



Information about the subject

Degree: Bachelor of Science Degree in Dentistry

Faculty: Faculty of Medicine and Health Sciences

Code: 480504 **Name:** Legal and Forensic Dentistry

Credits: 6,00 **ECTS Year:** 5 **Semester:** 1

Module: Module 4: Dental Pathology and Therapeutics

Subject Matter: DENTAL PATHOLOGY **Type:** Compulsory

Field of knowledge: Health Sciences

Department: Biostatistics, Epidemiology, and Public Health

Type of learning: Classroom-based learning

Languages in which it is taught: English, Spanish

Lecturer/-s:

485A	<u>Maria Miralles Ferragud</u> (Responsible Lecturer)	maria.miralles@ucv.es
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Module organization

Module 4: Dental Pathology and Therapeutics

Subject Matter	ECTS	Subject	ECTS	Year/semester
DENTAL THERAPY	66,00	Cosmetic Dentistry	6,00	4/2
		Orthodontics I	6,00	3/2
		Orthodontics II	6,00	4/1
		Paediatric Dentistry I	6,00	4/1
		Paediatric Dentistry II	6,00	4/2
		Pathology and Dental Therapeutics I	6,00	3/1
		Pathology and Dental Therapeutics II	6,00	3/2
		Pathology and Dental Therapeutics III	6,00	4/1
		Prosthodontics I	6,00	3/1
		Prosthodontics II	6,00	3/2
		Prosthodontics III	6,00	4/1
DENTAL PATHOLOGY	60,00	Dental Traumatology	6,00	5/1
		Dentistry in Special Patients	6,00	4/2
		Emergencies in Dentistry	6,00	5/2
		Legal and Forensic Dentistry	6,00	5/1



DENTAL PATHOLOGY

Oral Medicine	6,00	3/1
Oral Surgery I	6,00	4/1
Oral Surgery II - Implantology	6,00	5/2
Pathology of the Temporo-Mandibular Joint and Orofacial Pain	6,00	4/2
Periodontics I	6,00	3/2
Periodontics II	6,00	4/2

Recommended knowledge

General knowledge about legal and forensic dentistry. To know the different areas where the dentist can assist in a forensic procedure and DVI (disaster victim identification). Basic concepts about legal dentistry applied in the daily practice. Professional relationship in between dentist-patient based on their duties and rights. Research and data management. Team work and ethics, applicability in the daily practice.



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 Searches for information in bibliographic sources and knows how to analyze them.
- R2 Makes an adequate clinical history.
- R3 Knows the different parts of the physical examination of the patients.
- R4 The student is capable of making a diagnostic judgement based on the data from the anamnesis and examination.
- R5 Knows and identifies the periodontal structures at a radiological level.
- R6 The student is able to complete a complete clinical history and make a full clinical judgment.
- R7 The student is able to transmit knowledge in a precise and correct way.
- R8 Knows the general structure of the practical aspects of the dental profession
- R9 Searches for information in different places and analyses it with a constructive critical sense.
- R10 The student is able to work in a team.
- R11 Manages the organization, design and structure of a scientific communication.
- R12 Knows the profession by putting the patient first.
- R13 Shows ability to recognise the error and desire to correct it.
- R14 Shows ability to analyze and interpret legal texts related to dentistry.
- R15 Demonstrates ability to write a correct clinical history, in which the data is presented clearly and completely.



- R16 Demonstrates ability to draw up a clear and concise informed consent.
- R17 Demonstrates ability to participate in identification tasks if necessary, through the knowledge and application of different forensic techniques.
- R18 The student is able to write an expert report in an objective manner, without seeking one's own benefit, and to assist the justice system.
- R19 Demonstrates ability to recognize where the boundaries of the dental profession lie.
- R20 Demonstrates ability to act according to ethical standards in the face of any possible lawsuit.
- R21 Demonstrates ability to distinguish between accidental and voluntary trauma within the dental field.
- R22 Demonstrates ability to recognize the effects of toxins in the oral cavity



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 aCapacity for analysis and synthesis			X	
CG2 I bOrganizational 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 A 9 Understand the importance of maintaining and using records with patient information for subsequent analysis, preserving the confidentiality of the data.				X
CE C 2IObtain and prepare a medical history containing all relevant information.				X
CE C 2Knowing how to perform a complete oral examination, including the appropriate radiographic and complementary examination tests, as well as obtaining appropriate clinical references.				X
CE C 2Be able to make an initial diagnostic judgement and establish a reasoned diagnostic strategy, being competent in the recognition of situations requiring urgent dental care.				X
CE C 2Establish the diagnosis, prognosis and adequate therapeutic planning in all clinical areas of dentistry, being competent in the diagnosis, prognosis and elaboration of the dental treatment plan of the patient requiring special care, including medically compromised patients (such as diabetics, hypertensive, immunosuppressed, anticoagulated, among others) and patients with disabilities.				X
CE C 2Recognize life-threatening situations and know how to perform basic life support maneuvers.				X



