1. BASIC INFORMATION

Subject	Dental Prsothetics II
Degree	Degree in Dentistry
Faculty	Biomedical Science
Academic year	Third Year
ECTS	6 ECTS
Type	Compulsory
Languages	Spanish/English
Modality	Presence-Based
Semester	Second Term
Year	2024/2025
Coordinator	José Manuel Tello
Professors	Sergio Giner, Sabina Bertuol, María López

2. PRESENTATION OF THE SUBJECT

This subject concerns the treatment of the partially edentulous patient. The first part of the subject will be about general issues concerning partially dentulous patients. The second part will be about clinical methodologies to treat these patients. It describes the physiopathology of those patients, as well as the treatment techniques and materials used for treatment of tissue supported, tooth supported and tooth-tissue supported partial dentures.

3. GENERAL COMPETENCES AND LEARNING RESULTS

Basic competences:

- CB1. Students must prove they have knowledge on a specific field, based on the secondary general education. This knowledge is at a level that, apart from being supported by advanced textbooks, includes aspects that imply knowledge coming from the forefront of its field of study.
- CB2. Students are able to apply their knowledge to their professional work or vocation and prove to have these competences by proposing and defending arguments and by having the ability to solve problems on their study area.

- CB4. Students are able to transmit information, ideas, problems and solutions to a specialised and non-specialised public.

- CB5. Students have developed the learning skills needed to carry out works with a high level of personal autonomy.

Cross-curricular competences:

- CT1. Autonomous learning: Process that enables a person to be in charge of its own development, choosing his path, strategies, tools and the best moment to learn and apply what has been learnt. An autonomous student, at the end, chooses the best strategies to fulfil his learning goals.

- CT2. Self-confidence: Ability to value our own results, performances and the conviction to fulfil the challenges that have been laid out.

- CT4. Analysis and synthesis ability: Analysis is the reasoning methods that allow us to split up complicated situations into their components; also assesses other alternatives and perspectives to find out optimal solutions. Synthesis aims to reduce the complexity in order to have a better understanding and problemsolving capacity.

- CT5. Ability to apply knowledge into practice: Ability to use the acquired knowledge in the academic field in situations which are similar to the reality of the profession for which they are formed. For example, by relating theoretical foundations with their application to real problems of everyday life, addressing problems and situations close to the professional activity or resolve issues and / or actual problems.

- CT7. Ethical value awareness: Ability to think and act according to the universal principles based on the personal values aimed at his full development related to the commitment of determined social values.

- CT8. Information management: Ability to search, choose, analyse and integrate information from different sources.
- CT9. Personal relationship values: Positive relationship with others verbally and non- verbally by assertive communication, understanding by this, the ability to express or transmit what is wanted, thought or felt without causing discomfort, attacking or hurting someone’s feelings.

- CT10. Initiative and entrepreneurial spirit: Preference to assume and carry out different tasks. Ability to overcome correctly difficult tasks. Problem anticipation ability, to suggest improvements and carry on with the achievement of a task.

General Competences:

- CG1. Know the essential elements of the dentist profession, including ethical principles and legal responsibilities.
- CG2. Understand the importance of such principles for the benefit of the patient, society, and profession, with special attention to professional secret.
- CG3. 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.
- CG9. Understand the importance of maintaining and using records with patient information for subsequent analysis, preserving the confidentiality of the data oral care.
- CG11. Understand the basic biomedical sciences on which is based dentistry to ensure correct oral and dental care.
- CG12. Understand and recognize the normal structure and function of the stomatognathic system, at the molecular, cellular, tissue and organic levels, at different stages of life.
- CG13. Understand and recognize the biomaterial sciences essential for dental practice as well as the immediate management of possible allergies to them.
- CG14. Know about the general processes of the disease, among which are infection, inflammation, alterations of the immune system, degeneration, neoplasia, metabolic alterations, and genetic disorders.
- CG15 Be familiar with the general pathological characteristics of diseases and disorders that affect the organic systems, specifically those that have oral repercussions.
- CG16. 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.
- CG17. Understand and recognize the principles of ergonomics and safety at work (including control of cross infection, radiation protection and occupational and biological diseases).
- CG19. To understand the scientific method and have the critical capacity to assess established knowledge and novel information. To be able to formulate hypotheses, collect and critically evaluate information to solve problems, following the scientific method.

