

Academic Year/course: 2022/23

## 29324 - Prosthesis I

### Syllabus Information

---

**Academic Year:** 2022/23

**Subject:** 29324 - Prosthesis I

**Faculty / School:** 229 - Facultad de Ciencias de la Salud y del Deporte

**Degree:** 442 - Degree in Odontology

**ECTS:** 9.0

**Year:** 3

**Semester:** First semester

**Subject Type:** Compulsory

**Module:**

## 1. General information

### 1.1. Aims of the course

**The general objectives of the subject can be summarized as:**

1. Know the occlusal patterns and the factors that influence them.
2. Know and practice the handling of the semi-adjustable articulator.
3. Identify the specific problems related to total edentulism.
4. Know and practice the stages of their laboratory, prosthetic and preclinical treatment.

These approaches and objectives are aligned with the following Sustainable Development Goals (SDGs) of the United Nations 2030 Agenda (<https://www.un.org/sustainabledevelopment/>), in such a way that the acquisition of the results of subject learning provides training and competence to contribute to some extent to its achievement:

- Goal 3: Health and wellness.
- Goal 4: Quality education.
- Goal 5: Gender equality.
- Goal 8: Decent work and economic growth.
- Goal 10: Reduction of inequalities.

### 1.2. Context and importance of this course in the degree

Prosthesis I, a compulsory subject, is complemented by Prosthesis II of the second semester. In them the fundamental aspects related to the occlusion and the removable prosthesis are developed.

As we know the dental pathology, it is necessary to know the restorative criteria, including the occlusal ones that will be analyzed now. Thus, the bases that may be individualized in subjects of the next courses are analyzed.

The failure of restorative procedures or their absence can lead to tooth loss. Rehabilitation with a removable prosthesis when all teeth have been lost is studied specifically in this subject.

The routine of identifying different conditions and problems related to total edentulism will serve to complete the professional thinking scheme.

### 1.3. Recommendations to take this course

Have completed and passed the basic subjects.

## 2. Learning goals

### 2.1. Competences

**Upon passing the subject, the student will be more competent to:**

Specific competences:

CE.MIV.1. Carry out basic oral-dental pathology treatments in patients of all ages. Therapeutic procedures should be based on the concept of minimal invasion and on a comprehensive and integrated approach to oral-dental treatment.

CE.MIV.2. To diagnose, plan and carry out, in general, a multidisciplinary, sequential and integrated treatment of limited complexity in patients of all ages. Specifically, the dentist must be competent in establishing a diagnosis, a prognosis and the development of adequate therapeutic planning, and particularly in:

- CE.MIV.2.6. states of partial or total edentation and in the planning of their rehabilitative treatment by means of dental and muco-supported prostheses, or by dental implants.

- CE.MIV.3. To establish such a diagnosis and treatment plan, the dentist must acquire the following skills:

- CE.MIV.3.1. Interpret radiographs and other image-based procedures relevant to dental practice;

- CE.MIV.3.2. carry out diagnostic models, assemble them and take interocclusal records;

- CE.MIV.3.3. determine and identify the aesthetic requirements of the patient and the possibilities of satisfying her concerns;

CE.MIV.4. To establish an adequate treatment, the dentist must be competent in:

- CE.MIV.4.16. treat both partial and total edentulism, including biological design (specific design characteristics), dental preparation, obtaining records, clinical tests and adaptation to patients of complete and partial removable prostheses, simple removable prostheses on implants, including their «placement »And« commissioning », elaborate the prescriptions of the customized medical devices« dental prostheses »and« orthodontic appliances and dental-facial orthopedics »;

Obtain and prepare a medical record that contains all relevant information. CG.21. Know how to carry out a complete oral examination, including the appropriate complementary radiographic and exploration tests, as well as obtaining adequate clinical references CG.22. Have the ability to prepare an initial diagnostic judgment and establish a reasoned diagnostic strategy, being competent in recognizing situations that require urgent dental care. CG.23. Establish the diagnosis, prognosis and adequate therapeutic planning in all the clinical areas of Dentistry, being competent in the diagnosis, prognosis and preparation of the dental treatment plan for the patient that requires special care, including medically compromised patients (patients with diabetes, hypertension, immunosuppressed patients, anticoagulated, among others) and patients with disabilities. CG.25. Know and apply the basic treatment of the most common oral or dental pathology in patients of all ages. Therapeutic procedures should be based on the concept of minimal invasion and on a comprehensive and integrated approach to oral dental treatment. CG.27. Propose and propose preventive measures appropriate to each clinical situation. CG.28. Acquire clinical experience under adequate supervision. Brief description of the contents.

