

MASTER IN DENTAL MEDICINE

Concentrations :**Oral Diseases and Surgeries-Periodontology****Oral Diseases and Surgeries-Oral Surgery****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**

- Acquire skills to diagnose and treat periodontal diseases.
- Acquire skills to place dental implants.
- Acquire skills to enhance periodontal and peri-implant tissues.
- Acquire skills to treat mucogingival problems.
- Acquire skills to conduct research.

• Concentration: Oral Diseases and Surgeries-Oral Surgery


The Master in Oral Surgery, designed for graduated dentists, aims to equip professionals with advanced skills in 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.

These objectives aim to create highly qualified professionals equipped to address the complex challenges of modern oral surgery.

• Concentration: Pediatric Dentistry

The objectives of this program include developing advanced skills in diagnosing, treating, and preventing oral-facial pathologies in children, such as caries, erosion, dental dysplasias, bruxism, dento-maxillary disharmonies, periodontal pathologies, oral breathing, and sleep apnea. Students are trained in managing child-specific dental care, communicating with young patients, and collaborating with healthcare professionals. Additionally, students are introduced to care for individuals with special needs and engage in various community work, thus



improving public oral health. Alongside clinical training, the program also emphasizes research and scientific writing, aiming to prepare specialized dentists equipped to meet the unique dental needs of children and adolescents.

• **Concentration: Endodontics**

PEDAGOGICAL OBJECTIVE

It aims to equip residents with evidence-based knowledge, clinical skills, and a patient-centered approach, fostering a commitment to lifelong learning.

PATIENT CARE OBJECTIVE

It aims to train qualified and competent clinicians in endodontics who apply advanced techniques and philosophies. Graduates will be trained to manage root canal therapy, vital pulp therapy, revascularization procedures, complex endodontic surgeries, trauma cases, emergency care, and care for medically compromised patients.

RESEARCH OBJECTIVE

It aims to create an environment that promotes research and the dissemination of scientific findings by endodontic faculty and graduate students, fostering an appreciation for research design and critical literature review.

COMMUNITY SERVICE OBJECTIVE

It aims to train endodontists to lecture and teach in a clinical setting at a dental school, deliver presentations to dental societies and study clubs, and actively participate in organized dentistry.

• **Concentration: Orthodontics**

- 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**

Specialize in fixed prosthodontics, removable prosthodontics, and aesthetic 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**

- 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.

• **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.
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- 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: 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.

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

- **Concentration: Pediatric Dentistry**

- **Concentration: Endodontics**

- **Concentration: Orthodontics**

- **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 (2 Cr.); Periodontology (2 Cr.); Periodontology (2 Cr.)*

Concentration: Oral Diseases and Surgeries-Oral Surgery (9 credits): *Local anesthesia + exodontia (2 Cr.); Oral surgery (2 Cr.); Oral surgery clinic (1 Cr.); Oral surgery clinic 1(2 Cr.); Surgical pathology (2 Cr.);*

Concentration: Pediatric Dentistry (6 credits): *Pediatric Dentistry (2 Cr.), Pediatric Dentistry Clinic (2 Cr.), Odontologie pédiatrique (1 Cr.), Odontologie pédiatrique (1 Cr.)*

Concentration: Endodontics (6 credits): *Clinical Endodontics (in multidisciplinary mode) (3 Cr.), Endodontics (2 Cr.), Endodontics (1 Cr.)*

PROGRAM REQUIREMENTS

Basic Sciences Training

- **Concentration: oral diseases and surgeries-periodontology**
- **Concentration: oral diseases and surgeries-oral surgery**
- **Concentration : pediatric dentistry**
- **Concentration : endodontics**
- **Concentration : orthodontics.**
- **Concentration : esthetic and prosthetic dentistry**

Common core 1 (12 credits) : Research Methodology 1 (T.C1) (2 Cr.) ,Research Methodology 2 (T.C1) (2 Cr.), Basic sciences (T.C1) (2 Cr.) ,Biomedical biostatistics and epidemiology (T.C1) (2 Cr.),Dental sciences (T.C1) (2 Cr.), Laboratory training (T.C1) (2 Cr.)

- **Concentration: oral diseases and surgeries-periodontology**
- **Concentration: oral diseases and surgeries-oral surgery**

Common core 2 - Biology (12 credits): Biocompatibility and biomaterials (TC 2 Biol) (2Cr.), Physiopathology of oral structures 1 (TC2 Biol) (3Cr.), Cell communication and development, differentiation genetics 1 (TC2 Biol) (2Cr.), Cell communication and development, differentiation genetics 2 (TC2 Biol) (3 Cr.), Physiopathology of oral structures 2 (TC2 Biol) (2Cr.)

Common core 2 – Biomaterials (12 credits): Evaluation methods and laboratory techniques (TC2 Biom) (3 Cr.), Materials science (TC2 Biom (3 Cr.),Dental biomaterials, plastic and solid phase insertion biomaterials (TC2 Biom) (3 Cr.),Tissue Engineering and Nanotechnology and Biocompatibility(3 Cr.),

