MASTER IN DENTAL MEDICINE

Concentrations:

- Oral Diseases and Surgeries-Periodontology
- Oral Surgery and Implantology
- Pediatric Dentistry
- Endodontics
- Orthodontics
- Esthetic and Prosthetic Dentistry

Main Language of Instruction:
French ☑ English ○ Arabic ○

Campus Where the Program Is Offered: CSM

OBJECTIVES

- **Concentration: Oral Diseases and Surgeries-Periodontology**
  By the end of this program, students will be able to:
  - Diagnose and treat periodontal diseases.
  - Place dental implants.
  - Enhance periodontal and peri-implant tissues.
  - Treat mucogingival problems.
  - Conduct research.

- **Concentration: Oral Surgery and Implantology**
  This program aims to equip highly qualified professionals with advanced skills to address the complex challenges of modern oral surgery. Key objectives include:
  - Provide dentists with in-depth expertise in advanced oral surgery techniques, focusing on performing complex procedures and managing potential complications.
  - Train professionals to assess and manage risks associated with major oral surgical interventions, including emergency management and postoperative complication handling.
  - Enable practitioners to understand pathologies of the facial and maxillary regions, with an emphasis on early diagnosis and proper intervention planning.
  - Gain expertise in the biocompatibility and advanced use of biomaterials, essential for successful surgical interventions and tissue regeneration.
  - Develop advanced skills in oral implantology, covering both implant planning and the integration of digital technologies in the prosthetic process.
  - Promote a multidisciplinary approach in oral surgery by integrating knowledge in cellular communication, genetic development, and the pathophysiology of oral structures.
  - Build synthesis and oral communication skills, allowing practitioners to effectively present their work, research results, and case studies.
  - Provide extensive clinical experience over several semesters, enabling dentists to apply and refine their practical skills under expert supervision.

- **Concentration: Pediatric Dentistry**
  This program develops advanced skills in diagnosing, treating, and preventing oral-facial pathologies in children, including caries, erosion, dental dysplasias, bruxism, dento-maxillary disharmonies, periodontal diseases, oral breathing, and sleep apnea. It trains students to manage child-specific dental care, communicate effectively with young patients, and collaborate with healthcare professionals. The program also introduces students to the

care of individuals with special needs and involves them in community work to help improve public oral health. In parallel with clinical training, it emphasizes research and scientific writing, preparing specialized dentists to meet the unique dental needs of children and adolescents.

• **Concentration: Endodontics**

This program equips students with the following skills:

1. **Clinical Competence**
   Graduates will be able to perform comprehensive non-surgical and surgical endodontic treatments at a specialist level, including the management of complex anatomies, retreatments, and complications.
2. **Exposure to Case Diversity & Complexity**
   Graduates will demonstrate the ability to manage a wide range of endodontic cases, from routine to highly complex, under supervision and independently, following current best practices.
3. **Research and Critical Thinking**
   Graduates will develop and apply skills in critical appraisal, clinical reasoning, and scientific research, culminating in the completion and defense of a Master's-level thesis.
4. **Technology Integration**
   Graduates will competently integrate advanced technologies (e.g., CBCT, operating microscopes, digital tools) into diagnosis, treatment planning, and endodontic procedures.
5. **Teaching and Educational Contribution**
   Graduates will acquire the necessary pedagogical skills to teach endodontic principles and supervise undergraduate students in both theoretical and clinical settings.
6. **Ethical and Professional Development**
   Graduates will exhibit professionalism, ethical conduct, and reflective practice in line with national and European standards.
7. **Assessment and Accreditation Standards**
   Graduates will be regularly assessed via formative and summative methods to ensure the achievement of competencies required for ESE Specialist recognition.

• **Concentration: Orthodontics**

By the end of this program, students will be able to:

- Diagnose dental anomalies, facial structure deformities, and functional disorders.
- Develop and oversee the execution of orthodontic treatment plans.
- Perform preventive and interceptive orthodontic interventions.
- Carry out both simple and complex corrective orthodontic procedures.
- Collaborate within the team responsible for interdisciplinary treatment cases.
- Master the latest advancements and procedures in orthodontics.

• **Concentration: Esthetic and Prosthetic Dentistry**

This program enables students to specialize in fixed prosthodontics, removable prosthodontics, and esthetic and restorative dentistry.

PROGRAM LEARNING OUTCOMES (COMPETENCIES)

• **Concentration: Oral Diseases and Surgeries-Periodontology**

- Competence I: Apply knowledge of basic medical and technological sciences in periodontology.
- Competence II: Plan dental treatments based on diagnosis, prognosis, and periodontal considerations.
- Competence III: Manage complex preventive and curative dental care tailored to the patient's specific needs.
- Competence IV: Communicate professionally with all interdisciplinary stakeholders regarding periodontal care.
- Competence V: Self-manage professional development as a specialized dentist in periodontology.
- Competence VI: Develop disciplinary and interdisciplinary research skills.

• **Concentration: Oral Diseases and Surgeries-Oral Surgery**

- Competence I: Apply foundational and advanced knowledge in oral surgery to diagnose and treat a variety of clinical conditions effectively.
- Competence II: Develop and implement patient-centered treatment plans that account for comprehensive diagnoses and specialized oral surgery needs.

- Competence III: Execute complex oral surgical procedures with a commitment to clinical excellence and preventive care.
- Competence IV: Communicate effectively and ethically with patients, families, and interdisciplinary teams to foster trust and collaboration.
- Competence V: Commit to continuous professional development to stay current with advancements in oral surgery and maintain high standards of patient care.
- Competence VI: Conduct meaningful research in oral surgery, contributing to the scientific community and enhancing clinical practices.
- Competence VII: Integrate biomedical sciences, biomaterials, and multidisciplinary approaches to innovate and enhance oral surgery research and practice.

• **Concentration: Pediatric Dentistry**
- Competence I: Apply knowledge of basic medical and technological sciences in pediatric dentistry.
- Competence II: Plan dental treatments based on diagnosis, prognosis, and pediatric dentistry considerations.
- Competence III: Manage complex, preventive, and curative dental care tailored to the patient's specific needs.
- Competence IV: Communicate professionally with all interdisciplinary stakeholders regarding pediatric dentistry.
- Competence V: Self-manage professional development as a specialized dentist in pediatric dentistry.
- Competence VI: Develop disciplinary and interdisciplinary research skills.

• **Concentration: Endodontics**

By the end of the 3-year postgraduate training program, graduates will be able to:

1. Clinical Competence
- Diagnose, plan, and perform non-surgical and surgical endodontic procedures to a specialist standard.
- Manage complex cases including teeth with calcified canals, resorptions, iatrogenic complications, and previously failed treatments.
- Apply aseptic and ergonomic principles in all clinical procedures.
- Perform endodontic microsurgery, including apicectomy, root-end filling, and surgical retreatment.
- Integrate clinical decision-making with patient-centered care, considering systemic and local health factors.

2. Advanced Diagnostic Skills
- Utilize advanced diagnostic methods including periapical radiographs, pulp testing, and cone-beam computed tomography (CBCT).
- Interpret clinical and radiographic findings to formulate differential diagnoses and comprehensive treatment plans.

3. Scientific and Research Literacy
- Critically analyze scientific literature and apply evidence-based principles in clinical practice.
- Formulate a research question, design and conduct a clinical or laboratory-based study, and present results in the form of a written thesis.
- Contribute to the scientific community through publications and/or presentations at national or international meetings.

4. Technological Proficiency
- Use the operating microscope effectively throughout endodontic procedures.
- Employ contemporary endodontic technologies such as rotary and reciprocating file systems, apex locators, ultrasonic instruments, and magnification tools.
- Integrate digital technologies for case documentation, treatment planning, and education.

5. Interdisciplinary Collaboration
- Communicate effectively with other dental and medical professionals to develop multidisciplinary treatment strategies.
- Participate in case discussions involving periodontics, prosthodontics, orthodontics, pediatric dentistry, and oral surgery.

6. Educational and Teaching Skills
- Deliver theoretical and clinical teaching to undergraduate students and/or dental colleagues.
- Supervise preclinical and clinical sessions and provide constructive feedback.
- Develop educational materials and contribute to continuing professional development activities.

7. Ethical and Professional Behavior
- Demonstrate professionalism, integrity, and ethical responsibility in all clinical and academic activities.

- Adhere to national regulations and European standards regarding patient safety, confidentiality, and informed consent.
- Reflect critically on clinical experiences to foster self-improvement and lifelong learning.

• **Concentration: Orthodontics**
- Competence I: Apply knowledge of basic medical and technological sciences.
- Competence II: Plan dental treatments based on diagnosis, prognosis, and orthodontics considerations.
- Competence III: Manage complex, preventive, and curative dental care tailored to the patient's specific needs in orthodontics.
- Competence IV: Communicate professionally with all stakeholders regarding orthodontic needs.
- Competence V: Self-manage professional development as a specialized orthodontic dentist.
- Competence VI: Develop disciplinary and interdisciplinary research skills.

• **Concentration: Esthetic and Prosthetic Dentistry**
- Competence I: Apply knowledge of basic medical and technological sciences in aesthetic dentistry and fixed and removable prosthodontics.
- Competence II: Plan dental treatments based on diagnosis, prognosis, and the specificities of aesthetic dentistry and fixed and removable prosthodontics.
- Competence III: Manage complex, preventive, and curative dental care tailored to the patient's specific needs.
- Competence IV: Communicate professionally with all stakeholders regarding the requirements of aesthetic dentistry and fixed and removable prosthodontics.
- Competence V: Self-manage professional development as a specialized dentist in aesthetic dentistry and fixed and removable prosthodontics.
- Competence VI: Develop disciplinary and interdisciplinary research skills.

ADMISSION REQUIREMENTS

• **Concentration: Oral Diseases and Surgeries-Periodontology**
Candidates are selected based on:
- Admission file of candidates holding a Doctor of Dental Surgery degree.
- Oral interview.
- Theoretical exam.

• **Concentrations:**
Oral Surgery and Implantology
Pediatric Dentistry
Endodontics
To be eligible for admission to the postgraduate training program in Endodontology, applicants must meet the following minimum criteria:

1. **Academic Qualifications**
   - Hold a **recognized dental degree (e.g., DDS, DMD, or equivalent)** from an accredited university.
2. **Language Proficiency**
   - Demonstrate **proficiency in the language of instruction** (English)
3. **Letters of Recommendation**
   - Submit at least **two letters of recommendation** from academic or clinical supervisors familiar with the applicant's abilities, work ethic, and interest in endodontics.
4. **Motivation and Interview**
   - Provide a **letter of motivation** outlining career goals and reasons for pursuing advanced training in endodontology.
   - Successfully **complete an interview process** (in-person) designed to assess clinical reasoning, commitment to the specialty, and suitability for the program.
5. **Research Interest**
   - Demonstrate a **genuine interest in research and academic development**, with potential for contribution to scientific activity during the program.

6. Entry Examinations

- Successfully pass an **admission examination,** which includes:
  - o A **theoretical written test** covering fundamental topics in endodontics and general dentistry.
  - o A **practical skills assessment**, evaluating manual dexterity and basic endodontic procedures on simulated models or extracted teeth.

• **Concentration: Orthodontics**

Candidates are selected based on the following:

- Oral interview (Open Interview, File review, Clinical case discussion)
- Theoretical examination
- Practical examination
- Article Analysis
- Admission file of candidates holding a Doctor of Dental Surgery degree

• **Concentration: Esthetic and Prosthetic Dentistry**

Candidates are selected based on the following:

- Oral interview
- Theoretical examination
- Practical examination
- Admission file of candidates holding a Doctor of Dental Surgery degree.

COURSES/CREDITS GRANTED BY EQUIVALENCE

- **Concentration: Oral Diseases and Surgeries-Periodontology (6 credits):** Paro Clinic: Clinical Periodontology (2 Cr.); Periodontology (2 Cr.); Periodontology (2 Cr.).
- **Concentration: Oral Surgery and Implantology (9 credits):** Local Anesthesia + Exodontia (2 Cr.); Oral Surgery (2 Cr.); Oral Surgery Clinic 1 (1 Cr.); Oral Surgery Clinic 2 (2 Cr.); Surgical Pathology (2 Cr.).
- **Concentration: Pediatric Dentistry (6 credits):** Pediatric Dentistry (2 Cr.); Pediatric Dentistry Clinic (2 Cr.); Pediatric Dentistry (1 Cr.); Pediatric Dentistry (1 Cr.).
- **Concentration: Endodontics (2 credits):** Clinical Endodontics (in multidisciplinary mode) (1 Cr.); Endodontics (1 Cr.).

PROGRAM REQUIREMENTS

Required Courses (120 credits)

Required Courses - Common Core (12 Cr.)

Fundamental Biomedical Sciences (CC.1) (2 Cr.), Research Methodology 1 (CC.1) (2 Cr.), Clinical and Research Skills (CC.1) (2 Cr.), Biomedical Biostatistics and Epidemiology (CC.1) (2 Cr.), Dental Sciences and Scientific Communication (CC.1) (2 Cr.), Innovative Dental Technologies (CC.1) (2 Cr.).

Required Courses - Common Core 2 – Biology – Concentrations: Oral Diseases and Surgeries-Periodontology - Oral Surgery and Implantology (12 Cr.)

Biocompatibility and Biomaterials (CC.2 Biol) (2 Cr.), Physiopathology of Oral Structures 1 (CC.2 Biol) (3 Cr.), Cell Communication and Development, Differentiation Genetics 1 (CC.2 Biol) (2 Cr.), Cell Communication and Development, Differentiation Genetics 2 (CC.2 Biol) (3 Cr.), Physiopathology of Oral Structures 2 (CC.2 Biol) (2 Cr.).

Required Courses - Common Core 2 – Biomaterials – Concentrations: Pediatric Dentistry, Endodontics, Orthodontics, Esthetic and Prosthetic Dentistry (12 Cr.)

Evaluation Methods and Laboratory Techniques (CC.2 Biom) (3 Cr.), Materials Science (CC.2 Biom) (3 Cr.), Dental Biomaterials, Biomaterials Inserted in the Plastic and Solid Phase (CC.2 Biom) (3 Cr.), Tissue Engineering, Nanotechnology and Biocompatibility (CC.2 Biom) (3 Cr.).

Required Courses - Concentration: Oral Diseases and Surgeries-Periodontology (90 Cr.)

Clinical Periodontology (6 Cr.), Periodontal Diseases and Therapies 1 (3 Cr.), Periodontal Diseases and Therapies 2 (3 Cr.), Synthesis Work: Literature Review and Presentation (2 Cr.), Practical Work (1 Cr.), Clinical Periodontology (9 Cr.), Synthesis Work (2 Cr.), Implantology 1 Paro (3 Cr.), Periodontal Diseases and Therapies 3 (2 Cr.), Clinical

Periodontology (9 Cr.), Implantology 2 (4 Cr.), Thesis Project (3 Cr.), Lasers in Periodontology (1 Cr.) Clinical Periodontology (9 Cr.), Synthesis Work (2 Cr.), Digital Implantology (1 Cr.), Clinical Periodontology (9 Cr.), Synthesis Work (3 Cr.), Clinical Periodontology (6 Cr.), Synthesis Work: Literature Review and Presentation (2 Cr.), Thesis (10 Cr.).

