

## 1. BASIC INFORMATION

<b>Course</b>	Semiology and General Pathophysiology II
<b>Degree program</b>	Dentistry
<b>School</b>	Faculty of Biomedical and Health Sciences
<b>Year</b>	2 <sup>nd</sup> Year
<b>ECTS</b>	6 ETCS
<b>Credit type</b>	Mandatory
<b>Language(s)</b>	Spanish/English
<b>Delivery mode</b>	Face-to-face
<b>Semester</b>	2 <sup>nd</sup> Semester
<b>Academic year</b>	2020/2021
<b>Coordinating professor</b>	Pedro García Bermejo

## 2. PRESENTATION

The subject of Semiology and Physiopathology II is part of the Pathology and General Medical-Surgical Therapeutic Module and is developed every six months in the second year of the Dentistry degree.

From a general perspective, the purpose of the subject is for students to know the anatomical basis and the pathological mechanisms of disease production.

The competences to be achieved by the graduate are oriented to his training at the service of society by satisfying his health demands through a comprehensive and quality university training, aimed to the adaptation of the student to the work environment and his 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 to know the health-disease process, but to learn, develop skills and social relationships, both professionally and personally, in order to achieve teamwork in an optimal way, adequate problem solving, development of empathy and self-confidence.

### 3. COMPETENCIES AND LEARNING OUTCOMES.

#### Basic competencies:

- **BC2** - That students know how to apply their knowledge to their work or vocation in a professional manner and possess the skills that are usually demonstrated through the elaboration and defence of arguments and the resolution of problems within their area of study.
- **BC3** - Students have the ability to gather and interpret relevant data (usually within their field of study) to inform judgments that include reflection on relevant social, scientific or ethical issues.
- **BC4** - Students can communicate information, ideas, problems, and solutions to both a specialist and a non-specialist audience.
- **BC5** - That the students have developed the necessary learning skills to undertake further studies with a high degree of autonomy.

#### General competencies:

- **GC11** - Ability to understand the basic biomedical sciences on which Dentistry is based to ensure proper oral-dental care.
- **GC14** - Knowledge of the general processes of the disease, among which are infection, inflammation, alterations of the immune system, degeneration, neoplasia, metabolic disorders, and genetic disorders.
- **GC15** - Be familiar with the general pathological characteristics of diseases and disorders that affect organic systems, specifically those that have an oral repercussion.
- **GC16** - Ability to understand the fundamentals of action, indications and efficacy of drugs and other therapeutic interventions, knowing their contraindications, interactions, systemic effects, and interactions on other organs, based on the available scientific evidence.
- **GC18** - Knowledge to critically assess and use the sources of clinical and biomedical information to obtain, organize, interpret, and communicate scientific and health information.
- **GC19** - Knowledge of the scientific method and have critical capacity to assess established knowledge and new information. Be able to formulate hypotheses, collect and critically evaluate information to solve problems, following the scientific method.
- **GC3** - Ability to know how to identify the concerns and expectations of the patient, as well as to communicate effectively and clearly, both orally and in writing, with patients, relatives, the media, and other professionals.
- **GC6** - Understand the importance of developing a professional practice with respect to the patient's autonomy, beliefs, and culture.
- **GC7** - Ability to promote autonomous learning of new knowledge and techniques, as well as motivation for quality.

- **GC8** - Ability to know how to share information with other health professionals and work as a team.
- **GC9** - Ability to understand the importance of maintaining and using records with patient information for further analysis, preserving the confidentiality of data.

Cross-curricular competencies:

- **CC1** - Responsibility: The student must be able to assume the consequences of the actions taken and be accountable for their own actions.
- **CC10** - Innovation-Creativity: That the student is able to devise new and different solutions to problems that add value to problems that arise.
- **CC5** - Interpersonal understanding: That the student be able to perform an active listening in order to reach agreements using an assertive communication style.
- **CC6** - Flexibility: That the student is able to adapt and work in different and varied situations and with diverse people. It involves assessing and understanding different positions by adapting your own approach as the situation requires.
- **CC8** - Initiative: That the student has be able to anticipate proactively, proposing solutions or alternatives to the situations presented.