REQUIRED COURSES

- **Concentration: oral diseases and surgeries-periodontology (90 Cr.)**
Perio Clinic (6 Cr.), Periodontal diseases and therapies 1 (3 Cr.), Periodontal diseases and therapies 2 (3 Cr.), Synthesis work (2 Cr.), Synthesis work Perio (2 Cr.), practical work (1 Cr.), Perio Clinic (9 Cr.), Implantology 1 (3 Cr.), Periodontal diseases and therapies 3 (2 Cr.), Perio clinic (9 Cr.), Implantology 2 (4 Cr.), Thesis project (3 Cr.), Laser (1 Cr.) Perio Clinic (9 Cr.), Synthesis work (2 Cr.), Digital Implantology(1 Cr.), Perio Clinic (9 Cr.), Synthesis work (3 Cr.), Perio Clinic (6 Cr.), Synthesis work (2 Cr.), Thesis (10 Cr.)
- **Concentration: oral diseases and surgeries-oral surgery (87 Cr.)**
Oral and Maxillofacial Surgery Clinic 1 (7 Cr.),Teeth and periodontal tissues (2 Cr.), Infectious, inflammatory and tumoral pathologies of the cervico-facial region (2 Cr.), Minor oral surgery (2 Cr.),Literature review (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 (1 Cr.), Practical work on phantom (chir) (1 Cr.), Oral and Maxillofacial Surgery Clinic 3 (8 Cr.), Advanced Implantology (1 Cr.), Major oral surgery 2 (2 Cr.), Thesis project (5 Cr.), Literature review (1 Cr.), Advanced techniques in oral and implant surgery (Surgery) (2 Cr.), Oral and Maxillofacial Surgery Clinic 3 (8 Cr.), Precancerous lesions and cancers of the oral cavity. (2 Cr.), Workshops on scientific articles (chir) (1 Cr.), Major Oral Surgery 3 (1 Cr.), Oral surgery clinic (6 Cr.), Implantology 3 and implant prosthesis (2 Cr.), Workshops on scientific articles (1 Cr.), Oral surgery clinic (6 Cr.), Thesis (10 Cr.), Workshops on scientific articles (1 Cr.)
- **Concentration: pediatric dentistry (90 Cr.)**
Pediatric Dentistry Clinic (2 Cr.), Pediatric Dentistry (2 Cr.), Preclinical Pediatric Dentistry (2 Cr.), Dental Treatment under General Anesthesia (1 Cr.), Dental Treatment under Inhalation Sedation (4 Cr.), Community Dentistry 1 (2 Cr.), Literature review (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 2 (2 Cr.), Literature review(3 Cr.), Pediatric Dentistry Clinic(4 Cr.), Pediatric Dentistry (2 Cr.), Master's Thesis Project (2 Cr.), Dental Treatment under General Anesthesia (1 Cr.), Dental Treatment under Inhalation Sedation (3 Cr.), Community Dentistry 3 (2 Cr.), Literature review (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 4 (2 Cr.), Literature review (2 Cr.), Pediatric Dentistry Clinic (4 Cr.), Master's Thesis Project (3 Cr.), Dental Treatment under General Anesthesia (2 Cr.), Dental Treatment under Inhalation Sedation (4 Cr.), Literature review (2 Cr.), Pediatric Dentistry Clinic (2 Cr.), Master's Thesis (10 Cr.) ,Dental Treatment under General Anesthesia (1 Cr.), Dental Treatment under Inhalation Sedation (2 Cr.)

• **Concentration: endodontics (90 Cr.)**

Analysis of articles (2 Cr.), Presentations 1+2 (Master Endo.) (3 Cr.), Access to endodontics (3 Cr.), Shaping, obturation and complications (2 Cr.), Preclinical + Clinical endodontics (2 Cr.), Clinical Endodontics (14 Cr.), Retreatments and complex cases (2 Cr.), Surgical and multidisciplinary endodontics (2 Cr.), Clinical Endodontics (19 Cr.), Extra muros Clinical Endodontics (3 Cr.), Endodontic topics presentations (2 Cr.), Clinical Endodontics (12 Cr.), Endodontic topics presentations (2 Cr.), Clinical case presentation (3 Cr.), Thesis 1 (5 Cr.), Clinical Endodontics (3 Cr.), Clinical case presentation (1 Cr.), Thesis Project (5 Cr.), Thesis 2 (5 Cr.)

• **Concentration: orthodontics (100 Cr.)**

Orthodontic clinic 1 (2 Cr.), Preclinical orthodontics (3 Cr.), Basic sciences in orthodontics (2 Cr.), Preparatory session (1Cr.), Orthodontic techniques 1 (1Cr.), Typodont 1 (1Cr.), Orthodontic clinic 2 (12 Cr.), Typodont 2 (3 Cr.), Orthodontic techniques 2 (2 Cr.), Clinical Orthodontic 3 (12 Cr.), Orthodontics and interdisciplinary treatments 1 (1Cr.), Orthodontics and interdisciplinary treatments 2 (1 Cr.), Research and thesis 1 (2 Cr.) Literature review 1 (2 Cr.), Orthodontic clinic 4 (12 Cr.), Research and thesis 2 (3 Cr.), Literature review 2 (2 Cr.), Orthodontic clinic 5 (12 Cr.), Research and thesis 3 (5 Cr.), Literature review 3 (2 Cr.), Orthodontic clinic 6 (12 Cr.), Research and thesis 4 (5 Cr.), Literature review 4 (2 Cr.)

• **Concentration: esthetic and prosthetic dentistry (100 Cr.)**

Fixed Prosthodontics Fundamental principles and clinical applications 1 (1 Cr.), Concepts of occlusion in FP (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.), Complete denture prosthodontics and laboratory techniques (2 Cr.), Workshops on scientific articles (2 Cr.), Clinic al Restorative Dentistry (1 Cr.), Clinical Fixed prosthesis (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 Removable Prosthodontics and clinical assisting 2 (2 Cr.), Preclinical and clinical fixed prosthodontics 2 (4 Cr.), Removable Partial Denture prosthodontics and laboratory techniques (2 Cr.) , workshops on scientific articles 2 (Proth and DR (2 Cr.), Clinical Esthetic dentistry and prosthodontics (9 Cr.), Thesis project 1 (Proth-DR) (2 Cr.), Implant prosthodontics 1 (2 Cr.), Complete denture removable prosthodontics (2 Cr.), workshops on scientific articles 3 (Proth - DR) (2 Cr.), Clinical Esthetic dentistry and prosthodontics (9 Cr.), Thesis project 2 (Prothesis-DR) (3 Cr.), Digital fixed prosthesis (2 Cr.), Implant prosthodontics 2 (1 Cr.), workshops on scientific articles 4 (2 Cr.), Clinical Esthetic dentistry and prosthodontics (9 Cr.), Gerodontology (1 Cr.), Thesis 1 (5 Cr.), workshops on scientific articles 5 (Proth and DR) (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.), workshops on scientific articles 6 (Proth et DR) (2 Cr.),

SUGGESTED STUDY PLAN

Courses/Credits Granted by Equivalence

• **Concentration: oral diseases and surgeries-periodontology**

Code	Course Name	Credits
003CLP1S1	Paro Clinic	2
003PAROS1	Periodontology	2
003PAROI5	Periodontology	2
	Total	6

• **Concentration: oral diseases and surgeries-oral surgery**

Code	Course Name	Credits
003ALEXI6	Local Anesthesia + Exodontia	2
003CHORS1	Oral Surgery 2	2
003CCO2S2	Oral Surgery Clinic 2	1
003CCO1S	Oral Surgery Clinic 1	2
003PATCI4	Surgical Pathology	2
	Total	9

