

1. OVERVIEW

Subject area	Pharmacology
Degree	Bachelor's Degree in Nursing
School/Faculty	Biomedical and Health Sciences
Year	2 nd
ECTS	6 ECTS
Type	Compulsory
Language(s)	Spanish
Delivery Mode	On campus
Semester	Semester 1

2. INTRODUCTION

Pharmacology provides us with the knowledge of the pharmacological and therapeutic properties of substances used in daily clinical practice. One of the main nursing responsibilities during their daily work is the correct administration of drugs, including the prior and subsequent assessment of the patient receiving the treatment. It is also a nursing function to provide health information to patients and families related to the conservation, preparation, and administration of medications.

3. SKILLS AND LEARNING OUTCOMES

Basic competencies:

CG3 - Know and apply the theoretical and methodological foundations and principles of nursing.

CG6 - Base nursing interventions on scientific evidence and available means.

CG10 - Protect the health and well-being of individuals, families, or groups attended to, ensuring their safety.

CG14 - Establish evaluation mechanisms, considering scientific/technical aspects and quality.

CG15 - Work with the team of professionals as the basic unit in which professionals and other personnel of healthcare organizations are structured in a uni or multidisciplinary and interdisciplinary manner.

CG16 - Know healthcare information systems.

CB1 - That students have demonstrated to possess and understand knowledge in an area of study that is based on general secondary education and is usually at a level that, while supported by advanced textbooks, also includes some aspects that involve knowledge from the forefront of their field of study.

CB2 - That students know how to apply their knowledge to their work or vocation in a professional manner and possess the competencies that are usually demonstrated through the development and defense of arguments and the resolution of problems within their area of study.

CB3 - That students have the ability to gather and interpret relevant data (usually within their area of study) to make judgments that include a reflection on relevant social, scientific, or ethical issues.

CB4 - That students can convey information, ideas, problems, and solutions to both specialized and non-specialized audiences.

CB5 - That students have developed the learning skills necessary to undertake further studies with a high degree of autonomy.

Transversal competencies:

CT01 - Responsibility: That the student is able to assume the consequences of the actions he/she performs and to respond for his/her own acts.

CT07 - Teamwork: That the student is able to participate actively in the achievement of a common goal, listening, respecting, and valuing the ideas and proposals of the other members of his/her team.

CT09 - Planning: That the student is able to effectively determine his/her goals and priorities by defining the actions, deadlines, and optimal resources required to achieve such goals.

CT10 - Innovation-Creativity: That the student is able to devise new and different solutions to problems that add value to problems that arise.

Specific competencies:

CE2 - Know the use and indication of health products related to nursing care.

CE3 - Know the different groups of drugs, the principles of their authorization, use, and indication, and their mechanisms of action.

CE4 - Use of drugs, evaluating the expected benefits and associated risks and/or effects derived from their administration and consumption.

CE9 - Recognize life-threatening situations and know how to perform basic and advanced life support maneuvers.

Learning outcomes:

LO1: Ability to question, evaluate, interpret, and critically synthesize a range of information and data sources.

LO2: Ability to safely administer drugs and other therapies.

LO3: Relevant knowledge and ability to apply natural and life sciences.

LO4: Ability to adapt to socially complex and ambiguous situations in nursing practice.

Learning outcomes (RA, by the acronym in Spanish):

LO1: Ability to question, evaluate, interpret, and critically synthesize a range of information and data sources.

LO2: Ability to safely administer drugs and other therapies.

LO3: Relevant knowledge and ability to apply natural and life sciences.

LO4: Ability to adapt to socially complex and ambiguous situations in nursing practice.

The following table shows how the skills developed in the subject area relate to the intended learning outcomes:

Skills	Learning outcomes
<ul style="list-style-type: none"> • CB1, CB2, CB3, CB4, CB5 • CG3, CG6, CG14, CG16, • CT01, CT09 • CE2, CE3, CE4, CE9 	RA 1: Ability to question, evaluate, interpret, and critically synthesize a range of information and data sources.
<ul style="list-style-type: none"> • CB1, CB2, CB3, CB4, CB5 • CG10, CG14, CG15, CG16, • CT01, CT07, CT09, • CE2, CE3, CE4, CE9 	RA2: Ability to safely administer drugs and other therapies.
<ul style="list-style-type: none"> • CB1, CB2, CB3, CB4, CB5 • CG15, CG16, • CT01, CT07, CT09, • CE2, CE3, CE4, CE9 	RA3: Relevant knowledge and ability to apply natural and life sciences.
<ul style="list-style-type: none"> • CB1, CB2, CB3, CB4, CB5, • CG10, CG15, • CT01 CT07, CT09, CT10, • CE2, CE3, CE4, CE9 	RA4: Ability to adapt to socially complex and ambiguous situations in nursing practice.