Cross-cutting competences:

CG.3. 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.

CG.4. Understand and recognize the social and psychological aspects relevant to the treatment of patients.

CG.8. Know how to share information with other health professionals and work as a team.

CG.9. Understand the importance of maintaining and using records with patient information for subsequent analysis, preserving the confidentiality of the data.

CG.15. Be familiar with the general pathological characteristics of diseases and disorders that affect the organic systems, specifically those that have oral repercussions.

CG.17. Understand and recognize the principles of ergonomics and safety at work (including cross infection control, radiation protection, and occupational and biological diseases).

CG.20. Obtain and prepare a medical record that contains all the relevant information.

CG.21. Know how to carry out a complete oral examination, including the appropriate complementary radiographic and exploration tests, as well as obtaining adequate clinical references.

CG.22. Have the ability to prepare an initial diagnostic judgment and establish a reasoned diagnostic strategy, being competent in recognizing situations that require urgent dental care.

CG.27. Propose and propose the appropriate preventive measures for each clinical situation.

## 2.2. Learning goals

**The student, to pass this subject, must demonstrate the following results:**

Understand the basic diagrams that explain the occlusion.

Identify the occlusal scheme of a dentate subject.

Understand the bases for using the semi-adjustable articulator.

Recognize the consequences of total edentulism.

Identify the difficulties to build a complete prosthesis.

Define and practice the stages of building a complete prosthesis.

## 2.3. Importance of learning goals

It is foreseeable that most dentists will perform some act related to occlusion during their professional practice since the modification of the occlusal surface of the teeth should be practiced every time it is affected by various pathologies (caries, trauma ...).

The concept of occlusion will be seen in depth for the first time in this subject, but the application will be developed throughout the professional life (restorative dentistry, orthodontia, prosthetics ...). A respect to the previously identified occlusion of the patient, or the successful incorporation of a new occlusal scheme when necessary, are keys to the overall

success of the treatment.

On the other hand, the rehabilitation of total edentulism with a full prosthesis is a professional act in which different techniques must be combined with some protocol variations as different problems are identified. So this part of the subject will fill the initial training of the dentist specifically.

### 3. Assessment (1st and 2nd call)

#### 3.1. Assessment tasks (description of tasks, marking system and assessment criteria)

**The student must demonstrate that they have achieved the expected learning outcomes through the following assessment activities:**

##### **STUDENTS WITH CONTINUOUS ASSESSMENT**

- Continuous theoretical evaluation (80%): two tests of theoretical knowledge, one at the end of each thematic block.
  - Each test will consist of 5 essay questions.
  - Each test must be passed individually; otherwise, the final evaluation must be chosen. In other words, not passing any objective test implies having to appear for the final evaluation.
- Preclinical practices (15%): assessment of the technical skills developed in the preclinical/laboratory practices, including the completion of a practice notebook.
  - Only two justified absences from practices are allowed and when the student can attend another scheduled group.
  - There will be no individualized practices.
  - Who does not meet the above requirement must take an individual practical exam.
  - Attendance at practices is MANDATORY, but by itself does not score. Participation scores.
- Attitude, student participation and regular attendance at theoretical classes (5%).

##### **STUDENTS WITH FINAL EVALUATION**

- Final theoretical evaluation (80%): in case of not taking/passing the continuous theoretical evaluation.
  - The final objective test consists of a 50-question multiple choice exam with 5 possible answers and only one correct answer.
  - This exam will be considered apt with at least 30 correct answers.
  - Wrong answers don't discount.
- Preclinical practices (15%): assessment of the technical skills developed in the preclinical/laboratory practices, including the completion of a practice notebook.
  - Only two justified absences from practices are allowed and when the student can attend another scheduled group.
  - There will be no individualized practices.
  - Who does not meet the above requirement must take an individual practical exam.
  - Attendance at practices is MANDATORY, but by itself does not score. Participation scores.
- Attitude, student participation and regular attendance at theoretical classes (5%).

