

## 1. BASIC INFORMATION

<b>Course</b>	PROSTHESIS I
<b>Degree program</b>	GRADE IN DENTISTRY
<b>School</b>	BIOMEDIC AND HEALTH SCIENCES FACULTY
<b>Year</b>	THIRD
<b>ECTS</b>	6 ECTS
<b>Credit type</b>	MANDATORY
<b>Language(s)</b>	SPANISH/ENGLISH
<b>Delivery mode</b>	PRESENTIAL
<b>Semester</b>	FIRST
<b>Academic year</b>	2024-2025
<b>Coordinating professor</b>	BEGOÑA OTEIZA GALDÓN
<b>Professors</b>	ANA CANDEL, ZARAIDA CATALÁ, ROSA GALIANA, NATALIA HERRERO, MAITE SÁNCHEZ, MAMEN FERRER, ALICIA SALVADOR, PAOLA MELGAR, VERONICA AUSINA, MATTIA CAZOLA

## 2. PRESENTATION

The subject Prosthetics I belongs to the Prosthetics block which is developed over three years of training and has a total of 27 ECTS credits. It includes the subjects of Normal and Pathological Occlusion and Prosthesis I, II, III and IV.

The objective of Prosthesis I is to know how to apply the basic principles and fundamental concepts in the planning and carrying out of treatment with removable prostheses in the totally edentulous patient, being able to differentiate the relation between occlusion, function, anatomy and aesthetics when applied to the construction of a total removable prosthesis.

The primary intention of this subject is to understand the situation of the totally edentulous patient and its sequential treatment by means of the complete prosthesis. To acquire the ability to design, elaborate and insert removable and immediate total prostheses suitable for each clinical situation, which the student will then have to apply in the dental office.

### 3. COMPETENCIES AND LEARNING OUTCOMES

#### Basic competencies:

- BC1: Students must show and understand concepts in an area of study that starts from the basics of general secondary education, and is often found at a level that, although it is supported by advanced textbooks, includes also some aspects that involve knowledge from the vanguard of their study field.
- BC2: Students must know how to apply their knowledge to their work or vocation in a professional manner and possess skills that tend to be demonstrated through the elaboration and defence of arguments and solving problems within their study field.
- BC4: Students should be able to transmit information, ideas, problems and solutions to both specialized as non-specialized audiences.
- BC5: Students must have developed those learning skills needed to undertake studies with a high degree of autonomy.

#### General competencies:

- GC1: Learn the essential elements of a dentist's work, including the ethical and legal responsibilities.
- GC2: Understand the importance of such principles for the benefit of the patient, society and the profession, with particular attention to the obligation of professional secrecy.
- GC3: Ability to identify the concerns and expectations of the patient, as well as communicate in clear and effective way both orally and writing, with patients, family members, media, and other professionals.
- GC9: Ability to understand the importance of maintaining and using records with patient information for further analysis, preserving the confidentiality of the data.
- GC12: Ability to understand and recognize the structure and normal function of the oral cavity, at the molecular, cellular, tissular and organic level at different stages of life.
- GC13: Ability to understand and recognize the essential about dental practice biomaterials, as well as the immediate management of possible allergies to them.
- GC14: Knowledge of the overall processes of the illness, which include 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 affecting organic systems, specifically those that have an oral impact.

- 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 with other organs, based on the scientific evidence available.
- GC19: Knowledge of the scientific method and have a critical capacity to assess the established knowledge and the new information. To be able to formulate hypothesis, to collect and to evaluate critically the information for the resolution of problems, following the scientific method.
- CG25 - Ability to know and apply the basic treatment of the most common oral and dental pathology in patients of all ages. Therapeutic procedures should be based on the minimally invasive concept and on a global and integrated approach to oral treatment.
- GC26 - Ability to know how to plan and perform multidisciplinary, sequential and integrated dental treatment of limited complexity in patients of all ages and conditions and patients requiring special care.
- CG27 - Ability to plan and propose preventive measures appropriate to each clinical situation.

