

## 1. BASIC INFORMATION

Course	Semiology and general pathophysiology I
Degree Program	Dentistry Grade
School/Faculty	Faculty of Health Sciences
Year	Second
ECTS	6 ECTS
Credit Type	Mandatory
Language(s)	Spanish/English
Delivery mode	Campus-based mode
Semester	1 <sup>st</sup> Semester
Academic year	2025/2026
Coordinating professor	Pedro García Bermejo

## 2. PRESENTATION

The subject Semiology and Pathophysiology I is part of the General Medical and Surgical Pathology and Therapeutics Module and is developed every semester in the second year of the degree of Dentistry. From a general perspective, the purpose of the course is that students know the anatomical substrate and the pathophysiological mechanisms of disease production.

The competencies to be achieved by the graduate are oriented to their training at the service of society by satisfying its health demands through a comprehensive and quality university education, aimed at the adaptation of the student to the work environment and their personal development within the objectives of the Faculty of "Health Sciences" of the European University.

As part of the student's training, it is necessary not only the knowledge of the health-disease process, but also the learning, development of skills and social relations, both at a professional and personal level, in order to achieve optimal teamwork, adequate problem solving, development of empathy and self-confidence.

### 3. COMPETENCIES AND LEARNING OUTCOMES

#### Core competencies:

- **CB2:** That students know how to apply their knowledge to their work or vocation in a professional manner and possess the competencies that are usually demonstrated through the elaboration and defense of arguments and the resolution of problems within their area of study.
- **CB3:** That students 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.
- **CB4:** Students are able to convey information, ideas, problems and solutions to both specialized and non-specialized audiences.
- **CB5:** That students have developed those learning skills necessary to undertake further studies with a high degree of autonomy.

#### Cross-cutting competencies:

- **CT1:** Responsibility: That the student is able to assume the consequences of the actions he/she performs and answer for his/her own actions.
- **CT10:** Innovation-creativity: That the student is able to devise new and different solutions to problems that add value to the problems that arise.
- **CT5:** Interpersonal understanding: The student must be able to actively listen in order to reach agreements using an assertive communication style.
- **TC6:** Flexibility: The student must be able to adapt and work in different and varied situations and with different people. It involves valuing and understanding different positions, adapting their own approach as the situation requires.
- **CT8:** Initiative: The student should be able to proactively anticipate and propose solutions or alternatives to the situations presented.

#### Specific competencies:

- **CE27:** Know the general processes of disease, healing and repair, including infection, inflammation, hemorrhage and coagulation, scarring, trauma and alterations of the immune system, degeneration, neoplasia, metabolic alterations and genetic disorders.

- **CE28:** To know the general pathological characteristics of diseases and disorders affecting the organ systems.
- **CE29:** To know the oral manifestations of systemic diseases.
- **CE30:** Knowledge of general and clinical pharmacology in dental practice.
- **CE31:** To know the pharmacological basis of the different anesthetic techniques, both local and general, as well as the role of sedation and general anesthesia in the management of the dental patient.
- **CE32:** Know and handle the most frequent emergencies and medical emergencies in dental practice and basic cardiorespiratory resuscitation techniques.
- **CE33:** Have appropriate knowledge of human nutrition, in particular, the relationship of nutritional habits and diet to the maintenance of health and prevention of oral-dental diseases.

**Learning outcomes:**

- **RA1:** Overview of the mechanism of disease production, its signs and symptoms, diagnosis and treatment.
- **RA2:** Knowledge of the theoretical aspects that introduce clinical medicine, that is, the general knowledge defined as preclinical.
- **RA3:** Study of the possible causes that originate the disease (etiology).
- **RA4:** Knowledge of the mechanisms by which these causes act in a harmful way (pathogenesis).
- **RA5:** Analysis of disorders that occur in the function and structure of organs and systems (pathophysiology).