Required Courses - Concentration: Oral Surgery and Implantology (87 Cr.)
Oral and Maxillofacial Surgery Clinic 1 (7 Cr.), Teeth and Peridental Tissues (2 Cr.), Infectious, Inflammatory and Tumoral Pathologies of the Cervico-Facial Region (2 Cr.), Minor Oral Surgery (2 Cr.) Literature Review 1 (1 Cr.), Advanced Oral Surgery and Risk Assessment (3 Cr.), Oral and Maxillofacial Surgery Clinic 2 (7 Cr.), Pathologies of the Facial Bone and Maxillae (2 Cr.), Basics of Implantology (2 Cr.), Literature Review 2 (1 Cr.), Practical Work on Phantom Models (1 Cr.), Oral and Maxillofacial Surgery Clinic 3 (8 Cr.), Advanced Implantology (2 Cr.), Major Oral Surgery 2 (2 Cr.), Thesis Project (5 Cr.), Literature Review 3 (1 Cr.), Advanced Techniques in Oral and Implant Surgery (2 Cr.), Oral and Maxillofacial Surgery Clinic 4 (8 Cr.), Precancerous Lesions and Cancers of the Oral Cavity (2 Cr.), Workshops on Scientific Articles (Chir) (1 Cr.), Oral and Maxillofacial Surgery Clinic 5 (6 Cr.), Maxillofacial Surgery (1 Cr.), Advanced Oral Surgery (2 Cr.), Workshops on Scientific Articles (1 Cr.), Oral and Maxillofacial Surgery Clinic 6 (6 Cr.), Thesis (10 Cr.).

Required Courses - Concentration: Pediatric Dentistry (90 Cr.)
Pediatric Dentistry Clinic (2 Cr.), Pediatric Dentistry (2 Cr.), Pediatric Dentistry Preclinic (2 Cr.), Dental Treatment Under General Anesthesia (1 Cr.), Dental Treatment Under Inhalation Sedation (4 Cr.), Community Dentistry (Practical Work) 1 (2 Cr.), Article Analysis Pedo (2 Cr.), Pediatric Dentistry Clinic (4 Cr.), Pediatric Dentistry (1 Cr.), Dental Treatment Under General Anesthesia (1 Cr.), Dental Treatment Under Inhalation Sedation (4 Cr.), Community Dentistry (Practical Work) 2 (2 Cr.), Article Analysis (3 Cr.), Pediatric Dentistry Clinic (4 Cr.), Pediatric Dentistry (2 Cr.), Thesis Project (2 Cr.), Dental Treatment Under General Anesthesia (1 Cr.), Dental Treatment Under Inhalation Sedation (3 Cr.), Community Dentistry (Practical Work) 3 (2 Cr.), Article Analysis (1 Cr.), Pediatric Dentistry Clinic (4 Cr.), Pediatric Dentistry (1 Cr.), Dental Treatment Under General Anesthesia (2 Cr.), Dental Treatment Under Inhalation Sedation (4 Cr.), Community Dentistry (Practical Work) 4 (2 Cr.), Article Analysis (2 Cr.), Pediatric Dentistry Clinic (4 Cr.), Thesis Project (3 Cr.), Dental Treatment Under General Anesthesia (2 Cr.), Dental Treatment Under Inhalation Sedation (4 Cr.), Article Analysis (2 Cr.), Pediatric Dentistry Clinic (2 Cr.), Thesis (10 Cr.), Dental Treatment Under General Anesthesia (1 Cr.), Dental Treatment Under Inhalation Sedation (2 Cr.).

Required Courses - Concentration: Endodontics (94 Cr.)
Seminar: Current Literature - Case Presentation (2 Cr.), The Fundamental Science of Endodontics (3 Cr.), Advances in Endodontic Science (2 Cr.), Preclinical Endodontics (2 Cr.), Clinical Endodontics (14 Cr.), Advances in Clinical Management (2 Cr.), Interdisciplinary Endodontics (2 Cr.), Seminar: Current Literature - Case Presentation (1 Cr.), Article Analysis- Seminars (2 Cr.), Clinical Endodontics (19 Cr.), Extra Muros Clinical Endodontics (3 Cr.), Oral Presentations (2 Cr.), Clinical Endodontics (12 Cr.), Endodontics Topics Presentations (2 Cr.), Clinical Case Presentation (3 Cr.), Thesis 1 (5 Cr.), Clinical Endodontics/Peer Tutoring (4 Cr.), Clinical Case Presentation (1 Cr.), Thesis Project (5 Cr.), Clinical Endodontics/Peer Tutoring (2 Cr.), Endodontics Seminars (1 Cr.), Thesis 2 (5 Cr.).

Required Courses - Concentration: Orthodontics (100 Cr.)
Orthodontic Clinical 1 (2 Cr.), Preclinical Orthodontics (3 Cr.), Basic Sciences in Orthodontics (2 Cr.), Preparatory Session (1 Cr.), Orthodontic Techniques 1 (1 Cr.), Typodont 1 (1 Cr.), Orthodontic Clinical 2 (12 Cr.), Typodont 2 (3 Cr.), Orthodontic Techniques 2 (2 Cr.), Orthodontic Clinical 3 (12 Cr.), Orthodontics and Interdisciplinary Treatments 1 (1 Cr.), Orthodontics and Interdisciplinary Treatments 2 (1 Cr.), Research and Thesis 1 (2 Cr.), Literature Review 1 (2 Cr.), Orthodontic Clinical 4 (12 Cr.), Research and Thesis 2 (3 Cr.), Literature Review 2 (2 Cr.), Orthodontic Clinical 5 (12 Cr.), Research and Thesis 3 (5 Cr.), Literature Review 3 (2 Cr.), Orthodontic Clinical 6 (12 Cr.), Research and Thesis 4 (5 Cr.), Literature Review 4 (2 Cr.).

Required Courses - Concentration: Esthetic and Prosthetic Dentistry (100 Cr.)
Fixed Prosthodontics Fundamental Principles and Clinical Applications 1 (1 Cr.), Occlusion Concepts in Fixed Prosthodontics (1 Cr.), Instrumentation and Bio Materials in Restorative Dentistry (1 Cr.), Preclinical Occlusodontics (1 Cr.), Preclinical Removable Prosthodontics 1 and Clinical Assisting (2 Cr.), Preclinical Fixed Prosthodontics (3 Cr.), Removable Total Prosthetic Restoration and Laboratory Technique (2 Cr.), Synthesis Work: Literature Review and Presentation (2 Cr.), Clinical Restorative Dentistry (1 Cr.), Clinical Fixed Prosthodontics (2 Cr.), Fixed Prosthodontics Fundamental Principles and Clinical Applications 2 (2 Cr.), Restauration Procedures in Restorative Dentistry

(1 Cr.), Preclinical Restorative Dentistry (1 Cr.), Preclinical and Clinical Support Removable Prosthesis 2 (2 Cr.), Preclinical and Clinical Fixed Prosthodontics 2 (4 Cr.), Removable Partial Prosthetic Restoration and Laboratory Technique (2 Cr.), Synthesis Work (Prosthodontics and Restorative Dentistry) (2 Cr.), Clinical Esthetic Dentistry and Prosthodontics (9 Cr.), Thesis Project 1 (Prosth-DR) (2 Cr.), Implant Prosthodontics 1 (2 Cr.), Complete Denture Removable Prosthodontics (2 Cr.), Synthesis Work (Prosthodontics and Restorative Dentistry) (2 Cr.), Clinical Esthetic Dentistry and Prosthodontics (9 Cr.), Thesis Project 2 (Prosthesis-DR) (3 Cr.), Digital Fixed Prosthesis (2 Cr.), Implant Prosthodontics 2 (1 Cr.), Synthesis Work (2 Cr.), Clinical Esthetic Dentistry and Prosthodontics (9 Cr.), Gerodontology (1 Cr.), Thesis 1 (5 Cr.), Synthesis Work (Prosthodontics and Restorative Dentistry) (2 Cr.), Clinical Esthetic Dentistry and Prosthodontics (6 Cr.), Clinical Esthetic Dentistry and Prosthodontics (3 Cr.), Prosthetic and Multidisciplinary Correlation 2 (2 Cr.), Thesis 2 (5 Cr.), Clinical Case Presentation (1 Cr.), Synthesis Work (Prosthodontics and Restorative Dentistry) (2 Cr.).

SUGGESTED STUDY PLAN

Courses/Credits Granted by Equivalence

Code	Course Name	Credits
	Required Courses - Concentration: Oral Diseases and Surgeries - Periodontology	
003CLP1S1	Clinical Periodontology	2
003PAROS1	Periodontology	2
003PAROI5	Periodontology	2
	Total	**6**
	Required Courses - Concentration: Oral Surgery and Implantology	
003ALEXI6	Local Anesthesia + Exodontia	2
003CHORS1	Oral Surgery	2
003CCO1S1	Oral Surgery Clinic 1	1
003CCO1S3	Oral Surgery Clinic 3	2
003PATCI4	Surgical Pathology	2
	Total	**9**
	Required Courses - Concentration: Pediatric Dentistry	
003CDP1S3	Pediatric Dentistry	2
003CDP2S4	Pediatric Dentistry Clinic	2
003ODOPS1	Pediatric Dentistry	1
003ODOPS2	Pediatric Dentistry	1
	Total	**6**
	Required Courses - Concentration: Endodontics	
003CLE2S2	Clinical Endodontics (In Multidisciplinary Mode)	1
003ENDOS1	Endodontics	1
	Total	**2**

Semester 1

Code	Course Name	Credits
	Required Courses – Common Core	
003RCH1P1	Research Methodology 1 (CC.1)	2
003SBF1P1	Fundamental Biomedical Sciences (CC.1)	2

003CCLRP1	Clinical and Research Skills (CC.1)	2
	Total	**6**
	Required Courses - Concentration: Oral Diseases and Surgeries-Periodontology	
003SP18P1	Clinical Periodontology	6
003MP18P1	Periodontal Diseases and Therapies 1	3
003P218P1	Periodontal Diseases and Therapies 2	3
003TSP1P1	Synthesis Work: Literature Review and Presentation	2
003T118P1	Practical Work	1
	Total	**15**
	Required Courses - Concentration: Oral Surgery and Implantology	
003BASEP1	Minor Oral Surgery	2
003DTPDP1	Teeth and Peridental Tissues	2
003PINFP1	Infectious, Inflammatory and Tumoral Pathologies of the Cervico-Facial Region	2
003RE18P1	Literature Review 1	1
003CMF1P1	Oral and Maxillofacial Surgery Clinic 1	7
	Total	**14**
	Required Courses - Concentration: Pediatric Dentistry	
003CP18P1	Pediatric Dentistry Clinic	2
003DTP1P1	Pediatric Dentistry	2
003PC18P1	Pediatric Dentistry Preclinic	2
003SD18P1	Dental Treatment Under General Anesthesia	1
003PA18P1	Dental Treatment Under Inhalation Sedation	4
003TPS1P1	Community Dentistry (Practical Work) 1	2
003TSPEP1	Article Analysis Pedo	2
	Total	**15**
	Required Courses - Concentration: Endodontics	
003SEMNP1	Seminar: Current Literature - Case Presentation	2
003SFENP1	The Fundamental Science of Endodontics	3
003AVSEP1	Advances in Endodontic Science	2
003PRENP1	Preclinical Endodontics	2
	Total	**9**
	Required Courses - Concentration: Orthodontics	
003ORCLP1	Orthodontic Clinical 1	2
003PO18P1	Preclinical Orthodontics	3
003SCFOP1	Basic Sciences in Orthodontics	2
003SEPRP1	Preparatory Session	1
003TI18P1	Orthodontic Techniques 1	1
003TYP2P1	Typodont 1	1
	Total	**10**

	Required Courses - Concentration: Esthetic and Prosthetic Dentistry	
003PFPAP1	Fixed Prosthodontics Fundamental Principles and Clinical Applications 1	1
003LC18P1	Occlusion Concepts in Fixed Prosthodontics	1
003DR18P1	Instrumentation and Biomaterials in Restorative Dentistry	1
003POCCP1	Preclinical Occlusodontics	1
003AM18P1	Preclinical Removable Prosthodontics 1 and Clinical Assisting	2
003FI18P1	Preclinical Fixed Prosthodontics	3
003RP18P1	Removable Total Prosthetic Restoration and Laboratory Technique	2
003TSP1P1	Synthesis Work: Literature Review and Presentation	2
	Total	**13**

Semester 2

Code	Course Name	Credits
	Required Courses – Common Core	
003BBEPP2	Biomedical Biostatistics and Epidemiology (CC.1)	2
003DENTP2	Dental Sciences and Scientific Communication (CC.1)	2
003TECHP2	Innovative Dental Technologies (CC.1)	2
	Total	**6**
	Required Courses - Concentration: Oral Diseases and Surgeries - Periodontology	
003CLNIP2	Clinical Periodontology	9
003MP18P2	Implantology 1 Paro	3
003P318P2	Periodontal Diseases and Therapies 3	2
	Total	**14**
	Required Courses - Concentration: Oral Surgery and Implantology	
003IMPLP2	Basics of Implantology	2
003FANTP2	Practical Work on Phantom Models	1
003RE18P2	Literature Review 2	1
003EVCHP2	Advanced Oral Surgery and Risk Assessment	3
003PMFMP2	Pathologies of the Facial Bone and Maxillae	2
003CMF2P2	Oral and Maxillofacial Surgery Clinic 2	7
	Total	**16**
	Required Courses - Concentration: Pediatric Dentistry	
003CP18P2	Pediatric Dentistry Clinic	4
003DP18P2	Pediatric Dentistry	1
003AG18P2	Dental Treatment Under General Anesthesia	1
003PA18P2	Dental Treatment Under Inhalation Sedation	4
003TPS2P2	Community Dentistry (Practical Work) 2	2
003TS18P2	Article Analysis	3
	Total	**15**

