Information about the subject

Degree: Bachelor of Science Degree in Dentistry

Faculty: Faculty of Medicine and Health Sciences

Code: 480205 **Name:** General and Dental Pharmacology

Credits: 6,00 **ECTS Year:** 2 **Semester:** 1

Module: Module 3: General Medical-Surgical Pathology and Therapeutics

Subject Matter: MEDICAL PATHOLOGY **Type:** Compulsory

Field of knowledge: Health Sciences

Department: -

Type of learning: Classroom-based learning

Languages in which it is taught: English, Spanish

Lecturer/-s:

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Module organization

Module 3: General Medical-Surgical Pathology and Therapeutics

Subject Matter	ECTS	Subject	ECTS	Year/semester
GENERAL MEDICAL-SURGICAL PATHOLOGY	18,00	Anaesthesiology	6,00	2/1
		General Medical-Surgical Pathology	6,00	2/2
		Medical-Surgical Specialities	6,00	2/2
MEDICAL PATHOLOGY	12,00	General and Dental Pharmacology	6,00	2/1
		Pathological Anatomy	6,00	2/1

Recommended knowledge

No previous requirements

Learning outcomes

At the end of the course, the student must be able to prove that he/she has acquired the following learning outcomes:

R1 The student has the appropriate knowledge of the different pharmacological groups and their possible applications in the professional field by means of a multi-response written test and the resolution of short answer questions.

R2 The student has the knowledge to recognise possible adverse reactions arising from the administration of drugs by means of a multi-response written test and short answer questions.

R3 The student knows the main drug interactions originated by the joint administration of several drugs, as well as those generated when they are administered together with food, by means of a multi-response written test and resolution of short answer questions.

R4 The student discriminates on different therapeutic options the one that is more adequate to solve a certain health problem raised in written questions or in the classroom.

R5 The student, based on previously acquired physiological knowledge, solves and explains pharmacokinetic and pharmacodynamic aspects of drugs raised in written questions or raised in the classroom.

R6 The student demonstrates that he/she knows and interprets the graphic representations Dose/Response corresponding to the parenteral administration routes (intravenous bolus and intravenous perfusion) and extravasal administration through questions raised about the practical sessions given on this subject.

R7 The student demonstrates that he/she knows the different pharmaceutical forms available in the market and the different routes of administration of medicines through questions raised about the practical sessions given on this subject.

Competencies

Depending on the learning outcomes, the competencies to which the subject contributes are (please score from 1 to 4, being 4 the highest score):

GENERAL	Weighting			
	1	2	3	4
CG1 I a Capacity for analysis and synthesis			x	
CG2 I b Organizational and planning skills			x	

SPECIFIC	Weighting			
	1	2	3	4
CE A 7 Promote autonomous learning of new knowledge and techniques, as well as motivation for quality.			x	
CE B 1 Understand the basic biomedical sciences on which dentistry is based to ensure proper oral care.			x	
CE B 1 Know about general disease processes, including infection, inflammation, immune system disorders, degeneration, neoplasm, metabolic disorders and genetic disorders.			x	
CE B 1 Be familiar with the general pathological features of diseases and disorders affecting organ systems, specifically those with oral impact.			x	
CE B 1 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 available scientific evidence.			x	
CE B 1 Know, critically evaluate and know how to use clinical and biomedical information sources to obtain, organize, interpret and communicate scientific and health information.		x		
CE B 1 Know the scientific method and have the critical capacity to value the established knowledge and the new information. Be able to formulate hypotheses, collect and critically evaluate information for the resolution of problems, following the scientific method.		x		

TRANSVERSAL		Weighting			
		1	2	3	4
1. a.	Analysis and synthesis skills			x	
1. b.	Organizational and planning capacity			x	
1. c.	Oral and written communication in the native language.			x	
1. d.	Knowledge of a foreign language		x		
1. e.	Computer skills	x			
1. f.	Information management capacity			x	
1. g.	Problem solving			x	
1. h.	Decision making		x		
2. i.	Teamwork	x			
2. l.	Interpersonal skills	x			
2. n.	Critical Reasoning		x		
3. p.	Autonomous learning				x
3. q.	Adaptation to new situations		x		
3. r.	Creativity	x			
3. s.	Leadership	x			
3. u.	Initiative and entrepreneurship	x			
3. v.	Motivation for quality			x	
3. w.	Sensitivity to environmental and socio-health issues		x		