• **Concentration: pediatric dentistry**

Code	Course Name	Credits
003CDP1S3	Pediatric Dentistry	2
003CDP2S4	Pediatric Dentistry Clinic	2
003ODOPS1	Pediatric Dentistry	1
003ODOPS2	Pediatric Dentistry	1
	Total	6

• **Concentration: Endodontics**

Code	Course Name	Credits
003CLE2S2	Clinical Endodontics (In Multidisciplinary Mode)	3
003ENDOS1	Endodontics	2
003END2I6	Endodontics	1
	Total	6

Basic Sciences Training

Common Courses 1

Semester 1

Code	Course Name	Credits
003RCH1P1	Research Methodology 1 (T.C1)	2
003RCH2P1	Research Methodology 2 (T.C1)	2
003FONDP1	Basic sciences (T.C1)	2
	Total	6

Semester 2

Code	Course Name	Credits
003BBEPP2	Biomedical Biostatistics and Epidemiology (T.C1)	2
003DENTP2	Dental Sciences (T.C1)	2
003STLBP2	Laboratory Training (T.C1)	2
	Total	6

Common Courses 2 – Biology

Semester 3

Code	Course Name	Credits
003BC18P2	Biocompatibility and Biomaterials	2
003PH18P2	Physiopathology of Oral Structures 1	3
	Total	5

Semester 4

Code	Course Name	Credits
003CC18P2	Cell Communication and Development, Genetic Differentiation 1	2
003CD18P2	Cell Communication and Development, Genetic Differentiation 2	3
003PS18P2	Physiopathology of Oral Structures 2	2
	Total	7

Common Courses 2 – Biomaterials

Semester 3

Code	Course Name	Credits
003ML18P1	Evaluation Methods and Laboratory Techniques	3
003SM18P2	Materials Science	3
	Total	6

Semester 4

Code	Course Name	Credits
003IT18P2	Tissue Engineering, Nanotechnology and Biocompatibility	3
003MADEM2	Dental Biomaterials, Plastic and Solid Phase Insertion Biomaterials	3
	Total	6

REQUIRED COURSES

• Concentration: Oral Diseases and Surgeries-Periodontology

Semester 1

Code	Course Name	Credits
003SP18P1	Perio Clinic	6
003MP18P1	Periodontal Diseases and Therapies 1	3
003P218P1	Periodontal Diseases and Therapies 2	3
003TSP1P1	Synthesis Work	2
003T118P1	Perio Practical Work	1
	Total	15

Semester 2

Code	Course Name	Credits
003CLNIP2	Perio Clinic	9
003MP18P2	Implantology 1 Paro	3
003P318P2	Periodontal Diseases and Therapies 3	2
	Total	14

Semester 3

Code	Course Name	Credits
003TCP3P3	Perio Clinic	9
003MI18P3	Implantology 2	4
003PM18P3	Thesis Project	3
003LASRP3	Laser	1
	Total	17

Semester 4

Code	Course Name	Credits
003SP18P4	Perio Clinic	9
003TR18P4	Synthesis Work	2
003PADIP4	Digital Implantology	1
	Total	12

Semester 5

Code	Course Name	Credits
003CLNIP5	Perio Clinic	9
003TSM5P5	Synthesis Work	2
	Total	11

Semester 6

Code	Course Name	Credits
003PPROP6	Perio Clinic	9
003STP6P6	Synthesis Work	2
003MM18P6	Thesis	10
	Total	21

• Concentration: Oral Diseases and Surgeries-Oral Surgery

Semester 1

Code	Course Name	Credits
003CMF1P1	Oral and Maxillofacial Surgery Clinic 1	7
003DTPDP1	Teeth and Periodental Tissues	2
003PINFP1	Infectious, Inflammatory and Tumoral Pathologies of the Cervico-Facial Region	2
003BASEP1	Minor Oral Surgery	2
003RE18P1	Literature Review	1
	Total	14

Semester 2

Code	Course Name	Credits
003EVCHP2	Advanced Oral Surgery and Risk Assessment	3
003CMF2P2	Oral and Maxillofacial Surgery Clinic 2	7
003PMFMP2	Pathologies of the Facial Bone and Maxillae	2
003IMPLP2	Basics of Implantology	2
003RE18P2	Literature Review	1
003FANTP2	Practical Work on Phantom Models	1
	Total	16

Semester 3

Code	Course Name	Credits
003CMF3P3	Oral and Maxillofacial Surgery Clinic 3	8
003IMDIP3	Advanced Implantology	1
003IMAVP3	Major Oral Surgery 2	2
003PM18P3	Thesis Project	5
003RL18P3	Literature Review	1
	Total	17

Semester 4

Code	Course Name	Credits
003APMLP4	Advanced Techniques in Oral and Implant Surgery (Surgery)	2
003CMF4P4	Oral and Maxillofacial Surgery Clinic 3	8
003LPCCP4	Precancerous Lesions and Cancers of the ORAL CAVITY.	2
003TS18P4	Workshops on Scientific Articles	1
	Total	13

Semester 5

Code	Course Name	Credits
003CM18P5	Major Oral Surgery 3	1
003CL18P5	Oral Surgery Clinic	6
003IM18P5	Implantology 3 and Implant Prosthesis	2
003TS18P5	Workshops on Scientific Articles	1
	Total	10

Semester 6

Code	Course Name	Credits
003CL18P6	Oral Surgery Clinic	6
003MM18P6	Thesis	10
003TS18P6	Workshops on Scientific Articles	1
	Total	17

• Concentration: Pediatric Dentistry

Semester 1

Code	Course Name	Credits
003CP18P1	Pediatric Dentistry Clinic	2
003DTP1P1	Pediatric Dentistry	2
003PC18P1	Preclinical Pediatric Dentistry	2
003SD18P1	Dental Treatment Under General Anesthesia	1
003PA18P1	Dental Treatment Under Inhalation Sedation	4
003TPS1P1	Community Dentistry 1	2
003TSPEP1	Literature Review	2
	Total	15

Semester 2

Code	Course Name	Credits
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 2	2
003TS18P2	Literature Review	3
	Total	15

Semester 3

Code	Course Name	Credits
003CP18P3	Pediatric Dentistry Clinic	4
003DTP2P3	Pediatric Dentistry	2
003PR18P3	Master Thesis Project	2
003AN18P3	Dental Treatment Under General Anesthesia	1
003SP18P3	Dental Treatment Under Inhalation Sedation	3
003TPDPP3	Community Dentistry 3	2
003TR18P3	Literature Review	1
	Total	15

