DISCIPLINE SYLLABUS

1. PROGRAM DATA

1.1. Higher education institution	**University of Medicine and Pharmacy of Craiova**
1.2. Faculty	**Faculty of Dentistry**
1.3. Department	Department II
1.4. Field of study	Dental Medicine
1.5. Cycle of studies	Integrated Bachelor and Master's Degree
1.6. Study program	Dentistry in English
1.7. Qualification awarded	Doctor medic stomatolog (în limba engleză)
1.8. Qualification level	level 7 CNC/ CEC(EQF)/ ISCED
1.9. Form of education	Full-time (on-site attendance)

2. DISCIPLINE INFORMATION

2.1. Name of the discipline					Endodontics I			
2.2. Course coordinator (lectures)					Gheorghita Lelia Mihaela			
2.3. Practical/laboratory coordinator(s)					Gheorghita Lelia Mihaela, Diaconu Oana Andreea, Gheorghe Anca Gabriela, Banica Alexandra Carina			
2.4. Year of Study	4	**2.5. Semester**	7	**2.6. Type of assessment**	CE (PA) SE (E/A)	**2.7. Discipline status**	**Category**	DF - disciplină fundamentală
							Status	DOB - obligatorie
2.8 Discipline code					MD			

3. TOTAL ESTIMATED WORKLOAD (HOURS / SEMESTER))

3.1.Weekly workload (hours)	5	**3.2. Of which: Lecture**	2	**3.3. Laboratory**	3
3.4. Total hours according to the curriculum	70	**3.5. Of which: Lecture**	28	**3.6. Laboratory**	42
3.7. Additional academic activities (projects, research and guided academic activities, etc)					
3.8. Examinations (assessment)					4
3.9. Total of academic hours					**70**
3.10. Hours attributed to individual study					
3.10.1 Study of textbooks, lecture notes, bibliography					25
3.10.2 Additional literature and electronic resources					20
3.10.3. Preparation for laboratories					13
3.10.4. Preparation of assignments / portfolios					10
3.10.5. Preparation for final examination					10

3.10.6. Other activities (consultations, student groups)	2
3.11. Total individual study hours	80
3.12. Total workload – hours per semester (total academic hours + hours attributed to individual study)	150
3.13. Number of credits (1 credit=30 hours)	5

4. PREREQUIREMENTS

4.1 Curriculum prerequisites	Completion and/or promotion of the following disciplines: Anatomy, Physiology, Morphology of teeth and dental arches, Histology, Oral and dental prevention, Dental materials, Anesthesia and sedation in dentistry, Restorative Restorative I, II.
4.2 Competency prerequisites	At the beginning of the Endodontics I course, the student must demonstrate the following minimum skills: • Knowledge of the anatomy and morphology of the endodontic system • Understanding of pulpal pathological processes • Basic notions of infection control and asepsis • Correct use of basic dental instruments • Creation of access cavities for restorations • Handling common dental materials • Application of the rules of isolation of the operating field (dam) • Clinical examination of the patient and completion of the patient file • Working under supervision and following the instructions of the teaching staff

5. REQUIREMENTS

5.1. 1 for lecture activities	To participate in the course-type teaching activity, students must know and comply with the provisions contained in: the UMFCV Charta, the teaching and professional activity regulations of students (Romanian, English), the internal regulations of the discipline, the student examination methodology, the UMFCV code of ethics and deontology Amphitheater with projection system Students' tardiness and access after the start of the teaching process are not accepted because they influence the fluency of the presentation. During the course, students will have their mobile phones turned off. Taking photos/recordings during the course is prohibited without the teacher's consent.
5.2. for practical/laboratory activities	Clinical internships are held in appropriately equipped spaces: internship rooms 402 and 404 in Building B, floor 4 - Attendance at internships is mandatory and requires wearing specific equipment;

	- Clinical internships are organized in groups of students, according to the schedule. It is not allowed to perform the clinical internship with a group other than the one in which the student is registered - The rules of the teaching and professional activity regulations of students and the internal regulations of the discipline will be strictly observed - Rigorous compliance with hygiene, safety and professional conduct norms is sought - During the clinical internships, students will have their mobile phones turned off. It is forbidden to take pictures/recordings during practical activities, without the consent of the teaching staff - Students' lateness and access after the start of the teaching activity is not accepted, as it influences its conduct - It is required to execute a scale that involves performing at least 6 therapeutic procedures: 6 endodontic treatments performed with manual/rotary instruments on extracted teeth/endoblocks) both monoradicular and pluriradicular, accompanied by initial and after-completion radiographs of the endodontic treatment

6. COMPETENCES

By completing this discipline, the student will develop the following professional and transversal competences, in accordance with the list of competences established by the National Qualifications Framework / European Qualifications Framework (NQF/EQF), harmonized with the European ESCO framework and the ARACIS 2025 standards.	
6.1. Professional competences	C1- Identification of the disease state and establishing the correct diagnosis of the reversible and irreversible endodontic pathology C2 – Therapy of reversible and irreversible endodontic pathology
6.2. Transversal competences	CT1- to explain to the patient or relative, at their level of understanding, the definitive diagnosis as well as the proposed treatment plan for that clinical case CT2- to work in a team with the medical assistant and other dental or general medicine specialist colleagues to establish the dental diagnosis and a correct treatment plan for the respective case. CT3- to communicate orally and in writing the requirements, the working method, the results obtained and to consult with the team. CT4- to be open to learning throughout their professional life. CT5 – to have the ability to collect the necessary scientific information related to the pathology of endodontic diseases from various documentary sources. CT6- to know how to use information and communication technology.