**Cross competencies:**

- CC1: Responsibility: The student must be able to assume the consequences of the actions he performs and respond to his own actions.
- CC2: Self-confidence: The student must be able to act safely and with sufficient motivation to achieve his goals.
- CC4: Communicating skills: The student must be able to express concepts and ideas effectively, including the ability to communicate by writing with conciseness and clarity, as well as to speak in public in an effective way.
- CC5: Interpersonal comprehension: The student must be able to make an active listening in order to achieve an agreements using a style of assertive communication.
- CC7: Teamwork: The student must able to participate in an active way in the achievement of a common objective, listening, respecting and valuing the ideas and proposals of the rest of members of his team.
- CC8: Initiative: The student must be able to pro-actively propose solutions or alternatives to the situations presented.
- CC9: Planning: The student will be able to effectively determine his goals and priorities by defining the actions, timelines, and optimal resources required to achieve such goals.
- CC10: Innovation-Creativity: The student must be able to devise new and different solutions to problems and provide value to any problems that arise.

**Specific competencies:**

- SC34 - Perform basic treatment of oral-dental pathology in patients of all ages. Therapeutic procedures should be based on the concept of minimal invasive and on a global and integrated approach to oral-dental treatment.
- SC35 - Diagnose, plan and perform, in general, a multidisciplinary, sequential and integrated treatment of limited complexity in patients of all ages and conditions and in patients with special needs (diabetic, hypertensive, oncologic, transplanted, immunocompromised, anticoagulated, among others) or disabled. Specifically, the dentist must be competent in establishing a diagnosis, a prognosis and the development of an adequate therapeutic planning, particularly in orofacial pain, temporomandibular disorders, bruxism and other parafunctional habits; dental and periapical pathology; oral and dental trauma; periodontal pathology and peri-implant tissues; bone pathology of the jaws, oral soft tissues and adjoining glands; partial or total edentation states and in the planning of their rehabilitative treatment by means of dental and mucosa-supported prosthesis or dental implants, dental malpositions and/or malocclusions and other anatomical or functional alterations of the face or the stomatognathic system and their possible orthodontic, orthopedic or surgical corrections.
- SC37 - Make diagnostic models, mount them and take inter-occlusal records.
- SC41 - Perform limited procedures of invasive diagnostic techniques in soft tissues (biopsies).
- SC42 - Be competent in the appropriate prescription of drugs, knowing their contraindications, interactions, systemic effects and repercussions on other organs.
- SC46 - Identify and attend any dental emergency.
- SC48 - Perform simple surgical procedures: extraction of erupted primary and permanent teeth, fractured or retained roots and uncomplicated surgical extraction of unerupted teeth and simple pre-prosthetic surgery procedures.
- SC51 - Assess and treat the patient with caries or other non-carious dental pathology and be able to use all materials aimed at restoring the form, function and esthetics of the tooth in patients of all ages.
- SC53 - Operatively treat destructive processes and traumatic dento-alveolar lesions.
- SC56 - Treat both partial and total edentulism, including biological design (specific design features), tooth preparation, record keeping, clinical trials and patient fitting of partial and complete removable prostheses, simple dento-supported bridges and simple implant-supported prostheses, both removable and fixed, including "fitting" and "commissioning".

#### **Learning outcomes:**

- LR1: Recognize anatomy of completely edentulous patient.
- LR2: Recognize physiology of completely edentulous patients

- LR3: Extent knowledge on physiopathology of completely edentulous patient
- LR4: Analyze prognosis and therapeutic consequences of different cases
- LR5: Acquisition of concepts regarding clinical stages in completely edentulous patients.
- LR6: Deep study of laboratory phases in the treatment of completely edentulous patients.
- LR7: Precise handling of occlusal scheme in completely edentulous patients.
- LR8: To know clinical indications and clinical sequence of treatments with immediate complete dentures.
- LR9: To know the indications and clinical sequences of treatment with teeth-retained overdentures. Fix concepts of the clinical sequences of the partially and totally edentulous patient with teeth-retained overdentures. Accurately manage the occlusal scheme in partially and totally edentulous patients to be treated with teeth-retained overdentures.