	Required Courses - Concentration: Endodontics	
003CQ18P2	Clinical Endodontics	14
003EN18P2	Advances in Clinical Management	2
003LE18P2	Interdisciplinary Endodontics	2
003TED2P2	Seminar: Current Literature - Case Presentation	1
	Total	**19**
	Required Courses - Concentration: Orthodontics	
003CLO1P2	Orthodontic Clinical 2	12
003TYP1P2	Typodont 2	3
003TR18P2	Orthodontic Techniques 2	2
	Total	**17**
	Required Courses - Concentration: Esthetic and Prosthetic Dentistry	
003DR18P2	Clinical Restorative Dentistry	1
003PF18P2	Clinical Fixed Prosthodontics	2
003PFPAP2	Fixed Prosthodontics Fundamental Principles and Clinical Applications 2	2
003TD18P2	Restauration Procedures in Restorative Dentistry	1
003PDREP2	Preclinical Restorative Dentistry	1
003AM18P2	Preclinical and Clinical Support Removable Prosthesis 2	2
003PE18P2	Preclinical and Clinical Fixed Prosthodontics 2	4
003RPPLP2	Removable Partial Prosthetic Restoration and Laboratory Technique	2
003TSP2P2	Synthesis Work (Prosthodontics and Restorative Dentistry)	2
	Total	**17**

Semester 3

Code	Course Name	Credits
	Common Courses 2 – Biology – Concentrations: Oral Diseases and Surgeries - Periodontology - Oral Surgery and Implantology	
003BC18P2	Biocompatibility and Biomaterials (CC.2 Biol)	2
003PH18P2	Physiopathology of Oral Structures 1 (CC.2 Biol)	3
	Total	**5**
	Common Courses 2 – Biomaterials – Concentrations: Pediatric Dentistry, Endodontics, Orthodontics, Esthetic and Prosthetic Dentistry	
003ML18P1	Evaluation Methods and Laboratory Techniques (CC.2 Biom)	3
003SM18P2	Materials Sciences (CC.2 Biom)	3
	Total	**6**
	Required Courses - Concentration: Oral Diseases and Surgeries - Periodontology	
003TCP3P3	Clinical Periodontology	9
003MI18P3	Implantology 2	4
003PRPAP3	Thesis Project	3
003LASRP3	Lasers in Periodontology	1
	Total	**17**

	Required Courses - Concentration: Oral Surgery and Implantology	
003IMDIP3	Major Oral Surgery 2	2
003IMAVP3	Advanced Implantology	2
003PM18P3	Thesis Project	5
003RL18P3	Literature Review 3	1
003CMF3P3	Oral and Maxillofacial Surgery Clinic 3	8
	Total	**17**
	Required Courses - Concentration: Pediatric Dentistry	
003CP18P3	Pediatric Dentistry Clinic	4
003DTP2P3	Pediatric Dentistry	2
003PR18P3	Thesis Project	2
003AN18P3	Dental Treatment Under General Anesthesia	1
003SP18P3	Dental Treatment Under Inhalation Sedation	3
003TPDPP3	Community Dentistry (Practical Work) 3	2
003TR18P3	Article Analysis	1
	Total	**15**
	Required Courses - Concentration: Endodontics	
003ANALP3	Article Analysis- Seminars	2
003CD18P3	Clinical Endodontics	19
003CE18P3	Extra Muros Clinical Endodontics	3
003EX18P3	Oral Presentations	2
	Total	**26**
	Required Courses - Concentration: Orthodontics	
003CQ18P3	Orthodontic Clinical 3	12
003OI18P3	Orthodontics and Interdisciplinary Treatments 1	1
003OT18P3	Orthodontics and Interdisciplinary Treatments 2	1
003MR18P3	Research and Thesis 1	2
003RLO2P3	Literature Review 1	2
	Total	**18**
	Required Courses - Concentration: Esthetic and Prosthetic Dentistry	
003LI18P3	Clinical Esthetic Dentistry and Prosthodontics	9
003P118P3	Thesis Project 1 (Prosth-DR)	2
003PI18P3	Implant Prosthodontics 1	2
003RH18P3	Complete Denture Removable Prosthodontics	2
003TVP3P3	Synthesis Work (Prosthodontics and Restorative Dentistry)	2
	Total	**17**

Semester 4

Code	Course Name	Credits
	Common Courses 2 – Biology – Concentrations: Oral Diseases and Surgeries - Periodontology - Oral Surgery and Implantology	
003CC18P2	Cell Communication and Development, Genetic Differentiation 1 (CC.2 Biol)	2
003CD18P2	Cell Communication and Development, Genetic Differentiation 2 (CC.2 Biol)	3
003PS18P2	Physiopathology of Oral Structures 2 (CC.2 Biol)	2
	Total	**7**
	Common Courses 2 – Biomaterials – Concentrations: Pediatric Dentistry, Endodontics, Orthodontics, Esthetic and Prosthetic Dentistry	
003IT18P2	Tissue Engineering, Nanotechnology and Biocompatibility (CC.2 Biom)	3
003MADEM2	Dental Biomaterials, Biomaterials Inserted in the Plastic and Solid Phase (CC.2 Biom)	3
	Total	**6**
	Required Courses - Concentration: Oral Diseases and Surgeries - Periodontology	
003SP18P4	Clinical Periodontology	9
003SN18P4	Synthesis Work	2
003PADIP4	Digital Implantology	1
	Total	**12**
	Required Courses - Concentration: Oral Surgery and Implantology	
003APMLP4	Advanced Techniques in Oral and Implant Surgery	2
003TS18P4	Workshops on Scientific Articles	1
003LPCCP4	Precancerous Lesions and Cancers of the Oral Cavity	2
003CMF4P4	Oral and Maxillofacial Surgery Clinic 4	8
	Total	**13**
	Required Courses - Concentration: Pediatric Dentistry	
003CP18P4	Pediatric Dentistry Clinic	4
003DP18P4	Pediatric Dentistry	1
003STAHP4	Dental Treatment Under General Anesthesia	2
003PA18P4	Dental Treatment Under Inhalation Sedation	4
003TPDPP4	Community Dentistry (Practical Work) 4	2
003TV18P4	Article Analysis	2
	Total	**15**
	Required Courses - Concentration: Endodontics	
003CD18P4	Clinical Endodontics	12
003EE18P4	Endodontics Topics Presentations	2
003PRENP4	Clinical Case Presentation	3
	Total	**17**
	Required Courses - Concentration: Orthodontics	
003CQ18P4	Orthodontic Clinical 4	12
003MR18P4	Research and Thesis 2	3

003RLO3P4	Literature Review 2	2
	Total	**17**
	Required Courses - Concentration: Esthetic and Prosthetic Dentistry	
003DR18P4	Clinical Esthetic Dentistry and Prosthodontics	9
003P218P4	Thesis Project 2 (Prosthesis-DR)	3
003DGITP4	Digital Fixed Prosthesis	2
003PI18P4	Implant Prosthodontics 2	1
003TD18P4	Synthesis Work	2
	Total	**17**

Semester 5

Code	Course Name	Credits
	Required Courses - Concentration: Oral Diseases and Surgeries - Periodontology	
003CLNIP5	Clinical Periodontology	9
003TSM5P5	Synthesis Work	2
	Total	**11**
	Required Courses - Concentration: Oral Surgery and Implantology	
003MFCHP5	Maxillofacial Surgery	1
003CHAVP5	Advanced Oral Surgery	2
003CMF5P5	Oral and Maxillofacial Surgery Clinic 5	6
003TS18P5	Workshops on Scientific Articles	1
	Total	**10**
	Required Courses - Concentration: Pediatric Dentistry	
003CP18P5	Pediatric Dentistry Clinic	4
003PR18P5	Thesis Project	3
003SD18P5	Dental Treatment Under General Anesthesia	2
003PA18P5	Dental Treatment Under Inhalation Sedation	4
003TV18P5	Article Analysis	2
	Total	**15**
	Required Courses - Concentration: Endodontics	
003MM18P5	Thesis 1	5
003CLTUP5	Clinical Endodontics/Peer Tutoring	4
003PT18P5	Clinical Case Presentation	1
003PM18P3	Thesis Project	5
	Total	**15**
	Required Courses - Concentration: Orthodontics	
003CQ18P5	Orthodontic Clinical 5	12
003MR18P5	Research and Thesis 3	5
003RLO4P5	Literature Review 3	2
	Total	**19**

	Required Courses - Concentration: Esthetic and Prosthetic Dentistry	
003DR18P5	Clinical Esthetic Dentistry and Prosthodontics	9
003LGODP5	Gerodontology	1
003MM18P5	Thesis 1	5
003TSP5P5	Synthesis Work (Prosthodontics and Restorative Dentistry)	2
	Total	**17**

Semester 6

Code	Course Name	Credits
	Required Courses - Concentration: Oral Diseases and Surgeries - Periodontology	
003PPROP6	Clinical Periodontology	6
003TSM5P6	Synthesis Work: Literature Review and Presentation	2
003MM18P6	Thesis	10
	Total	**21**
	Required Courses - Concentration: Oral Surgery and Implantology	
003MM18P6	Thesis	10
003CMF6P6	Oral and Maxillofacial Surgery Clinic 6	6
	Total	**16**
	Required Courses - Concentration: Pediatric Dentistry	
003CP18P6	Pediatric Dentistry Clinic	2
003MM18P6	Thesis	10
003SD18P6	Dental Treatment Under General Anesthesia	1
003PA18P6	Dental Treatment Under Inhalation Sedation	2
	Total	**15**
	Required Courses - Concentration: Endodontics	
003CD18P6	Clinical Endodontics/Peer Tutoring	2
003EE18P6	Endodontics Seminars	1
003ME18P6	Thesis 2	5
	Total	**8**
	Required Courses - Concentration: Orthodontics	
003CQ18P6	Orthodontic Clinical 6	12
003MR18P6	Research and Thesis 4	5
003RLO3P6	Literature Review 4	2
	Total	**19**
	Required Courses - Concentration: Esthetic and Prosthetic Dentistry	
003DR18P6	Clinical Esthetic Dentistry and Prosthodontics	6
003AD18P6	Clinical Esthetic Dentistry and Prosthodontics	3
003CO18P6	Prosthetic and Multidisciplinary Correlation 2	2
003ME18P6	Thesis 2	5
003PC18P6	Clinical Case Presentation	1

003TSP6P6	Synthesis Work (Prosthodontics and Restorative Dentistry)	2
	Total	**19**

COURSE DESCRIPTION

003PAROS1 Periodontology 2 Cr.

This course enables students to diagnose and develop treatment plans for patients with simple and advanced periodontal disease.

- Mucogingival surgery: gum augmentation
- Clinical and radiological examination, design of a treatment plan
- Flaps in periodontal surgery
- Ortho-periodontal considerations
- Periodontal and occlusal pre-prosthetic considerations
- Flaps, grafts and sutures in periodontal surgery (Practical Work)
- Endo-periodontal lesions
- Treatments for furcation damage
- Pathogenesis of periodontal diseases
- Initiation to the clinic: recall (Practical Work)
- Reductive and regenerative bone surgery
- Periodontal healing: clinical and histological
- Pre-prosthetic periodontal surgeries

003PAROI5 Periodontology 2 Cr.

Supplemented by Practical Work (003TPE216)
This course enables students to develop diagnostic and treatment planning skills for managing simple periodontal diseases.

- Chemical treatment of periodontal diseases
- Aggressive localized and generalized periodontitis
- Periodontal maintenance. Reading note (Practical Work)
- Dental plaque and tartar
- Periodontal parameters and treatment plan. E.D (Practical Work)
- Aggravating factors of periodontal diseases
- Anatomy and histology of the periodontium
- Classification and epidemiology of periodontal diseases
- Chronic periodontitis
- Pathogenesis of periodontal diseases
- Susceptibility factors for periodontal disease
- Periodontal diseases and systemic diseases
- Genetics and periodontal disease
- Non-surgical treatment of periodontal disease

003CLP1S1 Clinical Periodontology 2 Cr.

This course enables students to provide non-surgical treatment for early-stage periodontal disease.

003ALEXI6 Local Anesthesia + Exodontia 2 Cr.

This course provides students with a thorough understanding of local anesthesia techniques and the principles of exodontia (tooth extraction). Students will learn to effectively administer local anesthesia, prepare patients for dental extractions, and manage perioperative and postoperative complications.

- Anesthetic products
- Anesthesia instrumentation
- Techniques of maxillary anesthesia
- Techniques of mandibular anesthesia

- Specialized anesthesia techniques E.D.
- Local anesthesia complications
- General anesthesia complications
- Patient preparation for dental extraction
- Principles and techniques of maxillary extraction
- Principles and techniques of mandibular extraction
- Extraction of roots and apexes
- Extraction of impacted wisdom teeth
- Perioperative complications
- Postoperative complications
- Postoperative care

003CHORS1 Oral Surgery 2 Cr.

This course provides students with comprehensive knowledge and practical skills in oral surgery. Students will learn to manage various surgical procedures, use instruments correctly, and understand the pharmacological principles applied to oral surgery. Special attention is given to the prevention and management of complications.

003CCO1S3 Oral Surgery Clinic 3 2 Cr.

By the end of this course, students will be able to:
- Understand the importance of asepsis in minor oral surgery procedures and apply aseptic protocols and techniques to minimize the risk of infections.
- Understand the anatomical principles related to tooth extractions and develop technical skills to perform accurate extractions.
- Master wisdom teeth avulsion techniques, with a focus on managing potential complications.
- Develop specialized skills for multiple extractions and alveolectomies and manage potential complications related to these extractions.
- Apply this knowledge to optimize post-extraction healing and minimize complications and develop suturing skills to ensure optimal healing.
- Students will be prepared to practice tooth extractions competently, integrating theoretical knowledge, advanced technical skills, and a thorough understanding of the principles of complication management

003CCO1S1 Oral Surgery Clinic 1 1 Cr.

This course enables students to master the techniques for administering local and regional dental anesthesia and to develop skills for choosing the most appropriate technique based on the procedure and the patient's needs. Students will also learn to assess the medical and dental conditions of the patient prior to a tooth extraction, gain a deep understanding of anatomical principles related to dental extractions, and develop technical skills to perform precise and effective extractions. The course emphasizes the importance of postoperative care in the healing process and provides guidance on measures to minimize discomfort and reduce the risk of complications.

By the end of this course, students will be able to:
- Perform dental extractions with a focus on effective pain management, patient safety, and the prevention of complications throughout the process.
- Perform local or regional anesthesia according to the nature of the procedure.
- Perform simple extractions of single-rooted and multi-rooted teeth.
- Assess the patient's health status and choose pre-medication and medication accordingly.
- Communicate effectively with all actors involved in the surgical procedure.
- Clinical training
- Clinical supervision

003PATCI4 Surgical Pathology 2 Cr.

By the end of this course, students will be able to explain the fundamental principles of pathophysiology, diagnosis, and treatment of common surgical conditions.

003ODOPS1 Pediatric Dentistry 1 Cr.

This required course is taught in the 4th year of the Doctor of Dental Surgery program, semester S1. It will be complemented by practical work in semester S6 (003TPOPS2).
By the end of these courses, students should be able to establish a pediatric dental treatment plan, manage child patients, and provide all necessary pediatric dental therapies.

