

## 1. BASIC INFORMATION

<b>Course</b>	MEDICAL EMERGENCIES IN THE DENTAL CLINIC
<b>Degree program</b>	Bachelor's Degree in Dentistry
<b>School</b>	Biomedical and Health Sciences
<b>Year</b>	5º
<b>ECTS</b>	3 (75 hs)
<b>Credit type</b>	Compulsory subject
<b>Language(s)</b>	Spanish/English
<b>Delivery mode</b>	Presence
<b>Semester</b>	First or second semester
<b>Academic year</b>	2024-2025
<b>Coordinating professor</b>	María Rosa García Villalobos
<b>Profesor</b>	Marina Laura Nevado Villafruela

## 2. PRESENTATION

Emergencies in the Dental Clinic is a compulsory subject of 3 ECTS which is taught on a semester-based length during the fifth year of the Bachelor's Degree in Dentistry.

The dentist as an oral-health professional must learn the theoretical founds together with the necessary technical skills to face medical emergencies in the dental clinic. The aims of of the subject are to identify clinical emergencies, medical devices management and emergency drugs to be administered. Also to learn how to perform Basic Life Support, Advance Life Support and Cardiopulmonary Resuscitation manoeuvres as well.

## 3. COMPETENCIES AND LEARNING OUTCOMES

**Core competencies:**

- **BC1:** Students must prove they have knowledge on a specific field, based on the secondary general education. This knowledge is at a level that, aside of being supported by advanced textbooks, includes aspects that imply knowledge coming from the forefront of its field of study.

- BC3: Students must be able to bring together and perform important facts (usually on their study area), and issue judgements that includes social, scientific or ethical reflections.
- BC4: Be competent at sharing information and professional knowledge with both patients and other professionals verbally and in writing. Communicate effectively with patients, with other health workers and with social media.

**Cross-curricular competencies:**

- TC1: - Autonomous learning: Process that enables a person to oversee its own development, choosing his path, strategies, tools and the best pathway to learn and to apply what has been learned. An autonomous student, at the end, chooses the best strategies to fulfill his learning goals.
- TC3 - Ability to adapt to new situations: Being able to work under different conditions, different people and various groups. Valuing and understanding different positions, adapting their own approach as the situation demands.
- TC4 - Analysis and synthesis ability: Analysis is the reasoning methods that allow us to split up complicated situations into their components; also assesses other alternatives and perspectives to find out optimal solutions. Synthesis aims to reduce the complexity in order to have a better understanding and problem-solving capacity.
- TC7 - Ethical values awareness: Awareness of ethical concepts to apply and legal issues to comply with, regarding professional activities with individuals, groups, and organizations. Importance of applying an ethical decision model to practice. Integrate moral principles/ethical values into professional conduct.
- TC8 - Information management: Ability to search, choose, analyze and integrate information from different sources.

**Specific competencies:**

- SC2. To understand the relevance of the above-mentioned principles for the patient's benefit, the profession's benefit and the whole society's benefit as well. To understand also the specific value of patient confidentiality and professional secrecy.
- SC3. To be able to identify the concerns and expectations of the patient and communicate in an effectively and clear way, by both oral and written form, with patients, relatives, the media and other professionals.

- SC11. To understand biomedical sciences processes, as the founding of Odontology to provide adequate oral & dental healthcare.
- SC16. To understand pharmacological action mechanisms and other types of therapeutic interventions, and evidence-based medical indications, contraindications, drug interactions, and side effects on different organs and systems.
- SC17. To recognize and understand the ergonomic principles and the principles of work safety, including cross-infection prevention, X-ray protection, and measures to prevent biological and occupational exposures.
- SC18. To be able to recognize, critically assess and use the different clinical and biomedical sources in order to obtain, organize, perform and communicate scientific and medical information.
- SC24. To recognize life-threatening situations and knowledge of the basic life-support maneuvers.

**Learning outcomes:**

- LO1: Knowledge and management of the most common medical emergencies as related to the practice of dentistry and learning of basic cardiopulmonary resuscitation techniques.
- LO2: Ability to identify clinical situations that require urgent medical intervention. Knowledge and management of clinical situations that require immediate treatment accomplished by the dentist.

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

Competences	Learning Outcomes
BC1, BC3, BC4, TC1, TC3, TC4, TC7, SC1, SC3, SC11, SC16, SC17, SC24.	LO1: Knowledge and management of the most common medical emergencies as related to the practice of dentistry and learning of basic cardiopulmonary resuscitation techniques.
BC1, BC3, TC4, TC7, T8 SC16, SC18, SC24.	LO2: Ability to identify clinical situations that require urgent medical intervention. Knowledge and management of clinical situations that require immediate treatment accomplished by the dentist.

## **4. CONTENT**

The subject contents are organized in two learning units, which are also divided into different topics for each different unit.