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

Competencias	Resultados de aprendizaje
BC1 TC4, TC5	LO1
BC1, GC12 TC4, TC5	LO2
BC2, GC14, GC15, GC16 TC4, TC5 SC34, SC47, SC48	LO3
BC2, GC1, GC2, GC3 TC1, TC4, TC5 SC35, SC41, SC42, SC56	LO4
BC5, GC9, GC13, GC19 TC4, TC5, TC7, TC9 SC35, SC37, SC46, SC56	LO5
BC4, GC9, GC13 TC4, TC5 SC35, SC37, SC56	LO6
BC2, GC13, GC9 TC4, TC5 CE35, CE56	LO7
BC2, BC4, BC5, GC10, GC19 GC25, TC4, TC5, TC9 SC35, SC56	LO8
GC27, TC9, SC35, SC37, SC51, SC53, SC56	LO9

## 4. CONTENT

**THEORETICAL CONTENT:** The subject is divided in three thematic units. Each thematic unit is divided into different lessons.

### *THEMATIC UNIT 1:*

Lesson 1. Occlusal schemes in Prosthetics: mutually protected occlusion; group-based occlusion; balanced occlusion.

Lesson 2: Dental articulators and face bows: concept, classification and purposes of use. Eccentric records and semi-adjustable articulator adjustment. Recording instrument for condyle movements: axiographs and pantographs.

### *THEMATIC UNIT 2:*

Lesson 3: The patient fully edentulous: general considerations. Morphological and functional changes of the stomatognathic apparatus in the total tooth. Fully toothed patient clinical history and examination. Intrabuccal topographical anatomy of total toothless.

Lesson 4: Diagnosis and treatment plan Clinical history and examination of the fully toothed patient. Pathology related to PTR.

Lesson 5: Complete Prosthetic Concept: Principles of support, retention, and stability.

Lesson 6: Full Prosthetic Prints: Anatomical and Functional Techniques. Clinical systematics. Obtaining work models. Printing materials.

Lesson 7: Recording the Vertical Dimension in Complete Prosthetics

Lesson 8: Intermaxillary Records

Lesson 9: Artificial teeth: functions, features and properties; materials and their selection.

Lesson 10: Clinical sessions for the making of the PTR (1st part)

Lesson 11: Assembling artificial teeth. Occlusal schemes: Balanced bilateral occlusion, lingualized occlusion and monoplane occlusion. Features and indications.

Lesson 12: Clinical testing of the prosthesis

Lesson 13: Complete Prosthetic Laboratory Technology. Prosthetic bases: functions and properties. Materials and techniques for its manufacture. Flask. Polymerization and finishing.

Lesson 14: Selective grinding. Reassembly and occlusal adjustment in Complete Prosthetics. Concept, justification and purposes. Clinical and laboratory techniques.

Lesson 15: Placement of the prostheses in the patient. Adjustments and corrections. Tips for use and maintenance. Periodic reviews. Overrun and adjustments. Breaks and repairs.

Lesson 16: Clinical sessions for the making of the RCD (Part 2)

Lesson 17: Immediate prosthesis. Concept. Advantages and drawbacks. Indications and contraindications. Clinical and laboratory phases.

*THEMATIC UNIT 3:*

Lesson 18: Treatment with teeth supported overdentures. Concept and generalities.

Lesson 19: Connection types.

Lesson 20: Clinical sessions. Maintenance and complications.

Lesson 21: Double crowns.

**PRACTICES CONTENT:**

Practice 1: Preliminary impressions in the completely edentulous patient

Practice 2: Individual trays

Practice 3: Final impressions

Practice 4: Resin bases

Practice 5: Face bow record and intermaxillary records

Practice 6: Articulator mounting

Practice 7: Teeth arrangement

## **5. TEACHING-LEARNING METHODOLOGIES**

The following are the types of teaching-learning methodologies to be applied:

- Lecture.
- Clinical cases.
- Simulation environments.
- Learning based in projects.

## **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 Activities	Hours
Tutorial sessions	18
Master Class	22
Virtual sessions	6
Portfolio	8
Clinical cases	17
Laboratory practices	33
Study at home	44
Knowledge tests	2
<b>TOTAL</b>	<b>150 h</b>

## 7. ASSESSMENT

To enroll in the subjects "Stomatological Prosthesis I and II" it is essential to have passed the subjects "Normal and Pathological Occlusion".

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

### Campus-based mode:

Assessment system	Weight
Theory exam	45 %
Case-Problem	10 %
Practices	40%
Portfolio	5 %

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.



In any case, it will be necessary to obtain a grade greater than or equal to 5.0, independently, in each of the evaluation systems that make up the course.