Semester 4

Code	Course Name	Credits
003CP18P4	Pediatric Dentistry Clinic	4
003DP18P4	Pediatric Dentistry	1
003STAHP4	Dental Treatment Under General Anesthesia 3	2
003PA18P4	Dental Treatment Under Inhalation Sedation	4
003TPDPP4	Community Dentistry 4	2
003TV18P4	Literature Review	2
	Total	15

Semester 5

Code	Course Name	Credits
003CP18P5	Pediatric Dentistry Clinic	4
003PR18P5	Master Thesis Project	3
003SD18P5	Dental Treatment Under General Anesthesia	2
003PA18P5	Dental Treatment Under Inhalation Sedation	4
003TV18P5	Literature Review	2
	Total	15

Semester 6

Code	Course Name	Credits
003CP18P6	Pediatric Dentistry Clinic	2
003MM18P6	Master Thesis	10
003SD18P6	Dental Treatment Under General Anesthesia	1
003PA18P6	Dental Treatment Under Inhalation Sedation	2
	Total	15

• Concentration: Endodontics

Semester 1

Code	Course Name	Credits
003AL18P1	Analysis of Articles	2
003TED2P1	Presentations 1+2 (Master Endo.)	3
003AC18P1	Access to Endodontics	3
003LM18P1	Shaping, Obturation and Complications	2
003PRENP1	Preclinical + Clinical Endodontics	2
	Total	12

Semester 2

Code	Course Name	Credits
003CQ18P2	Clinical Endodontics	14
003EN18P2	Retreatments and Complex Cases	2
003LE18P2	Surgical and Multidisciplinary Endodontics	2
	Total	18

Semester 3

Code	Course Name	Credits
003CD18P3	Clinical Endodontics	19
003CE18P3	Extra Muros Clinical Endodontics	3
003EX18P3	Endodontics Topics Presentations	2
	Total	24

Semester 4

Code	Course Name	Credits
003CD18P4	Clinical Endodontics	12
003EE18P4	Endodontics Topics Presentations	2
003PRENP4	Clinical Case Presentation	3
	Total	17

Semester 5

Code	Course Name	Credits
003MM18P5	Thesis 1	5
003CD18P5	Clinical Endodontics	3

003PT18P3	Clinical Case Presentation	1
003PM18P3	Thesis Project	5
	Total	14

Semester 6

Code	Course Name	Credits
003ME18P6	Thesis 2	5
	Total	5

• Concentration: Orthodontics

Semester 1

Code	Course Name	Credits
003ORCLP1	Clinical Orthodontic 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

Semester 2

Code	Course Name	Credits
003CLO1P2	Clinical Orthodontic 2	12
003MT18P2	Typodont 2	3
003TR18P2	Orthodontic Techniques 2	2
	Total	17

Semester 3

Code	Course Name	Credits
003CQ18P3	Clinical Orthodontic 3	12
003OI18P3	Orthodontics and Interdisciplinary Treatments 1	1
003OI18P3	Orthodontics and Interdisciplinary Treatments 2	1
003MR18P3	Research and Thesis	2
003RLO2P3	Literature Review 1	2
	Total	18

Semester 4

Code	Course Name	Credits
003CQ18P4	Clinical Orthodontic 4	12
003MR18P4	Research and Thesis 2	3
003RLO3P4	Literature Review 2	2
	Total	17

Semester 5

Code	Course Name	Credits
003CQ18P5	Clinical Orthodontic 5	12
003MR18P5	Research and Thesis 3	5
003RLO4P5	Literature Review 3	2
	Total	19

Semester 6

Code	Course Name	Credits
003CQ18P6	Clinical Orthodontic 6	12
003MR18P6	Research and Thesis 4	5
003RLO3P6	Literature Review 4	2
	Total	19

• Concentration: Esthetic and Prosthetic Dentistry

Semester 1

Code	Course Name	Credits
003PPFAP1	Fixed Prosthodontics Fundamental Principles and Clinical Applications 1	1
003LC18P1	Concepts of Occlusion in FP	1
003DR18P1	Instrumentation and Bio Materials in Restorative Dentistry	1
003POCCP1	Preclinical Occlusodontics	1
003AM18P1	Preclinical Removable Prosthodontics 1 and Clinical Assisting	2
003FI18P1	Preclinical Fixed Prosthodontics	3
003RP18P1	Complete Denture Prosthodontics and Laboratory Techniques	2
003TSP1P1	Workshops on Scientific Articles	2
	Total	13

Semester 2

Code	Course Name	Credits
003DR18P2	Clinical Restorative Dentistry	1
003PF18P2	Clinical Fixed Prosthesis	2
003PPFAP2	Fixed Prosthodontics Fundamental Principles and Clinical Applications 2	2
003TD18P2	Restoration Procedures in Restorative Dentistry	1
003PDREP2	Preclinical restorative Dentistry	1
003AM18P2	Preclinical Removable Prosthodontics and Clinical Assisting 2	2
003PE18P2	Preclinical and Clinical Fixed Prosthodontics 2	4
003RPPLP2	Removable Partial Denture Prosthodontics and Laboratory Techniques	2
003TSP2P2	Workshops on Scientific Articles 2 (Proth and DR)	2
	Total	17

Semester 3

Code	Course Name	Credits
003LI18P3	Clinical Esthetic Dentistry and Prosthodontics	9
003P118P3	Thesis Project 1 Proth-DR	2
003PI18P3	Implant Prosthodontics 1	2
003RH18P3	Complete Denture Removable Prosthodontics	2
003TVP3P3	Workshops on Scientific Articles 3 Proth - DR	2
	Total	17

Semester 4

Code	Course Name	Credits
003DR18P4	Clinical Esthetic Dentistry and Prosthodontics	9
003P218P4	Thesis Project 2 Prothesis-DR	3
003DG1P4	Digital Fixed Prosthesis	2
003PI18P4	Implant Prosthodontics 2	1
003TD18P4	Workshops on Scientific Articles 4	2
	Total	17

Semester 5

Code	Course Name	Credits
003DR18P5	Clinical Esthetic Dentistry and Prosthodontics	9
003LGODP5	Gerodontology	1
003MM18P5	Thesis 1	5
003TSP5P5	Workshops on Scientific Articles 5 Proth and DR	2
	Total	17

