COURSE DATA

DATA SUBJECT

Code: 34716
Name: Dental prosthesis I
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	3	Annual

SUBJECT-MATTER

Degree	Subject-matter	Character
1206 - Degree in Dentistry	Dental prostheses	COMPULSORY

COORDINATION

SELVA OTAOLAURRUCHI EDUARDO JOSE

FERNANDEZ DE ESTEVAN LUCIA

SUMMARY

This course covers three distinct parts:

- Pathophysiology of the temporomandibular joint, which analyses the anatomy, physiology and basic pathology of this complex joint and its relationship with teeth.

- Removable total dentures, or full prosthesis, which studies the pathophysiology of totally edentulous patients and their treatment through conventional prostheses or overdentures on natural teeth or on osseointegrated implants.

- Removable partial dentures, which analyses the partial tooth loss of patients and the possibilities of rehabilitation through removable dentures.

This is an initial step prior to the treatment of edentulous patients with other techniques and materials: fixed prostheses, implant-supported dentures, mixed prostheses, etc.

PREVIOUS KNOWLEDGE

RELATIONSHIP TO OTHER SUBJECTS OF THE SAME DEGREE

1206 - Degree in Dentistry

Obligation to have previously passed the subject(s)	34704 - Biomaterials and ergonomics I 34705 - Biomaterials and ergonomics II

OTHER REQUIREMENTS

COMPETENCES / LEARNING OUTCOMES

1206 - Degree in Dentistry

Realizar tratamiento no quirúrgico de los desórdenes témporo-mandibulares y dolor oro-facial.

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.

Tratar el edentulismo tanto parcial como total, incluidos el diseño biológico (características específicas de diseño), preparación dentaria, obtención de registros, pruebas clínicas y adaptación a los pacientes de prótesis removibles parciales y completas, puentes sencillos dento-soportados y prótesis sencillas sobre implantes, tanto removibles como fijas, incluyendo su «colocación» y «puesta en servicio»,

DESCRIPTION OF CONTENTS

THEORY

1. Pathophysiology of the Temporomandibular Joint

Development of basic concepts in occlusion, interrelation of this subject with other disciplines; review of anatomy and biodynamics applied to the temporomandibular joint complex.

Dentition and dental arches, their components and inter- and intra-arch relationships; development of occlusion. Basic mandibular positions. Methods for recording mandibular positions; mandibular kinematics. Occlusal patterns and their relationship to mandibular dynamics.

Articulators and facial arches: general information and use. Articulator assembly and programming.

Intermaxillary relationships. Aesthetic and dynamic records. Digital prosthetics, technology, digital smile planning.

Anterior guidance: importance. Methods for determination and reconstruction. Posterior determinants of occlusion. Importance in occlusal morphology. Occlusal patterns. Their selection according to the treatment to be performed. Objectives of occlusal restoration. Schools of occlusion.

Aesthetic and dynamic occlusal analysis. Physiological occlusion criteria. Adaptive occlusion. Pathological occlusion. Occlusal trauma. Parafunctions. Importance in maintaining occlusal health.

Pathological response. Occlusal trauma. Introduction to craniomandibular dysfunction syndrome. Etiology.

Clinical manifestations and repercussions on oral health.

2. Removable Complete Dentures

The edentulous patient. Diagnosis and treatment plan for completely edentulous patients. Anatomy of the completely edentulous patient.

Impression materials. Impressions in edentulous patients. Impression techniques. Vertical dimension.

Intermaxillary relationships.

Artificial teeth. Tooth set-up. Clinical try-in. Laboratory procedures. Selective grinding.

Completion and delivery: problems. Relining and repairs.

Clinical sessions for the fabrication of a removable complete denture.

Immediate prosthesis. Overdentures. Hybrid prosthesis and full-arch restorations.

3. Removable Partial Dentures

Introduction to removable partial dentures. Concepts. Bioanatomical and biomechanical factors in removable partial dentures.

Constituent elements of a removable partial denture. Major and minor connectors. Guiding planes.

Occlusal stops. Direct retainers. Occlusion in removable partial dentures. Indirect retainers.

Prosthetic bases. Artificial teeth.

Biomechanics. Imprints in removable partial dentures. The parallel: concept and use. Removable partial denture design: general principles. Laboratory fabrication. Completion and delivery of the removable partial

denture. Relines and repairs.

Clinical sessions on the fabrication of a removable partial denture.

Acrylic resin or partial dentures. Nylon.

PRACTICES

OCCLUSION

1. PRELIMINARY ALGINATE IMPRESSIONS. STUDY CASTS. BASELINE.

CREATION OF UPPER SPLIT-CAST.

2. TAKING THE FACIAL BOW. MOUNTING THE UPPER CAST IN THE ARTICULATOR.

3. LUCIA'S JIG. TAKING CENTRIC RELATION (CR) RECORDS.

4. MOUNTING THE LOWER CAST IN THE ARTICULATOR. VERIFICATION OF THE CENTRIC RELATIONSHIP. LATERALITY RECORDS. ARTICULATOR PROGRAMMING.