- CG21. Knowing how to perform a complete oral examination, including appropriate radiographic and complementary examination tests, as well as obtaining adequate clinical references.
- CG25. Know and apply the basic treatment of the most common oral and dental diseases in patients of all ages. Therapeutic procedures must be based on the concept of minimally invasive dentistry and in a comprehensive and integrated approach to the dental treatment.
- CG26. Know how to plan and perform multidisciplinary, sequential, and integrated dental treatments of limited complexity in patients of all ages and conditions and patients requiring special care.
- CG27. Raise and propose preventive measures appropriate to each clinical situation.

Specific competences:

Professional values, attitudes, and ethical behavior:

- CE9. Know the clinical and laboratory diagnostic procedures and tests, know their reliability and diagnostic validity, and be competent in the interpretation of their results.
- CE10. Recognize oral normality and pathology, as well as the evaluation of semiological data.
- CE13. Handle, discriminate and select appropriate materials and instruments in Dentistry.
- CE14. Know dental biomaterials: their handling, properties, indications, allergies, biocompatibility, toxicity, waste disposal and environmental impact.
- CE16. Know and use the basic equipment and instruments for the dental practice.
- CE37. Make diagnostic models, mount them, and take inter-occlusal recordings.
- CE38. Determine and identify the aesthetic requirements of the patient and the possibilities of satisfying their concerns.

Learning results:

- RA1: Know the anatomy of the partially edentulous patient
- RA2: Understand the physiology of the partially edentulous patient.
- RA3: Gain a deepest insight in the physiology of the partially edentulous patient
- RA4: Analyse the prognosis of different cases and their therapeutic income
- RA5: Understand the clinical steps of the treatment for the partially edentulous
- RA6: Understand the technical steps of the procedure

- RA7: Understand the desirable occlusal scheme for the partially edentulous patient

The relationship between the competences developed in the subject and the learning results they pursue is shown in the following table:

Competencias	Resultados de aprendizaje
CT1-CT4-CT5-CT8-CG12	RA1
CT1-CT4-CT5-CT8-CG12	RA2
CT1-CT4-CT5-CT8-CG12	RA3
CB2-CB4-CB5-CT4-CT5-CT7-CG1-CG2-CG3-CG11-CG13-CG14-CG15-CG21-CG25-CG26-CG27-CE9-CE10-CE14-CE16-CE39.	RA4
CB5,CT1-CT5-CT7-CG1-CG2-CG3-CG9-CG11-CG12-CG13-CG15-CG16-CG17-CG21-CG25-CG27-CE9-CE13-CE16-CE37-CE38.	RA5
CB5,CT1-CT5-CT7-CG1-CG2-CG3-CG9-CG11-CG12-CG13-CG15-CG16-CG17-CG21-CG25-CG27-CE9-CE13-CE16-CE37-CE38.	RA6
CB5,CT1-CT5-CT7-CG1-CG2-CG3-CG9-CG11-CG12-CG13-CG15-CG16-CG17-CG21-CG25-CG27-CE9-CE13-CE16-CE37-CE38.	RA7
CB5,CT1-CT5-CT7-CG1-CG2-CG3-CG9-CG11-CG12-CG13-CG15-CG16-CG17-CG21-CG25-CG27-CE9-CE13-CE16-CE37-CE38.	RA8

4. CONTENT

During the development of the subject, the student will be able to learn and dominate the subject units proposed in the work plan in the subject guide.

Theory content of the subject:

Lecture 1. Partially edentulous patient. Physiopathology. Consequences of tooth loss. Classification of partially edentulous arches.

Lecture 2. Assessment of the partially edentulous patient. Physical examination and diagnosis. Study casts.

Lecture 3. The removable partial denture: concept and objectives. General considerations and indications. Constituent elements. Concepts in removable partial dentures: support, retention and stability.

Lecture 4. Bases of removable partial dentures: concepts, objectives, types, materials and indications.

Lecture 5. Major connectors: concept, objectives, types and indications. Minor connectors

Lecture 6. Direct retainers: concept, objectives and types. Extracoronal (clasps) and intracoronal retainers (attachments). Indirect retainers.

Lecture 7. Biomechanics of removable partial dentures. Forces applied to RPDs elements. Counteraction of forces: principles applied to RPD design.

Lecture 8. Design of removable partial dentures. Cast parallelization: principles and procedure.

Lecture 9. Treatment planning of removable partial dentures. Tooth preparation for RPDs.

Lecture 10. Impressions and master casts for removable partial dentures. Mounting casts in the articulator. Parallelization and final design. Dental laboratory prescription: waxing techniques and structure casting.

