

1. BASIC DATA

Subject	Semiology and general pathophysiology I
Grade	Dentistry
School/Faculty	Faculty of Health Sciences
Course	Second
ECTS	6 ECTS
Character	Mandatory
Language(s)	Spanish/English
Modality	Face to face
Semester	1 ^{ER} Semester
Academic year	2024/2025
Coordinating teacher	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"> • CB2, CB3, CB4, CB5 • CG14, CG15, CG18, CG7, CG8 • CT1, CT10, CT6, CT8, CT6, CT8 • CE27, CE28, CE29 	RA1
<ul style="list-style-type: none"> • CB2, CB3, CB5 • CG18, CG19, CG8 • CT1, CT8 	RA2

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

4. CONTENTS

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. TRAINING ACTIVITIES

The types of training activities to be carried out and the student's dedication in hours to each of them are identified below:

Presential modality:

Training activity	Number of hours
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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
TOTAL	150 h

7. EVALUATION

The following is a list of the evaluation systems, as well as their weight in the total grade of the course:

Presential modality:

Evaluation 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%
TOTAL	100%

In the Virtual Campus, when you access the course, you will be able to consult in detail the evaluation activities to be performed, as well as the due dates and evaluation procedures for each of them.

7.1. Ordinary call (first exam 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. Extraordinary call (second exam 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

In this section you will find the chronogram with dates for the delivery of evaluable activities of the course:

Evaluable activities	Date
Objective Knowledge Test I. Test and Development	January 2025
Objective knowledge test II. Clinical case	January 2025
Oral Presentation	November/December 2024
Cases/Problems	November/December 2024
Laboratory Practices	November/December 2024
Practical Exercises	November/December 2024
Cases/Problem Multidisciplinary Activity	November/December 2024

This schedule may be subject to modifications due to logistical reasons. Any modification will be notified to the student in due time and form.

9. BIBLIOGRAPHY .

The reference work for the follow-up of the subject is:

- Laso Guzman, F.J. (2015). **Introduction to clinical medicine physiopathology and semiology**. Spain: Eselvier (3rd edition).

The following is a recommended bibliography:

Essential recommended bibliography

1. Pastrana Delgado J. (2013). **Fisiopatología y Patología General Básicas para ciencias de la salud**. Barcelona: Elsevier.
 2. Pérez Arellano, J.L. (2019). **Sisinio de Castro. Manual de Patología general**. Elsevier. 8th edition.
- Abul K. Abbas and Jon C. Aster (2018). Robbins. **Human Pathology**. Barcelona. Editorial Elsevier. 10th Edition.

Supplementary recommended bibliography:

1. Braunwald E (2019). **Harrison: Principles of Internal Medicine**. Mexico: McGraw-Hill/Interamericana. 20th edition.
2. Guyton, A.C. (2016). **Guyton & Hall, treatise on medical physiology**. Barcelona: Elsevier Spain, D.L. 13th edition.
3. Porth C. (2007). **Pathophysiology. Health-disease: a conceptual approach**. Madrid: Panamericana. 7th edition.

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

11. SATISFACTION SURVEYS

Your opinion matters!

Universidad Europea encourages you to participate in satisfaction surveys to detect strengths and areas for improvement about the faculty, the degree program and the teaching-learning process.

Surveys will be available in the survey area of your virtual campus or through your e-mail.

Your assessment is necessary to improve the quality of the degree.

Thank you very much for your participation.