- Diagnostic and radiology in pediatric dentistry (Practical Work)
- Biological examination in dentistry (Practical Work)
- Biological examination in dentistry
- Pain control in children
- Pharmacology in pediatric dentistry
- Restorative techniques in deciduous dentition
- Dental extraction techniques in children
- Traumatology in deciduous dentition
- Caries risk control
- Life cycle, morphological characteristics of deciduous teeth, and dental eruption sequence 1
- Occlusal guidance in pediatric dentistry
- Traumatology in immature permanent dentition
- Dental treatment of disabled or ill patients
- Emotional development, psychomotor development, and growth
- Behavior management methods in pediatric dentistry
- Biomaterials used in pediatric dentistry
- Occupational diseases of the dentist (reading note)
- Pulp therapy in deciduous dentition 1: pulpotomy (Practical Work)
- Pulp therapy in deciduous dentition 2: pulpectomy (Practical Work)
- Oral Pathology in Pediatric Dentistry 1 (Practical Work)
- Oral Pathology in Pediatric Dentistry 2 (Practical Work)
- Application of Laser in pediatric dentistry

003ODOPS2 Pediatric Dentistry 1 Cr.

Preclinical work
This required course is taught in the 4th year of the Doctor of Dental Surgery program, semester S2.
By the end of this course, students will be able to manage a child patient and provide all necessary pediatric dental therapies.

003CDP1S3 Pediatric Dentistry 2 Cr.

This course consists of an internship conducted in the 5th year of the Doctor of Dental Surgery program, semester S3.
It covers incisor-molar hypomineralization: differential diagnosis and treatment.

003CDP2S4 Pediatric Dentistry Clinic 2 Cr.

This course consists of an internship conducted in the 5th year of the Doctor of Dental Surgery program, semester S4.

003CLE2S2 Clinical Endodontics (In Multidisciplinary Mode) 3 Cr.

This course covers clinical endodontics.

003ENDOS1 Endodontics 2 Cr

This required course is taught in the 3rd year of the Doctor of Dental Surgery program. It is complemented by a workshop on shaping and filling of mono- and bi-radicular teeth (003TPE216)
Students will master the stages of endodontic treatment: filling of mono- and bi-radicular teeth, simple and complex, conventional endodontics and the different phases of retreatment of molars, as well as managing emergencies and complications.

- Pulpal and radicular anatomy of molars
- Fracture of NiTi
- Complex case strategies
- Cleaning and shaping of molars
- Shaping molars with NiTi
- Access cavities on molars: principles and risks
- Warm vertical compaction
- Pulpal and peri-radicular diseases 2: emergencies and pain control
- Loco-regional anesthesia in endodontics
- Treatment of resorptions and immature apices (MTA)
- Pulpal and peri-radicular diseases 1: operative protocol and treatment plan
- Molar retreatment: case selection
- Molar retreatment: coronary & radicular access

003RCH1P1 Research Methodology 1 (CC.1) 2 Cr.

This common required course, taught in the first year of the specialty program, covers core dental topics through various focused chapters.
- Bibliographic research
- Critical analysis of a scientific article
- Development of a research protocol

003SBF1P1 Fundamental Biomedical Sciences (CC.1) 2 Cr.

This common required course, taught in the first year of the specialty program, covers core dental topics through various focused chapters.
- Biostatistics
- Scientific writing
- Scientific communication

003CCLRP Clinical and Research Skills (CC.1) 2 Cr.

This common required course, taught in the first year of the specialty program, covers core dental topics through various focused chapters.
- Immunology
- Specialized microbiology
- Molecular and general biology
- Extracellular matrix and bone remodeling

003BBEPP2 Biomedical Biostatistics and Epidemiology (CC.1) 2 Cr.

This common required course, taught in the first year of the specialty program, covers core dental topics through various focused chapters.
- Biomedical biostatistics
- Biomedical biostatistics (Supervised Work)
- Epidemiology

003DENTP2 Dental Sciences and Scientific Communication (CC.1) 2 Cr.

This common required course, taught in the first year of the specialty program, covers core dental topics through various focused chapters.
- Odontium
- Mechanisms of pain
- Craniofacial imaging
- Photography applied to research

003STLBP2 **Innovative Dental Technologies (CC.1)** **2 Cr.**

This common required internship, conducted in the first year of the specialty program, covers core dental topics through various focused chapters.

- Digital dentistry
- LRCF research axes
- Laboratory internship (TD)

003BC18P2 **Biocompatibility and Biomaterials (CC.2 Biol)** **2 Cr.**

This common required course examines the biocompatibility of biomaterials and related laboratory techniques.
Key topics include:

- Platelet factors in bone healing + article
- Adipose cells - cell culture, carcinogenesis, mutagenesis
- Immunological reminders, and generalities on the biocompatibility of biomaterials.
- Biocompatibility of endodontic materials and composite resins, biocompatibility of periodontal materials and dental implants, biocompatibility of metals, alloys, and ceramics.
- Biocompatibility of amalgams and mercury, fluoride toxicity (1h), and 2h cell culture lab.

003PH18P2 **Pathophysiology of Oral Structures 1 (CC.2 Biol)** **3 Cr.**

This common required course introduces students to the elements of the extracellular matrix and provides an analysis of its components
Key topics include: Biology of covering tissues, skin, and gingiva: (cell-matrix extracellular interactions, functions of the basal lamina, physiological aging, matrix remodeling).
Pathophysiology of connective tissues: (inflammatory pathologies, fibrosing pathologies, hereditary and/or acquired connective tissue pathologies).

003CC18P2 **Cell Communication and Development, Genetic Differentiation 1 (CC.2 Biol)** **2 Cr.**

This common required course covers histological and immunohistological analysis techniques in the lab and explores the aging phenomena of connective tissue in vitro.
Key topics include:

- Cell junctions and oral mucosa, salivary glands, epithelial stem cells, cytokeratins.
- Elements of dental organ formation.
- Initiation stage and dental identity, morphogenesis and odontoblastic differentiation.
- The alveolodental skeleton: genesis and characteristics, physiopathological aspects.
- Genetic polymorphism: diagnosis and manifestations at the oral cavity level.

003CD18P2 **Cell Communication and Development, Genetic Differentiation 2 (CC.2 Biol)** **3 Cr.**

This common required course studies specific structures and properties of proteins in vitro.

003PS18P2 **Pathophysiology of Oral Structures 2 (CC.2 Biol)** **2 Cr.**

Lecture

003MADEM2 **Dental Biomaterials, Biomaterials inserted in the Plastic and Solid Phase (CC.2 Biom)** **3 Cr.**

This course provides information on the materials used in restorative, and prosthodontic procedures in dentistry. It introduces the physical and chemical properties that are related to the selection and use of dental biomaterials, including their composition and mechanical properties.
This course explains the behavior of dental biomaterials in relation to their composition and structure.
It also features presentations by speakers from the industrial and research world.

003IT18P2 Tissue Engineering, Nanotechnology and Biocompatibility (CC.2 Biom) 3 Cr.

This course aims to:
- Provide an overview of the general principles of tissue engineering and nanotechnology, as well as their applications and future prospects.
- Explain the interactions between materials and the biological environment including biocompatibility, toxicity, degradability, bifunctionality, biosecurity, and more.

003ML18P1 Evaluation Methods and Laboratory Techniques (CC.2 Biom) 3 Cr.

This course introduces students to methods of in vitro evaluation of dental materials in the research laboratory. It also provides students with basic knowledge of the different laboratory techniques.
Additionally, the course covers the manufacturing processes specific to each category of material.

003SM18P2 Materials Science (CC.2 Biom) 3 Cr.

This course provides students with fundamental knowledge of the mechanical, physical and chemical properties, structure, and behavior of each category of biomaterials used in dentistry, in relation to their function, application and service.

003TCP3P3 Clinical Periodontology 9 Cr.

This clinical course is assessed each semester, with the exception of the 7th year. The level of mastery evolves based on the work completed.
Objective: Non-surgically and surgically treat advanced periodontal disease cases and moderate implant cases in a multidisciplinary setting.

003CLNIP2 Clinical Periodontology 9 Cr.

This clinical course is assessed each semester. The level of mastery evolves based on the work completed.
Objective: Non-surgically and surgically treat advanced periodontal disease cases and moderate implant cases in a multidisciplinary setting.

003SP18P1 Clinical Periodontology 6 Cr.

This clinical course is assessed each semester. The level of mastery evolves based on the work completed.
Objective: Non-surgically treat moderate and advanced periodontal disease cases within a multidisciplinary setting.

003SP18P4 Clinical Periodontology 9 Cr.

This clinical course is taught in the 4th semester and is assessed each semester.
The level of mastery evolves based on the work completed.

003CLNIP5 Clinical Periodontology 9 Cr.

This required common clinical course is taught in the 8th year.
Objective: Surgically treat advanced periodontal disease, complex implant cases, and bone and tissue regeneration cases within a multidisciplinary setting.

003PPROP6 Clinical Periodontology 6 Cr.

This clinical course is taught in the 6th semester and is assessed each semester.
The level of mastery evolves based on the work completed.

003MP18P2 Implantology 1 Paro 3 Cr.

This course is common and required.
Prerequisite 003IMPP1
Objective: Learn implant treatment plans and surgical techniques.

Key topics include:
- Implant surgery: evolution and principles (Practical Work)
- The pre-implant assessment
- The pre-implant assessment: SAC Class ITI (Practical Work)
- Bone resorption around implants
- Osseointegration: fundamental mechanisms
- Osseointegration: fundamental mechanisms (Practical Work)
- The implant treatment plan
- Bone resorption around implants (Practical Work)
- Unit replacements in implantology
- Implant surgery: evolution and principles
- Assessment of implant stability
- Orthodontics and implantology 1-2
- Orthodontic implants
- Pre-implant X-ray interpretation (1)
- Pre-implant X-ray interpretation (2)
- Unit replacements in implantology (Practical Work)
- Implant surface conditions
- Implant surface states (Practical Work)
- Surgical anatomy
- Partial replacements in implantology
- Case presentation
- Implant stability assessment (Practical Work)
- Preservation of ridges and ROG (absorbable membranes)
- Ridge Preservation and ROG (Practical Work)
- Partial replacements in implantology (Practical Work)

003MI18P3 Implantology 2 4 Cr.

This course is common and required.
Objective: Design a multidisciplinary strategic periodontal treatment plan.
Key topics include:
- Immediate loading
- Orthodontics and implantology
- Autogenous bone grafts in implant surgery
- Lateral sinus fillers
- Internal sinus floor elevation
- Increase in toothless ridges

Practical Work: Implant surface conditions (reading note) - pre-implant scan interpretation (E.D.)

003LASRP3 Lasers in Periodontology 1 Cr.

This required course introduces the basic concepts of periodontal treatments using different types of laser.
By the end of this course, students will be able to plan and manage periodontal surgery using lasers.
Key topics include:
- Basic principles of laser equipment usage
- Clinical applications of laser techniques
- Practical work with various laser equipment

003PADIP4 Digital Implantology 1 Cr.

This course covers the basic principles of guided implant surgery.
Key topics include:
- Exploring implant software
- Optimizing the implant treatment plan for guided full rehabilitation

003MP18P1 Periodontal Diseases and Therapies 1 3 Cr.

This common required course is taught in the 1st semester of the 6th year.
Objective: Characterize, classify, and non-surgically treat periodontal disease.
Key topics include:
- Epidemiology of periodontal diseases
- Susceptibility factors
- Gingivitis associated with dental plaque
- Gingivitis not associated with dental plaque
- Pathogenic mechanisms
- Evolutionary mode of periodontal diseases
- Aggressive periodontitis
- Chronic periodontitis: clinical diagnosis
- Periodontal diseases and systemic diseases
- Periodontal diseases and systemic diseases (Practical Work)
- Inflammatory mechanisms and wound healing
- Gingival connective degrading enzymes (Practical Work)
- Host Response Modulations
- Prognostic factors of periodontal treatment (Practical Work)
- Chemical treatments for periodontal disease
- Non-surgical treatment of periodontal disease
- Genetic aspects of periodontal diseases
- Periodontal maintenance
- Smoking and periodontal healing (Practical Work)
- Oral halitosis (Practical Work)
- Gingival fluid (Practical Work)

003P218P1 Periodontal Diseases and Therapies 2 3 Cr.

This common required course is taught in the 1st semester of the 6th year.
Objective: Learn the surgical treatments for periodontal diseases.
Key topics include:
- Bone surgery: reduction techniques
- Gingivoplasty and flaps in periodontal surgery
- Crown lengthening: pre-prosthetic periodontal surgery
- Coronal lengthening (reading note)
- Bone surgery: filling materials, reconstructive techniques, bone grafts, autogenous
- Guided tissue regeneration: Emdogain
- Tissue engineering
- Growth factors
- Tissue scarring
- Long-term effectiveness of surgical and non-surgical techniques
- Post-operative antibiotic therapy, international recommendations (reading note)

003P318P2 Periodontal Diseases and Therapies 3 2 Cr.

This common required course enables students to:
- Recognize the different surgical and non-surgical therapeutic approaches to treating periodontal disease.
- Recognize the advantages, disadvantages, and usefulness of these techniques in treatment.
- Understand the interrelationships between periodontology and other dental specialties, as well as its role in the pathogenic mechanisms and treatment of teeth, and their supporting and surrounding tissues.

Key topics include:
- Periodontal healing
- Temporization on implants
- Tissue degrading enzymes
- Tissue engineering

- How to define and treat a complex case
- Periodontitis 1 Immuno/peri
- Perio Therapy Laser
- Full mouth disinfection
- Perio-prosthesis interrelationships 1-2
- Strategies of conservation of perio involved teeth
- 10th EWS soft fabric 2
- Oeriodontal therapy surgical v/s non-surgical
- Endo-implant interrelations perio 1-2
- Incision and sutures
- Periodontal plastic surgery 1-2
- Growth factors
- 10th EWS soft fabric 3
- Restorations fixed on implants
- 10th EWS soft fabric 1

003MM18P6 Thesis 10 Cr.

This required course enables students to develop the research skills necessary for earning a master's degree. By the end of this course, students will be able to conduct research specific to their discipline.

003TSP1P1 Synthesis Work: Literature Review and Presentation 2 Cr.

This course analyzes articles related to the teaching of the removable prosthesis ranging from the conventional prosthesis to the implant-retained prosthesis.
Key topics include:
- Bibliographic research (assistant)
- Digital smile design: application in DRE
- How to choose the right shade in restorative dentistry
- Treatment of white and brown lesions

003PRPAP3 Thesis Project 3 Cr.

This required course enables students to develop the research skills necessary for earning a master's degree. By the end of this course, students will be able to plan and manage research work.

003SN18P4 Synthesis Work 2 Cr.

This common required course is taught in the 2nd semester of the 7th year.
Objective: Analyze articles relating to periodontology according to the IMRAD method.

003TSM5P5 Synthesis Work 2 Cr.

This course is assessed each semester. The level of mastery evolves based on the work completed.
By the end of this course, students will be able to analyze articles relating to their discipline according to the IMRAD method.