Lecture 11. Removable partial denture framework try-in. Selective Impressions. Artificial teeth selection. Occlusion selection for RPDs. Dental laboratory prescription form after framework tryin.

Lecture 12. Removable partial denture placement. Remounting and occlusal equilibration. Adjustments. Instructions. Care and maintenance. Periodic check-ups. Relining. Breakage and repairs.

Lecture 13. Flexible removable dentures.

Practical content of the subject:

Practice 1. Impressions for the partially edentulous patient and diagnostic cast.

Practice 2. Custom trays manufacturing.

Practice 3. Record bases and occlusion rims manufacturing.

Practice 4. Upper occlusion rim records and mounting on the articulator.

Practice 5. Lower occlusion rim records and mounting on the articulator.

Practice 6. Surveying and design of removable partial denture.

Practice 7. Impressions with custom tray.

5. EDUCATIONAL AND LEARNING METHODS

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

- Master Classes
- Clinical Cases
- Learning based on problems and situations
- Simulation enviroments

6. EDUCATIONAL ACTIVITIES

The following table shows how the different types of educational activities are distributed and how many hours are assigned to each type:

Educational activity	Number of hours
Master Classes	28 h
Laboratory Practices	30 h
Clinical cases	8 h
Knowledge Test	2 h
Autonomous work and self-study	82 h
TOTAL	**150**

In the Virtual Campus, when you access the subject, you will be able to see in detail the statements of the activities that you will have to carry out, as well as the procedure and the delivery date of each one of them.

In the annexes, you can see the additional content corresponding to each of the practices.

7. ASSESMENT CRITERIA

The activities that are going to be graded, the assessment criteria and the percentage of each activity in the final grade are shown in the following table:

Evaluation System	Weight
Knowledge test	40%
Clinical case	20%
Practices	40%

The student could resort to blackboard in order to see in detail the description of the activities, the chronogram and the assessment criteria for each activity in detail.

7.1. ORDINARY CALL

EVERY PART OF THE SUBJECT (THEORY EXAM, LABORATORY PRACTICES, POST-TESTS AND CLINICAL CASE) MUST BE PASSED SEPARATELY WITH AT LEAST A GRADE OF 5 OUT OF 10 IN ORDER TO PASS THE SUBJECT.

Regarding the continuous evaluation background, different systems are going to be used in order to evaluate the procedures, abilities and attitude. The evaluation systems that are going to be implemented in this subject in order to assess and achieve the established aims are the following:

THEORY BLOCK

The theory block is a 40% of the final grade. It will be evaluated by means of knowledge test consisting on a multiple-choice exam. *The knowledge test is the 100% of the theory block.*

PRACTICES BLOCK

Laboratory practices are the 100% of the practices block. The practices block final grade will be the average of the graded activities.

All practices will have to be attended physically at the laboratory practices and are mandatory.

CLINICAL CASE

The clinical case exam is 100% of the clinical case block. The day of the theory exam, a Clinical Case exam will be made. It will consist of 10 - 20 multiple-choice questions. However this exam is independent from the theory exam. In order to pass this block a grade of 5 is required. Having less than 5 would mean failing this block. In this case, the student should retake it during the extraordinary call.

Students taking campus-based studies are required to demonstrate that they have attended at least 50% of their classes. Such attendance forms an essential part of the assessment process and is necessary to give the student the right to receive guidance, assistance and academic supervision from the professor. For such purposes, students must use the technological system put in place by the University to accredit their daily attendance at each of their classes. This system shall furthermore ensure that objective information is gathered regarding the active role of the student in the classroom. The failure to use the methods proposed by the University to demonstrate 50% attendance will give the professor the right to grade the course as a fail under the ordinary exam period. The foregoing does not affect other requirements of higher attendance percentages that each school may establish in their teaching guides or internal regulations.

Therefore, it is the authority of the professor that students who have not fulfilled the 50% of attendance in the ordinary call must pass all the evaluation tests in the extraordinary call, for which they must obtain a grade greater than or equal to 5.0 out of 10.0 in all of them (Faculty Board 11-07-23).

7.2. EXTRAORDINARY CALL

In order to pass the subject during the Extraordinary call, the student must retake the failed blocks during the Ordinary call. The assessment criteria are the same for the Extraordinary call.

In order to pass the subject during the extraordinary call is is necessary to obtain a grade of 5 or more out of ten in the final grade of the subject. It is mandatory that the different blocks are passed independently in order to calculate the average and the final grade of the subject.

