown knowledge and understanding of subjects and explain with specific language to obtain passing grade. More so the knowledge is detailed, more the rating is positive. Evaluation is out of 30, from 18/30 to 30/30 with honors.
EDUCATIONAL OBJECTIVES	The aim of this course is to provide the students with knowledge about fundamental concepts of the main pharmacological classes, the basic concepts of pharmacokinetics and pharmacodynamics of principal drugs, features and mechanisms of toxic substances, adverse drug reactions; to provide the students notions about principal targets of toxic substances and to acquire methods to evaluate toxicological risk.
TEACHING METHODS	Teaching activity is organized in frontal lessons (48 h)
SUGGESTED BIBLIOGRAPHY	H.P. Rang, M.M. Dale, J. M. Ritter, R.- Flower. Farmacologia. 8a edizione, ISBN 978-88-214-4039-7. F. Clementi, G. Fumagalli. Farmacologia generale e molecolare. 5a edizione, ISBN 978-88-214-4436-4. Francesco Rossi, Vincenzo Cuomo, Carlo Riccardi. Farmacologia. Principi di base e applicazioni terapeutiche. 5a edizione, ISBN 8855321773

SYLLABUS

Hrs	Frontal teaching
1	pharmacology, aim of course. definition of drug
8	pharmacokinetic: drugs administration, absorption distribution metabolism and elimination. variability of drug response
4	Receptors, dose-response curve, drug-receptor interaction, receptor binding study, potency and efficacy, agonist and antagonist.
2	pharmacogenetics
2	drug development and pharmacovigilance
4	anti-inflammatory drugs
4	antimicrobial drugs
4	anticancer drugs
6	biotech drugs
2	some drugs classes acting on nervous system
2	toxicology: toxic substance, toxicological risk and safety index ((NOEL, ADI, TLV, MAC) and toxicodynamics
1	acute, subchronic and chronic toxicity studies; notes on mutagenesis, carcinogenesis and teratogenesis tests.
8	brief focus on pharmacology