4. CONTENTS

The course is organized into 9 learning units, which are further divided into topics:

Unit 1: General Pharmacology:

1. Introduction to Pharmacology
2. Principles of Drug Administration
3. Pharmacokinetics
4. Pharmacodynamics

Unit 2: Pharmacology of the Nervous System:

5. Pharmacology of the Autonomic Nervous System
6. Anxiolytic Drugs
7. Antiepileptic Drugs
8. Antidepressant Drugs
9. Antipsychotic Drugs
10. Drugs for the Treatment of Neurodegenerative Diseases
11. Nonsteroidal Anti-Inflammatory Drugs (NSAIDs)
12. Local and General Anesthetics
13. Drugs for Neuromuscular Disorders

Unit 3: Pharmacology of the Cardiovascular System. Pharmacology of Coagulation.

14. Antianemic Drugs
15. Coagulant Drugs, Anticoagulants, and Antiplatelet Agents
16. Hypolipidemic Drugs
17. Antihypertensive Drugs
18. Drugs for Heart Failure
19. Antianginal Drugs
20. Antiarrhythmic Drugs
21. Diuretic Drugs
22. Drugs for Hydroelectrolytic and Acid-Base Disorders

Unit 4: Pharmacology of the Immune System and Infectious Processes.

23. Drugs for the Immune System and Infectious Processes
24. Steroidal Anti-Inflammatory Drugs (Glucocorticoids)
25. Antibiotic Drugs
26. Antiseptic and Disinfectant Drugs
27. Antifungal, Antiviral, Antiprotozoal, and Anthelmintic Drugs
28. Cytostatic Drugs

Unit 5: Pharmacology of the Respiratory System.

29. Drugs for the Respiratory System
30. Antiasthmatic Drugs

Unit 6: Pharmacology of the Digestive System.

31. Drugs for the Digestive System
32. Drugs Used in Digestive Pathologies

Unit 7: Pharmacology of the Endocrine System.

33. Drugs for Endocrine System Disorders

34. Drugs for Disorders of the Male and Female Reproductive Systems

Unit 8: Pharmacology of Bone.

35. Bone Drugs

Unit 9: Intoxications.

36. Intoxications and Antidotes

5. TEACHING-LEARNING METHODS

The types of teaching-learning methods are as follows:

- Master class
- Cooperative learning
- Communicative tasks
- Problem Based Learning (PBL)
- Simulation environments
- Case method

6. LEARNING ACTIVITIES

The types of learning activities, plus the amount of time spent on each activity, are as follows:

Learning activity	Number of hours
Practical exercises	75
Master Classes	25
Tutorships	5
Self-study	30
Seminars	25
TOTAL	160

7. ASSESSMENT

The assessment systems, plus their weighting in the final grade for the subject area, are as follows:

On campus:

Sections	Evaluation System	Weight
SECTION 1 (Knowledge) 50%	Knowledge Tests	50%
SECTION 2 (Activities) 50%	Directed Individual Assignments Practical Tests Group Assignments	20% 10% 20%
TOTAL		100%

8. BIBLIOGRAPHY

The recommended bibliography for the course includes:

- Adams M, Holland Norman. Farmacología para enfermería. Un enfoque fisiopatológico. Pearson 2ª ed. 2009.
- Lorenzo P, Moreno A, Leza JC, Lizasoain I, Moro MA, Portolés A. Velázquez Manual de Farmacología básica y clínica. Panamericana. 18a ed. 2012.
- Castells-Molina S, Hernández-Pérez M. Farmacología en enfermería. Elsevier 3ª ed. 2012.
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Websites for consultation:

- <http://www.vademecum.es>
- <http://www.portalfarma.com/home.nsf>
- <http://www.aemps.gob.es>
- <http://www.emea.es>