003T118P1 Practical Work 1 Cr.

This common required course includes disciplinary practical work.
Key topics include:
- TD Prosthesis 2: 3i system
- Surgical guide: lengthening and implant
- Piezo surgery and bone grafting
- Dissection on animal jaws: flaps and grafting
- TD Photo shoot
- TD Implantology 1: Branemark and Replace systems
- TD Prosthesis 1: Branemark and Replace system

- TD Implantology 3: Strauman system
- TD Prosthesis 3: Strauman system
- TD Implantology 4: Astra system
- TD Prosthesis 4: Astra system
- RTG on dentoform and root amputation
- TD Implantology 2: 3i system

003IMDIP3 Major Oral Surgery 2 2 Cr.

This course explores advanced techniques in dental implantology, focusing on the management of soft tissues around implants and various methods of guided bone regeneration. Students will learn the principles of ridge preservation and approaches to sinus bone grafting.
Key topics include:
- Management of soft tissues around implants
- Use of bone substitutes in oral implantology
- Guided bone regeneration: indications and principles
- Ridge preservation: indications and technical variations
- Anatomy and physiology of the maxillary sinus
- Crestal sinus grafting approach
- Lateral sinus grafting approach
- Surgical augmentation procedures: separation
- Surgical augmentation procedures: osteotomy blocks
- Intraoral bone grafts
- Parietal bone blocks: principles and clinical applications
- Management of complications in oral implantology
- Peri-implantitis: etiology and treatment
- Timing of implant placement
- Immediate implant placement

003CHAVP5 Advanced Oral Surgery 2 Cr.

This course explores advanced techniques in oral surgery, including the use of piezosurgery and ultrasound for implant site preparation, lasers in oral surgery, zygomatic implants, platelet concentrates, as well as clinical applications of botulinum toxin and filler injection techniques.
Key topics include:
- Ultrasound implant site preparation
- Piezo workshop
- Lasers in oral surgery
- Laser workshop
- Zygomatic implants
- Platelet concentrates
- Clinical applications of botulinum toxin
- Filler injection techniques

003BASEP1 Minor Oral Surgery 2 Cr.

This course introduces the fundamental principles of oral surgery. Students will learn the essential techniques to successfully perform oral surgical interventions.
Key objectives include:
- Understand the general principles of oral surgery.
- Apply disinfection and sterilization measures to maintain a safe and hygienic surgical environment.
- Administer local anesthesia with a comprehensive understanding of surgical anatomy applied to oral surgery.
- Perform flap and suture techniques to promote optimal healing and minimize postoperative complications.
- Manage hemostasis effectively during surgical procedures.
- Diagnose and manage impacted wisdom teeth and other dental anomalies, such as germectomies, canines, and supernumerary teeth.
- Treat perioperative and postoperative complications associated with oral surgery.

003IMPLP2 Basic of Oral Implantology 2 Cr.

This course provides an in-depth introduction to implantology and the various implant systems used in dental practice. Students will learn the basics of implantology, including the macro- and micro-topography of implants, osseointegration, and the biology of soft tissues involved in implantology.
Key topics include:
- Introduction to implantology and implant systems
- Macro-topography and micro-topography of implants
- Osseointegration
- Biology of soft tissues in dental implantology
- Pre-implant evaluation and treatment planning
- Anatomical risks in implant surgery
- SAC classification: preoperative risk assessment
- Primary implant stability: biological principles
- Imaging techniques in implantology
- Radiographic interpretation in implantology
- Implant rehabilitation for single edentulous patients
- Implant rehabilitation for partially edentulous patients
- Implant rehabilitation for completely edentulous patients
- Postoperative and long-term follow-up

003TS18P4 Workshops on Scientific Articles 1 Cr.

This course equips students with skills in bibliographic research and public speaking. It includes a public speaking skill development program and sessions dedicated to bibliographic research.
Key topics include:
- Fundamental principles of public speaking
- Planning and structuring speeches
- Effective presentation techniques
- Use of visual and audiovisual aids
- Managing stress and anxiety
- Practicing feedback and presentation evaluation
- Developing self-confidence and assurance

003IMAVP3 Advanced Implantology 2 Cr.

This course provides students with comprehensive training in the use of digital technologies in dental implantology, covering both theoretical and practical aspects of digital implant planning, computer-aided prosthetic design (CAD), and the fabrication of dental prostheses using innovative digital tools.
Key topics include:
- Introduction to guided surgery
- Principles of implant planning and digital surgery
- Full-mouth rehabilitation (All on 4, All on 6)
- Application of digital implant-guided surgery: 3D imaging software, principles of biomechanics in implant prosthetics
- Temporary prosthesis in implant therapy
- Soft tissue management in implant prosthetics
- Occlusion and implants
- Surgical guide and implant-supported prosthesis
- Principles of loading protocols in oral implantology
- Immediate loading protocols in implantology
- Surgical guidelines for achieving aesthetics in the anterior zone
- Principles of aesthetic outcome evaluation

003PINFP1 Infectious, Inflammatory, and Tumoral Pathologies of the Cervico-Facial Region 2 Cr.

This course focuses on common head and neck pathologies encountered in dental practice. Students will explore

cervicofacial lymphadenopathies, conditions of the teeth related to the maxillary sinus, and pathologies of the salivary glands.
Key topics include:
- Understand and perform a complete examination of the oral cavity.
- Identify and describe common elementary lesions in oral dermatology.
- Recognize and manage immunobullous and vesicular diseases affecting the oral cavity.
- Identify different oral mucosal pigmentations and understand their causes.
- Understand and diagnose diseases of the salivary glands.
- Understand the indications and interpret the results of a complete blood count (CBC) in the context of oral pathology.
- Know the functions and contributions of the laboratory of cytology, pathology, and molecular biology in the diagnosis of oral pathologies.

003RE18P1 Literature Review 1 1 Cr.

This course familiarizes students with the principles and methods of scientific research in oral surgery. Through a series of seminars and practical workshops, students will explore the various stages of the literature review process and learn how to critically evaluate relevant scientific articles.
Key objectives include:
- Understand the fundamental principles of research in dental medicine.
- Formulate relevant research questions in the field of dentistry, identify gaps in the existing literature and propose significant research topics.
- Use bibliographic and documentary research techniques to retrieve relevant scientific articles in areas of interest.
- Critically read scientific articles, evaluate the quality of research methods used, the validity of the results obtained, and the relevance of the conclusions drawn.
- Acquire skills in academic writing and presentation of their literature review results, following academic publication standards.

003RE18P2 Literature Review 2 1 Cr.

This course familiarizes students with the principles and methods of scientific research in the field of oral surgery. Through a series of seminars and practical workshops, students will explore the different stages of the literature review process and learn how to critically evaluate relevant scientific articles.
Key objectives include:
- Understand the fundamental principles of research in dental medicine.
- Formulate relevant research questions in the field of dentistry, identify gaps in the existing literature and propose significant research topics.
- Use bibliographic and documentary research techniques to retrieve relevant scientific articles in areas of interest.
- Critically read scientific articles, evaluate the quality of research methods used, the validity of the results obtained, and the relevance of the conclusions drawn.
- Acquire skills in academic writing and presentation of their literature review results, following academic publication standards.

003RL18P3 Literature Review 3 1 Cr.

By the end of this course, students will be able to assess a multidisciplinary article and judge its scientific validity to justify the application of its results.
Key objectives include:
- Understand the fundamental principles of research in dental medicine.
- Formulate relevant research questions in the field of dentistry, identify gaps in the existing literature and propose significant research topics.
- Use bibliographic and documentary research techniques to retrieve relevant scientific articles in areas of interest.
- Critically read scientific articles, evaluate the quality of research methods used, the validity of the results obtained, and the relevance of the conclusions drawn.

- Acquire skills in academic writing and presentation of their literature review results, following academic publication standards.

003EVCHP2 Advanced Oral Surgery and Risk Assessment 3 Cr.

This course covers a wide range of topics, including applied oral and maxillofacial anatomy, management of high-risk patients, preprosthetic surgery, and the surgical treatment of odontogenic and non-odontogenic tumors. Students will learn to handle complications such as oroantral communications and oral nerve damage, and to manage irradiated, cardiac, diabetic patients, and those on bisphosphonates. They will also develop skills in general anesthesia, pain management, and case documentation.
Key topics include:
- Applied head and neck anatomy
- Preprosthetic tissue surgery
- Preprosthetic bone surgery
- Surgical treatment of odontogenic tumors
- Surgical treatment of non-odontogenic tumors
- Oroantral communication
- Oral nerve lesions
- High-risk patients 1
- High-risk patients 2
- Irradiated patients
- Cardiac patients
- Diabetes and other endocrinological issues
- Bisphosphonates in oral surgery
- General anesthesia in oral surgery
- Pain management in oral surgery
- Oral photography and case documentation

003APMLP4 Advanced Techniques in Oral and Implant Surgery 2 Cr.

This course provides students with a comprehensive understanding of the interactions between oral surgery and other fields of dentistry and medicine. This multidisciplinary approach allows students to acquire specialized skills and knowledge, integrating different perspectives for holistic clinical practice.
Key topics include:
- Endodontic microsurgery
- Endodontic microsurgery workshop 1
- Endodontic microsurgery workshop 2
- Gingivectomy, gingivoplasty, and crown lengthening
- Muco-gingival grafts
- Root amputation and hemisection
- Orthodontics and oral surgery (from an orthodontic perspective)
- Orthodontic surgery
- Nitrous oxide: guidelines, precautions, and complications
- Oral surgery in pediatric patients
- Forensic dentistry

003MFCHP5 Maxillofacial Surgery 1 Cr.

This course covers maxillofacial surgery, focusing on sinusitis of various origins and dental-related sinusitis, bone reconstruction of the jaws, and surgical treatment of tumors and jaw fractures. Students will learn orthognathic surgery techniques, classifications and repairs of cleft lips and palates, as well as facial cosmetic surgery and aesthetic suturing techniques.
Key topics include:
- Sinusitis: etiology and management
- Dental-origin sinusitis
- Bone reconstruction of the jaws

- Surgical treatment of jaw tumors
- Surgical treatment of jaw fractures
- Orthognathic surgery
- Cleft lips and palates: classification and repair
- Facial cosmetic surgery
- Aesthetic sutures

003CMF1P1 Oral and Maxillofacial Surgery Clinic 1 7 Cr.

This course provides students with advanced and practical training in oral and maxillofacial surgery as well as oral implantology. It aims to develop the clinical expertise needed to diagnose, plan, and execute surgical and implant treatments with precision and professionalism.
Key objectives include:
- Manage perioperative and postoperative complications associated with oral surgery.
- Medicate high-risk patients.
- Develop comprehensive and individualized treatment plans for patients requiring oral surgery and dental implants.
- Perform extractions of complex teeth and impacted and included wisdom teeth.
- Acquire practical skills in dental implant placement, including preoperative planning, surgical techniques, and postoperative management.
- Place dental implants following safety and hygiene protocols, and follow patients to ensure long-term success of the implantation.

003CMF2P2 Oral and Maxillofacial Surgery Clinic 2 7 Cr.

This course provides students with advanced and practical training in oral and maxillofacial surgery as well as oral implantology. It aims to develop the clinical expertise needed to diagnose, plan, and execute surgical and implant treatments with precision and professionalism.
Key objectives include:
- Manage perioperative and postoperative complications associated with oral surgery.
- Medicate high-risk patients.
- Develop comprehensive and individualized treatment plans for patients requiring oral surgery and dental implants.
- Perform extractions of complex teeth and impacted and included wisdom teeth.
- Acquire practical skills in dental implant placement, including preoperative planning, surgical techniques, and postoperative management.
- Place dental implants following safety and hygiene protocols, and follow patients to ensure long-term success of the implantation.

003CMF3P3 Oral and Maxillofacial Surgery Clinic 3 8 Cr.

This clinical course provides students with practical experience in oral and maxillofacial surgery. They will have the opportunity to apply their theoretical knowledge under the close supervision of experienced surgeons in a clinical setting, further developing their surgical skills.
Key topics include:
- Simple and complex tooth extractions
- Dental implant placement
- Biopsies and excisions of oral and maxillofacial lesions
- Management of surgical complications
- Soft tissue surgery

003PM18P3 Thesis Project 5 Cr.

This required course enables students to develop the research skills necessary for earning a master's degree. By the end of this course, students will be able to conduct research specific to their discipline.

003CMF4P4 Oral and Maxillofacial Surgery Clinic 4 8 Cr.

This clinical course provides students with practical experience in oral and maxillofacial surgery. They will have the opportunity to apply their theoretical knowledge under the close supervision of experienced surgeons in a clinical setting, further developing their surgical skills.
Key topics include:
- Simple and complex tooth extractions
- Dental implant placement
- Biopsies and excisions of oral and maxillofacial lesions
- Management of surgical complications
- Soft tissue surgery

003CMF5P5 Oral and Maxillofacial Surgery Clinic 5 6 Cr.

This clinical course provides students with practical experience in oral and maxillofacial surgery. They will have the opportunity to apply their theoretical knowledge under the close supervision of experienced surgeons in a clinical setting, further developing their surgical skills.
Key topics include:
- Simple and complex tooth extractions
- Dental implant placement
- Biopsies and excisions of oral and maxillofacial lesions
- Management of surgical complications
- Soft tissue surgery
- Cyst and tumor surgery
- Bone reconstruction
- Sinus graft

003CMF6P6 Oral and Maxillofacial Surgery Clinic 6 6 Cr.

This clinical course provides students with practical experience in oral and maxillofacial surgery. They will have the opportunity to apply their theoretical knowledge under the close supervision of experienced surgeons in a clinical setting, further developing their surgical skills.
Key topics include:
- Simple and complex dental extractions.
- Dental implant placement.
- Biopsies and excisions of oral and maxillofacial lesions.
- Management of surgical complications.
- Soft tissue surgery.
- Cyst and tumor surgery
- Bone reconstruction.
- Sinus grafting.

003PMFMP2 Pathologies of the Facial Bone and Maxillae 2 Cr.

This course covers various pathologies of the facial mass and maxilla, focusing on cervicofacial lymphadenopathies, interactions between teeth and the maxillary sinus, and the pathophysiology of the salivary glands. Students will learn to diagnose and treat benign and malignant salivary pathologies, perform oral biopsies and fine-needle aspirations, and analyze pulpoperiapical, tumoral, sinus, salivary, and lymph node lesions. The course also includes imaging techniques and anatomical-pathological interpretations.
Key topics include:
- Cervicofacial lymphadenopathies
- Teeth and the maxillary sinus: clinical overview and treatment principles
- Pathophysiology of the salivary glands
- Non-tumoral salivary gland pathologies (congenital and acquired)
- Benign and malignant salivary gland pathologies
- Oral biopsies: indications and techniques
- Fine-needle aspiration: indications, techniques, and limitations

- Anatomical pathology of pulpoperiapical, tumoral, sinus, salivary gland, and lymph node lesions
- Imaging and exploration of the maxillary sinus/salivary gland

003FANTP2 Practical Work on Phantom Models 1 Cr.