7. OBJECTIVES OF THE COURSE

7.1. General objective of the course:	The Endodontics I discipline aims to train future dentists in the field of endodontic pathology by integrating diagnostic, preventive and therapeutic knowledge of complicated dental lesions and by adapting the clinical approach to the specifics of each endodontic case. This contributes to the acquisition of theoretical and practical knowledge regarding the clinical examination, diagnosis and specialized treatment of endodontic diseases, being an essential part of the student's training in the field of dentistry.
7.2. Specific objectives (SO):	SO1 Knowledge of the principles of patient history and extra- and intraoral examination. SO2 Knowledge of contemporary methods of radiological and imaging diagnosis in endodontics. SO3 Development of a treatment plan in accordance with the diagnosis of pulp disease. SO4 Isolation of the surgical field in endodontics using the dam system. SO5 Knowledge of endodontic instruments. SO6 Knowledge of the principles of endodontic treatment. SO7 Knowledge of the principles of odontometry. Interpretation of retroalveolar radiographs performed for odontometry. SO8 Knowledge of the principles and techniques of chemo-mechanical root canal treatment. SO9 Knowledge of the principles and techniques of three-dimensional root canal obturation. SO10 Performing endodontic access cavitation and shaping, irrigation and obturation of root canals according to standard protocols. SO11: Recognize and manage simple endodontic incidents and accidents. SO12: Apply the principles of asepsis, antisepsis and patient safety.

8. LEARNING OUTCOMES

8.1. Knowledge (K)	Upon completion of the course , the student will be able to accumulate, describe, analyze and evaluate specialized knowledge regarding the structures of the dento-maxillary apparatus, the pathology of the teeth, jaws and oral cavity tissues, dental and dentoalveolar anomalies, congenital malformations, as well as the principles of diagnosis and treatment (prophylactic, preventive, interceptive and curative) specific to dentistry, through classical or digital methods/techniques. By completing the Endodontics I discipline, the student will be able to: K1- identify and describe the particularities of the endodontic morphology of the teeth K2- identify endodontic diseases, describe them and establish their correct diagnosis K3- understand and apply the principles of treatment in the case of reversible and irreversible pulp inflammations K4- explain to the patient or relative, at their level of understanding, the diagnosis of certainty, as well as the treatment plan proposed in the respective clinical case
8.2. Skills (S)	The student/graduate acquires and proves specialized clinical experience under appropriate supervision. gradually and gradually performs, during the years of study, practical and clinical tasks necessary to ensure the specific professional competencies (knowledge, skills and aptitudes) of the dental profession. By completing the Endodontics I discipline, the student will demonstrate the ability to: S1- correctly perform a patient's anamnesis, respecting its specific stages S2- perform the general objective examination and of the dento-maxillary apparatus in the case of a patient with pulp inflammation S3- use specific paraclinical methods within the diagnostic process S4- critically interpret the results of clinical and paraclinical investigations, correlate the information and formulate a diagnosis of certainty. S5- establish the treatment plan appropriate to the diagnosed condition, taking into account the morphological endodontic and structural particularities of the respective tooth. S6- performs specific therapeutic procedures correctly and safely S7- communicates effectively, adapting the style and message to each patient with endodontic pathology.

8.3. Responsibility and autonomy (R&A)	Upon completion of the course the student/graduate integrates and applies specialized skills necessary for prevention, diagnosis and treatment activities regarding anomalies and diseases of the teeth, jaws and related tissues. evaluates, analyzes, differentiates, estimates, interprets and uses the information, knowledge, skills and responsibilities accumulated during the years of study, to obtain the necessary skills to practice the profession of dentist By completing the Endodontics I discipline, the student will prove: RA1- the ability to act autonomously in coordinating and carrying out the clinical examination activity, assuming the responsibility for formulating a diagnosis in the case of a patient with an endodontic pathology RA2- the ability to act autonomously in the efficient organization of the activities of providing dental care, assuming the responsibility for prioritizing tasks RA3- the ability to work in a team RA4- the ability to assume the responsibility for the correct application, under supervision, of specific therapeutic procedures, in accordance with professional protocols and standards RA5- the ability to adapt professional conduct to the requirements of the clinical situation, demonstrating flexibility and empathy in the relationship with the patient and with the medical team RA6- the ability to request and accept constructive feedback from teachers and other health professionals, for personal and professional development RA7- the ability to be aware of the need for individual study as the basis of personal autonomy and professional development RA8- the ability to access scientific databases: PubMed, sciencedirect, ANELISPLUS. RA9- the ability to act responsibly in compliance with the norms of ethics and academic integrity

