

## 1. BASIC INFORMATION

<b>Course</b>	General pharmacology. Human Nutrition. Anesthetics and resuscitation
<b>Degree program</b>	Dentistry degree
<b>School</b>	Biomedical Sciences and Health
<b>Year</b>	Second
<b>ECTS</b>	6 ECTS
<b>Credit type</b>	Mandatory
<b>Language(s)</b>	English
<b>Delivery mode</b>	On-site
<b>Semester</b>	First and second
<b>Academic year</b>	2025-2026
<b>Coordinating professor</b>	Laura Pérez Blázquez

## 2. PRESENTATION

The compulsory subject of General Pharmacology, Human Nutrition, Anaesthesia and Resuscitation belongs to the subject General Pharmacology. Human nutrition. Anesthesia and resuscitation of module 3 and is developed during the 2nd course of Grade in Dentistry.

This course aims to provide the student with an integrated view of the different medicines, through the study of the fundamentals of action, indications and efficacy of the drugs, knowing their contraindications and interactions, based on the available scientific evidence, as well as knowing, critically evaluating and knowing how to use the sources of clinical and biomedical information to obtain, organize, interpret and communicate scientific and health information. It also provides an overview of the importance of nutrients in oral health.

## 3. LEARNING OUTCOMES

### Core competencies:

- CB1: That students have demonstrated knowledge and understanding of 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
- CB3: Students have the ability to collect and interpret relevant data (usually within their area of study) to make judgments that include reflection on relevant social, scientific or ethical issues.
- CB4: That students can transmit information, ideas, problems and solutions to a specialized and nonspecialized public.

### Cross-curricular competencies:

- CT1: Autonomous learning: Process that allows the person to be the author of his or her own development, choosing the paths, strategies, tools and moments that he or she considers most

effective for learning and putting into practice independently what has been learned. The freelance learner, in short, selects the best strategies to achieve his or her learning objectives.

- CT4: Capacity for analysis and synthesis: Analysis is the method of reasoning that allows complex situations to be broken down into their constituent parts; it also allows us to evaluate other alternatives and perspectives in order to find optimal solutions. Synthesis seeks to reduce complexity in order to better understand it and/or solve problems.
- CT8: Information Management: Ability to search, select, analyze and integrate information from diverse sources.

**Specific competencies:**

- CE11: To understand the basic biomedical sciences on which dentistry is based in order to ensure correct oral and dental care.
- CE16: To understand the fundamentals of action, indications and efficacy of drugs and other therapeutic interventions, knowing their contraindications, interactions, systemic effects and interactions on other organs, based on the available scientific evidence.
- CE18: To know, critically evaluate and know how to use clinical and biomedical information sources to obtain, organize, interpret and communicate scientific and health information.

**Learning outcomes:**

- LO1: To know general and clinical pharmacology in dental practice.
- LO2: To know the pharmacological bases of the different local and general anesthetic techniques, as well as the role of sedation and general anesthesia in the management of the dental patient.
- LO3: Have appropriate knowledge of human nutrition, in particular the relationship of nutritional habits and diet to the maintenance of health and the prevention of oral and dental diseases.

The following table shows the relationship between the competencies developed during the course and the learning outcomes pursued:

Competencies	Learning outcomes
CB1, CB3, CB4, CT1, CT4, CT8, CE11, CE18	LO1
CB1, CB3, CB4, CT1, CT4, CT8, CE11, CE16, CE18	LO2
CB1, CB3, CB4, CT8, CE18	LO3

## 4. CONTENT

### LU1: GENERAL PHARMACOLOGY

- Unit 1. Concept and historic development of pharmacology.
- Unit 2. Pharmacokinetics.
- Unit 3. Pharmacodynamics.
- Unit 4. Mechanisms of adverse drug reactions.
- Unit 5. Drug Interactions.

### LU2: AUTONOMIC NERVOUS SYSTEM PHARMACOLOGY

- Unit 6. Pharmacology of the autonomic nervous system
- Unit 7. Neuromuscular blocking agents.

