1. BASIC INFORMATION

Course	Semiology and pathophysiology I
Degree program	Dentistry degree
School	Biomedical and health sciences school
Year	Second
ECTS	6
Credit type	Mandatory
Language(s)	Spanish and English
Delivery mode	Traditional (presential)
Semester	First
Academic year	2024-2025
Coordinating professor	Emilio Pintor
Professor	Emilio Pintor and Carlos Duran

2. PRESENTATION

Semiology y General Physiopathology I is a compulsory subject of 6 ECTS that is taught on a semester basis in the second year of the Odontology degree. This subject belongs to the module of "Semiology and General Physiopathology" that has 12 ECTS.
Train students to acquire the knowledge and skills necessary for knowing how to do anamnesis and physical exam, knowledge of the most frequent and most relevant pathologies for dental practice, the planning of diagnostic and therapeutic strategies, the solution of clinical problems, the ability to integrate clinical information with that obtained by complementary tests and the ability to analyze emergency situations and decision-making in such situations

3. COMPETENCIES AND LEARNING OUTCOMES

Core competencies:

- CC2: know how to apply their knowledge to their work or vocation in a professional manner and possess the skills that are usually shown through the elaboration and defense of arguments and the resolution of problems within their area of study.
- CC3: have the ability to Core competencies:
- CC2: know how to apply their knowledge to their work or vocation in a professional manner and possess the skills that are usually shown through the elaboration and defense of arguments and the resolution of problems within their area of study.
- CC3: have the ability to gather y interpret relevant data (usually within their area of study) to make judgments that include a reflection on relevant social, scientific or ethical issues.
- CC4: transmit information, ideas, problems and solutions to a specialized and non-specialized public.
- CC5: have developed the necessary learning skills to undertake further studies with a high degree of autonomy.

Cross-curricular competencies:

- GC3. Know how to identify the patient's concerns and expectations, as well as communicate effectively and clearly, both orally and in writing, with patients, family members, the media and other professionals.
- GC6. Understand the importance of developing a professional practice with respect to the patient's autonomy, their beliefs and culture.
- GC7. Promote autonomous learning of new knowledge and techniques, as well as motivation for quality.
- GC 8. Know how to share information with other health professionals and work as a team.
- GC 9. Understand the importance of maintaining and using the records with patient information for further analysis, preserving the confidentiality of the data.
- GC 11. Understand the basic biomedical sciences on which dentistry is based to ensure proper dental and dental care.
- GC 14. To know about the general processes of the disease, among which are infection, inflammation, immune system diseases, degeneration, neoplasia, metabolic alterations and genetic disorders.
- GC 15. Knowing general pathological characteristics of diseases and disorders that affect organic systems, specifically those that have an oral repercussion.
- GC 16. Understand the fundamentals of action, indications y efficacy of drugs and other therapeutic interventions, knowing their contraindications, interactions, systemic effects and interactions on other organs, based on available scientific evidence.
- GC 18. Know, critically assess and know how to use the sources of clinical and biomedical information to obtain, organize, interpret and communicate scientific and health information.
- GC 19. Understand the scientific method and have critical capacity to assess established knowledge and novel information. Be able to formulate hypotheses, collect and critically evaluate information to solve problems, following the scientific method.

Specific competencies:

- SC1: Know which are main signs and symptoms in more common diseases in general medicine.
- SC2. Know technical/medical language
- SC3. Know basic word roots, prefixes and suffixes in medicine.
- SC4. Know how to do a medical history.
- SC5. Know how to write a medical report.
- SC6. Understand everything written in a medical report.

Learning outcomes:

- LO1: Overview of the mechanism of production of the disease, its signs and symptoms, its diagnosis and treatment.
- LO2: Knowledge of the theoretical aspects that introduce clinical medicine, that is, the general knowledge that is defined as preclinical
- LO3: Study of the possible causes that cause the disease (etiology)
- LO4: Knowledge of the mechanisms band which these causes act in a harmful way (pathogenesis)
- LO5: Analysis of disorders that occur in the function and structure of organs and systems (pathophysiology)gather y interpret relevant data (usually within their area of study) to make judgments that include a reflection on relevant social, scientific or ethical issues.
- CC4: transmit information, ideas, problems and solutions to a specialized and non-specialized public.
- CC5: have developed the necessary learning skills to undertake further studies with a high degree of autonomy.

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

Competencies	Learning outcomes
CC2, CC3, GC5, CG6, GCT8 CG10, SC3 SC6, SC7, SC11, SC14, SC15	LO1: Overview of the mechanism of production of the disease, its signs and symptoms, its diagnosis and treatment
CC2, CC5, GC5, SC1, SC2, CE3, SC9, SC14, SC15, SC18	LO2: Knowledge of the theoretical aspects that introduce clinical medicine, that is, the general knowledge that is defined as preclinical
CC2, CC3, CC4, CC5, GC1, GC5, GC6, GT8, GC10, SC3, SC8, SC11, SC14, SC15, SC16, SC19	LO3: Study of the possible causes that cause the disease (etiology)
CC2, CC3, CC5, GC5, SC3, SC8, SC11, SC14, SC15, SC16, SC17	LO4: Knowledge of the mechanisms band which these causes act in a harmful way (pathogenesis)
CC2, CC3,CC4, CC5, GC1, GCT, GCT, GC8, GC10, SC8, SC11, SC14, SC15, SC18, SC19	LO5: Analysis of disorders that occur in the function and structure of organs and systems (pathophysiology)