Semester 6

Code	Course Name	Credits
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	Workshops on Scientific Articles 6 Proth et DR	2
	Total	19

COURSE DESCRIPTION

Courses/Credits Granted by Equivalence

• Concentration: Oral Diseases and Surgeries-Periodontology

003PAROS1	Periodontology	2 Cr.
<p>This course enables students to diagnose and develop treatment plans for patients with simple and advanced periodontal disease</p> <ul style="list-style-type: none">- 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.
<p>Supplemented by Practical Work (003TPE216)</p> <p>This course enables students to develop diagnostic and treatment planning skills for managing simple periodontal diseases</p> <ul style="list-style-type: none">- 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	Periodontology clinic	2 Cr.
<p>This course enables students to provide non-surgical treatment for early-stage periodontal disease.</p> <h4>• Concentration: Oral Diseases and Surgeries-Oral Surgery</h4>		

003ALEXI6	Local Anesthesia + Exodontia	2 Cr.
<p>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.</p> <ul style="list-style-type: none">- 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.
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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 will be given to the prevention and management of complications.

003CCO2S2	Oral Surgery Clinic 1	2 Cr.
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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

003CCO1S3	Oral Surgery Clinic 2	2 Cr.
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This course enables students to understand the importance of asepsis in minor oral surgery procedures and to apply aseptic protocols and techniques to minimize the risk of infections. Students will acquire a deep understanding of the anatomical principles related to dental extractions and develop technical skills for precise extractions. They will master the techniques for wisdom tooth avulsions, focusing on managing potential complications, and develop specialized skills for multiple extractions and alveolectomies. The course also emphasizes optimizing post-extraction healing and minimizing complications, along with developing suturing skills to ensure optimal healing. By the end of this course, students will master dental extractions, integrating theoretical knowledge, advanced technical skills, and a thorough understanding of complication management principles.

- Administer pre-extraction analgesia in various clinical situations.
- Perform the extraction of simple single teeth (partially preserved crown).
- Provide postoperative care following the procedure.
- Diagnose and manage a post-extraction complication.
- Perform the extraction of single and multiple complex teeth.

003PATCI4	Surgical pathology	2 Cr.
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By the end of this course, students will be able to explain the fundamental principles of pathophysiology, diagnosis, and treatment of common surgical conditions.

• **Concentration: Pediatric Dentistry**

003ODOPS1	Pediatric Dentistry	1 Cr.
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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.
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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 should be able to manage a child patient and provide all necessary pediatric dental therapies.

003CDP1S3	Pediatric Dentistry Clinic	2 Cr.
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Pediatric Dentistry Clinic (clinical internships) 003CDP1S3 is a required 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.
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Pediatric dentistry clinic (clinical internship) 003CDP1S3 is a required internship conducted in the 5th year of Doctor of Dental Surgery program, semester S4.

• **Concentration: Endodontics**

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

Clinical Endodontics

003END2I6 Endodontics 1 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 (003TPE2I6)

Students will master the stages of endodontic treatment: filling of mono- and bi-radicular teeth, simple and complex

- Lateral/thermomechanical Condensation
- Patient management
- Obturation materials
- Surgical Preparation
- Cross-infection control, endodontic aseptic chain and ergonomics
- Retreatment: incisors, canines, premolars (1)
- Retreatment: incisors, canines, premolars (2)

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 (003TPE2I6)

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

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

Clinical Endodontics

003END2I6 Endodontics 1 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 (003TPE2I6)

Students will master the stages of endodontic treatment: filling of mono- and bi-radicular teeth, simple and complex

- Lateral/thermomechanical Condensation
- Patient management
- Obturation materials
- Surgical Preparation
- Cross-infection control, endodontic aseptic chain and ergonomics
- Retreatment: incisors, canines, premolars (1)
- Retreatment: incisors, canines, premolars (2)



PROGRAM REQUIREMENTS

Basic Sciences Training

Common Courses 1

- Concentration: Oral Diseases and Surgeries-Periodontology
- Concentration: Oral Diseases and Surgeries-Oral Surgery
- Concentration: Pediatric Dentistry
- Concentration: Endodontics
- Concentration: Orthodontics.
- Concentration: Esthetic and Prosthetic Dentistry

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

003RCH2P1	Research Methodology 2 (CC.1)	2 Cr.
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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

003FONDP1	Basic Sciences (CC.1)	2 Cr.
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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.
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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 (CC.1)	2 Cr.
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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	Laboratory Internship (CC.1)	2 Cr.
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This common required internship, conducted in the first year of the specialty program, covers core dental topics through various focused chapters.

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

Common Courses 2 - Biology

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

003BC18P2	Biocompatibility and Biomaterials (CC. 2 Biol)	2 Cr.
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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.
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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.
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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.
- Genetic polymorphism: diagnosis and manifestations at the oral cavity level.

003CD18P2	Cell Communication and Development, Genetic Differentiation 2 (CC. 2)	3 Cr.
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This common required course covers the study of specific structures and properties of proteins in vitro.

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

Common Courses 2 - Biomaterials

- **Concentration: Pediatric Dentistry**
- **Concentration: Endodontics**
- **Concentration: Orthodontics**
- **Concentration: Esthetic and Prosthetic Dentistry**

003MADEM2	Dental Biomaterials, Materials in Restorative, and Prosthodontic Dentistry	3 Cr.
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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	3 Cr.
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This course aims to:

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

003ML18P1	Evaluation Methods and Laboratory Techniques	3 Cr.
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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.

003SM18P1	Materials Science	3 Cr.
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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.

REQUIRED COURSES

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

003TCP3P3	Perio Clinic	9 Cr.
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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	Perio Clinic	9 Cr.
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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	Perio Clinic	6 Cr.
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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	Perio Clinic	9 Cr.
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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	Perio Clinic	9 Cr.
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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	Perio Clinic	9 Cr.
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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	3 Cr.
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This course is common and required.

Pre-requisite 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.
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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	Laser	1 Cr.
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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.
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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.
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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 aspect 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.
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This common required course is taught in the 1st semester of the 6th year.

Objective: Learn the surgical treatments of 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.
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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.
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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	2 Cr.
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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

003PM18P3	Thesis Project	3 Cr.
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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.

003TR18P4	Synthesis Work	3 Cr.
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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 (Perio)	3 Cr.
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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.