The table below shows the relationship between the competencies developed in the course and the learning outcomes pursued:

Competencies	Learning outcomes
<ul style="list-style-type: none"> <li>• CB2, CB3, CB4, CB5</li> <li>• CG14, CG15, CG18, CG7, CG8</li> <li>• CT1, CT10, CT6, CT8, CT6, CT8</li> <li>• CE27, CE28, CE29</li> </ul>	RA1
<ul style="list-style-type: none"> <li>• CB2, CB3, CB5</li> <li>• CG18, CG19, CG8</li> <li>• CT1, CT8</li> </ul>	RA2

<ul style="list-style-type: none"> <li>• CB2, CB3, CB4, CB5</li> <li>• CG14, CG15, CG18, CG7, CG8</li> <li>• CT5, CT8</li> <li>• CE28</li> </ul>	RA3
<ul style="list-style-type: none"> <li>• CB2, CB3, CB4, CB5</li> <li>• CG14, CG15, CG18, CG7, CG8</li> <li>• CT5, CT8</li> <li>• CE27, CE28</li> </ul>	RA4
<ul style="list-style-type: none"> <li>• CB2, CB3, CB4, CB5</li> <li>• CG14, CG15, CG18, CG7, CG8</li> <li>• CT5, CT8</li> <li>• CE27, CE28, CE29</li> </ul>	RA5

## 4. CONTENT

The subject is organized into four learning units, which in turn are divided into topics:

### Learning Unit 1: General

Topic 1: Pathophysiology and general semiology

Topic 2: Pathophysiology of the immune system.

Topic 3: Diseases induced by microorganisms

Topic 4: Diseases induced by the environment

Topic 5: Pathophysiology of tumor diseases.

Topic 6: Diseases related to heredity

Topic 7: Nutrition-related diseases

### Learning Unit 2: Pathophysiology and semiology of the blood and lymphoid system

Topic 8: Introduction to hematology

Item 9: Alterations of the red series

Topic 10: Alterations of the white series, lymph nodes and spleen.

Topic 11: Pathology of Hemostasis

### Learning unit 3: Pathophysiology and semiology of the cardio-circulatory system

Topic 12: Introduction to the pathology of the circulatory system.

Topic 13: Atherosclerosis

Topic 14: Ischemic Heart Disease

Topic 15: Heart failure

Topic 16: Arterial hypertension

Topic 17: Valvulopathies

Topic 18: Rhythm disorders. Normal ECG. Main arrhythmias

Topic 19: Vascular pathology of lower limbs

### Learning Unit 4: Pathophysiology and semiology of the respiratory system

Topic 20: Introduction to the pathology of the respiratory tract.

Topic 21: Respiratory failure

Topic 22: Obstructive Pulmonary Pathology

Topic 23: Restrictive pulmonary pathology

Topic 24: Pathology of the pulmonary circulation.

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

The following are the types of teaching-learning methodologies to be applied:

- Master Class
- Case Method
- Cooperative learning
- Problem Based Learning (PBL)
- 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
Tutorials	18
Master Classes	25
Virtual Master Classes	10
Group Work	5
Practical Exercises	10
Case Analysis	20
Laboratory Practices	15
Study and Self-Employment	45
Presential Knowledge Tests	2
<b>TOTAL</b>	<b>150 h</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
Objective Knowledge Test I. Test and Development	40%
Objective Knowledge Test II. Clinical Case	10%
ORAL Exposition	10%
Case/Problem	10%
Case/Problem Multidisciplinary Activity	10%
Laboratory Practices	10%
Practical Exercises	10%
<b>TOTAL</b>	<b>100%</b>

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 assessment period**

To pass the course in the first exam period, you must obtain a grade greater than or equal to 5.0 out of 10.0 in the final grade (weighted average) of the course.

In any case, it will be necessary to obtain a grade greater than or equal to 5.0, independently, in each of the evaluation systems that make up the course (including the knowledge tests separated into partials). It may be assessed that a grade equal to or greater than 4 is needed in the knowledge tests when separated into partial exams.

The Universidad Europea de Valencia establishes continuous assessment as a system of evaluation of knowledge, skills and core, general, cross-curricular and specific competences of the degree in Dentistry, in accordance with the provisions of the Regulations for the evaluation of undergraduate degrees. In this regard and for the purposes of the use of calls the student should be aware that, if any evaluation system provided in the Learning Guide, in the ordinary call (first exam period the student will have an overall grade of the subject, thus using up one call.

According to the aforementioned Regulations, students taking face-to-face degree courses are required to justify at least 50% of class attendance, as a necessary part of the evaluation process and in the case of theoretical or practical classes determined as mandatory by the teacher in the schedules of the subject, the student must register an attendance of 90%, whether the absence is justified or not. The lack of accreditation by the means proposed by the University will entitle the professor to grade the subject as failed in the ordinary call, according to the grading system.

Punctuality will be required, 3 delays of more than 15 minutes or departures before class will be counted as a lack of attendance.