- If the student has failed or has not attended a practice exam during the semester, it must be retaken during the follow-up period.
- The theory exam must be passed during the Extraordinary call. The format and the assessment criteria would be the same as the Ordinary call.
- The clinical case must be passed during the Extraordinary call. The format and the assessment criteria would be the same as the Ordinary call.

8. CHRONOGRAM

This section indicates the schedule of the graded activities of the subject:

Actividades evaluables	Fecha	Porcentaje
Prácticas		
Activity 1. Practice Exam 1	Week 6	8 %
Activity 2. Practice Exam 2	Week 9	8 %
Activity 3. Practice Exam 3	Week 11	8 %
Activity 4. Practice Exam 4	Week 14	8 %
Activity 5. Practice Exam 5	Week 13	8 %
Clinical Case		
Activity 6. Clinical Case Exam	Week 15	20%
Theory		
Activity 7. Theory Exam, Knowledge Test	Week 15	40%

9. BIBLIOGRAPHY

Recommended bibliography:

- **McCracken's** Removable Partial Prosthodontics. Alan B. Carr, David T. Brown. 12th ed. Imprint: Mosby
- **Jeffrey P. Okeson**. Management of Temporomandibular Disorders and Occlusion. 7th edition. 2012. Imprint: Mosby.
- **Mallat E, Keogh TP**. "Prótesis parcial removible. Clínica y laboratorio. ELSERVIER (1995).
- **Mallat Desplants, Mallat Callis E**. "Prótesis removibles y sobredentaduras" (2003).
- **David Loza Fernández, et all.** "Diseño de prótesis parcial removible". Ripano (2006).
- **J.C. Davenport** "Atlas en color de Prótesis Parcial removible" Labor (1992).

10. HOW TO COMMUNICATE WITH YOUR PROFESSOR

If you have a question about the contents or activities, do not forget to write it in the forums of your subject so that all your classmates can read it. It is possible that someone has your same doubt! If you have any questions exclusively addressed to the professor, you can send a private message from Blackboard. In addition, in case you need to delve into a topic, you can agree with your professor a tutoring hour. It is advisable that you read regularly the messages sent by colleagues and teachers, because they constitute one more way of learning.

11. STUDY RECOMMENDATIONS

University education requires planning and regularity from the first week. The exchange of experiences and opinions with professors and other students is very positive, since they allow the development of basic skills such as flexibility, negotiation, teamwork, and, of course, critical thinking.
Therefore, we propose a general methodology of study based on the following points:

- Follow a rhythm of constant and systematic study.
- Attend lectures and access the subject on blackboard in a continuous manner to keep you updated on the development of it.

- Actively participate in it by sending opinions, doubts and experiences on the topics discussed and / or raising new aspects of interest for discussion.
- Read the messages sent by classmates and / or professors.
- Complete the classes notes by reading the suggested bibliography and related papers.

Active participation in physical and virtual classroom activities is considered of special interest and academic value. The way you can participate is very varied: asking questions, giving opinions, doing the activities that the professor proposes, participating in collaborative activities, helping other colleagues, etc. This way of working means effort, but it allows you to obtain better results in your competence development.

12. DIVERSITY ATTENTION UNIT

From the Diversity Attention Unit, we provide support to our students throughout their university life to help them achieve their academic goals. Other key aspects of our work include the inclusion of students with specific educational support needs, universal accessibility on the university's different campuses, and equal opportunity.

From this Unit, we offer students:

- Accompaniment and monitoring through the provision of advice and personalized plans to students who need to improve their academic performance.
- In the realm of diversity support, we make non-significant curricular adjustments, meaning adjustments at the level of methodology and evaluation, for those students with specific educational support needs, aiming to ensure equal opportunities for all students.
- We offer students various extracurricular educational resources to develop various competencies that will enrich them in their personal and professional development.
- Vocational guidance by providing tools and advice to students with vocational doubts or those who believe they have made the wrong choice of major.
- Students in need of educational support can contact us at: orientacioneducativa@universidadeuropea.es

13. 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.

14. PLAGIARISM REGULATION

Any student that uses or benefits from unlawful means during an evaluation test or that unduly attributes the author of the academic work required for the assessment will be graded as a "fail" (0) and may similarly be the object of a sanction, subject to the opening of disciplinary proceedings. In the case of the Final Graduation Project, the plagiarism or the lack of originality of the project, will automatically be graded as a "fail" (0) in the corresponding course in both ordinary and extraordinary periods. Likewise, the student will lose their status as a student during six months according with the General Standards for Graduation Projects and Master's Thesis in its Article 5.