COURSE DATA

DATA SUBJECT

Code: 34723
Name: Periodontics
Cycle: Undergraduate Studies
ECTS Credits: 12
Academic year: 2025-26

STUDY (S)

Degree	Center	Acad. year	Period
1206 - Degree in Dentistry	Facultat de Medicina i Odontologia	4	Annual

SUBJECT-MATTER

Degree	Subject-matter	Character
1206 - Degree in Dentistry	Periodontics	COMPULSORY

COORDINATION

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SUMMARY

Periodontics is a compulsory subject included in the module of specifically Odontological Pathology and Therapeutics. For the Degree on Odontology this subject has been allocated 12 ECTS credits, with a theoretical-practical approach and clinical practice in patients.

This subject is placed in fourth year because for its good development the student must know the basics on health branch and must be qualified to carry out dental treatments that requires anesthesia or basic surgery, that they must have practice during the previous years. This way, by taking this subject the student will learn how to handle any health problem that affects the periodontium by acquiring the knowledge and basic skills in a clinic that will assure a good profit of the Practicum during the fifth year.

PREVIOUS KNOWLEDGE

RELATIONSHIP TO OTHER SUBJECTS OF THE SAME DEGREE

1206 - Degree in Dentistry

Obligation to have previously passed the subject(s)	34696 - Human anatomy 34697 - Biology 34698 - Human physiology 34699 - Biochemistry 34702 - Psychology and communication

OTHER REQUIREMENTS

COMPETENCES / LEARNING OUTCOMES

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Conocer la morfología y función del aparato estomatognático, incluyéndose contenidos apropiados de embriología, anatomía, histología y fisiología específicos.

Educar y motivar a los pacientes en materia de prevención de las enfermedades buco-dentarias, controlar los hábitos bucales patogénicos, instruirlos sobre una correcta higiene bucal, sobre medidas dietéticas y nutricionales y, en resumen, sobre todos los métodos de mantenimiento de la salud bucodental.

Realizar procedimientos quirúrgicos sencillos: extracción de dientes temporales.

Realizar tratamientos básicos de la patología buco-dentaria en pacientes de todas las edades. Los procedimientos terapéuticos deberán basarse en el concepto de invasión mínima y en un enfoque global integrado del tratamiento buco-dental.

Ser competente en la evaluación de los resultados del tratamiento periodontal y en la identificación, en su caso, de necesidades de tratamiento periodontal complejo.

Tener capacidad para elaborar un juicio diagnóstico inicial y establecer una estrategia diagnóstica razonada, siendo competente en el reconocimiento de las situaciones que requieran una atención odontológica urgente.

Tener conocimientos sobre la etiología, progresión y evolución de las enfermedades periodontales, atendiendo a las características bacteriológicas e inmunológicas de cada una de ellas, con especial atención a aquellos factores locales o sistémicos que pueden alterar su curso.

DESCRIPTION OF CONTENTS

I- INTRODUCTION TO PERIODONTICS

1. - Introduction to periodontics.
Concept. Historical evolution. Parts of the subject. Connection with other subjects. Schedule and teaching methodology.

II- STRUCTURE AND PHYSIOLOGY OF THE PERIODONTIUM

2. - Clinical anatomy of the periodontium.
Components of the periodontium and its anatomical relationships. Periodontal insertion and periodontal protection. Clinical and radiological features of a healthy periodontium.
3. - Periodontal histology and physiology. Dentogingival junction.
Periodontal components histology and their functional relationship. Protection of the internal periodontium environment and dentogingival insertion.
4. - Formation and development of the periodontium in the tooth eruption process. Anatomical and dimensional variations and its repercussion on periodontal health and on esthetics.
Although this subject has its own identity, due to practical clinical issues it will be developed chronologically and progressively during lessons 35 and 36, when the students will have more defined clinical criteria on Periodontics.

III- PATHOPHYSIOLOGY OF THE PERIODONTIUM

5. - Dental plaque (biofilm) and dental calculus.
Dental plaque: composition, structure, formation and classification. Biofilms. Dental calculus: composition, structure, formation and pathogenic potential. Other factors that boost the accumulation of plaque: iatrogenic factor and root enamel.
6. - Microbiology of the periodontal diseases.
Evidence of the bacterial etiology in the periodontal diseases. Criteria for a definition of the periodontogenic bacteria. Specific and nonspecific plaque hypothesis. Periodontal microflora during health and disease. Mechanisms of antimicrobial action important in periodontal diseases.
7. - Histopathology of the periodontal disease.
Swelling as a mechanism of defense. Cellular and humoral immunity. Protective and destructive roles of the host response. Chronological evolution of the periodontal disease. Pathological anatomy of the periodontal lesion and its clinical correlation. Periodontal pockets.
8. - Mechanisms of defense against the dental plaque.
Host-parasite interaction. Periodontal disease progression and mechanisms of tissue destruction.
9. - Modifying factors in the pathogenesis of periodontal diseases.
Diabetes, stress, smoking, hormonal alterations. Susceptibility to periodontitis (genetic factors).