The student must consult in the schedule of the course in the Virtual Campus the sessions of compulsory attendance in the classroom.

The mention of "Matrícula de Honor" will be awarded to students who have obtained a grade equal to or higher than 9.0. Their number may not exceed 5% of the students enrolled in each subject in the corresponding academic year, unless the number of students enrolled is less than 20, in which case only one honorary registration may be awarded.

### **7.2. Second assessment period**

To pass the course in the second exam period, you must obtain a grade higher or equal to 5.0 out of 10.0 in the final grade (weighted average) of the course.

In any case, it will be necessary to obtain a grade greater than or equal to 5.0 in the final test, so that it can be averaged with the rest of the activities.

The activities that were not handed in or passed in the first exam period must be submitted, after having received the corresponding corrections from the teacher.

The Universidad Europea de Valencia establishes the continuous evaluation as a system of assessment of knowledge, skills and core, general, cross-curricular, and specific competences of the degree in Dentistry, in accordance with the provisions of the Regulations for the evaluation of undergraduate degrees. In this regard and for the purposes of using calls, the student should be aware that in the extraordinary call the Objective Test of Knowledge (OTK) which determines whether or not the call was used. In the exceptional case that the student only needs to pass evaluation system /s that are not the OTK, it will be considered

NP if not presented and will obtain a numerical grade if the student was examined of, at least, one of them.

Pursuant to the aforementioned Regulations, students taking face-to-face degree courses are required to justify at least 50% of class attendance, as a necessary part of the evaluation process, and in the case of theoretical or practical classes determined as mandatory by the teacher in the schedules of the subject, the student must register an attendance of 90%, whether the absence is justified or not. Those students who, due to non-compliance with this requirement, must take the extraordinary call (second exam period), need to perform as many activities or knowledge tests determined by the teacher to recover this part successful completion will be based on the specified rubric.

## 8. SCHEDULE

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

Assessable activities	Deadline
Objective Knowledge Test I. Test and Development	January 2026
Objective knowledge test II. Clinical case	January 2026
Oral Presentation	November/December 2025
Cases/Problems	November/December 2025
Laboratory Practices	November/December 2025
Practical Exercises	November/December 2025
Cases/Problem Multidisciplinary Activity	November/December 2025

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:

- Argente H, Alvarez M. *Semiología Médica. Fisiopatología, semiotecnia y propedeútica*. 3ª Edición. Editorial Panamericana 2021

The recommended Bibliography is:

### Essential recommended bibliography

- Pastrana Delgado J. (2023). *Fisiopatología y Patología General Básicas para ciencias de la salud*. Barcelona: Elsevier (2ª Edición).



2. Pérez Arellano, J.L. (2019). **Sisinio de Castro. Manual de Patología general**. Elsevier. 8ª edición.
3. Laso Guzman, F.J. (2020). **Introducción a la medicina clínica fisiopatología y semiología**. España: Elsevier. (4ª edición).

#### **Supplementary recommended bibliography:**

1. Braunwald E (2023). **Harrison: Principios de Medicina Interna**. México: McGraw-Hill/Interamericana. 21ª edición.
2. Guyton, A.C. (2021). **Guyton & Hall, tratado de fisiología médica**. Barcelona: Elsevier España, D.L. 14ª edición.
3. Alvarez A, et al. Cediell Semiología Médica. 8ª Edición. Editorial Médica Celsius 2019

#### **Web pages for consultation:**

- Medline-PubMed: <http://www.ncbi.nlm.nih.gov/sites/entrez>
- The Cochrane Collaboration: <http://www.cochrane.org/>
- UpToDate: <http://www.uptodate.com/index>
- World Health Organization (WHO): <http://www.who.int/es/>

## **10. EDUCATIONAL GUIDANCE AND DIVERSITY UNIT**

From the Educational Guidance and Diversity Unit (ODI) we offer support to our students throughout their university life to help them achieve their academic achievements. Other pillars of our actions are the inclusion of students with specific educational support needs, universal accessibility in the different campuses of the university and equal opportunities.

This Unit offers students:

1. Accompaniment and follow-up through counseling 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, that is, in terms of methodology and evaluation, for those students with specific educational support needs, thus pursuing equal opportunities for all students.
3. We offer students different extracurricular training resources to develop various competencies that will enrich their personal and professional development.
4. Vocational guidance through the provision of tools and counseling 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.uev@universidadeuropea.es](mailto:orientacioneducativa.uev@universidadeuropea.es)