4. CONTENT

PART I. BASIC CONCEPTS IN PATHOPHYSIOLOGY
Unit 1. Introduction: Disease and etiology. Signs and symptoms. Pathogenesis. Diagnosis, therapy and prognosis.
Unit 2. Immune system pathophysiology.
Unit 3. Infectious disease pathophysiology.
Unit 4. Environmental disease pathophysiology.
Unit 5. Congenital and genetic disease pathophysiology.
Unit 6. Neoplasms pathophysiology.
Unit 7. Eating disorders
PART II. HEMATOLOGIC PATHOPHYSIOLOGY: BLOOD DISORDERS
Unit 8. Approach to the patient with hematologic disease: physiology and physical examination.
Unit 9. Erythrocyte disorders.
Unit 10. Leukocyte disorders. Leukemia y lymphoma.
Unit 11. Blood coagulation and bleeding disorders.
PART III. CARDIOVASCULAR PATHOPHYSIOLOGY.
Unit 12. Approach to the patient with cardiovascular disease: physiology and physical examination.
Unit 13. Atherosclerosis.
Unit 14. Coronary artery disease.
Unit 15. Heart failure: Left-side and Right-side H.F.
Unit 16. Arterial Hypertension.
Unit 17. Valvular heart disease.
Unit 18. Normal ECG. Arrhythmias.
Unit 19. Peripheral vascular disease: Arterial and vein disorders.
PART IV. RESPIRATORY PATHOPHYSIOLOGY
Unit 20. Approach to the patient with respiratory disease: physiology and physical examination.
Unit 21. Respiratory failure
Unit 22. Obstructive lung disease.
Unit 23. Restrictive lung disease
Unit 24. Vascular pulmonary disease

5. TEACHING-LEARNING METHODOLOGIES

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

- Lectures
- Problem-based learning
- Clinical cases leaning

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
Problem/clinical case based learning	**30 h**
Master Classes	**64 h**
Office hours	**6**
Knowlegde tets	**2**
Autonomous work	**48**
TOTAL	**150 h**

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 exam	**50%**
Clinical activities (case studies)	**40%**
Attendance to class and participation	**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 overcome the subject in first exam period (June grades), you must overcome the requirements listed below on theoretical knowledge, activities and attitudes:

- Theoretical knowledge tests: 50% of the final grade

The objective evaluation of the theoretical knowledge of the subject of Semiology and Pathophysiology-1, will be carried out by formative written test.

Written test consists of test questions and / or short writing (independent or sequential) in relation to the knowledge taught in class.

Grades will be numerical between 0 and 10

Learning outcomes corresponding to each evaluation will be considered to be exceeded, when a numerical average grade ≥ 5 is obtained in the written test.

- Clinical activities: 40% of the final grade

Throughout the course, individual and team activities will be carried out. The teacher will indicate in each one of them, the criteria for its realization, evaluation and qualification. The final grade will be the average of the notes of the activities.

Learning outcomes in this part will be considered exceeded, when an average score of all the activities carried out ≥ to 5 points is obtained.

- Attendance and participation in class: 10% of the final grade:

Unique note at the end of the course in which the overall work and participation in the classroom and / or the exposure and development of the group work and the attitudes shown during the development of the subject will be assessed.

- Final June grade:

To pass the subject it is essential to have exceeded written test (grade ≥ 5)

Final grade will be obtained from the average grade of the theory test passed (50% of the final grade) and the grade obtained from the activities (40% of the grade). The remaining 10% will be qualified according to the skills and attitudes shown band the student.

Regarding to the activities, it will be considered to pass them, when obtaining a numerical average grade ≥ 5, being a necessary condition the minimum obtaining of 4 points to make a numerical average in each of the activities

The student who, having passed the theoretical test, does not reach 5 in the final summative evaluation (theoretical evaluation plus training activities), must recover the written test (s), as well as the corresponding activity (s) in the call for applications. July.

7.2. Second exam period

To pass the course in the second exam period you should ….

- In the evaluation for students who have failed at the end of the semester , only that part of the subject in which the teaching objectives have not been reached during the regular academic period will be included. It will be done through a test of characteristics similar to those made during the course.

Evaluation for special situations

•For those students who cannot perform the continuous assessment, in a documentary justified and previously informed to the teacher during the first week of the subject, a specific evaluation will be agreed upon.
They are considered as justified reasons for not attending classes:

- Overlaps with other subjects authorized by the Faculty.
- Prolonged illness justified with medical certification.
- Working grounds, justified by employment contract.
- Other reasons: to be evaluated by the professor and the Faculty.

This circumstance does not exempt students from practices, objective tests and jobs that are proposed and carried out in the classroom.
All those sections that have not been passed in the ordinary call (proof of knowledge and mandatory active methodologies) must be evaluated again in extraordinary call.

8. SCHEDULE

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

Assessable activities	Deadline
Case study 1	Week 3
Case study 2	Week 6
Case study 3	Week 9
Case study 4	Week 12
Case study 5	Week 15
Case study 6	Week 18

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:

- Pathophysiology: concepts of altered health states. Porth, Carol. 9Th edition Philadelphia [etc.] : Wolters Kluwer Health : Lippincott Williams & Wilkins, cop. 2015

The recommended Bibliography is:

- Introduction to human disease: pathophysiology for health professionals. Hart, Michael Noel (1938-). Sudbury, MA : Jones & Bartlett Learning, cop. 2012
- Hurst Review: Pathophysiology Review. Hurst, Marlene. McGraw-Hill. Medical. 2008
- Harrison's Online: Featuring the complete contents of Harrison's Principles of Internal Medicine, 18e
- Harrison's principles of internal medicine New York 19th edition: McGraw-Hill
- Cecil essentials of medicine. Philadelphia : W.B. Saunders, cop. 2007
- Goldman's Cecil medicine. Philadelphia : Elsevier/Saunders/, cop. 2012

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

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.