003SP18P6	Synthesis work (Paro)	2 Cr.
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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.
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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 dentoforn and root amputation
- TD Implantology 2: 3i system

Concentration: Oral Diseases and Surgeries-Oral Surgery

003IMAVP3	Advanced Oral Implantology	2 Cr.
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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

003AVCHP5	Advanced Oral Surgery	2 Cr.
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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	Basic Principles of Oral Surgery	2 Cr.
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This course introduces the fundamental principles of oral surgery. Students will learn the essential techniques to successfully perform oral surgical interventions.

Key topics 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 Principles of Oral Implantology	2 Cr.
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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	Bibliographic Research and Public Speaking	
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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

003IMDIP3	Digital Implantology and Prosthetics	2 Cr.
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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 Cervicofacial 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

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 topics 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 topics 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.
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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 topics 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	Major Oral Surgery and Risk Assessments	3 Cr.
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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	Multidisciplinary Approach in Oral Surgery	2 Cr.
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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.
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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.
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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 topics 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.
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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 topics 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.
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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

003CMF4P4	Oral and Maxillofacial Surgery Clinic 4	8 Cr.
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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

003CM5P5	Oral and Maxillofacial Surgery Clinic 5	6 Cr.
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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.
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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 Mass and Maxilla	2 Cr.
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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.
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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.
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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	Synthesis Work	1 Cr.
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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 topics 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.
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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 topics 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.

• **Concentration: Pediatric Dentistry**

003CDP1S3 Pediatric Dentistry Clinic 2 Cr.

Pediatric Dentistry Clinic (clinical internships) 003CDP1S3 is a required course taught in the 3rd semester of the 5th year of the Doctor of Dental Surgery program.

003CDP2S4 Pediatric Dentistry Clinic 2 Cr.

Pediatric dentistry clinic (clinical internship) 003CDP1S3 is a required course taught in the 4th semester of the 5th year of the Doctor of Dental Surgery program.

003ODOPS1 Pediatric Dentistry 1 Cr.

Pediatric Dentistry (003DOPS1) is a required course taught in the 1st semester of the 4th year of the Doctor of Dental Surgery program. It is complemented by practical work in semester S6 (003TPOPS2).

By the end of this course, students should be able to establish a pediatric dental treatment plan, manage child patients, and provide all necessary pediatric dental therapies.

Key topics include:

- 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
- Incisor-molar hypomineralization: differential diagnosis and treatment

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 should be able to manage a child patient and provide all necessary pediatric dental therapies.

003CP18P1	Pediatric Dentistry Clinic	2 Cr.
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Clinical training on pediatric or special need patients involves treating patients while awake in the dental chair.

003CP18P2	Pediatric Dentistry Clinic	4 Cr.
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Clinical training .

003CP18P3	Pediatric Dentistry Clinic	4 Cr.
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Clinical training on pediatric or special need patients involves treating patients while awake in the dental chair.

003CP18P4	Pediatric Dentistry Clinic	4 Cr.
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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
- Psychomotricity
- 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.
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Clinical training on pediatric or special need patients involves treating patients while awake in the dental chair.

003CP18P6	Pediatric Dentistry Clinic	2 Cr.
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Clinical training on pediatric or special need patients involves treating patients while awake in the dental chair.

003DTP1P1	Pediatric Dentistry	2 Cr.
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By the end of this course, students will be able to discuss child psychology, conduct a general health assessment, and understand the pharmacological pain and 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.
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By the end of this course, students will be able to discuss child psychology, conduct a general health assessment, and understand the pharmacological 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.
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By the end of this course, students will be able to discuss child psychology, conduct a general health assessment, and understand the pharmacological 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: Cranio facial
- Cephalometric analysis
- Space analysis
- Dental anomalies
- Management of dental traumatology in children
- Children with medical problems and dental treatment

003DP18P4	Pediatric Dentistry	1 Cr.
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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.
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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	2Cr.
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Practical work

003PR18P3	Thesis Project	2 Cr.
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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.
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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.
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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.
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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.
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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.
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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.
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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.
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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 Conscious Sedation	4 Cr.
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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 contra-indications 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 Conscious Sedation	4 Cr.
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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 contra-indications 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 Conscious Sedation	3 Cr.
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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 contra-indications 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 Conscious Sedation	4 Cr.
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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 Conscious Sedation	4 Cr.
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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 contra-indications 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 Conscious Sedation	2 Cr.
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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 contra-indications 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.
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This course focuses on promoting oral health across various population groups.

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

• **Concentration: Endodontics**

003AL18P1	Analysis of Articles	2 Cr.
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Analysis of scientific articles

003TED2P1	Presentations 1+2 (Master Endo.)	3 Cr.
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This course includes bibliographic research and comprehensive analysis.

- Clinical case presentations: 20 minutes each by 6th- and 7th-year students
- Presentations (6th- and 7th-year students)

003AC18P1	Access to Endodontics	2 Cr.
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Students must focus on all anatomical complexities to accurately illustrate the endodontic system to handle different challenging clinical situations. Key topics include:

- Introduction to Endodontics

- The pulpal anatomy of the maxillary teeth
- The pulpal anatomy of mandibular teeth
- Reconstitution and coronary access
- Pulpal and periapical diseases (1)
- Pulpal and periapical diseases (2)
- Pulpal and periapical diseases (3)
- Pulpal and periapical diseases (4)
- Pulpal and periapical diseases (5)
- Pulpal and periapical diseases (6) (Practical Work)
- E.D. Pulpal and periapical diseases (7) (Reading Notes) (Practical Work)
- E.D. Pulpal and periapical diseases (8) (Reading Notes) (Practical Work)
- Endodontic pharmacology 1
- Endodontic pharmacology 2
- Endodontic emergencies (Practical Work)
- Diagnostic Methods (Practical Work)
- Loco-regional anesthesia in endodontics (Practical Work)
- Digital radiography in endodontics (1) (Practical Work)
- Digital radiography in endodontics (2) (Practical Work)

003LM18P1

Cleaning and Shaping, Filling and Their Complications

3 Cr.

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:

- The Portfolio
 - Shaping and cleaning the canal system 1: objectives and concepts
 - Methods of communication and synthesis work
 - Shaping and cleaning the canal system 2: The instruments
 - Shaping and cleaning the canal system 3: The instruments
 - Shaping and cleaning the canal system 4: Manual techniques
 - Shaping and cleaning the canal system 5: Manual techniques
 - Shaping and cleaning the canal system 6: Manual techniques
 - Shaping and cleaning of the canal system 7: irrigation
 - Shaping and cleaning the canal system 8: NiTi
 - Shaping and cleaning the canal system 9: NiTi
 - Shaping and cleaning the canal system 10: The NiTi
 - Operative protocol of endodontic treatments
 - NiTi instruments: heat treatments
 - Reciprocating systems: characteristic and technique
 - One flare and 2 shape: why new instruments?
 - Methods of sterilization and disinfection
 - NiTi instruments on the Lebanese market: operating protocols, advantages and disadvantages Canal Obturation
- 1: Filling Materials
- Canal Obturation 2: Filling Materials (Practical Work)
 - Channel Obturation 3: lateral compaction, thermomechanical and molded cone
 - Channel Obturation 4: vertical compaction
 - Canal Obturation 5: system B
 - Canal Obturation 6: the thermoplasticized gutta-percha
 - Post-operative complications (Practical Work)

003PRE2P1

Endo+Clinical Preclinical (I)

2 Cr.

Key topics include:

- Preclinical Endodontics: Workshops
- Clinical Endodontics
- Scientific Paper analysis.
- Endodontic retreatments, fractured instruments (demo+appl)

- Endodontic retreatments, coronary access (demo+appl)
- Endodontic retreatments, channel access (demo+appl)
- Surgical Endodontics (demo+appl)
- Surgical Endodontics 1 (appl)
- Surgical Endodontics 2 (appl)
- (Ca(OH)₂) and MTA applications

003CQ18P2	Clinical Endodontics	14 Cr.
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Endodontic clinical work

003LE18P2	Surgical and Multidisciplinary Endodontics	2 Cr.
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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:

- Perforations: classification
- Calcium hydroxide in endodontics
- Endodontic retreatment 3: Coronal access (1)
- Endodontic retreatment 4: Coronal access (2)
- Endodontic retreatment 1: Therapeutic decision
- Restoration of endodontically treated teeth: endodontic approach
- MTA: indications, benefits and clinical results
- Treatment of immature teeth
- Traumatology and endodontics
- Thinning of plumped teeth
- Endodontic reprocessing 2: Coronary access

003EN18P2	Retreatments and Complex Cases	2 Cr.
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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:

- The endo-periodontal relationship
- Surgical techniques 1
- Surgical techniques 2
- Surgical endodontics: indications and contraindications
- Peri-radicular anatomy, incisions and sutures (Practical Work)
- Surgical preparation in surgical endodontics
- The endo - pedo Filling materials
- Coronary elongation
- Endo-ortho Cysts (pathology)
- Cysts: a surgical approach

003CD18P3	Endodontic Clinic	19 Cr.
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Clinical work

003CE18P3	Clinical Endodontics: Extra Muros	3 Cr.
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Clinical work

003EX18P3	Clinical Case Presentation	2 Cr.
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This course includes bibliographic research and comprehensive analysis.

This course is taught during the 2 years of master studies and is assessed each semester.

The level of mastery is assessed based on the presentations made by students.

003PT18P3	Clinical Case Presentation (Endo)	1 Cr.
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Students will be able to:

- Prepare a PowerPoint presentation of one or more clinical cases treated
- Establish the elements of the diagnosis.
- Argument 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.
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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.

003CD18P4	Clinic Endo	16 Cr.
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Clinical work

003EE18P4	Clinical Case Presentation	2 Cr.
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Tutorials

003PRENP4	Clinical Case Presentation	2 Cr.
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Students will be able to:

- Prepare a PowerPoint presentation of one or more clinical cases treated
- Establish the elements of the diagnosis.
- Argument 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.
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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.

003ME18P6	Thesis 2	5 Cr.
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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 redaction.

By the end of this course, students will be able to conduct research specific to their discipline.

Concentration: Orthodontics.

003SEPRP1	Preparatory Session	1 Cr.
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This required course is taught at the end of the fifth year and beginning of the Master in Dental Medicine: Orthodontics program.

By the end of this course, students will be able to manipulate the orthodontic wire in a correct way, 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.
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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.
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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

003MT18P2	Typodont 2	2 Cr.
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- 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 Clinic 1	2 Cr.
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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 Clinic 2	12 Cr.
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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 Clinic 3	12 Cr.
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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 Clinic 4	12 Cr.
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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 Clinic 5	12 Cr.
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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 Clinic 6	12 Cr.
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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.
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This required course is taught in the 7th year of this concentration.
By the end of this course, students should be able to formulate the problem of their thesis based on an adequate literature review.

003MR18P4	Research and Thesis 2	3 Cr.
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This required course is taught in the 7th year of this concentration.
By the end of this course, students should be able to select the materials and methods necessary for the study and select the sample.

003MR18P5	Research and Thesis 3	5 Cr.
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This required course is taught in the 8th year of this concentration.
By the end of this course, students should be able to carry out the experimental study, obtain statistical results and interpret them.

003MR18P6	Research and Thesis 4	5 Cr.
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This required course is taught in the 8th year of this concentration.
By the end of this course, students should be able to analyze and interpret the results, write and defend the thesis.

003SCFOP1	Basic Sciences in Orthodontics	2 Cr.
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This required course is taught in the 6th year of this concentration.
By the end of this course, students should 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)

003TOR1P1	Orthodontic Techniques 1	2 Cr.
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This required course is taught in the 6th year of this concentration.
By the end of this course, students should 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.
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This required course is taught in the 7th year of this concentration.
By the end of this course, students should 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

003O18P3	Orthodontics and Interdisciplinary Treatments 1	1 Cr.
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This required course is taught in the 7th year of this concentration.

By the end of this course, students should 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 prosthodontist
- Lip and palate fractures and congenital malformations: seen by surgery
- Different solutions to problems encountered during orthodontic treatment

003O18P3	Orthodontics and Interdisciplinary Treatments 2	1 Cr.
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This required course is taught in the 7th year of this concentration.

By the end of this course, students should 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 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.
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This required course is taught in the 7th year of this concentration.

By the end of this course, students should 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.
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This required course is taught in the 7th year of this concentration.

By the end of this course, students should be able to know the new techniques as well as evaluate the different stages of a randomized research.

003RLO4P5	Literature Review 3	2 Cr.
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This required course is taught in the 8th year of this concentration.
By the end of this course, students should be able to understand new techniques as well as evaluate the different stages of randomized research.

003RLO3P6	Literature Review 4	2 Cr.
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This required course is taught in the 8th year of this concentration.
By the end of this course, students should be able to evaluate an article and judge its scientific validity to justify the application of its results.