Specific competencies:

- **SC27** - To know the general processes of sickness, healing and repair, among which we can include infection, inflammation, bleeding and clotting, healing, trauma, immune system disorders, degeneration, neoplasia, metabolic disturbances and genetic disorders.
- **SC28** - To know the general pathological features of diseases and disorders that affect different organ systems.
- **SC29** - To know the oral manifestations of systemic diseases.
- **SC30** - To know the general and clinical Pharmacology in dental practice.
- **SC31** - To know the pharmacological basis of different anesthetic techniques - both local and general - and the role of sedation and general anesthesia in dental patient management.
- **SC32** - To recognize and handle medical emergencies in the dental practice and basic cardiopulmonary resuscitation techniques.
- **SC33** - To have appropriate knowledge of human nutrition, in particular, the relationship of nutritional habits and diet with maintaining health and prevention of oral-dental disease.

Learning outcomes:

- **LO1:** An overview of the disease's production mechanism, its signs and symptoms, its diagnosis, and its treatment.
- **LO2:** Knowledge of the theoretical aspects that introduce clinical medicine, that is, the general knowledge that is defined as preclinic.
- **LO3:** Study of possible causes that cause the disease (etiology)
- **LO4:** Knowledge of the mechanisms by which these causes act in a harmful way (pathogenesis)
- **LO5:** Analysis of disorders that occur in the function and structure of organs and systems (physiopathology).

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

Competencies	Learning outcomes
<ul style="list-style-type: none"> <li>• BC2, BC3, BC4, BC5</li> <li>• GC14, GC15, GC18, GC7, GC8</li> <li>• CC1, CC10, CC6, CC8</li> <li>• SC27, SC28, SC29</li> </ul>	<b>LO1:</b> An overview of the disease's production mechanism, its signs and symptoms, its diagnosis, and its treatment.
<ul style="list-style-type: none"> <li>• BC2, BC3, BC5</li> <li>• GC18, GC19, GC8</li> <li>• CC1, CC8</li> </ul>	<b>LO2:</b> Knowledge of the theoretical aspects that introduce clinical medicine, that is, the general knowledge that is defined as preclinic
<ul style="list-style-type: none"> <li>• BC2, BC3, BC4, BC5</li> <li>• GC14, GC15, GC18, GC7, GC8</li> <li>• CC5, CC8</li> <li>• SC28</li> </ul>	<b>LO3:</b> Study of possible causes that cause the disease (etiology))
<ul style="list-style-type: none"> <li>• BC2, BC3, BC4, BC5</li> <li>• GC14, GC15, GC18, GC7, GC8</li> <li>• CC5, CC8</li> <li>• SC27, SC28</li> </ul>	<b>LO4:</b> Knowledge of the mechanisms by which these causes act in a harmful way (pathogenesis)
<ul style="list-style-type: none"> <li>• BC2, BC3, BC4, BC5</li> <li>• GC14, GC15, GC18, GC7, GC8</li> <li>• CC5, CC8</li> <li>• SC27, SC28, SC29</li> </ul>	<b>LO5:</b> Analysis of disorders that occur in the function and structure of organs and systems (physiopathology).

## 4. CONTENT

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

### Learning Unit 1: Physiopathology and semiology of the digestive system

Lesson 1. Introduction to the pathology of the digestive system.

Lesson 2. Esophageal pathology

Lesson 3. Gastro-duodenal pathology

Lesson 4. Small and large bowel pathology

Lesson 5. Liver insufficiency

Lesson 6. Jaundice

Lesson 7. Portal hypertension

Lesson 8. Pathology of the bile ducts and exocrine pancreas

### Learning Unit 2: Physiopathology and semiology of endocrine system

Lesson 9. Introduction to the pathology of the endocrine system.

Lesson 10. Endocrine pancreatic pathology: Diabetes mellitus.

Lesson 11. Pathology of the thyroid gland.

Lesson 12. Pathology of adrenal glands.

Lesson 13. Growth pathology. Dwarfism and gigantisms.