**LU3: ANALGESIC PHARMACOLOGY. PAIN MANAGEMENT IN DENTISTRY**

- Unit 8. Opioid analgesics
- Unit 9. Analgesic and non-steroidal anti-inflammatory drug (NSAIDs).
- Unit 10. Corticosteroids.

**LU4: NERVOUS SYSTEM PHARMACOLOGY. PAIN MANAGEMENT IN DENTISTRY**

- Unit 11. Antimigraine and antihistamine drugs.
- Unit 12. Benzodiazepines
- Unit 13. Antidepressants and antiepileptic drugs.

**LU5: ANESTHESIA AND SEDATION IN DENTISTRY**

- Unit 14. Local and general anaesthetics.

**LU6: HUMAN NUTRITION**

- Unit 15. Principles of Human Nutrition. Vitamins and trace elements. Involvement in dental pathology.

**LU7: INFECTIOUS PROCESSES PHARMACOLOGY**

- Unit 16. General principles for the use of anti-infectives.
- Unit 17. Bactericide antibiotics.
- Unit 18. Bacteriostatic antibiotics.
- Unit 19. Antivirals and antifungals.
- Unit 20. Antiseptics and disinfectants.
- Unit 21. Treatment of the most common oropharyngeal infections. Antibiotic prophylaxis in dentistry.

**LU8: CARDIOVASCULAR SYSTEM PHARMACOLOGY**

- Unit 22. Antihypertensive drugs. Vasodilators. Diuretics.
- Unit 23. Cardiac pharmacology. Inotropic agents. Antianginal agents.
- Unit 24. Lipid lowering drugs.

**LU9: HEMATOLOGIC PHARMACOLOGY**

- Unit 25. Anticoagulants, antiplatelet agents y fibrinolytic drugs.

**LU10: ENDOCRINE-METABOLIC PHARMACOLOGY**

- Unit 26. Diabetes Mellitus Treatment: insulin and oral anti-diabetic drugs.

**LU11: DIGESTIVE SYSTEM PHARMACOLOGY**

- Unit 27. Gastrointestinal drugs

**LU11: RESPIRATORY SYSTEM PHARMACOLOGY**

- Unit 28. Respiratory pharmacology

**LU13: OTHER GROUPS**

- Unit 29. Bone pharmacology.
- Unit 30. Cytostatics.

## 5. TEACHING-LEARNING METHODOLOGIES

The types of teaching-learning methodologies used are indicated below:

- Master class
- Practical exercises
- Analysis of cases
- Oral presentation
- Tutoring
- Autonomous work
- Knowledge tests

## 6. LEARNING ACTIVITIES

Listed below are the types of learning activities and the number of hours the student will spend on each one:

**Campus-based mode:**

Learning activity	Number of hours
Master class	40
Practical exercises	5
Case-analysis	6
Oral presentation	6
Tutoring	10
Autonomous work	80
Knowledge tests	5
<b>TOTAL</b>	<b>150</b>

## 7. ASSESSMENT

Listed below are the assessment systems used and the weight each one carries towards the final course grade:

**Campus-based mode:**

Assessment system	Weight
Knowledge tests	70%

Oral presentation	10%
Activities	20%

When you access the course on the *Campus Virtual*, you'll find a description of the assessment activities you must complete, as well as the delivery deadline and assessment procedure for each one.

### 7.1. First assessment period

In order to pass the course in the ordinary exam session, you must obtain a grade higher or equal to 5.0 out of 10.0 in the final grade (weighted average) of the course. However, this grade will only be valid if the minimum requirements established for each of the assessable blocks have been met, as indicated in the learning guide. This means that, even if the weighted average is equal to or higher than 5.0, the subject will not be passed if any of the parts have not reached the minimum grade required.

In any case, it will be necessary to obtain a grade higher or equal to 5.0 in the final exam, so that it can be averaged with the rest of the evaluable activities that have been passed according to the criteria established in the learning guide.

