

## 29319 - Pharmacology

### Syllabus Information

**Academic year:** 2024/25

**Subject:** 29319 - Pharmacology

**Faculty / School:** 229 - Facultad de Ciencias de la Salud y del Deporte

**Degree:** 442 - Degree in Odontology

**ECTS:** 6.0

**Year:** 2

**Semester:** Second semester

**Subject type:** Basic Education

**Module:**

### 1. General information

#### OBJECTIVES

- 1<sup>o</sup>) To know the transit of the drug through the organism and its pharmacodynamic behaviour
- 2<sup>o</sup>) To understand the scientific bases that explain the actions and effects of the different pharmacological groups involved in the treatment of dental treatment, in order to achieve a rational use of them
- 3<sup>o</sup>) To know the adverse reactions and interactions derived from the use of drugs used in the treatment of different pathologies, especially those that are important in dentistry.

Objectives aligned with the following Sustainable Development Goals (SDGs): Health and wellness; Quality education.

#### CONTEXT

This subject is part of the module Pathology and general medical-surgical therapeutics. It allows students to learn about the behaviour of drugs in the body in order to understand and evaluate the different pharmacological groups most commonly used in the dental clinic.

### 2. Learning results

- To know the general principles of pharmacology
- To identify the most frequently prescribed pharmacological groups in dentistry
- To understand the relevance of adverse drug reactions (ADRs) and changes in drug response secondary to drug-drug associations.
- To assess the problem of self-medication and the benefit/risk ratio in pharmacological treatment in order to achieve a rational use of drugs.
- Adequate assessment of the pharmacological information in circulation, particularly in the field of dentistry.

### 3. Syllabus

#### THEORY

Concept of Pharmacology

Drug absorption. Routes of administration

Drug distribution

Drug disposal

Pharmacodynamics

Pharmacological interactions of interest in dentistry

Adverse drug reactions (ADRs). Oral manifestations of ADRs. Pharmacovigilance

Cholinergic neurotransmission

Adrenergic neurotransmission

Histamine and Antihistamines

Pharmacology of inflammation-pain: NSAIDs, Corticosteroids, Opioids

Anaesthesia: Local anaesthetic drugs. Basic aspects of general anaesthesia in dentistry

CNS pharmacology: anxiolytics and hypnotics; antidepressants and antimanic drugs

Pharmacology of haemostasis, coagulation and fibrinolysis. Impact on dentistry.

CV pharmacology: myocardial ischemia, heart failure and arterial hypertension. Impact on dentistry.

Pancreatic hormones: Insulin and glucagon. Antidiabetics. Dental management of the diabetic patient.

Thyroid hormones. Antithyroid drugs. Parathyroid hormone. Calcium. Vit D. Calcitonin.

Antimicrobial therapeutics: Beta-lactam antibiotics and aminoglycosides. Macrolides, Ketolides, Lincosamides, Tetracyclines, Chloramphenicol. Others

Anti-infective pharmacology: Antifungal and antiviral drugs

## **PRACTICES**

Seminars

Galenic forms-routes of administration.

Computer Simulator

Problem-Based Learning

Magistral formulas

Teamwork-presentation

## **4. Academic activities**

PARTICIPATORY MASTER CLASS (the topics of which are detailed in the program)

PRACTICAL CLASSES

Seminar

Workshop on drug administration routes and dosage forms

Problem-based learning

Laboratory and computer practices

Group work

## **5. Assessment system**

**FACE-TO-FACE MODEL:** Continuous assessment

*Theoretical part:* Objective test (multiple choice or short answer) 60% of the final grade; *Practical part:* 40% of the final grade (Personal PBL portfolio and mini-cases; Performance, presentation and defence of a review paper in small groups).

Attendance and active participation will be valued.

Each part must be passed separately with a minimum of 5 points.

Global evaluation test: students who have not passed any of the parts reflected in the continuous evaluation, or students who want to improve their grade, with the best of the grades obtained prevailing. *Theoretical part:* Objective test (multiple choice or short answer) (60% of the final grade). *Practical part:* Performance, presentation and discussion of one or several of the activities reflected in the practical part of the subject (40% of the final grade).

Each part must be passed separately with a minimum of 5 points.

**NON-FACE-TO-FACE MODEL:** global evaluation test (written test or multiple-choice test) in which theoretical and practical knowledge will be assessed, as indicated above.

**GRADING SYSTEM:** according to art. 5.2 of Royal Decree 1125/2003 of September 5 (BOE September 18): From 0 to 4.9: Fail (S); 5.0 to 6.9: Pass (A); 7.0 to 8.9: Notable (N); from 9.0 to 10: Outstanding (SB). Honour: grade equal to or higher than 9.0.

## **6. Sustainable Development Goals**

3 - Good Health & Well-Being

4 - Quality Education