IV- PERIODONTAL EXAMINATION

10. - Clinical examination I. Clinical examination II.
Anamnesis. Clinical parameters. Catheterization and periodontogram. Laboratory tests: microbiological, immunological and biochemical.
11. - Radiological examination I. Radiological examination II.
Radiographic parameters. Radiographic study techniques. Parallel periapical radiographic series.

V- PERIODONTAL DISEASES

12. - Periodontal diseases classification.

Historical approach of the different classifications of the periodontal diseases by a supposed etiopathogenic mechanism.
13. - Forms of periodontal disease I. Gingivitis.
Plaque-induced gingivitis. Other gingival alterations.
14.- Forms of periodontal disease II. Periodontitis.
Chronic periodontitis. Aggressive periodontitis. Necrotizing periodontal disease.
15.-. Systemic impact of the periodontal diseases.
Cardiovascular disease. Effects during pregnancy. Respiratory infections.
16. - Epidemiology of the periodontal disease I. Epidemiology of the periodontal disease II.
Periodontal index systems. Prevalence, severity and distribution of the periodontal disease among the population. Epidemiology contributions.

VI- PERIODONTAL DIAGNOSIS AND TREATMENT PLANNING

17. - Periodontal diagnosis and prognosis.
Diagnostic criteria. General and single-tooth periodontal prognosis.
18. - Treatment planning. Sequence and goals of a periodontal treatment.
Comprehensive and periodontal treatment plan. Treatment steps and goals. Information and motivation. Etiological factor control and other related factors control. Assessment. Surgical treatment. Maintenance.

VII- BASIC PERIODONTAL TREATMENT.

19.-Motivation techniques applied to a periodontal patient.
Motivational interviewing: importance and development.
20. - Mechanical control of supragingival plaque.
Importance of supragingival plaque removal. Techniques to self-monitoring plaque. Limitations and adverse effects.
21. - Chemical control of supragingival plaque: antiseptics. Antibiotic therapy in periodontal diseases (I and II).
Chemical control of plaque. Objectives. Classification of chemical agents for controlling plaque. Chlorhexidine: mechanism of action, indications and side effects. Administration guidelines. Antibiotics in the treatment of periodontal disease, types and indications. Intralesional liberation systems.
22. - Non-surgical treatment of periodontal disease: periodontal Instrumentation I.
Concepts: tartar removal, scaling and root planing, gingival curettage. Instrumentation with mechanical devices: sonic and ultrasonic. Indications and limitations. Advantages and disadvantages. Other instruments used.
23- -surgical treatment of periodontal disease: periodontal Instrumentation II. Periodontal Instrumentation III.
Scaling and root planing: definition, objectives, instruments and techniques. Indications, limitations and clinical outcomes.
24. - Periodontal considerations in other dental treatments I. Orthodontics Periodontics relationship. Periodontics and restorative dentistry.
Periodontal remodeling during orthodontic movement. Indications and contraindications of orthodontic treatment in adult patients with periodontal pathology. Periodontal-orthodontic treatment sequence.
Restorative treatment and biological width. Factors in the design of dental restorations that may affect the periodontal tissue. Biological with invasion.

25. - Periodontal considerations in other dental treatments II. Orthodontics ¿ Periodontics relationship. Occlusion and periodontal disease.
Pulp injuries and its impact on the periodontium. Endodontic-periodontal syndrome: causes, clinical and radiographic manifestations, differential diagnosis (periodontal abscess). Treatment protocol.
Periodontal physiological behavior to occlusion forces. Definition and terminology of occlusal trauma. The occlusal trauma and periodontal disease. Pathologic tooth migration.
26. - Halitosis and periodontal disease.
Etiopathogenic factors of halitosis. Differential diagnosis and treatment.
27. - Dentin Hypersensitivity and periodontal treatment.
Epidemiology, etiopathogenesis, differential diagnosis and treatment of dentinal sensitivity.

VIII- PERIODONTAL SURGICAL TREATMENT.

