

29324 - Prosthesis I

Syllabus Information

Academic Year: 2020/21

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 subject and its expected results respond to the following approaches and objectives:

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.

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:

The subject evaluation system will consist of:

- Objective tests of theoretical knowledge (continuous theoretical evaluation) (80% of the final grade)
- Carrying out practical exercises, assessing the technical skills developed in the laboratory and / or clinical practices, including carrying out the practical notebook (15% of the final grade).
- Attitude and relevant participation of the student in all training activities, proper use of the Virtual Campus and ICT applied to their subject (5% of the final grade).

The previous sections must be approved separately.

Rating system:

Aspects or qualities that will be valued in these activities.

Within each of the activities the following aspects will be valued:

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

Final objective test, in case of not doing / passing objective theoretical evaluation:

- The final objective test consists of a 50-question test with 5 possible answers and only one true. This exam will be considered suitable with at least 35 correct answers. Wrong answers are not discounted.

Quality level that is going to be required for the evaluation criteria.

Requirement to pass the practices and seminars:

Attend, work and participate during seminars and practices (Only two excused absences from practices and / or seminars are allowed as long as they are repeatable, that is, the student can go to another scheduled group. Individual practices will not be scheduled.

Whoever does not meet the above requirement will take the individual practical exam.

Attendance at practices and seminars is compulsory but by itself does not score. Yes rate participation.

Passing the theory in final objective test:

- The minimum grade to pass the subject is 35 correct answers out of 50.
- If you cannot pass the theory in the 2nd call, you must present it in full next year.

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: Dental Prosthesis Concept. Objectives. Course organization. Theoretical and Practical program. Schedule. Rules. Evaluation Criteria. General bibliography.

OCCLUSION

Topic 1: Mounting casts on articulator

- Study and video display.
- **Workshop.** Articulator description.
- **Work** in group of three. Exposure and comments in groups.

Topic 2: Concept, integrant elements and functions. Anatomy and physiology of dental arches.

- **Magistral Lesson.**
- **Laboratory Practice:** Alginate impressions. Casting.

Topic 3: Temporomandibular Joint (TMJ). Mandibular Dynamics. Neuro-muscular organization.

- **Magistral Lesson.**
- **Laboratory Practice:** Trim and plinth.

Topic 4: Stomatognathic system physiology. Chewing, swallowing, breathing, phonation, aesthetics and reflexes.

- **Magistral Lesson.**
- **Laboratory Practice:** Facebow transfer. Maxillary cast assembly.

Topic 5: Cephalometrics applied to prosthesis. Points, plans, cranio-facial-mandibular indices.

- **Magistral Lesson.**
- **Laboratory Practice:** Centric Relation registration. Mandibular cast assembly.

Topic 6: Occlusion Concept. Teeth alignment. Occlusal morphology. Occlusion during mandibular dynamics.

- **Magistral Lesson.**
- **Laboratory Practitce:** Resgistration of th inclination of the condylar guidance and Bennet Angle.

Topic 7: Compatibility between occlusal morphology and mandibular dynamics.

- **Magistral Lesson.**
- **Workshop:** Discussion in groups about the occlusal pathologic findings in the students.

Topic 8: Occlusion Theories. Centric Relation. Centric Occlusion. Habitual Occlusion. Mutually protected occlusion. Bilateral balanced occlusion. Group Function. Dysfunctions.

- **Magistral Lesson.**
- **Workshop:** Students presentations of pathologic findings.

Topic 9: Facebows and articulators.

- **Magistral Lesson.**
- **Laboratory Practice:** Incisal guide reproduction.

COMPLETE EDENTULISM

Topic 10: Edentulous patient. Evolution changes because of age. Anatomical and functional evolution in edentulous patients.

- **Magistral Lesson.**

Topic 11: Clinical History, clinical and complementary explorations, diagnosis, prognosis and treatment plan in edentulous patients.

- **Magistral Lesson.**
- **Workshop:** Clinical History.

Topic 12: Complete Prosthesis. Concept and general characteristics. Biomechanical and retention principles. Prosthetical space.

- **Magistral Lesson.**
- **Workshop:** Clinical History.

Topic 13: Impressions in complete prosthesis. Impression materials, individual trays and casts.

- **Magistral Lesson.**
- **Preclinic Practice:** Incial impressions in edentulous typodont.

Topic 14: Base Plates and wax rods.

- **Magistral Lesson.**
- **Preclinic Practice:** Articulator mounting with Split-cast.

Topic 15: Transference and resiter of intermaxillary and caniomaxillary relations.

- **Magistral Lesson.**
- **Preclinic Practice:** Individual tray manufacture. Work impressions.

Topic 16: Artificial teeth. Mount and articulate of artificial teeth. Occlusion in complete prosthesis.

- **Magistral Lesson.**
- **Preclinic Practice:** Base plates manufacture.

Topic 17: Prosthesis test. Evaluate data: Aesthetics and functional.

- **Magistral Lesson.**

Topic 18: Wax-up, muffling, demuffling and prosthesis obtention.

- **Magistral Lesson.**
- **Precilinic Practice:** Teeth wax articulation.

Topic 19: Articulator test, remounting, laboratory selective grinding and prosthesis finishing.

- **Magistral Lesson.**

Topic 20: Prosthesis installation in the mouth. Aesthetic, functional and stability checks. Patient instructions.

- **Magistral Lesson.**
- **Preclinic Practice:** Muffling and demuffling.
- **Level Test.**

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/odontologia/grado-odontologia>

4.5. Bibliography and recommended resources

Basic Bibliography:

- Okeson, Jeffrey P. Tratamiento de la oclusión y afecciones temporomandibulares. Barcelona : Elsevier España, 2003
- Bortolotti, Lilia. Prótesis removibles : clásica e innovaciones / Lilia Bortolotti . Caracas : Amolca, 2006
- Geering Alfred H. Atlas de prótesis total y sobredentaduras. Barcelona : Masson-Salvat, 1993 Prótesis completas / dirigido por B. Koeck; con la colaboración de J. Besford. . 4ª ed. Barcelona [etc.] : Elsevier Masson, 2007.

Complementary bibliography:

- Pessina Edoardo. Articuladores y arcos faciales en prótesis odontológica y gnatología / Edoardo Pessina, Mario Bosco, Alessandro M. Vinci. Barcelona : Salvat, 1994
- Campos Ortega, Agustín. Rehabilitación oral y oclusal. Madrid : Harcourt, 2000
- Campos Ortega, Agustín. Procedimientos clínicos de laboratorio en rehabilitación oral/oclusal. Madrid : Harcourt, 2000
- Casado Llompart, José Ramón. Tratamiento del desdentado total / José Ramón Casado Llompart. Madrid : José Ramón Llompart, 1991
- Fonollosa Pla, Josep Maria.. Prótesis removible de resina / Josep Ma Fonollosa Pla ; directoras Caterina Casado Latorre, Ma Angeles Chavarría Lorente. . Barcelona : Masson, 2004.
- Alonso, Aníbal Alberto. Oclusión y diagnóstico en rehabilitación oral / Aníbal Alberto Alonso, Jorge Santiago Albertini, Alberto Horacio Bechelli . 1a ed., 4a reimp. Buenos Aires : Editorial Médica Panamericana, 2005
- Öwall, Bengt. Odontología protésica : principios y estrategias terapéuticas / Öwall, Arnd F. Käyser, Gunnar E. Carlsson. Madrid : Mosby, 1997