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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. j.	Multidisciplinary teamwork				X



2. k.	Work in an international context			X
2. l.	Interpersonal skills		X	
2. m.	Recognition of diversity and multiculturalism			X
2. n.	Critical Reasoning			X
2. o.	Ethical commitment			X
3. p.	Autonomous learning			X
3. q.	Adaptation to new situations			X
3. r.	Creativity			X
3. s.	Leadership			X
3. t.	Knowledge of other cultures and customs			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
R2	65,00%	MULTIPLE CHOICE TEST: Multiple choice test with one correct answer. This shows to greater extent the contents acquired by the student.
R2, R4	10,00%	PRESENTATION: The student develops by means of an oral presentation, supported with audio-visual materials, a theme or topic given by the teacher. At the end of the presentation, the teacher or audience may ask questions.
R3, R5, R17, R18, R20, R21, R22	5,00%	PRACTICAL: Written test in which the student is asked to solve practical exercises, clinical cases or problems about the contents of different subjects.
	5,00%	ASSIGNMENTS: The student, either individually or in a group, develops a theme which reviews or researches, and he/she presents it, in writing, for assessment by the teacher.
	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.
	10,00%	SIMULATIONS, OSCES: Through simulations, real-life situations are reproduced in standardised conditions, which enable the teacher to analyse the clinical skills of the student in specific situations. Computer simulations or standardised simulated illnesses are used. The test known as OSCE (Objective Structured Clinical Examination) may also be used. The OSCE consists of students going around a circuit of sequential stops where they are asked to carry out a variety of different skills and techniques.



Observations

The exam will consist on 40 MCQ test, with 4 options. It will be necessary to get a 6 on the exam to pass it. Wrong questions will cancel a correct one. Seminars are compulsory. The oral presentations are compulsory and will need to be showed in the classroom to be valid. The attendance to the seminars and the proper presentation is compulsory to be able to attend the exam. You can only miss the 10% of the seminars to attend to the first call of the exam. In case of not being able to attend the seminars due to a medical reason it will need to be justified 7 days in advance and with a medical certificate or 15 days after the absence. In case of missing 20% of the seminars you would need to wait to the second call to attend the exam. Missing more than 20% of the seminars means that you won't be able to attend the exam neither the first or second call and you will fail the subject straight away. -In case of a non justified absence, the student will miss the option of attending the first call. The only chance to pass the subject will be to attend to the second call and pass the exam. -In case of a justified absence the student can attend the first call and the second call of the exam if the seminar has been sent and the professor has confirmed so. -The non presentiality can only be justified as per the Estatutos UCV. -Exemptions will be assessed individually. The grades will not be kept for the following year. Compulsory Oral presentation about a free topic related to LF dentistry. In case of failing the MCQ test the student will repeat the seminars and oral presentation. Grades will not be kept for the following year. Both theoretical and practical areas will need a minimum grade of 5 each one to pass the whole subject. Presenciality: 5% of your final grade. The fact of not attending at 1 or more lessons means you lose the benefit of that 5% to your final grade. The student needs to address the oral competencies needed to attend patients in clinics. In this course, the option of "Single Evaluation" is not considered, as continuous assessment activities and practical tasks are carried out. The use of AI in the course must always comply with the professor's guidelines.

MENTION OF DISTINCTION: In accordance with the regulations governing the assessment and grading of subjects in force at UCV, the distinction of "Matrícula de Honor" (Honours with Distinction) may be awarded to students who have achieved a grade of 9.0 or higher. The number of "Matrículas de Honor" (Honours with Distinction) may not exceed five percent of the students enrolled in the group for the corresponding academic year, unless the number of enrolled students is fewer than 20, in which case a single "Matrícula de Honor" (Honours with Distinction) may be awarded. Exceptionally, these distinctions may be assigned globally across different groups of the same subject. Nevertheless, the total number of distinctions awarded will be the same as if they were assigned by group, but they may be distributed among all students based on a common criterion, regardless of the group to which they belong. The criteria for awarding "Matrícula de Honor" (Honours with Distinction) will be determined according to the guidelines stipulated by the professor responsible for the course, as detailed in the "Observations" section of the evaluation system in the course guide.



