

SUBJECT TEACHING GUIDE

G153 - Fundamental Pharmacology

Degree in Medicine

Degree in Medicine

Academic year 2024-2025

1. IDENTIFYING DATA					
Degree	Degree in Medicine Degree in Medicine			Type and Year	Compulsory. Year 3 Compulsory. Year 3
Faculty	Faculty of Medicine				
Discipline	Subject Area: Pharmacology and Nutrition Diagnostic and Therapeutic Procedures				
Course unit title and code	G153 - Fundamental Pharmacology				
Number of ECTS credits allocated	6	Term	Semester based (2)		
Web					
Language of instruction	Spanish	English Friendly	No	Mode of delivery	Face-to-face

Department	DPTO. FISILOGIA Y FARMACOLOGIA
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Other lecturers	MARIA ELENA CASTRO FERNANDEZ ALVARO MARCELINO DIAZ MARTINEZ CARMEN MARTINEZ-CUE PESINI MONICA TRAMULLAS FERNANDEZ ANA VICTORIA VILLAR RAMOS MARIA FUENCISLA PILAR CUELLAR

3.1 LEARNING OUTCOMES

- To understand the concept of drug as a molecule that interacts with the systems of the organism and that can induce beneficial effects in the treatment of diseases
- To integrate in the general framework of their knowledge the role of the drug as a double profile tool : capable of producing important therapeutic effects but also toxic
- Being able to retain and understand the fundamental information about the most important drugs used in the treatment of the diseases of the different systems, their mechanisms of action and the therapeutic and toxic pharmacological effects
- To understand the role of pharmacological treatment as a key element in the treatment of human pathology

4. OBJECTIVES

- To know and understand the mechanisms by which drugs exert their effects
- Know the processes that determine the passage of drugs through the body, and by which a drug reaches its concentration in different tissues and systems
- To know in depth the characteristics of the drugs that exert their effects in the different systems and devices
- Know the mechanisms and expression of adverse reactions of drugs that act in different systems
- Know the general bases of pharmacological interaction phenomena

6. SUBJECT PROGRAM	
CONTENTS	
1	General aspects of Pharmacology Pharmacology concept. Importance of pharmacology in clinical practice. General mechanisms of action of drugs (Pharmacodynamics) Pharmacokinetics: absorption, distribution, metabolism, and elimination of drugs Adverse reactions and interactions
2	Pharmacology of the Vegetative Nervous System Pharmacology of the adrenergic system. Agonist drugs and antagonists Pharmacology of the cholinergic system: agonist and antagonist drugs. Pharmacology of the motor plate
3	Pharmacology of Cell Mediators Cell mediators Pharmacology of non-steroidal anti-inflammatory drugs (NSAIDs).
4	Pharmacology of the central nervous system Pharmacology of the opioid receptor. Antidepressant drugs. Pharmacology of abnormal movements. Anticonvulsant and antiparkinson drugs. Antipsychotic drugs. Anxiolytic drugs. Antiepileptic drugs General anesthetic drugs
5	Pharmacology of gastrointestinal motility. Pharmacology of gastric secretion. Bronchodilator drugs Antitussive and mucolytic drugs
6	Blood pharmacology Pharmacology of diuresis Cardiotonic drugs Antiarrhythmic drugs Ca ²⁺ blocking drugs Antihypertensive drugs Antianginal and vasodilatory drugs Hyperlipoproteinemia drugs
7	Chemotherapy. Beta-lactam antibiotics Aminoglycoside antibiotics and glycopeptides Macrolides Tetracyclines Lincosamines. Other antibiotics Quinolones Tuberculosis drugs Antifungal drugs Antiviral drugs Antineoplastics and immunomodulators
8	Insulin and oral hypoglycemic agents Thyroid and antithyroid drugs. Phospho-calcium metabolism Hypothalamic and pituitary hormones Gonadal hormones Contraceptives

7. ASSESSMENT METHODS AND CRITERIA				
Description	Type	Final Eval.	Reassessn	%
The partial exam will include 50% of the syllabus. It will be eliminatory for those who obtain a qualification higher than 7 points. This partial exam (30% of the final grade mark) will evaluate 50% of the syllabus and will be made up of short-essay ques	Written exam	No	Yes	30,00
Calif. minimum 5.00 Duration: less than 4 hours Date of the exam: see the exam calendar of Facultad de Medicina. Conditions of recovery: In an exam of similar characteristics in the extraordinary call. The final exam is recoverable in the extraordinary	Written exam	Yes	Yes	30,00
The continuous evaluation is not recoverable and will compute 40% in the final grade for the course. Throughout the course, seven questionnaires will be made on the theoretical contents in the context of laboratory practices.	Written exam	No	No	40,00
		No	No	0,00
		No	No	0,00
TOTAL				100,00
Observations				
If the face-to-face evaluation is not allowed, online evaluation methods (including online oral interviews) will be carried out using the authorized platforms as recommended by the Vice-Rectorado de Ordenación Académica y Profesorado,				
Observations for part-time students				
The same as the rest of students				

8. BIBLIOGRAPHY AND TEACHING MATERIALS
BASIC
Farmacología Humana. Flórez, J, Armijo, JA, Mediavilla A (dirs.), 6 ed. Barcelona: Elsevier, 2014.
Rang y Dale. Farmacología. Ritter, Flower, Henderson, Loke, MacEwan & Rang, 9ª Ed, Elsevier, 2020
Farmacología Básica y Clínica, Pedro Lorenzo Fernández / Alfonso Moreno González / Juan Carlos Leza Cerro / Ignacio Lizasoain Hernández / María Ángeles Moro Sánchez / Antonio Portolés Pérez (eds). 19 ed. Madrid: Editorial Médica Panamericana, 2018.
Goodman & Gilman's. Las Bases Farmacológicas de la Terapéutica, Brunton, L., MCGRAW HILL, 13ª Edición, 2018