Universidad Europea

1. BASIC INFORMATION

Course	Basic Periodontics
Degree program	Bachelor in Dentistry
School	Biomedical and Health Sciences
Year	2nd
ECTS	6
Credit type	Compulsory
Language(s)	English
Delivery mode	On-site
Semester	Second
Academic year	2020-2021
Coordinating professor	Joao Paulo Firmino Canhoto

2. PRESENTATION

Periodontology is the study of the periodontium or the support structures of the teeth, encompassing the tissues that surround the teeth and fix them to the bone.

This subject is devoted to the study of the periodontium and the diseases that alter its structure as well as their treatment.

Content contextualization.

Through the subject Periodontics I the student will be able to:

- Become familiar with periodontal concepts
- Know the anatomy and physiology of the healthy periodontium and know the differences with the diseased periodontium.
- Assess the health and disease status with the adequate tools (indexes, periodontal charts, x-rays, etc.).
- Know the periodontal diseases, their aetiology and classification according to the clinical characteristics.
- Know all the systemic and environmental factors that influence the development of periodontal diseases.
- Know the general pathologies that have periodontal manifestations.
- Develop the skills related to the different examinations necessary to reach a periodontal diagnosis.
- Develop a treatment plan and select the necessary resources to its completion.

- Develop the skills related to the different therapeutic measures.
- The aim of the laboratory practices is to teach the use of the different periodontal instruments and the techniques related to the periodontal treatment.

3. COMPETENCIES AND LEARNING OUTCOMES

Core competencies:

- CB2: Students should know how to apply their knowledge to their work or vocation in a professional way and possess the competencies that are usually demonstrated through the elaboration and defence of arguments and the resolution of problems within their study area
- CB3: Students should 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 and ethical issues.
- CB5: Students should have developed those learning skills necessary to undertake further studies with a high degree of autonomy.

General competencies:

- CG14 – Knowledge of the general process of disease, including infection, inflammation, immune system alterations, degeneration, neoplasia, metabolic alterations and genetic disorders.
- CG22 - Capacity to elaborate an initial diagnostic judgement and establish a reasoned diagnostic strategy, being competent in the recognition of those situations that require an urgent dentistry treatment.
- CG25 – Capacity to know and apply the basic treatment of the most common oral and dental pathologies in patients of all ages. The therapeutic procedures must be based in the principle of minimal invasion and in a global and comprehensive oral and dental treatment.
- CG26 – Capacity to plan and perform multidisciplinary dentistry treatments, in a sequential way and of limited complexity in patients of all ages and conditions, as well as patients that require special care.
- CG27 – Capacity to plan and propose the adequate preventive measures to each clinical situation.
- CG30 – Capacity to recognise the dentist's role in the oral diseases preventive actions as well as in the maintenance and promotion of oral health, both at individual and community levels.
- CG4 - Understand and recognise the social and psychological aspects relevant to patient treatment.

Cross-curricular competencies:

- CT1: Responsibility: The student must be able to take the consequences of his/her own actions and be held accountable for such actions.
- CT3: Ethical values conscience: Ability of the student to feel, judge, argue and act according to the moral values in a coherent, persistent and autonomous way.
- CT7: Teamwork: The student must be able to participate actively in the development of a common goal; listening, respecting and valuing the ideas and proposals of the rest of members of his/her team.
- CT8: Initiative: The student must be able to anticipate in a proactive way proposing solutions or alternatives to the situations that are presented.

Specific competencies:

- CE34 - Perform basic treatments of oral and dental pathologies that are most common in patients of all ages. Therapeutic procedures must be based in the concept of minimal invasion within a global and integrated focus of the oral and dental treatment.
- CE35 – Diagnose, plan and perform, with general characteristics, a sequential, multidisciplinary and comprehensive treatment, with limited complexity, in patients of all ages and conditions, as well as in patients with special needs (diabetes, high blood pressure, oncologic pathology, organ transplant, immunosuppression medication, blood thinning medication, among others) and handicapped patients. More specifically, the dentist must be competent in the establishment of a diagnosis, prognosis, and adequate therapeutic planning, especially in cases of orofacial pain, TMJ disorders, bruxism and other parafunctional habits, dental and periapical pathology, oral and dental trauma, periodontal and periimplant pathology, bone pathology of the jaws, the soft tissues and annex glands, partial or complete states of edentulism. The dentist must also be competent in the planning of the rehabilitating treatment using tooth-borne prosthesis, implant-borne prosthesis or mucosal supported prosthesis, dental malpositions and/or dental malocclusions, and other anatomic or functional alterations of the face and the stomatognatic system and its possible orthodontic, orthopaedic, or surgical corrections.
- CE36 – Take and interpret radiographies and other image-based procedures that are relevant to the dentist's practice.
- CE38 – Determine and identify the aesthetic requirements of the patient and the possibilities to fulfil them.
- CE39 – Identify the patient that requires special care, recognizing his/her characteristics and peculiarities.
- CE45 – Identify, evaluate and attend urgent treatments and medical emergencies that may present during the clinical practices and apply cardiopulmonary resuscitation; handle acute infections, including the pharmacologic prescription and the simple surgical aspects.
- CE47 – Perform medical and surgical treatment of the common diseases of the oral soft tissues.

