

1. BASIC INFORMATION

Course	General Pharmacology General. Human Nutrition. Anesthetics and Resuscitation
Degree program	Dentistry Degree
School	Biomedical Sciences and Health
Year	Second
ECTS	6 ECTS
Credit type	Mandatory
Language(s)	English
Delivery mode	On-site
Semester	First and second
Academic year	2024 - 2025
Coordinating professor	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. COMPETENCIES AND 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:

Type of educational activity	Number of hours
Master class	40
Practical exercises	5
Analysis of cases	6
Oral presentation	6
Tutoring	10
Autonomous work	80
Knowledge tests	5
TOTAL	150

7. ASSESSMENT

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

Assessment system	Weight
Knowledge tests	70%
Oral exposition	10%
Activities	20%

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

7.1. First exam period

To pass the course in the first exam period, you must obtain a final course grade of at least 5 out of 10 (weighted average of grades above 5; grades below 5 will not be included in the weighted average).

In any case, you will need to obtain a grade of 5.0 in each Knowledge tests in order to be count towards the final grade along with all the grades corresponding to the other activities.

7.2. Second exam period

In order to pass the course in extraordinary convocation, a grade greater than or equal to 5.0 out of 10 must be obtained in the evaluable parts that were not carried out or approved in the first exam period. The same evaluation criteria will be followed as in the first exam period.

7.3. Attendance

Students taking campus-based studies are required to demonstrate that at least 50% attendance to the classes. Such attendance forms an essential part of the assessment process and is necessary to give the student the right to receive guidance, assistance and academic supervision from the professor. For such purposes, students must use the technological system put in place by the University to accredit their daily attendance at each of their classes. This system shall furthermore ensure that objective information is gathered regarding the active role of the student in the classroom. If the student is not able to follow the methods proposed by the University to demonstrate 50% attendance, it will give the professor the right to grade the course as a fail under the ordinary exam period.

Therefore, it is the authority of the professor that students who have not fulfilled the 50% of attendance in the ordinary call must pass all the evaluation tests in the extraordinary call, for which they must obtain a grade greater than or equal to 5.0 out of 10.0 in all of them (Faculty Board 11-07-23)

8. SCHEDULE

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

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.

Assessable activity	Date (week)
Activity 1. Drug interactions	Weeks 5-6
Oral exposition: nutrition and health	Weeks 9-12
Activity 2. Lipid lowering drugs seminar	Week 13-15
Activity 3. Anticoagulation clinical cases	Weeks 15-18
First midterm	Weeks 10-12
Second midterm	Weeks 19-20

9. BIBLIOGRAFÍA

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)

Specific pharmacology:

- Gage Pickett: Dental Drug Reference. Ed. Elsevier Mosby, 2005
- Lüllman H, Mohr K: Farmacología Texto y Atlas. Ed. Masson SA, 2010
- Yagiela, Dowd, Neidle: Pharmacology and Therapeutics for Dentistry. 5ª Ed. Ed. Elsevier Mosby, 2004
- Vademecum Internacional: primera guía farmacológica completa. Ed. UBM Medica, 2011
- Medimecum. Guía de terapia farmacológica. ED. Adis, 2016

Interesting web pages:

- Agencia Española de Medicamentos y Productos Sanitarios. Disponible en: <http://www.aemps.gob.es/>
- Centro de Farmacovigilancia de Navarra. Disponible en: <http://www.cfnavarra.es/bif/DEFAULT.HTML>

- Acceso on-line a publicaciones farmacológicas: Disponible en: <http://www.imedicinas.com/>
- Información sobre medicamentos del Ministerio de Sanidad, Servicios Sociales e Igualdad: <http://www.mssi.gob.es/profesionales/farmacia/informaMedicamentos/home.htm>
- Vademécum Internacional. Disponible en: <http://www.vademecum.es/>
- Agencia europea del medicamento. Disponible en: www.emea.europa.eu
- Consejo general de Colegios Oficial de Farmacéuticos. Disponible en: www.portalfarma.com

10. DIVERSITY MANAGEMENT UNIT

Students with specific learning support needs:

Curricular adaptations and adjustments for students with specific learning support needs, in order to guarantee equal opportunities, will be overseen by the Diversity Management Unit (UAD: Unidad de Atención a la Diversidad).

It is compulsory for this Unit to issue a curricular adaptation/adjustment report, and therefore students with specific learning support needs should contact the Unit at unidad.diversidad@universidadeuropea.es at the beginning of each semester.

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.