28. - Introduction to periodontal surgery.
General principles of periodontal surgery. Objectives of periodontal surgery treatment. Indications and contraindications. Patient preparation, medication and care.
29. - Periodontal soft tissues surgery.
Classification of periodontal surgery techniques. Surgical techniques for the treatment of the pockets.
30. - Resective osseous periodontal surgery. Furcation involvement surgical treatment.
Physiological bone architecture and destruction patterns in periodontitis. Classification of bone defects. Definition and classification of bone surgery techniques. Indications and goals of resective osseous surgery (ROS). Description and steps of resective osseous surgery.
Root anatomy and terminology. Classification of furcation lesions: clinical and radiographic diagnosis. Treatment options in furca lesions.
31. - Regenerative periodontal surgery I.
Periodontal wound healing. Periodontal pocket healing. Concepts: regeneration, repairing, reinsertion, new insertion and bone regeneration.
Indications and limitations of periodontal regeneration techniques: patient factors, etiopathogenic control of periodontitis, characteristics of bone defects.
32. - Regenerative periodontal surgery II.
Therapeutic media on periodontal regeneration. Debridement, root conditioning, bone grafting and fillers, guided tissue regeneration and guided bone regeneration. New therapeutic approaches for periodontal regeneration.
33. - Mucogingival surgery I.
Recession concept. Recession etiopathogenesis. Classification of recession lesions. Therapeutic approach.
34. - Mucogingival surgery II.
Mucogingival surgery. Objectives and indications. Surgical techniques.

35. - Periodontal surgery for aesthetic and restorative purposes I.
Influence of periodontal tissues in facial aesthetics. Studies on dimensions of the dentogingival unit. Dimensional variability factors: periodontal biotype and phenotype. Clinical significance and implications in the periodontal treatment.
36 Periodontal surgery for aesthetic and restorative purposes II.
The altered passive eruption, definition, production mechanisms, types and clinical implications. The gummy smile: causes, differential diagnosis and treatment planning. Periodontal surgery prior to restorative treatment.

IX- PERIODONTICS APPROACH TO ORAL IMPLANTOLOGY

37. - Periodontium and peri-implant tissues. Implant treatment in patients with periodontitis.
Integration of hard and soft tissues. Dimensional characteristics of peri-implant tissues. Examination of peri-implant tissues.
38.-Management of hard and soft tissues in implantology, its impact on health and aesthetics.
39. - Periodontal disease and peri-implant disease.
Microflora on implants in patients with a history of periodontal disease. Peri-implant mucositis and peri-implantitis.

X- PERIODONTAL TREATMENT MAINTENANCE.

40. - Periodontal maintenance phase. Maintenance of osseointegrated implants.
Effect of periodontal treatment in the maintenance of the dentition. Alternatives for the prevention and control of periodontal disease. Periodontal maintenance patient with dental implants: ground and objectives. Maintenance Planning.

Pre-Clinical Training:

1. - Introduction to pre-clinical training. Periodontal medical history: Periodontogram.
2. - Application of periodontal indices.
3. - Knowledge of the tools used in periodontal examination and treatment.
4. - Sharpening of the basic periodontal treatment tools.
5. - Identification of the equipment used for periodontal surgery.
6. - Tools used for scaling and root planing.
7. - Radiographical examination.
8. - Scaling and root planing on phantom anterior teeth.
9. - Scaling and root planing on phantom molars and premolars.
10. - Periodontal examination and periodontogram data among students.
11. - Scaling and root planing among students.

Clinical Practices:

Clinical Practices:

The students will take care of patients with periodontal pathology. They will create the clinical history, do the examination, diagnosis, prognosis, treatment plan development and, finally, they will develop the basic periodontal treatment. During this process, there will be a specially focus on motivational techniques applied to the periodontal patient (motivational interviewing).
- Paper on a topic of the content of Periodontology (Documentation and presentation of a clinical case)
- Seminars of practical interest.

WORKLOAD

PRESENCIAL ACTIVITIES

Activity	Hours
Theory	52,00
Odontology practices	64,00
Laboratory	50,00
Classroom practices	14,00
Total hours	**180,00**

NON PRESENCIAL ACTIVITIES

Activity	Hours
Attendance at other activities	8,00
Individual or group project	15,00
Independent study and work	34,00
Preparation of lessons	43,00
Preparation for assessment activities	16,00
Resolution of case studies	4,00
Total hours	**120,00**

TEACHING METHODOLOGY

The teaching-learning methodology in this subject will be fundamentally based on face-to-face activities of a theoretical and practical nature.
Theoretical classes in the form of lectures will introduce students to the essential and most relevant contents of the subject, forming the basis of learning, which will be expanded and reinforced through supplementary material available on the virtual platform and the recommended bibliography.
Simulated laboratory practices with models will aim to provide students with the minimum skills and abilities required to access clinical practice with patients.
Seminars and the study of clinical cases will allow students to become familiar with critical analysis of information and reasoned decision-making based on the knowledge acquired.
Clinical practice in this subject is carried out with patients and, together with the other methodologies mentioned and under the direct supervision of a professor, aims to ensure that the student recognizes the particular characteristics of anamnesis, examination, diagnosis, treatment planning, basic treatment, and indications for advanced surgical periodontal treatment in patients with periodontal disease.
Direct supervision, which is essential in these clinical practices with patients, helps students resolve doubts and improve their learning, allowing for continuous guidance beyond the scheduled tutoring sessions.
A gender perspective, respect for diversity, and the Sustainable Development Goals (SDGs) will be incorporated into the teaching, whenever possible.