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Learning activities

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

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|-----|--|
| 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. |
| M3 | Problem and case solving.
Social action activities. |
| M4 | Group work with research, discussion and filtering information about the degree subjects. |
| M6 | Discussion and problem solving. |
| M8 | Oral presentations by students. |
| M9 | Group work: group work sessions supervised by the teacher.
Knowledge building through interaction and activity of students. |
| M10 | Carrying out bibliographic reviews and practical work experience dissertations. |



- M11 Practical in-person classes in clinics linked to the university, where the student will carry out different treatments under direct supervision from the assigned tutor.
- M12 Seminars, supervised monographic classes with shared participation.
- 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	R4	30,00	1,20
SEMINAR M4	R12, R13, R14, R15, R16, R17	10,00	0,40
EVALUATION M12	R10	2,00	0,08
PRACTICAL CLASS M4, M12, M13	R12	20,00	0,80
TOTAL		62,00	2,48

LEARNING ACTIVITIES OF AUTONOMOUS WORK

	LEARNING OUTCOMES	HOURS	ECTS
INDIVIDUAL WORK M4	R12, R13	73,00	2,92
GROUP WORK M4, M6, M8	R7, R8, R9	15,00	0,60
TOTAL		88,00	3,52



Description of the contents

Description of the necessary contents to acquire the learning outcomes.

Theoretical contents:

Content block	Contents
I	Lesson 1.Introduction to legal and forensic medicine.Legal and forensic dentistry.Lesson 2.Legal dentistry. Definition, concepts and goals. History.Lesson 3.Forensic dentistry. Definition, concepts and goals. History.Lesson 4.Brief introduction to law.Lesson 5.How to open a dental practice.Lesson 6.Colleagues who work with the dentist. Legal competencies.
II	Lesson 7.Legal and illegal act.Lesson 8.Ethics in dentistry nowadays. Patients rights and duties.Dentist rights and duties.Dentist-patient relationship.Lesson 9.Legal documents in dentistry. Clinical history.Lesson 10.Consent form, concept and characteristics. History.Exceptions.Lesson 11.Other medico-legal documents.
III	Lesson 12.Professional secrecy.Lesson 13.Data protection.Lesson 14.Professional responsibility.Lesson 15.Prescription.
IV	Lesson 16.Thanatology.Lesson 17.Witness report, introduction.Lesson 18.Witness report: parts and relevance in dentistry.Lesson 19.Forensic anthropology. Concept, competencies andhistorical evolution.Lesson 20Body identificationLesson 21Dead Body identification.



V	Lesson 22Dentist's duty in a body identification.Lesson 23.Conclusions in a dental identification.Lesson 24Features in the soft and hard tissues related with a bodyidentificationLesson 25Dental prosthesis, x-rays and oral restorations. Implication ina body identification.Lesson 26Bite marksLesson 27Craniometry and dentometryLesson 28Sexual dimorphism.Lesson 29Age estimationLesson 30Photography in forensic dentistryLesson 31Rugoscopy and queiloscopy.Lesson 32DNA research and applicability in body identification.17
VI	Lesson 33Dental damage assessment.Lesson 34Child protection and the dentist's role.Lesson 35Toxicology.Lesson 36.Mass fatality events. Investigation and forensic dentist's role.

Temporary organization of learning:

Block of content	Number of sessions	Hours
I	4,00	8,00
II	5,00	10,00
III	4,00	8,00
IV	5,00	10,00
V	9,00	18,00
VI	4,00	8,00



References

BOE British Dental Association BDAPubmedGisbert JA. Medicina Legal y Toxicología. Parte IV. Cap. XXXII. 4ta edición. Ediciones Científicas y Técnicas S.A. Masson-Salvat Medicina. 1992. pág. 321-31A. Castaño, J. Doldan. Manual de Introducción a la Odontología. 1ª Edición. Madrid. Autor-Editor. 2005 Eneko Barbería. Catástrofes: Identificación De Víctimas Y Otros Aspectos Médico-Forenses: Aspectos teórico-prácticos. 1ª Edición. Elsevier. 2015 Mónica Costales. Odontología Legal y Forense. 1ª Edición. Formación Alcalá, s.l. 2023. Fonseca GM, Kasprzak J. About the Polish contributions to lip print identification and the need for synergy in forensic research. Forensic Sci Int Synerg. 2024 Feb 15;8:100461. doi:10.1016/j.fsisyn.2024.100461. PMID: 38425694; PMCID: PMC10901748. Cappella A, Solazzo R, Mazzarelli D, Gibelli D, Dolci C, Sforza C, Cattaneo C. The potential of facial nevi in personal identification. Sci Rep. 2024 Mar 14;14(1):6206. doi:10.1038/s41598-024-56847-z. PMID: 38485806; PMCID: PMC10940291.