The Universidad Europea de Valencia establishes continuous assessment as a system of evaluation of knowledge, skills and basic, general, transversal and specific competences of the degree in Dentistry, in accordance with the provisions of the Regulations for the evaluation of undergraduate degrees. In this regard and for the purposes of the consumption of calls the student should be aware that, if any evaluation system provided in the Learning Guide, in the ordinary call the student will have an overall grade of the subject, thus consuming call.

According to the aforementioned Regulations, students taking face-to-face degree courses are required to justify at least 50% of class attendance, as a necessary part of the evaluation process and in the case of theoretical or practical classes determined as mandatory by the teacher in the schedules of the subject, the student must register an attendance of 90%, whether the absence is justified or not. The lack of accreditation by the means proposed by the University will entitle the professor to grade the subject as failed in the ordinary call, according to the grading system.

Punctuality will be required, 3 delays of more than 15 minutes or departures before class will be counted as a lack of attendance.

The student must consult in the schedule of the course in the Virtual Campus the sessions of compulsory attendance in the classroom.

The mention of "Matrícula de Honor" will be awarded to students who have obtained a grade equal to or higher than 9.0. Their number may not exceed 5% of the students enrolled in each subject in the corresponding academic year, unless the number of students enrolled is less than 20, in which case only one honorary registration may be awarded.

## **7.2. Second exam period**

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

In any case, it will be necessary to obtain a grade greater than or equal to 5.0 in the final test, so that it can be averaged with the rest of the activities.

The activities that were not passed in the ordinary exam must be handed in, after having received the corresponding corrections from the teacher, or those that were not handed in.

The Universidad Europea de Valencia establishes the continuous evaluation as a system of assessment of knowledge, skills and basic, general, transversal and specific competences of the degree in Dentistry, in accordance with the provisions of the Regulations for the evaluation of undergraduate degrees. In this regard and for the purposes of the consumption of calls the student should be aware that in the extraordinary call will be the Objective Test of Knowledge (POC) which determines whether or not to consume call and in the exceptional case that only has pending to overcome evaluation system /s that are not the POC, will be considered NP if not presented and will obtain a numerical grade if you present at least one of them.

Pursuant to the aforementioned Regulations, students taking face-to-face degree courses are required to justify at least 50% of class attendance, as a necessary part of the evaluation process, and in the case of theoretical or practical classes determined as mandatory by the teacher in the schedules of the subject, the student must register an attendance of 90%, whether the absence is justified or not. Those students who, due to non-compliance with this requirement, must appear in the extraordinary call, must perform as many activities or knowledge tests determined by the teacher to recover this part and its corresponding overcoming based on the specified rubric.

## 8. SCHEDULE

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

Assessable activities	Deadline
KNOWLEDGE EXAM	TO BE ASSIGNED
CLINICAL CASE	TO BE ASSIGNED
PRACTICE	PENDING ON PLANNING
PORTFOLIO	PENDING ON PLANNING

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 **reference** work for the follow-up of the subject is:

- Koech. Prótesis Completas. Ed Elsevier. Barcelona, 2007
- E. Mallat Desplats , E. Mallat Callís Prótesis parcial removible y sobredentaduras. 2004. Ed. Elsevier. Madrid
- Grunert I, Crepaz M. Prótesis total. Ed. Quintessence . Barcelona, 2008.
- Zarb, Kobkirk, Eckert, Jacob. Prosthodontic treatment for edentulous patients. Complete dentures and implant supported prostheses. Ed Elsevier 2013.

The following is the **recommended** bibliography

- Wirz J. Hoffman A. Electroformación en Odontología Restauradora: Nuevas facetas de la Prótesis Biológicas. Quintessence, 2004.
- Milano V. Desiate A. Prótesis total. Aspectos gnatológicos. Conceptos y procedimientos. AMOLCA. 2011
- Fonollosa Pla. Prótesis Completas Sobredentaduras y Prótesis Híbridas. 2014. Ed. Especializadas Europeas
- Basker RM, Davenport JC, Thomason JM. Prosthetic treatment of the edentulous patient ( 5ª Ed ) Wiley-Blackwell 2011.

## **10. EDUCATIONAL GUIDANCE, DIVERSITY AND INCLUSION UNIT**

From the Educational Guidance, Diversity and Inclusion 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.uev@universidadeuropea.es](mailto:orientacioneducativa.uev@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.