This course aims to provide dental students with in-depth practical experience using resin models for the placement of dental implants with various implant systems. Students will apply theoretical knowledge acquired in previous implantology courses and enhance their practical skills under the supervision of experts.
Key topics include:
- Nobel Replace Implant System (Surgical and Prosthetic)
- Megagen Implant System (Surgical and Prosthetic)
- 3I Implant System (Surgical and Prosthetic)
- BTK Implant System (Surgical and Prosthetic)
- Straumann Implant System (Surgical and Prosthetic)
- Orthodontic Mini-Screw System (Surgical)
- Geistlich GBR (Bone Substitute + Membrane)

003LPCCP4 Precancerous Lesions and Cancers of the Oral Cavity 2 Cr.

This course explores the clinical, epidemiological, and therapeutic aspects of precancerous lesions and cancers of the oral cavity. It covers a range of topics, from recognizing and managing potentially malignant lesions to the epidemiology and treatment of oral cancers.
Key topics include:
- Potentially malignant lesions of the oral cavity
- Squamous cell carcinoma: epidemiology, risk factors, and clinical forms
- Hematologic malignancies and other cancers of the oral mucosa
- Malignant tumors of the hard tissues of the oral cavity / Salivary gland tumors
- Role of head and neck tumor markers in the prognosis and diagnosis of oral cancer
- Radiotherapy
- Chemotherapy
- Effects of chemotherapy and radiotherapy on the oral cavity and their management
- Pharmacological control of pain and infection in cancer patients
- Blood tests: indications and interpretation

003TS18P5 Workshops on Scientific Articles 1 Cr.

By the end of this course, students will be able to evaluate a multidisciplinary article and judge its scientific validity to justify the application of its results.
Key objectives include:
- Understand the fundamental principles of research in dental medicine.
- Formulate relevant research questions in the field of dentistry, identify gaps in the existing literature and propose significant research topics.
- Use bibliographic and documentary research techniques to retrieve relevant scientific articles in areas of interest.
- Critically read scientific articles, evaluate the quality of research methods used, the validity of the results obtained, and the relevance of the conclusions drawn.
- Acquire skills in academic writing and presentation of their literature review results, following academic publication standards.

003MM18P6 Thesis 10 Cr.

This required course enables students to develop the research skills necessary for earning a master's degree.
By the end of this course, students will be able to conduct research specific to their discipline.
Key objectives include:
- Collect qualitative and quantitative data and analyze them according to the principles of scientific research.
- Present and defend the research orally.
- Conduct a brief and synthetic literature review, either discipline-specific or interdisciplinary.

- Formulate hypotheses or research objectives and validate them using the appropriate methodology.
- Write a thesis manuscript and a scientific article following scientific writing standards.
- Draw relevant conclusions based on the research findings.

003CP18P1 Pediatric Dentistry Clinic 2 Cr.

This course consists of clinical training on pediatric or special needs patients. It involves treating patients while awake in the dental chair.

003CP18P2 Pediatric Dentistry Clinic 4 Cr.

Clinical training.

003CP18P3 Pediatric Dentistry Clinic 4 Cr.

This course consists of clinical training on pediatric or special needs patients. It involves treating patients while awake in the dental chair.

003CP18P4 Pediatric Dentistry Clinic 4 Cr.

By the end of this course, students will be able to identify orofacial problems in children and describe appropriate treatments based on established protocols.
Key topics include:
- Periodontal disease in children
- Nutrition and dental health in children
- Cranio-mandibular disorders in children
- Psychomotor therapy
- Oral traumatology: primary teeth
- Oral traumatology: permanent teeth
- Speech therapy
- Pharmacology in pediatric dentistry
- Applied pharmacology
- Caries risk control
- Caries risk evaluation
- Radiological interpretation

003CP18P5 Pediatric Dentistry Clinic 4 Cr.

This course consists of clinical training on pediatric or special needs patients. It involves treating patients while awake in the dental chair.

003CP18P6 Pediatric Dentistry Clinic 2 Cr.

This course consists of clinical training on pediatric or special needs patients. It involves treating patients while awake in the dental chair.

003DTP1P1 Pediatric Dentistry 2 Cr.

By the end of this course, students will be able to discuss child psychology, conduct a general health assessment, and understand pharmacological approaches to painand behavior management. Moreover, this course covers the most common procedures in pediatric dentistry.
Key topics include:
- Nitrous oxide sedation
- Management of dental emergencies: practical act: pulse monitoring, blood pressure, swallowed object
- Dental treatment under general anesthesia from A to Z
- Local anesthesia in children
- Pain and anxiety in children
- Restorative dentistry

- Esthetic dentistry
- Endodontic treatment in primary dentition: pulpotomy
- Endodontic treatment in primary dentition: pulpectomy
- Early childhood caries
- Epidemiology and indices
- Scientific writing
- Research in Pediatric dentistry
- Epidemiology: application in the field
- Psychology of the child and pediatric dentistry
- Patient examination and treatment plan (Practical Work)

003DP18P2 Pediatric Dentistry 1 Cr.

By the end of this course, students will be able to discuss child psychology, conduct a general health assessment, and understand pharmacological approaches to pain and behavior management. Moreover, this course covers the most common procedures in pediatric dentistry.
Key topics include:
- Management of dental traumatology in children
- Endodontics on permanent teeth
- Special need patients and dental treatment
- Children with medical problems and dental treatment
- Classification of dental caries (ICDAS)
- Growth and development: Cranio facial
- Cephalometric analysis
- Space analysis
- Dental anomalies

003DTP2P3 Pediatric Dentistry 2 Cr.

By the end of this course, students will be able to discuss child psychology, conduct a general health assessment, and understand pharmacological approaches to pain and behavior management. Moreover, this course covers the most common procedures in pediatric dentistry.
Key topics include:
- Special need patients and dental treatment
- Endodontics on permanent teeth
- Classification of dental caries (ICDAS)
- Growth and development: Craniofacial
- Cephalometric analysis
- Space analysis
- Dental anomalies
- Management of dental traumatology in children
- Children with medical problems and dental treatment

003DP18P4 Pediatric Dentistry 1 Cr.

By the end of this course, students will be able to identify orofacial problems in children and describe appropriate treatments based on established protocols.
Key topics include:
- Periodontal diseases in children
- Nutrition and dental health of children
- Cranio-mandibular disorders in children
- Psychomotricity
- Oral traumas: primary teeth
- Oral traumas: permanent teeth
- Speech therapy
- Pharmacology in pediatric dentistry

- Applied pharmacology
- Caries risk control
- Caries risk assessment
- Radiological interpretation

003MM18P6 Thesis 10 Cr.

This required course enables students to develop the research skills necessary for earning a master's degree. By the end of this course, students will be able to conduct research specific to their discipline.

003PC18P1 Pediatric Dentistry Preclinic 2 Cr.

Practical work.

003PR18P3 Thesis Project 2 Cr.

This required course enables students to develop the research skills necessary for earning a master's degree. By the end of this course, students will be able to conduct research specific to their discipline.

003PR18P5 Thesis Project 3 Cr.

This required course enables students to develop the research skills necessary for earning a master's degree. By the end of this course, students will be able to conduct research specific to their discipline.

003SD18P1 Dental Treatment Under General Anesthesia 1 Cr.

By the end of this course, students will be able to:
- Refer patients for dental treatment under general anesthesia in a hospital setting
- Prescribe specific medical exams required for dental treatment under general anesthesia
- Perform dental treatment under general anesthesia in a hospital setting
- Provide a post-operative follow up for dental treatments performed under general anesthesia

003AG18P2 Dental Treatment Under General Anesthesia 1 Cr.

This course focuses on the diagnosis, management, and follow up of dental treatment for pediatric and special need patients performed under general anesthesia.

003AN18P3 Dental Treatment Under General Anesthesia 1 Cr.

By the end of this course, students will be able to:
- Refer patients for dental treatment under general anesthesia in a hospital setting
- Prescribe specific medical exams required for dental treatment under general anesthesia
- Perform dental treatment under general anesthesia in a hospital setting
- Provide a post-operative follow up for dental treatments performed under general anesthesia

003STAHP4 Dental Treatment Under General Anesthesia 2 Cr.

This required course covers dental care under general anesthesia and is taught in semesters S2, S3, S4, S5, and S6.

003SD18P5 Dental Treatment Under General Anesthesia 2 Cr.

This course focuses on the diagnosis, management, and follow-up of dental treatment for pediatric and special need patients performed under general anesthesia.

003SD18P6 Dental Treatment Under General Anesthesia 1 Cr.

This course focuses on the diagnosis, management, and follow up of dental treatment for pediatric and special need patients performed under general anesthesia.

003PA18P1 Dental Treatment Under Inhalation Sedation 4 Cr.

By the end of this course, students will be able to:
- Refer a patient for dental care under nitrous oxide conscious sedation
- Prescribe anxiolytic pre-medications that may be necessary for dental care under conscious sedation
- Administer nitrous oxide conscious sedation
- Understand and list the contraindications of conscious sedation
- Carry Out post-op follow-up for dental treatment under conscious sedation

This clinical course is assessed each semester.
The level of mastery evolves progressively with each semester.

003PA18P2 Dental Treatment Under Inhalation Sedation 4 Cr.

By the end of this course, students will be able to:
- Refer a patient for dental care under nitrous oxide conscious sedation
- Prescribe anxiolytic pre-medications that may be necessary for dental care under conscious sedation
- Administer nitrous oxide conscious sedation
- Understand and list the contraindications of conscious sedation
- Carry out post-op follow-up for dental treatment under conscious sedation

This clinical course is assessed each semester.
The level of mastery evolves progressively with each semester.

003SP18P3 Dental Treatment Under Inhalation Sedation 3 Cr.

By the end of this course, students will be able to:
- Refer a patient for dental care under nitrous oxide conscious sedation
- Prescribe anxiolytic pre-medications that may be necessary for dental care under conscious sedation
- Administer nitrous oxide conscious sedation
- Understand and list the contraindications of conscious sedation
- Carry out post-op follow-up for dental treatment under conscious sedation

This clinical course is assessed each semester.
The level of mastery evolves progressively with each semester.

003PA18P4 Dental Treatment Under Inhalation Sedation 4 Cr.

Students will be able to perform dental treatments under conscious sedation by administering a mix of oxygen and nitrous oxide.
This clinical course is assessed each semester.
The level of mastery evolves progressively with each semester.

003PA18P5 Dental Treatment Under Inhalation Sedation 4 Cr.

By the end of this course, students will be able to:
- Refer a patient for dental care under nitrous oxide conscious sedation
- Prescribe anxiolytic pre-medications that may be necessary for dental care under conscious sedation
- Administer nitrous oxide conscious sedation
- Understand and list the contraindications of conscious sedation
- Carry out post-op follow-up for dental treatment under conscious sedation

This clinical course is assessed each semester.
The level of mastery evolves progressively with each semester.

003PA18P6 Dental Treatment Under Inhalation Sedation 2 Cr.

By the end of this course, students will be able to:
- Refer a patient for dental care under nitrous oxide conscious sedation
- Prescribe anxiolytic pre-medications that may be necessary for dental care under conscious sedation
- Administer nitrous oxide conscious sedation

- Understand and list the contraindications of conscious sedation
- Carry out post-op follow-up for dental treatment under conscious sedation

This clinical course is assessed each semester.
The level of mastery evolves progressively with each semester.

003TPS1P1 Community Dentistry (Practical Work) 1 2 Cr.

This course focuses on promoting oral health across various population groups.

003TPS2P2 Community Dentistry (Practical Work) 2 2 Cr.

This course focuses on promoting oral health across various population groups, both within and beyond the faculty setting.

003TPDPP3 Community Dentistry (Practical Work) 3 2 Cr.

This course focuses on promoting oral health across various population groups
- Outside the faculty
- Practical work (school visits)

003TPDPP4 Community Dentistry (Practical Work) 4 2 Cr.

This required course focuses on promoting oral health across various population groups:
- Outside the faculty
- Practical work (school visits)

003TSPEP1 Article Analysis Pedo 2 Cr.

This course is assessed each semester. The level of mastery evolves based on the work completed.
By the end of this course, students will be able to analyze articles relating to their discipline according to the IMRAD method.

003TS18P2 Article Analysis 3 Cr.

This course is assessed each semester. The level of mastery evolves based on the work completed.
By the end of this course, students will be able to analyze articles relating to their discipline according to the IMRAD method.

003TR18P3 Article Analysis 1 Cr.

This course is assessed each semester. The level of mastery evolves based on the work completed.
By the end of this course, students will be able to analyze articles relating to their discipline according to the IMRAD method.

003TV18P4 Article Analysis 2 Cr.

This course is assessed each semester. The level of mastery evolves based on the work completed.
By the end of this course, students will be able to analyze articles relating to their discipline according to the IMRAD method.

003TV18P5 Article Analysis 2 Cr.

This course is assessed each semester. The level of mastery evolves based on the work completed.
By the end of this course, students will be able to analyze articles relating to their discipline according to the IMRAD method.

003SEMNP1 Seminar: Current Literature - Case Presentation 2 Cr.

This course consists of a series of seminars based on intensive and comprehensive readings in the literature of endodontics covering all facets pertaining to the science and practice of endodontics.

003SFENP1 The Fundamental Science of Endodontics 3 Cr.

This course covers all anatomical complexities to accurately illustrate the endodontic system to handle different challenging clinical situations.
Key topics include:

- Endodontic Diagnosis
- Pulp, Root Canal and Periradicular Conditions
- Endodontic Case Selection and Planning
- Radiographic Interpretation in Endodontics
- Tooth, Root Canal Anatomy, Isolation and Access Cavity Designs
- Cleaning and Shaping the Root Canal System
- Obturation of the Root Canal System

003AVSEP1 Advances in Endodontic Science 2 Cr.

By the end of this course, students will be able to define the form and dynamics of canal instrumentation to address contemporary shaping objectives and techniques, while adhering to essential steps to avoid errors and associated symptoms.
Key topics include:

- Histology and Physiology of the Pulpodentinal Complex
- Oral Immunology and Microbiology
- Advances in Materials for Microbial Control
- Hydraulic Calcium Silicate-based Endodontic Cements
- Regenerative Endodontics
- Nickel-Titanium Metallurgy
- Anxiety and Pain Control

003PRENP1 Preclinical Endodontics 2 Cr.