### ***Learning Unit 1***

1. Definition of urgency and emergency. Prevention of complications in dental care.
2. Initial assessment of an urgent clinical situation.
3. Hypertensive crisis. Hypertensive emergencies. Arterial Hypotension. Shock.
4. Syncope. Types of syncope. Treatment of syncope.
5. Seizures. Altered consciousness. Anxiety. Treatment.
6. Ictus and Acute Cerebrovascular Disorders. Emergency treatment.
7. Diabetic emergencies in the dental clinic. Hypoglycemia. Hyperglycemic crisis.
8. Asthmatic and respiratory emergencies. COPD exacerbation. Pulmonary thromboembolism.

### ***Learning Unit 2***

9. Drug adverse reactions. Allergic reactions. Anaphylaxis. Treatment.
10. Acute chest pain. Stable & unstable angina. Acute myocardial infarction. Treatment.
11. Medical accidents in the dental clinic. Treatment of different accident types.
12. Cardio-respiratory arrest. Basic Life support.
13. Acute hemorrhage. Hemorrhage management in anticoagulated patients.
14. Ethical aspects facing urgent & emergency situations.
15. Essential resources to manage medical emergencies in the dental office.

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

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

The following types of teaching-learning methodologies will be applied:

- Lectures / Master classes
- Case method
- Cooperative learning
- Problem-based learning
- Project-based learning

## 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 CLASSES	14
PRACTICAL EXERCISES	9
ANALYSIS OF CLINICAL-CASES	4
SIMULATION	6
TUTORING	5
KNOWLEDGE TEST	2
AUTONOMOUS STUDY AND WORKS	35
<b>TOTAL</b>	<b>75</b>

## 7. ASSESSMENT

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

**Campus-based mode:**

Evaluation systems	Weight %
Power point presentation	40% of the final score
Multiple choice exam	40%
Simulates hospital attendance	10% (5% cpr workshop and 5% simulated clinical case)
Class attendance (clinical case, kahoots..)	10%

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).

In any case, you will need to obtain a grade of at 5.0 in the final exam in order for it to count towards the final grade along with all the grades corresponding to the other activities.

### 7.2. Second exam period

To pass the course in the second exam period, you must obtain a final grade of at least 5 out of 10 (weighted average).

In any case, you will need to obtain a grade of at 5.0 in the final exam in order for it to count towards the final grade along with all the grades corresponding to the other activities.

The student must deliver the activities not successfully completed in the first exam period after having received the corresponding corrections from the professor, or those that were not delivered in the first place.

## 8. SCHEDULE

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

Assessable activities	Deadline
Groups presentations	Week 1
Master classes	Weeks 1,2,4,5,6,7 Weeks 8,10,11,12,13,15
Clinical cases	Weeks 3,17
Simulatio practices	Weeks 9,14
Knowledges test	Week 18-20

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. REFERENCES

The main reference work for this subject is:

- 1. Medical Emergencies in the Dental Office. Stanley F. Malamed. 6ª Edición en inglés. Editorial Elsevier. 2007.
- 2. Medical Emergencies in Dentistry. Jeffrey D. Bennett y Morton B. Rosenberg Editorial Saunders. 2002
- 3. Cecil. Medicina Interna. Andreoli, Carpenter, Griggs y Loscalzo. (Traducción de la 5ª edición en inglés de: "Cecil Essentials of Medicine"). Editorial Elsevier Science. Saunders. 5ª edición en español. 2003.
- 4. Urgencias Médicas en una Clínica Dental. Gallegos Cuesta, M. y González Arce, P. Editorial propia 2011.
- 5. Medical Problems in Dentistry. Crispian Scully. 6ª Edición. Elsevier 2010.

## 10. EDUCATIONAL GUIDANCE AND DIVERSITY 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 means 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 opportunities 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.

## **12. REGULATIONS FOR THE ASSESSMENT OF ACCREDITED UNDERGRADUATE DEGREES AT UNIVERSIDAD EUROPEA DE MADRID**

### **REGULATIONS FOR THE ASSESSMENT OF ACCREDITED UNDERGRADUATE DEGREES AT UNIVERSIDAD EUROPEA DE MADRID**

#### **CHAPTER I. COURSE ASSESSMENT SYSTEM FOR ACCREDITED UNDERGRADUATE DEGREES**

##### **Article 1 - 4. Continuous assessment**

Students taking campus-based studies are required to demonstrate that they have attended at least 50% of their 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. The failure to use the methods proposed by the University to demonstrate 50% attendance will give the professor the right to grade the course as a fail under the ordinary exam period. The foregoing does not affect other requirements of higher attendance percentages that each school may establish in their teaching guides or internal regulations.



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).

**Article 6 - 12. Final grades**

Any student that uses or benefits from unlawful means during an evaluation test or that unduly attributes the author of the academic work required for the assessment will be graded as a “fail” (0) and may similarly be the object of a sanction, subject to the opening of disciplinary proceedings. In the case of the Final Graduation Project, the plagiarism or the lack of originality of the project, will automatically be graded as a “fail” (0) in the corresponding course in both ordinary and extraordinary periods. Likewise, the student will lose their status as a student during six months according with the General Standards for Graduation Projects and Master’s Thesis in its Article 5.