Furthermore, in order to take the final exam, you must have attended at least 50% of the scheduled classes and activities, as established in the course guide. This requirement applies regardless of whether the absences are justified or not. If the percentage of absences exceeds this limit, they cannot be justified in any case and this will imply the impossibility of passing the subject in that call.

### 7.2. Second assessment period

In order to pass the course in the extraordinary call, you must obtain a grade higher or equal to 5.0 out of 10.0 in the final grade (weighted average) of the course.

In any case, it will be necessary to obtain a grade higher or equal to 5.0 in the final exam, so that it can be averaged with the rest of the evaluable activities.

Depending on the parts not passed in the ordinary exam, you will have to make up those that have not reached the minimum grade required:

- If you have not passed the theory exam, you will have to repeat this test in the extraordinary call.
- If you have not passed the practical part of the subject (practical exam), you will have to take it again, according to the indications of the course professors.
- If any of the continuous assessment activities (theoretical or practical) have not been passed or were not presented in the ordinary exam, you must complete them in person during the follow-up period, at the established times. These activities may coincide with the original ones or be replaced by others, at the discretion of the professors.

## 8. SCHEDULE

This table shows the delivery deadline for each assessable activity in the course:

Assessable activities	Deadline
Activity one – drug interactions	Weeks 5-6
Oral presentation: Nutrition and health	Weeks 9-12
Activity two – lipid lowering drugs seminar	Week 13-15
Activity three – anticoagulation clinical cases	Weeks 15-18
First midterm	Weeks 10-12
Second midterm	Weeks 19-20

This schedule may be subject to changes for logistical reasons relating to the activities. The student will be notified of any change as and when appropriate.

## 9. BIBLIOGRAPHY

- General pharmacology:
- Flórez J, Armijo JA y Mediavilla A: Farmacología Humana. Ed. Masson-Salvat, 2008
- Flórez J, Armijo JA y Mediavilla A: Farmacología Humana. Ed. Masson-Salvat, 2013. E-book
- Goodman y Gilman's: Las Bases Farmacológicas de la Terapéutica. 11ª Ed. Editorial McGraw-Hill Interamericana, 2009
- P. Lorenzo, A. Moreno, I. Lisazoain, JC Leza, MA Moro, A, Portolés. Velazquez. Farmacología Básica y Clínica. Editorial Médica Panamericana, 2016.
- Raffa, R.B., Rawls, S.M., Beyzarov, E.P. Netter Farmacología Ilustrada 2008. Elsevier Masson
- Rang, H.P., Dale, M.M., Ritter, J. M. Farmacología. 2013. Elsevier Churchill Livingstone
- Rang&Dale's Pharmacology. 7th Ed. 2012. Elsevier (hard copy and e-book)

## 10. EDUCATIONAL GUIDANCE, DIVERSITY AND INCLUSION UNIT

From the Educational Guidance and Diversity Unit we offer support to our students throughout their university life to help them reach their academic achievements. Other main actions are the students' inclusions with specific educational needs, universal accessibility on the different campuses of the university and equal opportunities.

From this unit we offer to our students:

1. Accompaniment and follow-up by mean of counselling and personalized plans for students who need to improve their academic performance.
2. In terms of attention to diversity, non-significant curricular adjustments are made in terms of methodology and assessment for those students with specific educational needs, pursuing an equal opportunity for all students.
3. We offer students different extracurricular resources to develop different competences that will encourage their personal and professional development.
4. Vocational guidance through the provision of tools and counselling to students with vocational doubts or who believe they have made a mistake in their choice of degree.

Students in need of educational support can write to us at:

[orientacioneducativa@universidadeuropea.es](mailto:orientacioneducativa@universidadeuropea.es)

## **11. ONLINE SURVEYS**

Your opinion matters!

The Universidad Europea encourages you to participate in several surveys which help identify the strengths and areas we need to improve regarding professors, degree programs and the teaching-learning process.

The surveys will be made available in the “surveys” section in virtual campus or via e-mail.

Your assessment is necessary for us to improve.

Thank you very much for your participation.