EVALUATION

1. Preclinical Assessment Test

This consists of continuous evaluation of the student's attitude and skill level during the preclinical training phase of the course (laboratory and clinical sessions without patients). Its goal is to ensure appropriate professional treatment without posing a risk of injury to the patient's oral tissues during clinical practice.
Failure to pass this continuous assessment will prevent the student from participating in clinical practice with patients. If deemed unfit, the student must repeat the test until they reach the minimum required skills and knowledge to treat patients.

2. Final Assessment

To be eligible to sit the final exam, the student must have previously returned all materials lent by the University for preclinical and clinical practice in perfect condition.
This requirement ensures the correct use and future availability of the materials for students in the following academic year.

To pass the course, the student must successfully complete each of the following components:

1. Clinical practice with patients
2. Presentation of a clinical case and submission of a systematic literature review
3. Final theoretical exam

Final Grade Criteria:

Final theoretical exam: 70 multiple-choice questions (5 options per question, only one correct; incorrect answers do not penalize; each question is worth 1 point; passing grade is 42 or more).

To assess the grade for clinical practice in Periodontology, the final theoretical exam must be passed first. Once passed, the final grade will be completed with the scores from clinical practice, the presentation of a clinical case, and the systematic literature review, as follows:

- The final exam accounts for **70%** of the final grade.
- Clinical practice evaluation accounts for **10%**. It will be based on skills acquired, procedures

performed, and compliance with clinical practice rules. This is a continuous assessment conducted by the professor in charge of practice supervision.

- The **presentation of a clinical case** and the **submission of a systematic literature review** will jointly represent **20%** of the final grade.

In the **clinical case presentation**, the following will be assessed:

- Proper elaboration of the case according to previously provided guidelines.
- Oral presentation evaluated by the assigned professor.
- Correct resolution of the case integrating theoretical content into the diagnostic, prognostic, and treatment planning processes.

Regarding the **literature review**, the following will be assessed:

- On-time submission by the deadline indicated in the virtual classroom.
- Plagiarism and indiscriminate use of artificial intelligence will be penalized.
- **Failure to submit the review on time will result in it not being evaluated.**
- The guide used will be the **Guide for developing a systematic review in the field of Health Sciences**, available on the Universitat de València Libraries website.

This component will also include:

- Attendance at all scheduled activities.
- Assessment of the student¿s involvement in these tasks.

Attendance to practical activities is mandatory. The requirement is met if the student has attended at least 80% of the activities and has properly justified any remaining absences due to force majeure. This is an essential condition to pass the course.

Students are reminded of the importance of completing the **course evaluation surveys** for all faculty involved in this subject.

REFERENCES

Bibliografia básica:

1.-Lindhe. Periodontologi¿a cli¿nica e implantologi¿a odontolo¿gica [Tomo 1]. 1a edición en formato digital. Buenos Aires, Argentina: Me¿dica Panamericana, 2017. Print.

2.- Lindhe.Periodontologi¿a cli¿nica e implantologi¿a odontolo¿gica. [Tomo 2]. 1a edición en formato digital. Buenos Aires, Argentina: Me¿dica Panamericana, 2017. Print.

3.- Newman, Michael G et al. Newman and Carranza¿s Clinical Periodontology. Thirteenth edition. Philadelphia, PA: Elsevier, Inc, 2018. Print.-

Bibliografia complenentaria:

1.-Echevarría García, José Javier et al. Manual SEPA de periodoncia y terapeútica de implantes¿: fundamentos y guía práctica. Madrid [etc: Médica Panamericana, 2005. Print.

2.- Wolf, Herbert F, Edith M Rateitschak, y Klaus H Rateitschak. Periodoncia. 3a ed., completament rev. i ampl. Barcelona: Masson, 2005. Print.

3.- Carranza, Fermín A, Gerald Shklar, and Ray. C Williams. History of Periodontology. Chicago: Quintessence Pub., 2003. Print.

RECURSOS e-Salut:

- ClinicalKey Student Medicina, Odontologia y Enfermería

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- Acces Medicina

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