### Learning Unit 3: Physiopathology and semiology of the urinary system

Lesson 14. Introduction to the pathology of the urinary system.

Lesson 15. Renal failure: acute and chronic.

Lesson 16. Glomerular pathology.

Lesson 17. Urinary tract pathology.

### Learning Unit 4: Physiopathology and semiology of the osteoarticular system

Lesson 18. Bone pathology: Osteoporosis, osteomalacia and Paget disease.

Lesson 19. Joint pathology: inflammatory and degenerative arthropathies.

### Learning Unit5: Physiopathology and semiology of the nervous system

Lesson 20. Introduction to nervous system pathology: neurological examination.

Lesson 21. Pathology of the consciousness.

Lesson 22. Pathology of the motor system.

Lesson 23. Pathology of CSF and meninges.

Lesson 24. Pathology of the cranial nerves.

Lesson 25. Pathology of the peripheral nerves (neuropathies) and muscle (myopathies).

## 5. TEACHING-LEARNING METHODOLOGIES

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

- Master Class
- Case method
- Cooperative learning
- Problem-Based learning
- Simulations

## 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:**

Tipo de actividad formativa	Número de horas
Master Classes	37,5
Group work	10
Practical exercises	10
Analysis of cases	60
Laboratory sessions	15
Tutoring sessions	17,5
Total	150 h

## 7. ASSESSMENT

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

Sistema de evaluación	Peso
Evaluation of knowledge I. Test and Short Questions	40%
Evaluation of knowledge II. Clinical Case	20%
Oral presentations	15%
Case/Problem	5%
Laboratory sessions	10%
Practical exercises	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 grade greater than or equal to 5.0 out of 10.0 in the final grade (weighted average) of the course.

It is necessary to get a 5.0 out of 10.0 in the Evaluation of knowledge I and II to pass the subject.

To be able to take the evaluative test in ordinary call, students must attend a minimum of 50% of the theoretical or theoretical face-to-face classes.

### 7.2. Second exam period

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

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

Those students who did not obtained a grade equal to or greater than 5.0 out of 10.0 in the ordinary call must attend this call. The exam will consist of a theoretical part like the ordinary call and in the same conditions. In addition, those students who have not presented or participated in the different evaluation activities, must do them in this call or be evaluated in the corresponding case such as clinical cases and oral presentations. Provided that the marks obtained in each of the rest of the activities other than the theoretical test, are greater than 4, the mark obtained in the ordinary call will be respected to scale with the mark of the objective test of knowledge.

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:

Actividades evaluables	Fecha
Evaluation of knowledge I. Test and Short Questions	June 2021
Evaluation of knowledge II. Clinical Case	May 2021
Oral presentations	April/May 2021
Case/Problem	April/May 2021
Laboratory sessions	May 2021
Practical exercises	May 2021

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 recommended bibliography is as follows:

### Indispensable recommended bibliography:

1. Laso Guzman, F.J. (2015). **Introducción a la medicina clínica fisiopatología y semiología**. España: Elsevier. (3ª edición).
2. Pastrana Delgado J. (2013). **Fisiopatología y Patología General Básicas para ciencias de la salud**. Barcelona: Elsevier.
3. Pérez Arellano, J.L. (2019). **Sisinio de Castro. Manual de Patología general**. Elsevier. 8ª edición.

### Complementary recommended bibliography:

1. Braunwald E (2019). **Harrison: Principios de Medicina Interna**. México: McGraw-Hill/Interamericana. 20ª edición.
2. Guyton, A.C. (2016). **Guyton & Hall, tratado de fisiología médica**. Barcelona: Elsevier España, D.L. 13ª edición.
3. Porth C. (2007). **Fisiopatología. Salud-enfermedad: un enfoque conceptual**. Madrid: Panamericana. 7ª edición.



**Recommended web-pages:**

- Medline-PubMed: <http://www.ncbi.nlm.nih.gov/sites/entrez>
- The Cochrane Collaboration: <http://www.cochrane.org/>
- UpToDate: <http://www.uptodate.com/index>
- Organización Mundial de la Salud (OMS): <http://www.who.int/es/>

## **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.