- CE50 – Treat pharmacologically, as well as surgically, the inflammatory processes of the periodontal and periimplant tissues, including supra and subgingival instrumentation techniques.
- CE55 – Perform conventional aesthetic procedures from a multidisciplinary perspective.

Learning outcomes:

- LO1: LO1: Learning and understanding periodontal pathology
- LO2: Acquire the adequate knowledge to distinguish the different aetiological factors involved in the development of periodontal diseases.
- LO3: Ability to make adequate decisions while establishing a treatment plan in a periodontally compromised patient.

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

Competencies	Learning outcomes
CG14, CG27, CG30, CB2, CB3, CB5, CE45	RA1
CG27, CG3O, CG4, CB2, CB3, CB5, CE35, CE36, CE39, CE45,	RA2
CG22, CG25, CG26, CG27, CG30, CG4, CB2, CB3, CB5, CT1, CT3, CT7, CT8, CE34, CE35, CE36, CE38, CE39, CE45, CE47, CE50, CE55	RA3

4. CONTENT

The subject is divided into six learning units (L.U.) which are in turn divided into topics (depending on the units).

PART 1. Anatomy

Topic 1. Periodontal anatomy.
Elements and units that form the periodontium in the oral cavity. Anatomic position and structures.
Topic 2. The mucosa at teeth and implants.
Anatomic and functional concepts of the mucosa in the oral cavity, both around teeth and

implants.
Topic 3. Bone as a tissue.
Alveolar bone comprising the jaws, Anatomy and functions of bone.

PART 2. Epidemiology

Topic 4. Epidemiology of periodontal diseases.
Prevalence of periodontal diseases in the population, periodontal indexes and risk factors of periodontal diseases.

PART 3. Microbiology

Topic 5. Biofilm and dental calculus.
Formation of bacterial plaque and dental calculus afterwards.
Topic 6. Periodontal infections.
Infection process of periodontal structures. Pathogenic bacteria responsible for periodontal infections.

PART 4. Host-parasite interactions

Topic 7. Pathogenesis of periodontitis.
Formation phases of bacterial plaque formation and gingival lesions. Formation phase of periodontal lesion. Cells that intervene in the inflammation. Microorganisms related with specific periodontal infections.

PART 5. Periodontal diseases

Topic 8. Non-plaque induced inflammatory gingival lesions.
Non-plaque induced inflammatory lesions: lesions of bacterial, viral, fungal, genetic, traumatic and systemic origin.
Topic 9. Plaque induced inflammatory gingival lesions.
Clinical signs of gingivitis. Classification of gingival diseases. Plaque-induced gingivitis. Plaque-induced gingivitis modified by hormonal, systemic, medication and malnutrition factors.
Topic 10. Chronic periodontitis.
Chronic periodontitis characteristics. Prevalence and progression of chronic periodontitis. Risk factors of chronic periodontitis.
Topic 11. Aggressive periodontitis.
Aggressive periodontitis classification and characteristics. Aetiology, diagnosis and treatment.
Topic 12. Necrotizing periodontitis.
Types. Clinical characteristics of GUN and PUN. Diagnosis and microbiology. Treatment.