Key topics include:

- Introduction to the Operating Microscope, dentist and patient position
- Photos and recording. Preparation of case presentation in endodontics
- Endodontic Access on Extracted Teeth: Anterior and Posterior
- Endodontic Access on Extracted Teeth and CBCT analysis: calcified pulp chamber
- Rotary Instrumentation with different NiTi Systems: Anterior and Posterior Teeth
- Part I
- Rotary Instrumentation with different NiTi Systems: Anterior and Posterior Teeth
- Part II
- Root Canal Obturation: Warm Vertical Compaction and continuous wave technique
- Root Canal Obturation: Carrier-Based and Single-Cone Techniques with resin-based sealers and Bioceramic sealers
- Root canal obturation: Large apices and immature teeth
- Retreatment I: Removal of screw posts and cast post and cores
- Retreatment II: Removal of Fiber Posts
- Retreatment III: Filling material removal
- Retreatment IV: Patency and ledge bypass
- Retreatment V: Management of Procedural Mishaps and Root Perforations
- Retreatment VI: Management of Separated Instruments, bypass
- Retreatment VII: Management of Separated Instruments, removal
- Surgical Endodontics
- Surgical Endodontics
- Guided Endodontics
- Synthesis of all techniques
- Group Discussion

003CQ18P2 Clinical Endodontics 14 Cr.

Endodontic clinical work.

003EN18P2 Advances in Clinical Management 2 Cr.

Students will be able to identify and analyze the various factors that contribute to endodontic treatment failure, equipping them to describe these causes accurately and apply corrective solutions.
Key topics include:
- Nonsurgical Retreatment
- Detection of canal orifices, negotiation, and management of calcified and curved canals
- Vital pulp treatment
- Endodontic emergencies and systemic antibiotics
- Prevention and management of iatrogenic endodontic mishaps
- Regenerative endodontics
- Classifications and management of endodontic-periodontal lesions
- Management of traumatic dental injuries in the permanent dentition

003LE18P2 Interdisciplinary Endodontics 2 Cr.

Students will be able to outline the various indications for a surgical approach in endodontics, enabling them to organize operative procedures effectively and emphasize the connections between endodontics and other dental specialties.
Key topics include:
- Surgical endodontics 1
- Crown lengthening
- Surgical endodontics 2
- Bone graft materials
- Guided endodontic techniques: Precision and innovation in practice
- Laser in endodontics

003TED2P2 Seminar: Current Literature - Case Presentation 1 Cr.

This course consists of a series of seminars based on intensive and comprehensive readings in the literature of endodontics covering all facets pertaining to the science and practice of endodontics

003ANALP3 Articles Analysis - Seminars 2 Cr.

This course enables students to develop critical reading and analytical skills by dissecting scholarly articles, identifying key arguments, methodologies, and contributions to their field. They will learn to evaluate sources, synthesize research findings, and engage in evidence-based discussions. Through interactive seminars, students will present and debate cutting-edge research, refine their academic communication, and collaborate on interdisciplinary topics. These sessions foster critical thinking, peer feedback, and professional networking.

003CD18P3 Clinical Endodontics 19 Cr.

Clinical work.

003CE18P3 Extra Muros Clinical Endodontics 3 Cr.

Clinical work.

003EX18P3 Oral Presentations 2 Cr.

This course includes bibliographic research and comprehensive analysis.
This course is taught during the 2 years of master's studies and is assessed each semester.
The level of mastery is assessed based on the presentations made by students.

003CD18P4 Clinical Endodontics 12 Cr.

Clinical work.

003EE18P4 Endodontics Topics Presentations 2 Cr.

This course enables students to explore advanced endodontic concepts through structured presentations, covering current techniques, research, and clinical innovations. They will critically analyze case studies, discuss evidence-based practices, and engage in peer-led debates to refine their diagnostic and treatment planning skills. These sessions aim to deepen theoretical knowledge while fostering collaborative learning and professional communication in endodontics.

003PRENP4 Clinical Case Presentation 3 Cr.

By the end of this course, students will be able to:
- Prepare a PowerPoint presentation of one or more clinical cases treated
- Establish the elements of the diagnosis.
- Justify choices regarding the treatment plan applied.
- Discuss the advantages and disadvantages of the treatments carried out based on current scientific references.
- Define the prognosis of the chosen treatment.
- This course is taught in the second half of the 2nd year of specialty.

003MM18P5 Thesis 1 5 Cr.

This required course enables students to develop the research skills necessary for earning a master's degree. By the end of this course, students will be able to conduct research specific to their discipline.

003CLTUP5 Clinical Endodontics/Peer Tutoring 4 Cr

This course enables students to engage in structured peer-led sessions to refine their clinical skills in endodontics. Through case discussions, hands-on demonstrations, and constructive feedback, students will deepen their understanding of diagnosis, treatment planning, and advanced techniques (e.g., instrumentation, irrigation protocols, and obturation). Peer tutoring fosters teamwork, critical self-assessment, and the ability to teach complex procedures—essential competencies for future educators and practitioners

003PT18P5 Clinical Case Presentation 1 Cr.

By the end of this course, students will be able to:
- Prepare a PowerPoint presentation of one or more clinical cases treated
- Establish the elements of the diagnosis.
- Justify choices regarding the treatment plan applied.
- Discuss the advantages and disadvantages of the treatments carried out based on current scientific references.
- Define the prognosis of the chosen treatment.
- This course is taught in the second half of the 2nd year of specialty.

003PM18P3 Thesis Project 5 Cr.

This required course enables students to develop the research skills necessary for earning a master's degree.
By the end of this course, students will be able to conduct research specific to their discipline.

003CD18P6 Clinical Endodontics/Peer Tutoring 2 Cr.

Clinical work.

003EE18P6 Endodontics Seminars 1 Cr.

This course enables students to critically examine contemporary topics in endodontic theory and practice. Students will analyze recent research findings, debate clinical controversies, and evaluate emerging technologies in root canal treatment. Through structured presentations and group discussions, students will develop skills in evidence-based decision-making, scientific communication, and critical appraisal of endodontic literature.

The seminars emphasize interactive learning, encouraging students to challenge conventional wisdom while developing professional judgment essential for advanced clinical practice.

003ME18P6 Thesis 2 5 Cr.

This required course enables students to develop the research skills necessary for earning a master's degree. This course is the second part of the process of thesis writing.
By the end of this course, students will be able to conduct research specific to their discipline.

003SEPRP1 Preparatory Session 1 Cr.

This required course is taught at the end of the fifth year and beginning of the Master in Dental Medicine: Orthodontics.
By the end of this course, students will be able to manipulate the orthodontic wire correctly, construct a cephalometric analysis, and analyze an article.
Key topics include:

- Configurations (1)
- Configurations (2)
- Configurations (3)
- Configurations (4)
- Configurations (5)
- Configurations (6)
- Configurations (7)
- Configurations (8)
- Configurations (9)
- Configurations (10)
- Configurations (11)
- Radiological anatomy (1)
- Radiological anatomy (2)
- Radiological anatomy (3)
- Radiological anatomy (4)

003PO18P1 Preclinical Orthodontics 3 Cr.

This required course is taught in the sixth year of this concentration.
By the end of this course, students will be able to make interception appliances, analyze radiographs, and visualize and manipulate new radiological technologies.
Key topics include:

- A-P analysis
- Splint retainers
- Digital impression and workflow
- Case presentation: template
- Band adaptation
- Bracket Bonding
- HeadGear
- Removable transpalatal arch
- Quadhelix
- Radiographic Superimpositions
- Dental photography
- Place assessment (conventional and digital)
- Tweed Analysis
- Steiner analysis
- Three-dimensional analysis and special considerations in cephalometry
- Management of research projects
- Cephalometric analysis and digital superimpositions
- Digital brackets Positioning and digital indirect bonding trays

- Orthodontic charts: conventional and digital
- Digital diagnosis and simulation
- Workshop aligners

003TYP2P1 Typodont 1 1 Cr.

This required course is taught in the sixth year of this concentration.
By the end of this course, students will be able to simulate an orthodontic treatment on a typodont.
Key topics include:
- Mounting on articulator
- Typodont CI I Bipro with extraction 14, 24, 34 and 44

003TYP1P2 Typodont 2 3 Cr.

- Practical work
- Typodont CI II/I Bipro with extraction 14, 24, 35 and 45
- Typodont CI II/I without premolar extraction
- Typodont CI II/I with extraction 14, 24, 34 and 44

003ORCLP1 Orthodontic Clinical 1 2 Cr.

This course is taught in the 1st year of this concentration.
By the end of this course, students should be able to:
Execute the first steps of the treatment plan.
Communicate effectively with patients.

003CLO1P2 Orthodontic Clinical 2 12 Cr.

This required course is taught in the 1st year of this concentration.
By the end of this course, students should be able to:
Execute the first steps of the treatment plan.
Communicate effectively with patients.
Clinical internship.

003CQ18P3 Orthodontic Clinical 3 12 Cr.

This required course is taught in the 2nd year of this concentration.
By the end of this course, students should be able to:
Execute treatment plan steps.
Empower patients.
Establish relationships of trust with patients.
Communicate with the team.

003CQ18P4 Orthodontic Clinical 4 12 Cr.

This required course is taught in the 2nd year of this concentration.
By the end of this course, students should be able to:
Execute treatment plan steps.
Cooperate with healthcare professionals for the benefit of the patient, while being aware of the limits of their skills.

003CQ18P5 Orthodontic Clinical 5 12 Cr.

This required course is taught in the 3rd year of this concentration.
By the end of this course, students should be able to:
- Execute treatment plan steps.
- Collaborate effectively with all dental specialties for the success of orthodontic treatment.
- Manage teamwork while respecting the ergonomic and safety rules of the orthodontic office.

003CQ18P6 Orthodontic Clinical 6 12 Cr.

This required course is taught in the 3rd year of this concentration.
By the end of this course, students should be able to:
Execute treatment plan steps.
Collaborate effectively with all dental specialties for the success of orthodontic treatment.
Manage teamwork while respecting the ergonomic and safety rules of the orthodontic office.

003MR18P3 Research and Thesis 1 2 Cr.

This required course is taught in the 7th year of this concentration.
By the end of this course, students will be able to formulate the problem of their thesis based on an adequate literature review.

003MR18P4 Research and Thesis 2 3 Cr.

This required course is taught in the 7th year of this concentration.
By the end of this course, students will be able to select the materials and methods necessary for the study and select the sample.

003MR18P5 Research and Thesis 3 5 Cr.

This required course is taught in the 8th year of this concentration.
By the end of this course, students will be able to carry out the experimental study, obtain statistical results and interpret them.

003MR18P6 Research and Thesis 4 5 Cr.

This required course is taught in the 8th year of this concentration.
By the end of this course, students will be able to analyze and interpret the results, write and defend the thesis.

003SCFOP1 Basic Sciences in Orthodontics 2 Cr.

This required course is taught in the 6th year of this concentration.
By the end of this course, students will be able to recognize the phenomena of cranio-facial growth and the development of the dentition as well as the etiologies of malocclusions. They will be able to define the biological bases of the treatment and identify the properties of the materials used in orthodontics as well as the biomechanics used.

- Development of the dentition and establishment of occlusion (1)
- Development of the dentition and establishment of occlusion (2)
- Craniofacial growth (1)
- Craniofacial growth (2)
- Craniofacial growth (3)
- Craniofacial growth (4)
- Etiology of malocclusions (1)
- Etiology of malocclusions (2)
- Materials used in orthodontics (1)
- Materials used in orthodontics (2)
- Orthodontic biomechanics (1)
- Orthodontic biomechanics (2)
- Orthodontic biomechanics (3)
- Biological bases of orthodontic treatment (1)
- Biological bases of orthodontic treatment (2)
- Radiological anatomy (5)

003TI18P1 Orthodontic Techniques 1 1 Cr.

This required course is taught in the 6th year of this concentration.
By the end of this course, students will be able to carry out a clinical examination and an adequate diagnosis. They

will also differentiate between orthodontic treatment and orthopedic treatment, as well as conduct preventive and interceptive orthodontic measures. Additionally, they will state the principles and therapeutic sequences of standard edgewise and Tweed-Merrifield techniques.
Key topics include:
- Clinical examination
- Orthodontic treatment
- Orthopedic treatment
- Standard Edgewise Technique
- Tweed-Merrifield Edgewise Technique
- Aligners

003TR18P2 Orthodontic Techniques 2 2 Cr.

This required course is taught in the 7th year of this concentration.
By the end of this course, students will be able to establish the relationship between orthodontics and other disciplines. They will also be able to set up a multidisciplinary treatment plan.
Key topics include:
- MBT technique.
- Bidimensional Technique
- Self-ligating technique
- Imaging and orthodontics
- Speech therapy and orthodontics
- Retention and relapse
- Office management and planning
- Lingual orthodontics
- Miniscrews in orthodontics
- Sleep apnea in young adolescents
- Sleep apnea in adults
- Transverse dimension
- Artificial Intelligence

003OI18P3 Orthodontics and Interdisciplinary Treatments 1 1 Cr.

This required course is taught in the 7th year of this concentration.
By the end of this course, students will be able to establish the relationship between orthodontics and other disciplines. They will also be able to set up a multidisciplinary treatment plan for the adult.
Key topics include:
- Adult Orthodontics
- Occlusodontics and orthodontics (seen by occlusodontics)
- Occlusodontics and orthodontics (seen by orthodontics)
- Occlusodontics and orthodontics (seen by orthodontics) (Practical Work)
- The smile: prosthetic perspectives
- Esthetic restorations of anterior teeth
- Digital smile design
- Orthodontics and implantology (Practical Work)
- Conventional imaging and radiology of ATM internal derangements
- Classification of dysfunctions of the masticatory apparatus
- Orthodontics and implantology
- Orthodontics and periodontology: seen by orthodontics
- Orthodontics and periodontology: seen by periodontology
- Orthodontics and prosthetics: seen by the prosthodontist
- Lip and palate fractures and congenital malformations: seen by surgery
- Different solutions to problems encountered during orthodontic treatment

003OT18P3 Orthodontics and Interdisciplinary Treatments 2 1 Cr.

This required course is taught in the 7th year of this concentration.
By the end of this course, students will be able to establish the relationship between orthodontics and other disciplines. They will also be able to set up a multidisciplinary treatment plan for the adolescent.
Key topics include:

- Occlusodontics and orthodontics: seen by occlusodontics.
- Occlusodontics and orthodontics: seen by orthodontics.
- Orthodontics and oral surgery: seen by oral surgery.
- Orthodontics and oral surgery: seen by orthodontics.
- Orthodontics and orthognathic surgery: seen by orthodontics
- Orthodontics and orthognathic surgery: seen by the maxillofacial surgeon
- Cleft lip and palate and congenital malformations: seen by orthodontics
- Cleft lip and palate and congenital malformations: seen by maxillofacial surgeons
- Orthodontics and prosthetics: seen by orthodontics
- Aligners workshop

003RLO2P3 Literature Review 1 2 Cr.

This required course is taught in the 7th year of this concentration.
By the end of this course, students will be able to assess a multidisciplinary article and judge its scientific validity to justify the application of its results.

003RLO3P4 Literature Review 2 2 Cr.