5. FUNCTIONAL ANALYSIS OF THE OCCLUSION. SELECTIVE GRINDING.

REMOVABLE TOTAL PROSTHESIS (RTP)

1. IMPRESSIONS. CASTING AND BASELINE THE STUDY CASTS.

2. PERIPHERAL DESIGN. BASE PLATE FABRIC.

3. UPPER BOW FABRIC. FACEBOW FABRIC. MOUNTING THE UPPER MODEL ON THE ARTICULATOR.

4. ARTICULAR BOW FABRIC. INTERMAXILLARY RECORDS. MOUNTING THE LOWER MODEL ON THE ARTICULATOR.

5. MOUNTING THE UPPER ANTERIOR TEETH.

6. PERIPHERAL SEALING AND FINAL IMPRESSION.

REMOVABLE PARTIAL DENTURE (RPD)

1. IMPRESSIONS OF PARTIALLY ETENTONE MODELS. CASTING AND SOTING.

2. DENTAL DESIGN AND PREPARATION OF THE CASES.

3. INDIVIDUAL TRAY AND FINAL IMPRESSION. CASTING AND BASELINE.

DIGITAL AND IMPLANT-SUPPORTED PROSTHESIS

1. INTRAORAL SCANNING. DIGITAL SMILE PLANNING.

2. IMPLANT-SUPPORTED PROSTHESIS. ATTACHMENT RECOGNITION.

WORKLOAD

PRESENCIAL ACTIVITIES

Activity	Hours
Theory	54,00
Odontology practices	9,00
Laboratory	103,00
Classroom practices	14,00
Total hours	**180,00**

NON PRESENCIAL ACTIVITIES

Activity	Hours
Attendance at other activities	0,00
Individual or group project	20,00
Independent study and work	35,00
Preparation of lessons	30,00
Preparation for assessment activities	25,00
Resolution of case studies	10,00
Total hours	**120,00**

TEACHING METHODOLOGY

The information regarding theoretical topics covered in the course syllabus will be supplemented and expanded. Students will prepare these topics, which will be discussed in class with the faculty. To make things easier for students, outlines of the theoretical classes will be posted in the Virtual Classroom. This knowledge will be consolidated and reinforced in clinical and laboratory practices, which will focus on the theoretical knowledge already covered in class. A gender perspective, respect for diversity, and the Sustainable Development Goals (SDGs) will be incorporated into teaching, whenever possible.

EVALUATION

Theoretical knowledge will be assessed through a voluntary written, partial, eliminatory theoretical exam (with 7 or more points out of 10) to be taken in January. If the student achieves the same score or exceeds this score, they will be eliminated from the first thematic section taught in the course in the first and second sittings of the academic year. Five theoretical questions will be asked, each of which will be evaluated out of 2 points.

At the end of the course, in the first sitting (May), a written theoretical exam will be given on the contents of the three thematic sections of the course. Students who have failed the first section will only be examined in the second and third sections. Five theoretical questions will be asked, each of which will be evaluated out of 10 points.

The final grade will be the average of the three grades, and the student will pass this theoretical portion if they achieve a minimum of 5 points in each section.

The practical portion will be assessed continuously, evaluating each phase of the work to be completed throughout the course. Students must achieve a grade of 5 or higher in this section. Otherwise, they will be required to repeat the laboratory exercises in the following year, as they have not been able to demonstrate achievement of the objectives required to pass the practical portion of the course throughout the course. Students' theoretical and practical knowledge will also be assessed in seminars using educational tools.

Each assessment (of the ongoing practical work throughout the course and of the educational tools in the seminars) is given up to a maximum of 10 points (approximately 40-50 grades), and the final grade for this practical part will be the average of all the grades.

A final practical test will also be conducted, where students will complete a project from their year in front of the instructor and answer questions about practical photographs. Each of these tests will be graded out of 10 points, resulting in the average grade (although each part of the test must be passed independently).

The grade for the practical part will be the sum of the two grades obtained in the continuous assessment practicals (60%) and the final exam (40%) and must be equal to or greater than 5 points.

The final grade for the course will be the arithmetic average of the grades obtained in the theoretical and practical parts, both of which must be equal to or greater than 5 points.

In the second sitting, students who have failed only one of the theoretical or practical parts will be examined

only in that part, respecting the grade obtained in the other part. The continuous assessment practical part will respect the grade obtained during the course, and a final practical test will be conducted as described in the first sitting. The theoretical part will consist of 10 questions from the three sections of the course, each graded on a single point. Students who failed the first thematic section in the voluntary January midterm exam (more than a 7) will not be asked any questions from that thematic section.

For admission to this course, it is a requirement that the student has successfully completed all of their practical work.

Attendance at practical activities and seminars is mandatory. Students will be considered to have met this requirement if they have attended at least 80% of these activities and have adequately justified their inability to attend the remaining sessions due to force majeure.

Students are reminded of the importance of completing the evaluation surveys for all faculty members of the degree courses.

REFERENCES

Básicas

- Dawson P. Evaluación, diagnóstico Y tratamiento de los problemas oclusales. la ed. española de la 2ª

ed. en inglés. 1991. Barcelona. Salvat Editores.

- Drücke W. Klemt B. Bases de la prótesis dental total. 1991 .Ed. Doyma. Barcelona (España).

- Mallat, Keogh. Prótesis Parcial Removible. Clínica y laboratorio. Ed. Mosby/Doyma libros.

- RECURSOS e-Salut:

-ClinicalKey Student Medicina, Odontologia y Enfermería

[https://uv-es.libguides.com/RecursosSalut]

- Acces Medicina

[https://uv-es.libguides.com/Access_Medicina]

- Médica Panamericana

[https://uv-es.libguides.com/Medica_Panamericana]

Complementarias

- Okeson J. Oclusión y afecciones temporomandibulares. La ed. española de la 3ª ed. en inglés. 1995.

Madrid. Mosby/Doyma Libros

- Llena J. prótesis completa. 1988. Ed. Labor. Barcelona (España).

- McGivney, Castleberry. McCracken. Prótesis Parcial Removible. Editorial Médica Panamericana.