PART 6. Basic periodontal treatment

Topic 13. Supragingival mechanical plaque control.
Brushing techniques, frequency and duration. Interdental cleaning auxiliaries. Additional auxiliaries and mouth rinses. Importance of oral hygiene instructions and patient motivation.
Topic 14. Non-surgical periodontal treatment.
Aims of periodontal treatment. Non-surgical techniques of periodontal treatment. Patient re-evaluation and periodontal maintenance

5. TEACHING-LEARNING METHODOLOGIES

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

- MASTER CLASSES
- SEMINARS
- LABORATORY PRACTICE
- TUTORIAL ACTIVITY

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	28 h
SEMINARS	6 h
LABORATORY PRACTICE	24 h
TUTORIAL ACTIVITY	2 h
TOTAL	**60 h**

7. ASSESSMENT

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

Assessment system	Weight
KNOWLEDGE TEST	30%
PRE-CLINICAL PRACTICE	40%
PRACTICAL EXERCISES	20%
CASE ANALYSIS	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 should….

- **In order to average the assessments in the first exam period, it is essential to overcome the four activities with a grade over 5.0 (out of 10 points) in each one.**

Knowledge test (30% of the final grade)

- A written test about the theory content will be carried out and will consist of 70 multiple choice questions. Each question contains four answers, of which only one is correct. Each wrongly answer discounts 1/3 of the number of correct answers. Non-answered questions do not discount on the final grade.
    - Final grade will be determined using the following formula:

      (Nº of correct answers - Nº of wrong answers /3) x (10/70)
- In order to pass the theory content assessment, it is necessary to obtain a grade over 5.0. If the student fails to reach the grade of 5.0, it will be necessary to repeat the test in the second exam period.

Pre-clinical practice (40% of the grade)

The students perform several activities in the laboratory during the semester. Such practices are made with the intent of preparing the student for the clinical practice and labour life, simulating the real-life treatments in a controlled environment.

Practice evaluation is divided in three blocks:

- The **first block** comprises the periodontal chart, curette identification and periapical status.
- The **second block** comprises oral hygiene and periodontal indexes.
- The **third block** comprises the quadrant scaling and root planning as well as curette sharpening.

- After each block, an individual assessment is made for every student, where he/she must answer theory questions and practice the activity over the head model.

- Each block must be passed with a grade over 5.0. If the student does not that grade, a new practical exam can be made at the end of the semester during the first exam period.
- **Second block will be presented and assessed in Spanish in order to comply with the requirements of the Bachelor in Dentistry approved by the University. The purpose of this activity is to improve the use of Spanish language.**
- These three blocks must be averaged (whenever the student passes each one of the blocks independently with a grade over 5.0) and such average will count 40% of the final grade of the subject.
- If the student does not pass one or any of the blocks from the practice during the first exam period, a second attempt can be made during the second exam period.

Practical exercises (20% of the final grade)

- During the semester the students will perform a review work, supported on bibliographical research and developing investigative work. Topics of the reviews are assigned by the teacher. The work is going to be presented by the students during class in a presentation that lasts **10 minutes. It is fundamental to have uploaded the work in PDF format as well as PowerPoint the day of the presentation.**
- In order to pass the practical exercises, it is necessary to have a grade over 5.0.
- If the student fails this activity during the first exam period, the student must perform the practical exercises determined by the teacher in order to justify the knowledge evaluated in this part. The student will perform these exercises during the second exam period.

Case analysis (10% of the final grade)

- After all theory content has been explained, the students will solve a problem involving clinical case. **In the problem, questions about any of the theory topics can be asked.**
- In order to pass the clinical case problem, it is necessary to have a grade over 5.0. In case the student fails this activity, it can be repeated during the second exam period.

7.2. Second exam period

In order to pass the subject during the second exam period, the student must pass those activities that were failed during the semester or the first exam period. The student will repeat only the activities that were not passed, and the other grades (from the first exam period) will be kept for the computation of the final grade. The characteristics of the assessment will be identical to the first exam period.

8. SCHEDULE

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

Assessable activities	Deadline

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

Here is the **indispensable** recommended bibliography:

- CLINICAL PERIODONTOLOGY AND IMPLANT DENTISTRY
  - Lindhe J, Lang NP (6th edition). Wiley Blackwell
- ATLAS DE PERIODONCIA
  - Rateitschat Editorial Salvat

And here is the **complementary** recommended bibliography:

- CIRUGÍA MUCOGINGIVAL
    - Fernando Fombellida Cortázar y Francisco Martos Molino
- Mucogingival Aesthetic Surgery
    - Giovanni Zucchelli Editorial Quintessence
- Carranza's Clinical Periodontology
    - M Newman, 2014. Editorial McGraw-Hill

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 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.