Assessment system for the acquisition of competencies and grading system

Assessed learning outcomes	Granted percentage	Assessment method
R1, R2, R3, R4, R5, R6, R7	10,00%	OPEN QUESTIONS: Written exam in which basic theory knowledge and the ability to relate, integrate and coherently express it in writing is assessed.
R1, R2, R3, R4, R5, R6, R7	75,00%	MULTIPLE CHOICE TEST: Multiple choice test with one correct answer. This shows to greater extent the contents acquired by the student.
R1, R2, R3, R4, R5	5,00%	CLASS PARTICIPATION: The teacher assesses the participation, involvement and progress the student makes in acquiring knowledge and skills in theory and practical classes and seminars. This is never more than 5% of the final grade.
R6, R7	10,00%	PRACTICAL EXAM: The student carries out a test in which he/she must show by means of practical application the acquisition of certain knowledge. For example, histological or anatomopathological diagnoses, interpretation of images or diagnostic tests.

Observations

GENERAL REQUIREMENTS:
The subject will be divided into the following evaluation items:
1. THEORETICAL EXAMINATION, based on the theoretical contens taught during the course and consisting of multiple-choice questions (75%) and short answer questions (10%). The grade of this exam represents 85% of the total of the course. It will be necessary to obtain a grade higher than 4 in order to count the rest of the grading items.
2. THEORETICAL-PRACTICAL SEMINARS EXAM, based on the knowledge acquired in the seminars given during the course. It will take place at the same time as the theoretical exam. The grade of this exam represents 10% of the total of the course. It will be necessary to obtain a grade higher than 4 to count the rest of the grading items.
3. ATTENDANCE AND PARTICIPATION. Corresponds to record of grades obtained in the activities carried out by the student in the classroom or through the teaching platform. It represents 5% of the total of the course.
The final grade of the course corresponds to the sum of the grades obtained in the theoretical

exam, theoretical-practical seminars exam and the attendance and paticipation item. The course is considered passed with a grade equal to or higher than 5.
The passing grades corresponding to items 2 and 3 will be kept for the second call.
The evaluation system for students of second and succesive enrollments corresponds, both in 1st and 2nd call, to the sum of the following evaluation items: Theoretical exam (85%) + theoretical-practical seminars exam (15%).

CRITERIA FOR THE AWARDING OF HONORS:

According to Article 22 of the Regulatory Regulations for the Evaluation and Grading of UCV Subjects, the mention of "Matrícula de Honor" may be awarded by the professor responsible for the subject to students who have obtained the grade of "Sobresaliente". The number of "Matrícula de Honor" mentions that may be awarded may not exceed 5% of the students included in the same official transcript, unless this less than 20, in which case only one "Matricula de Honor" may be awarded.

MENTION OF DISTINCTION:

According to Article 22 of the Regulations governing the Evaluation and Qualification of UCV Courses, the mention of "Distinction of Honor" may be awarded by the professor responsible for the course to students who have obtained, at least, the qualification of 9 over 10 (“Sobresaliente”). The number of "Distinction of Honor" mentions that may be awarded may not exceed five percent of the number of students included in the same official record, unless this number is lower than 20, in which case only one "Distinction of Honor" may be awarded.

Learning activities

The following methodologies will be used so that the students can achieve the learning outcomes of the subject:

M1	Lecture. Problem Solving. Explanation of contents by the teacher. Explanation of knowledge and skills.
M2	Practical basic sciences laboratory sessions, practical simulation laboratory sessions, virtual hospital and dissecting room.
M5	Problem and case solving. Written tasks. Online activity on the e-learning platform. Personal study. Compiling information and documentation.
M10	Carrying out bibliographic reviews and practical work experience dissertations.