##### Aspects or qualities that will be valued in these activities.

Participation in theory classes. Continuous evaluation of:

- Collaborative attitude
- Adequate answer to the teacher's questions
- Raising reasonable doubts, showing prior reading of the topic.
- Participation in solving the questions of other classmates
- Evolution in the expression with adequate scientific terms

Participation in the seminars. Continuous assessment of:

- Collaborative attitude
- Adequate answer to the teacher's questions
- Raising reasonable doubts, showing prior reading of the topic
- Participation in solving the questions of other classmates
- Evolution in the expression with adequate scientific terms

Work during practical sessions:

- Contribution of all general and specific material
- Concentration on explanations and practical work
- Proper use of the material
- Adoption of a suitable and protective work posture
- Use of protection measures
- I work with order and cleanliness
- Evolution in the expression with adequate scientific terms
- Compliance with the practice objective

Preparation of the practical notebook:

- The delivery deadline will be specified
- Individual
- The concepts will appear ordered
- It should be easy to interpret
- Photos, diagrams can be added
- The terms used will be correct
- It should serve as a quick reminder of the explained work routines
- Without maximum extension

## GRADING SYSTEM

The numerical qualification will be expressed in accordance with the provisions of art. 5.2 of Royal Decree 1125/2003 of September 5 (BOE September 18), which establishes the European credit system and the grading system in university degrees of an official nature and validity throughout the national territory.

Thus, the grades will be established in the following range: From 0 to 4.9: Failed (S); from 5.0 to 6.9: Approved (A); from 7.0 to 8.9: Good (N); from 9.0 to 10: Outstanding (SB). The Honor Roll mention may be awarded to students who have obtained a grade equal to or greater than 9.0.

## 4. Methodology, learning tasks, syllabus and resources

### 4.1. Methodological overview

The methodology followed in this course is oriented towards the achievement of the learning objectives. A wide range of teaching and learning tasks are implemented, such as lectures, workshops, clinical case sessions, and autonomous work and study.

### 4.2. Learning tasks

This course is organized as follows:

- **Lectures**
- **Clinical case sessions.** Laboratory practice sessions with their own dental casts. The practice is made with real materials and instruments. Preclinic and laboratory practices with plastic casts that reproduce the anatomical condition of edentulism in a similar context to a real patient.
- **Workshops.** Workshops with presentation and group analysis of student's casts mounted on a semi-adjustable articulator. Study and video display of different prosthetic techniques accompanied by comments and analysis in groups.
- **Autonomous work and study.** Students study the recommended texts.

### 4.3. Syllabus

This course will address the following topics:

Topic 0: Course organization. Theoretical and Practical program. Schedule. Rules. Evaluation Criteria. General bibliography.

#### OCCLUSION

Topic 1: Stomatognathic apparatus. Anatomy and physiology of dental arches.

Topic 2: Temporomandibular joint (TMJ). Characteristics, components and mandibular dynamics.

Topic 3: Physiology of the stomatognathic apparatus. Chewing. Swallowing. Phonation.

Topic 4: Cephalometry applied to prosthetics.

Topic 5: Occlusion.

Topic 6: Theories of occlusion. functional occlusion. dysfunctions.

Topic 7: Articulator and facebow.

### **COMPLETE EDENTULISM**

Topic 8: The edentulous patient.

Topic 9: Clinical history in the edentulous patient. Diagnosis, prognosis and treatment plan.

Topic 10: Complete prosthesis.

Topic 11: Impressions in complete prostheses.

Topic 12: Base plates and wax rims.

Topic 13: Intermaxillary relationships.

Topic 14: Mounting of teeth in wax.

Topic 15: Test of the prosthesis in the mouth: test of teeth in wax.

Topic 16: Waxing and encasing.

Topic 17: Prosthesis test in articulator, assembly, selective carving in the laboratory and finishing.

Topic 18: Placement of the prosthesis in the mouth.

### **PRACTICAL PROGRAM**

- Taking impressions in the dentate patient.
- Empty impressions.
- Plinth.
- Realization of Split-Cast or split model.
- Articulator and facial bow, making contact.
- Transfer of references from the patient to the articulator.
- Taking impressions in the edentulous patient.
- Preparation of individual tray.
- Preparation of plaster model with individual tray.

## **4.4. Course planning and calendar**

Further information concerning the timetable, classroom, office hours, assessment dates and other details regarding this course will be provided on the first day of class or please refer to the Faculty of Health and Sports Sciences website and Moodle.

Degree website: <https://fccsyd.unizar.es/es/odontologia/grado-en-odontologia>

## **4.5. Bibliography and recommended resources**

To consult the bibliography and recommended resources, you must access the *Recommended Bibliography* link.