• **Concentration: Esthetic and Prosthetic Dentistry**

003DR18P2	Restorative Dentistry Clinic	1 Cr.
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This clinical required internship is conducted in the 7th and 8th year, semesters 1 and 2; and 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	Restoration Procedures in Restorative Dentistry	1 Cr.
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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- Designing 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.
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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.
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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
- Aesthetic inlays/onlays
- Bridge abutment onlays and inlays
- Veneers
- Reconstructions with fiber posts

- Evaluation
- Research work

003AM18P1	Preclinical Removable Prosthesis 1 and Clinical Support	2 Cr.
<p>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)</p> <p>By the end of this practical course, students should 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.</p>		
003RP18P1	Removable Total Prosthetic Restoration and Laboratory Technique	2 Cr.
<p>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.</p>		
003AM18P2	Preclinical and Clinical Support Removable Prosthesis 2	2 Cr.
<p>By the end of this common course students must be able to carry out the laboratory steps for the manufacture of a partial skeletal prosthesis.</p>		
003RPPLP2	Removable Partial Prosthetic Restoration and Laboratory Technique	2 Cr.
<p>By the end of this course students must be able to plan the management and realization of clinical cases involving partial skeletal prostheses.</p>		
003PF18P2	Clinical Fixed Prosthodontics	2 Cr.
<p>Clinical work</p>		
003LI18P3	Cosmetic and Prosthetic Dentistry Clinic	9 Cr.
<p>Clinical work</p>		
003DR18P4	Clinical Esthetic Dentistry and Prosthodontics	9 Cr.
<p>Clinical work</p>		
003DR18P5	Clinical Esthetic Dentistry and Prosthodontics	9 Cr.
<p>Clinical work</p>		
003DR18P6	Cosmetic and Prosthetic Dentistry Clinic	6 Cr.
<p>Clinical</p> <p>Link to Program-Level Learning Outcomes (PAR)</p>		work
003AD18P6	Cosmetic and Prosthetic Dentistry Clinic	3 Cr.
<p>Clinical Internship</p>		
003P118P3	Thesis Project 1 (Proth-DR)	2 Cr.
<p>This required course enables students to develop the research skills necessary for earning a master's degree. It is the second part in the process of writing the thesis.</p> <p>By the end of this course, students will be able to plan and manage a research work.</p>		
003RH18P3	Removable Prosthetic Rehabilitation of Total Edentulous	2 Cr.
<p>Students must be able to handle complex cases of total edentulism.</p>		

003P218P4	Thesis Project 2 (Prosthesis-DR)	3 Cr.
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This required course enables students to develop the research skills necessary for earning a master's degree. It is the second part in the process of writing the thesis.

By the end of this course, students will be able to plan and manage a research work.

003LGODP5	Gerontology	1 Cr.
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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.
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This required course enables students to develop the research skills necessary for earning a master's degree. It is the second part in the process of writing the thesis.

By the end of this course, students will be able to conduct research specific to their discipline.

003ME18P6	Thesis 2	5 Cr.
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This required course enables students to develop the research skills necessary for earning a master's degree. It is the second part in the process of writing the thesis.

By the end of this course, students will be able to conduct research specific to their discipline.

003PC18P6	Case Presentation	1 Cr.
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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: Basic Principles and Clinical Applications	1 Cr.
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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 should 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: Basic Principles and Clinical Applications 2	2 Cr.
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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 should be able to recognize the basic principles and various therapeutic steps in conventional fixed prosthodontics.

003LC18P1	Occlusion Concepts in Fixed Prosthodontics	1 Cr.
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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.
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Practical work in Occlusodontics

003Fl18P1	Preclinical Fixed Prosthodontics	3 Cr.
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This required course is part of the Doctor of Dental Surgery program, taught in the 6th year, P1.

It follows the theoretical course (code 003PFPAP1).

By the end of this practical course, students should be able to prepare $\frac{3}{4}$, 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 Fixed Prosthodontics 2	4 Cr.
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This required course is part of the Doctor of Dental Surgery program, taught in the 6th year, P2.

It follows the theoretical course (code 003PFPAP1) and practical course (code 003PPD3P1).

By the end of this practical course, students should be able to prepare $\frac{3}{4}$, 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 Prosthodontics	2 Cr.
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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.

003Pl18P3	Implant Prosthodontics 1	2 Cr.
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This required course is taught in the 7th year, P3.

It is complemented by a clinical course titled “Esthetic and Prosthetic Dentistry Clinic” (code 003CPD1P3).

By the end of this course, students should 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: Prosthodontics-Perio (7th and 8th prosthodontics + perio) (1) (Practical Work)
- Case presentation: Prosthodontics-Perio (7th and 8th prosthodontics + perio) (2) (Practical Work)
- Case presentation

003PI18P4	Implant Prosthodontics 2	1 Cr.
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This required course is taught in the 7th year, P3.

It is complemented by a clinical course titled “Esthetic and Prosthetic Dentistry Clinic” (code 003CPD1P3).

By the end of this course, students should be able to recognize the basic principles and various therapeutic steps in implant fixed prosthodontics.

003CO18P6	Prosthetic and Multidisciplinary Correlation 2	2 Cr
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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” (code 003CPD1P3).

By the end of this course, students should refine their knowledge in fixed prosthodontics and their multidisciplinary correlations.

003TSP1P1	Synthesis Work	2 Cr.
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This course involves the analysis of articles related to the teaching of removable prostheses ranging from conventional prostheses to implant-retained prostheses

Key topics include:

Bibliographic research (adjoint)

- Digital smile design: application in DRE (Dental Restorative Esthetics)
- How to choose the appropriate shade in restorative dentistry
- Treatment of white and brown lesions

003TSP2P2	Synthesis Work 2 (Proth and DR)	2 Cr.
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This common required course is taught in the second semester of the 6th, 7th and 8th years. It consists of a bibliographic research and an analysis of articles relating to the 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.
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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.
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This required common course is taught in the second semester of the 6th, 7th, and 8th years. It consists of a bibliographic research and analysis of articles related to conventional fixed prosthodontics and supra-implant prosthodontics following the IMRAD method.

003TSP5P5	Synthesis Work 5 (Prosthodontics and Restorative Dentistry)	2 Cr.
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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 6 (Prosthodontics and Restorative Dentistry)	2 Cr.
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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.