

## 1. BASIC INFORMATION

Course	Dental Therapy I
Degree program	Degree in Dentistry
School	Biomedical sciences
Year	Third
ECTS	6 CTS )
Credit type	Obligatory
Language(s)	English/Spanish
Delivery mode	Face to face clases
Semester	First semester
Academic year	2024/2025
Coordinating professor	Carolina Moñivas Palomero

## 2. PRESENTATION

This subject aims to provide the student with an integrated vision to carry out a correct performance of dental therapeutics, in its preventive, curative and rehabilitative aspects, through an adequate restorative methodology. The therapeutic processes should be based on the concept of minimal invasive dentistry and biomimetic, giving a global and integrated approach to the oral-dental treatment.

## 3. COMPETENCIES AND LEARNING OUTCOMES

### Core competencies:

- CoC3: Students must have the ability to gather and interpret relevant data (usually within their area of study) to make judgments that include a reflection on relevant social, scientific or ethical issues.
- CoC4: students must be able transmit information, ideas, problems and solutions to a specialized and non-specialized public. autonomy.
- CoC5: Students must develop the learning skills that are necessary to undertake further studies with a high degree of autonomy.

### Cross-curricular competencies:

- CC1: Autonomous learning: Process that allows the person to be the author of their own development, choosing the paths, the strategies, the tools and the moments that they consider most effective to learn and independently implement what they have learned. The autonomous student, in short, selects the best strategies to achieve their learning objectives.
- CC4: Capacity for analysis and synthesis: Analysis is the method of reasoning that allows the decomposition of complex situations in their constituent parts; also evaluate other alternatives and perspectives to find optimal solutions. The synthesis seeks to reduce complexity in order to understand it better and / or solve problems.
- CC5: Ability to apply knowledge to practice: Ability to use the knowledge acquired in the academic field in situations as similar as possible to the reality of the profession for which they are being trained, for example, by relating theoretical foundations with their application to real problems of everyday life, address problems and situations close to professional activity or solve real issues and / or problems.
- CC7: Awareness of ethical values: Ability to think and act according to universal principles based on the value of the person that are directed to their full development and that entails the commitment with certain social values.
- CC8: Information management: Ability to search, select, analyze and integrate information from various sources.

**Especific Competences:**

- SC10. Recognise oral normality and pathology, as well as the evaluation of semiological data.
- SC13. Handle, discriminate and select appropriate materials and instruments in Dentistry.
- SC14. Know dental biomaterials: their handling, properties, indications, allergies, biocompatibility, toxicity, waste disposal and environmental impact.
- SC16. Know and use the basic equipment and instrumentation for dental practice.
- SC18. Provide a comprehensive approach to oral care and apply the principles of health promotion and prevention of oral diseases
- SC19. Educate and motivate patients in the prevention of oral diseases, control pathogenic oral habits, instruct them on proper oral hygiene, dietary and nutritional measures and, in summary, on all methods of maintaining oral health.
- SC44. Prepare and isolate the operative field.

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

Competencies	Learning outcomes
CoC3, CC1, CC4, CC5, CC8, SC10, SC18, SC19	LO1: Diagnose, plan and perform, in general, a restorative, sequential and integrated treatment of limited complexity in patients of all ages and conditions.
CoC4, CC1, CC4, CC5, CC7, SC13, SC 14, SC16, SC44	LO3: Perform basic treatments of the oral and dental pathology in simulated patients of all ages based on the concept of minimal invasion and in a global and integrated approach to the oral-dental treatment.
CoC3, CoC5, CC1, CC4, CC5, CC8, SC10	LO4: Recognize normality and oral pathology, as well as the evaluation of semiological data.
CoC3, CoC4, CoC5, CC1, CC4, CC5, CC7, CC8, SC 10, SC18, SC19	LO5: Identify the main reason for consultation and the history of the current disease. Make a general clinical history of the patient and a clinical record that faithfully reflects the patient's records.
CoC3, CoC4, CoC5, CC1, CC4, CC5, CC7, CC8, SC16, SC44	LO8: Prepare and isolate the operative field. Know the management of acute infections, including drug prescription and simple surgical aspects. Identify any dental emergency related to dental therapy.
CoC3, CoC4, CoC5, CC1, CC4, CC5, CC7, CC8, SC10, SC13, SC14, SC16	LO10: Assess and learn to treat the simulated patient with caries or other non-carious dental pathology and be able to use all the materials aimed at restoring the shape, function and aesthetics of the tooth in simulated patients in permanent dentition.