M13 Personal preparation of written texts, essays, problem solving, seminars.

M15 Personalised Attention. Period of instruction and/or guidance carried out by a tutor with the aim of analysing with the student his/her work, activities and evolution in learning of subjects.

IN-CLASS LEARNING ACTIVITIES

	LEARNING OUTCOMES	HOURS	ECTS
THEORY CLASS M1, M5, M13	R1, R2, R3, R4, R5	42,00	1,68
SEMINAR M1, M2, M5, M10, M13, M15	R4, R5, R6, R7	5,00	0,20
TUTORING M5, M15	R1, R2, R3, R4, R5, R6, R7	4,00	0,16
EVALUATION M15	R1, R2, R3, R4, R5, R6, R7	4,00	0,16
PRACTICAL CLASS M1, M2, M5, M10, M15	R4, R5, R6, R7	5,00	0,20
TOTAL		**60,00**	**2,40**

LEARNING ACTIVITIES OF AUTONOMOUS WORK

	LEARNING OUTCOMES	HOURS	ECTS
INDIVIDUAL WORK M5, M10, M13	R4, R5, R6, R7	90,00	3,60
TOTAL		**90,00**	**3,60**

Description of the contents

Description of the necessary contents to acquire the learning outcomes.

Theoretical contents:

Content block	Contents
UNIT I.- GENERAL PHARMACOLOGY	1. Introduction to the study of pharmacology. Concept and objectives. 2. General mechanisms of drug action.Drug-receptor interactions. 3. ADME process: absorption, distribution, metabolism and elimination of drugs. 4. Routes of drugs administration. Therapeutic guidelines. 5. Toxicity and adverse drug reactions. Pharmacological interactions.
UNIT II.- SPECIFIC PHARMACOLOGY TO DENTAL TREATMENT	7. Opioid analgesics. 8. Systemic and topical corticosteroids. 9. Treatment of bacterial, fungal and viral infections. 10. Antiseptics, disinfectants and other agents of local action.

UNIT III.- SYSTEMIC PHARMACOLOGY	11. Neurotransmission of the Autonomic Nervous System. 12. Adrenergic transmission. Adrenergic agonist and antagonist drugs. 13. Cholinergic transmission. Cholinergic agonist and antagonist drugs. 14. Neuromuscular and ganglionic blocking drugs. 15. Neurotransmission of the Central Nervous System. 16. Pharmacology of the nervous system: ·Anxiolytic, hypnotic and sedative drugs. ·Antidepressant, antimanic and neuroleptic antipsychotic drugs. ·Pharmacology of dementia. Alhzeimer´s disease. ·Antiparkinsonian and antispastic drugs. ·Antiepileptic and anticonvulsant drugs. 17. Pharmacology related to hormones and metabolism. 18. Pharmacology related to respiratory function. 19.- Pharmacology related to digestive function. 20. Pharmacology of hemostasis. 21. Pharmacology of the cardiovascular system: ·Pharmacology of heart failure. ·Pharmacology of arterial hypertension. Diuretic drugs. ·Pharmacology of angina pectoris. ·Pharmacology of cardiac arrythmia. ·Pharmacology of vascular insufficiency. 22. Hypolipidemic drugs.
UNIT IV.- THEORETICAL-PRACTICAL SEMINARS	23. Introduction to pharmacokinetics. Practical simulation. 24. Pharmaceutical forms and routes of administration. 25. Calculation of drugs doses. 26. Practical clinical cases.

Temporary organization of learning:

Block of content	Number of sessions	Hours
UNIT I.- GENERAL PHARMACOLOGY	3,00	6,00
UNIT II.- SPECIFIC PHARMACOLOGY TO DENTAL TREATMENT	8,00	16,00
UNIT III.- SYSTEMIC PHARMACOLOGY	14,00	28,00
UNIT IV.- THEORETICAL-PRACTICAL SEMINARS	5,00	10,00

References

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SUPPLEMENTARY BIBLIOGRAPHY

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