This required course is taught in the 7th year of this concentration.
By the end of this course, students will be able to learn the new techniques as well as evaluate the different stages of randomized research.

003RLO4P5 Literature Review 3 2 Cr.

This required course is taught in the 8th year of this concentration.
By the end of this course, students will be able to learn new techniques as well as evaluate the different stages of randomized research.

003RLO3P6 Literature Review 4 2 Cr.

This required course is taught in the 8th year of this concentration.
By the end of this course, students will be able to evaluate an article and judge its scientific validity to justify the application of its results.

003DR18P2 Clinical Restorative Dentistry 1 Cr.

This clinical required internship is conducted in the 7th and 8th years (semesters 1 and 2) and in the second semester of the 6th year of this concentration.
Students will diagnose and provide treatment for patients with carious and non-carious lesions of varying complexity using the appropriate material.

003TD18P2 Restauration Procedures in Restorative Dentistry 1 Cr.

This required course is taught during the 2nd semester of this concentration.
It is completed by practical work and clinical sessions:
1- Justify and adapt the choice of interventions in complex Esthetic and Restorative Dentistry situations.
2- Design non-invasive therapies for complex esthetic and restorative dentistry cases.

- Non-carious cervical lesions
- Direct posterior composite restorations
- Failed direct restorations
- Ceramic inlays/onlays

- Aesthetics of anterior teeth
- Veneers
- Bonding and repair of aesthetic elements
- Etiology of discolorations and whitening products
- Whitening of sound and endo-treated teeth
- Unconventional preparations

003DR18P1	Instrumentation and Bio Materials in Restorative Dentistry	1 Cr.

This required course is taught during the 1st semester of this concentration.
It is completed by practical work and clinical sessions.
Students will propose the appropriate material in esthetic and restorative dentistry for the treatment of complex situations in this field.

003PDREP2	Preclinical Restorative Dentistry	1 Cr.

This required course is taught in the first semester of this concentration.
Key topics include:
- Complex cavities for amalgams
- Direct posterior composites
- Direct anterior composites
- Whitening and initiation to sono and air-abrasion
- Esthetic inlays/onlays
- Bridge abutment onlays and inlays
- Veneers
- Reconstructions with fiber posts
- Digital Dentistry in Restorative and Esthetic Dentistry
- Laser in restorative and esthetic dentistry
- Evaluation
- Research work

003AM18P1	Preclinical Removable Prosthodontics 1 and Clinical Assisting	2 Cr.

This required course is part of the Doctor of Dental Surgery program; it is taught in the 6th year P1. It follows the theoretical course (code 003PFPAP1)
By the end of this practical course, students will be able to prepare coronal sizes 3/4, MOD, 7/8 and peripheral sizes for units and bridges of 3 elements, make cavities, make models by pindex and split cast, mount them on articulators, and perform selective grinding.

003RP18P1	Removable Total Prosthetic Restoration and Laboratory Technique	2 Cr.

By the end of this course, students will be able to manage the realization of a removable total prosthesis in both the laboratory and the clinic, addressing the specific needs of each clinical case.

003AM18P2	Preclinical and Clinical Support Removable Prosthesis 2	2 Cr.

By the end of this common course students will be able to carry out the laboratory steps for the manufacture of a partial skeletal prosthesis.

003RPPLP2	Removable Partial Prosthetic Restoration and Laboratory Technique	2 Cr.

By the end of this course students will be able to plan the management and realization of clinical cases involving partial skeletal prostheses.

003PF18P2	Clinical Fixed Prosthodontics	2 Cr.

Clinical work.

003LI18P3	**Clinical Esthetic Dentistry and Prosthodontics**	**9 Cr.**

Clinical work.

003DR18P4	**Clinical Esthetic Dentistry and Prosthodontics**	**9 Cr.**

Clinical work.

003DR18P5	**Clinical Esthetic Dentistry and Prosthodontics**	**9 Cr.**

Clinical work.

003DR18P6	**Clinical Esthetic Dentistry and Prosthodontics**	**6 Cr.**

Clinical work.
Link to Program-Level Learning Outcomes (PAR).

003AD18P6	**Clinical Esthetic Dentistry and Prosthodontics**	**3 Cr.**

Clinical Internship.

003P118P3	**Thesis Project 1 (Prosth-DR)**	**2 Cr.**

This required course enables students to develop the research skills necessary for earning a master's degree. It is the second part of the thesis writing process.
By the end of this course, students will be able to plan and manage a research work.

003RH18P3	**Complete Denture Removable Prosthodontics**	**2 Cr.**

By the end of this course, students will be able to handle complex cases of total edentulism.

003P218P4	**Thesis Project 2 (Prosthesis-DR)**	**3 Cr.**

This required course enables students to develop the research skills necessary for earning a master's degree. It is the second part of the thesis writing process.
By the end of this course, students will be able to plan and manage a research work.

003LGODP5	**Gerodontology**	**1 Cr.**

This course aims to ensure masticatory function and stability in the elderly through adequate prosthetic restorations that integrate into the orofacial environment.

003MM18P5	**Thesis 1**	**5 Cr.**

This required course enables students to develop the research skills necessary for earning a master's degree. It is the second part of the thesis writing process.
By the end of this course, students will be able to conduct research specific to their discipline.

003ME18P6	**Thesis 2**	**5 Cr.**

This required course enables students to develop the research skills necessary for earning a master's degree. It is the second part of the thesis writing process.
By the end of this course, students will be able to conduct research specific to their discipline.

003PC18P6	**Clinical Case Presentation**	**1 Cr.**

This course involves an audio-visual presentation of one or more clinical cases treated by students in the clinic. They will establish the elements of the diagnosis, argue their choices regarding the treatment plan applied, discuss the advantages and disadvantages of the treatments carried out based on current scientific references, and define the prognosis of the chosen treatment. This course is taught in the second semester of the 3rd year of this concentration.

003PFPAP1 **Fixed Prosthodontics Fundamental Principles and Clinical Applications 1** **1 Cr.**

This required course is taught in the 6th year, P1.
It is complemented by practical work "Preclinical Fixed Prosthodontics 1" (Code 003PPD4P1) and "Preclinical Fixed Prosthodontics 2" (Code 003PPD4P2).
By the end of this course, students will be able to recognize the basic principles and various therapeutic steps in conventional fixed prosthodontics.
Key topics include:

- Laboratory steps II (Practical Work)
- Metal infrastructures: principles and designs
- Preparations in fixed prosthodontics II
- Case presentations
- Provisional techniques II
- Corono-radicular restorations I
- Corono-radicular restorations II
- Provisional techniques I
- All-ceramic crowns I
- Laboratory steps I (Practical Work)
- Impression methods I
- All-ceramic bridges
- Periodontal prosthodontics II
- Biomechanics of different alloys in prosthodontics
- Ceramics
- Principles of cementation and bonding
- Attachments in fixed prosthodontics (Practical Work)
- Periodontal prosthodontics I
- Fixed prosthodontics and crown lengthening
- Photography in prosthodontics
- Preparations in fixed prosthodontics I
- Impression methods II

003PFPAP2 **Fixed Prosthodontics Fundamental Principles and Clinical Applications 2** **2 Cr.**

This required course is taught in the 6th year, P1.
It is complemented by practical work "Preclinical Fixed Prosthodontics 1" (Code 003PPD4P1) and "Preclinical Fixed Prosthodontics 2" (Code 003PPD4P2).
By the end of this course, students will be able to recognize the basic principles and various therapeutic steps in conventional fixed prosthodontics.

003LC18P1 **Occlusion Concepts in Fixed Prosthodontics** **1 Cr.**

By the end of this course, students will be able to describe the masticatory apparatus, its physiology, and kinematics. They should also recognize the etiopathogenesis and pathophysiology of dysfunctions, and evaluate the various exploration tests of the TMJ.

003POCCP1 **Preclinical Occlusodontics** **1 Cr.**

Practical work in Occlusodontics.

003FI18P1 **Preclinical Fixed Prosthodontics** **3 Cr.**

This required course is part of the Doctor of Dental Surgery program, taught in the 6th year, P1.
It follows the theoretical course (003PFPAP1).
By the end of this practical course, students will be able to prepare ¾, MOD, 7/8 coronal preparations and peripheral preparations for single units and 3-unit bridges, take impressions, fabricate models using pindex and split cast techniques, mount them on an articulator, and perform selective grinding.

003PE18P2 Preclinical and Clinical Fixed Prosthodontics 2 4 Cr.

This required course is part of the Doctor of Dental Surgery program, taught in the 6th year, P2.
It follows the theoretical course (003PFPAP1) and practical course (003PPD3P1).
By the end of this practical course, students will be able to prepare ¾, MOD, 7/8 coronal preparations and peripheral preparations for single units and 3-unit bridges, take impressions, fabricate models using pindex and split cast techniques, mount them on an articulator, and perform selective grinding.

003DGITP4 Digital Fixed Prosthesis 2 Cr.

This course covers various aspects of digital dentistry, particularly focusing on CAD-CAM technology. The lectures range from foundational topics such as the history of CAD-CAM systems to more practical applications, including optical impressions, scanners, and hands-on training in digital impression techniques. Additionally, the course delves into software design used in digital dentistry, with sessions on different CAD-CAM software and their specific design capabilities. This comprehensive approach ensures that students gain both theoretical knowledge and practical skills necessary for modern digital dental practices.

003PI18P3 Implant Prosthodontics 1 2 Cr.

This required course is taught in the 7th year, P3.
It is complemented by a clinical course titled "Esthetic and Prosthetic Dentistry Clinic" (003CPD1P3).
By the end of this course, students will be able to recognize the basic principles and various therapeutic steps in implant fixed prosthodontics.
Key topics include:

- Staff
- Temporization in implant restorations of edentulous patients
- Diagnostic & sequential treatment planning
- Case presentations in fixed prosthodontics
- Case presentations in fixed prosthodontics (Practical Work)
- Diagnosis and treatment planning for implant prosthodontics
- Radiographic and surgical guide in implantology
- Choice of abutments in implant prosthodontics
- Screw-retained or cemented full ceramic-metal prosthesis
- Screw-retained or cemented single ceramic-metal prosthesis
- Screw-retained or cemented partial ceramic-metal prosthesis
- Full hybrid prosthesis
- Ideal occlusion in implant prosthodontics
- Soft tissue management in implant prosthodontics
- Immediate loading in implant prosthodontics
- Management of failures in implant prosthodontics
- New technologies in implant prosthodontics
- Orthodontics and implants
- Documentation and case presentation IV
- Temporaries in implantology
- Literature review in fixed prosthodontics (1) (Practical Work)
- Cementation and passive adaptation in implantology (Practical Work)
- Literature review in fixed prosthodontics (2) (Practical Work)
- Literature review in fixed prosthodontics (3) (Practical Work)
- Case presentation: Prostho-Perio (7th and 8th prostho + perio) (1) (Practical Work)
- Case presentation: Prostho-Perio (7th and 8th prostho + perio) (2) (Practical Work)
- Case presentation

003PI18P4 Implant Prosthodontics 2 1 Cr.

This required course is taught in the 7th year, P3.
It is complemented by a clinical course titled "Esthetic and Prosthetic Dentistry Clinic" (003CPD1P3).
By the end of this course, students will be able to recognize the basic principles and various therapeutic steps in implant fixed prosthodontics.

003CO18P6 Prosthetic and Multidisciplinary Correlation 2 2 Cr

This required course is taught in the second semester of the 8th year, P6.
It is complemented by a clinical course titled "Esthetic and Prosthetic Dentistry Clinic" (003CPD1P3).
By the end of this course, students will refine their knowledge in fixed prosthodontics and their multidisciplinary correlations.

003TSP2P2 Synthesis Work (Prosthodontics - Restorative Dentistry) 2 Cr.

This common required course is taught in the second semester of the 6th, 7th and 8th years. It consists of bibliographic research and an analysis of articles relating to conventional and supra-implant fixed prosthesis according to the IMRAD method.
Link to Program-Level Learning Outcomes (PAR).

003TVP3P3 Synthesis Work (Prosthodontics - Restorative Dentistry) 2 Cr.

This required course is taught over the 6 semesters of this program and is assessed each semester.
It is a common course for the 6th, 7th, and 8th years. It consists of bibliographic research and analysis of articles related to conventional fixed prosthodontics and supra-implant prosthodontics following the IMRAD method. The level of mastery evolves based on the work completed.

003TD18P4 Synthesis Work 2 Cr.

This required common course is taught in the second semester of the 6th, 7th, and 8th years. It consists of bibliographic research and analysis of articles related to conventional fixed prosthodontics and supra-implant prosthodontics following the IMRAD method.

003TSP5P5 Synthesis Work (Prosthodontics and Restorative Dentistry) 2 Cr.

This required course is taught over the 6 semesters of this program and is assessed each semester.
It is a common course for the 6th, 7th, and 8th years. It consists of bibliographic research and analysis of articles related to conventional fixed prosthodontics and supra-implant prosthodontics following the IMRAD method. The level of mastery evolves based on the work completed.

003TSP6P6 Synthesis Work (Prosthodontics and Restorative Dentistry) 2 Cr.

This required course is taught over the 6 semesters of this program and is assessed each semester.
It is a common course for the 6th, 7th, and 8th years. It consists of bibliographic research and analysis of articles related to conventional fixed prosthodontics and supra-implant prosthodontics following the IMRAD method. The level of mastery evolves based on the work completed.

003DTPDP1 Teeth and Peridental Tissues 2 Cr.

By the end of this course, students will be able to:
- Perform a **semiological analysis** of pathologies based on **pain-related symptoms**.
- **Adapt the therapeutic approach** appropriately to each specific pathology.
- Apply a **radiological semiological reasoning**.

Course Content:
- Inflammatory pathologies of the tooth and its surrounding tissues.
- Management of cervico-facial pain.
- **Practical sessions (TPC):** Radiological interpretation of acute and chronic dental and periodontal pathologies.
- **Practical sessions (TPC):** The role of the bacteriology laboratory in cervico-facial infections.
- **Practical sessions (TPC):** Text analysis — medical-surgical treatments of complications of dental infections (drainage routes, prescriptions).
- Semiotics of complications of dental infections.
- Etiological diagnosis of dento-maxillofacial pain – Part 1
- Etiological diagnosis of dento-maxillofacial pain – Part 2
- Bone infections: osteomyelitis and osteitis of local and general causes, osteoradionecrosis (ORN).
- Odontogenic and non-odontogenic cysts of the jaws.

003TECHP2	Innovative Dental Technologies (CC.1)	2 Cr.

This course is a direct application of the genetics course. It is taught in the first year of the program.
- Laboratory internship (tutorial).
- Digital dentistry.

003TSM5P6	Synthesis Work: Literature Review and Presentation	2 Cr.

This course is taught during the specialized master's semesters and is assessed on a semester basis. The level of mastery evolves according to the work completed.
At the end of this course, students will be able to analyze articles related to their discipline using the IMRAD method.