## 4. CONTENT

The subject is organized into seven learning units (L.U.), which, in turn, are divided into topics. In addition, the set of objectives that were raised globally for the module are specifically linked to the development of each unit:

### LU 1. Knowledge of dental anatomy.

- Generalities.
- Dental anatomy (Incisors, canines, premolars and molars).
- Dental histology

### LU 2. Dental pathology

- Bacterial pathology: dental caries. Pathophysiology, pathology, etiology, and classification
- Non-bacterial pathology. Attrition, erosion, abfraction and tintions.

**LU 3. Dental pathophysiology.**

- Dental response to aggression.
- The dentin wound.
- Protection of the dentin-pulp complex. Direct and indirect pulp protection.
  - Glass ionomer cements.
  - Compomers
  - Calcium hydroxide.
  - Mineral trioxide (MTA) added.
- Dentin-pulp inflammation.

**LU 4. Dental restoration**

- Direct obturation materials in Dental Therapeutics. Biomimetics. Composite resins.
  - Composition.
  - Classification.
  - Properties.
  - Problems of composite resins.
  - Clinical management.
- Adhesion
  - Factors influencing adherence.
  - Qualities, composition and classification of adhesives.
  - Adhesion to enamel.
  - Adhesion to dentin

**LU 5. Cavitory designs for composite resin.**

- Generalities:
  - Elements
  - Classification
  - Goals.
- Restorations in the previous sector.
  - Class I, Class III, Strictly proximal, Class IV, Class V and VI.
- Restorations in the posterior sector.
  - Class I, Class II, tunneling, Class V and VI.

**LU 6. Preparation of the operative field.**

- Matrices and instruments in Dental Therapeutics.
- Operative methodology.

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

## **5. TEACHING-LEARNING METHODOLOGIES**

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

- Master class.
- Case method.
- Cooperative learning.
- Problem-based learning.
- Simulation environments.

## 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
LABORATORY PRACTICES	34,5
MASTER CLASES	17
KNOWLEDGE TESTS	3
ASYNCHRONOUS VIRTUAL MASTER CLASSES	5
TUTORIALS	2,5
AUTONOMOUS WORK	75
PROBLEMS SOLVING	8
CASES ANALYSIS	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 test	30%
Portfolio	15%
Clinical case	15%
Preclinic practices	40%

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 subject in ordinary call, you must obtain a grade greater than or equal to 5.0 out of 10.0 in each of the different evaluable activities (knowledge test, portfolio, case / problem, simulated preclinical practices).

## 7.2. Second exam period

To pass the subject in an extraordinary call, it is necessary to obtain a qualification greater than or equal to 5.0 out of 10.0 in the different evaluable activities (knowledge test, portfolio, case / problem, simulated preclinical practices) of the subject. The activities not passed in ordinary call must be delivered, after having received the corresponding corrections from the teacher, or those that were not delivered.

## 8. SCHEDULE

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

Assessable activities	Deadline
Activity 1. Portfolio	Weeks 1-12
Activity 2. Clinical case	Weeks 5,8,13
Activity 3. Pre-clinic practices	Weeks 1-15
Activity 4. Knowledge test	Week 17

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

The main reference work for this subject is:

- Patología y Terapéutica Dental - 2ª Edición. Ed. ElSevier 2014. García Barbero, Javier.

The recommended Bibliography is:

- Anatomía, fisiología y oclusión dental. Editorial: Elsevier- Saunders. Wheeler.
- Odontología restauradora, fundamentos y técnicas, tomo I-II. Luis Narciso Baratieri. Editorial Santos 2009.
- Operatoria dental. Barrancos Mooney. Panamericana. 1.999.
- Soluciones clínicas, técnicas y fundamentos. Luis Narciso Baratieri. Editorial Santos 2009.
- Adhesión dental: Pautas de actuación clínica. José Luis Padrós Serrat. Ediciones especializadas europeas. Octubre 2009.

## 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](mailto: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.