9. CONTENTS AND ORGANIZATION OF TEACHING–LEARNING ACTIVITIES

9.1. Lecture	Allocated time (hours)	Teaching methods	Notes
1. Introduction. Odontogenesis (amelogenesis, dentinogenesis, root formation). Morphophysiology of the dental pulp (cells, fibers, ground substance,	2h lecture/ week	Interactive lectures supported by Power Point presentations/conversation/problem solving/exemplification through short presentations of clinical situations/Visual explanations through diagrams	Formative evaluation through a number of 5 multiple choice questions adapted to

innervation, vascularization)			the course theme
2. Pulp-dentin complex (dentin biology, secondary dentin formation, pain reception, age-related changes, congenital and systemic diseases) Morphophysiology of the apical region (apex, cementum, periodontal space, alveolar bone) and the relationship of teeth with local anatomical structures	2h lecture/ week	Interactive lectures supported by Power Point presentations/conversation/problem solving/exemplification through short presentations of clinical situations/Visual explanations through diagrams	Formative evaluation through a number of 5 multiple choice questions adapted to the course
3. Morphology of the endodontic space.	2h lecture/ week	Interactive lectures supported by Power Point presentations/conversation/problem solving/exemplification through short presentations of clinical situations/Visual explanations through diagrams	Formative evaluation through a number of 5 multiple choice questions adapted to the course
4. Clinical examination in endodontics - anamnesis: identification and recording of all relevant factors; - inspection, palpation, percussion, mobility testing, vitality tests, exploratory drilling, - transillumination, exploration of fistulas, selective anesthesia, occlusion analysis,	2h lecture/ week	Interactive lectures supported by Power Point presentations/conversation/problem solving/exemplification through short presentations of clinical situations/Visual explanations through diagrams	Formative evaluation through a number of 5 multiple choice questions adapted to the course

specification of the nature of dyschromia; - assessment of the risks of all therapeutic options (endodontic treatment "de novo", restoration of a previous treatment, surgical treatment); patient acceptance of the proposed therapeutic solutions			
5.Principles and techniques of isolating the operating field; use of the dental dam system	2h lecture/ week	Interactive lectures supported by Power Point presentations/conversation/problem solving/exemplification through short presentations of clinical situations/Visual explanations through diagrams	Formative evaluation through a number of 5 multiple choice questions adapted to the course
6. Creating access to the pulp chamber	2h lecture/ week	Interactive lectures supported by Power Point presentations/conversation/problem solving/exemplification through short presentations of clinical situations/Visual explanations through diagrams	Formative evaluation through a number of 5 multiple choice questions adapted to the course
7. Chemo-mechanical root canal treatment: principles, establishing working length, root canal enlargement techniques, endodontic irrigants	2h lecture/ week	Interactive lectures supported by Power Point presentations/conversation/problem solving/exemplification through short presentations of clinical situations/Visual explanations through diagrams	Formative evaluation through a number of 5 multiple choice questions adapted to the course
8. Chemo-mechanical root canal treatment: principles, establishing working length, root canal enlargement techniques, endodontic irrigants-	2h lecture/ week	Interactive lectures supported by Power Point presentations/conversation/problem solving/exemplification through short presentations of clinical situations/Visual explanations through diagrams	Formative evaluation through a number of 5 multiple choice

continuing previous lecture			questions adapted to the course
9. Root canal enlargement using rotary techniques at constant low speed (Ni-Ti alloy burs)	2h lecture/ week	Interactive lectures supported by Power Point presentations/conversation/problem solving/exemplification through short presentations of clinical situations/Visual explanations through diagrams	Formative evaluation through a number of 5 multiple choice questions adapted to the course
10. Root canal obturation: objectives, materials, their degree of biocompatibility, obturation techniques, indications for postoperative discomfort (pain, edema)	2h lecture/ week	Interactive lectures supported by Power Point presentations/conversation/problem solving/exemplification through short presentations of clinical situations/Visual explanations through diagrams	Formative evaluation through a number of 5 multiple choice questions adapted to the course
11. Root canal obturation: objectives, materials, their degree of biocompatibility, obturation techniques, indications for postoperative discomfort (pain, edema)- continuing the previous lecture	2h lecture/ week	Interactive lectures supported by Power Point presentations/conversation/problem solving/exemplification through short presentations of clinical situations/Visual explanations through diagrams	Formative evaluation through a number of 5 multiple choice questions adapted to the course
12. Clinic of acute dental pulp inflammation: (hyperemia, reversible symptomatic pulpitis, irreversible symptomatic pulp inflammation), clinical signs, histopathology, positive and differential diagnosis, evolution, complications, treatment indications	2h lecture/ week	Interactive lectures supported by Power Point presentations/conversation/problem solving/exemplification through short presentations of clinical situations/Visual explanations through diagrams	Formative evaluation through a number of 5 multiple choice questions adapted to the course
13. Clinic of chronic inflammation of the dental pulp: anatomoclinical	2h lecture/ week	Interactive lectures supported by Power Point presentations/conversation/problem solving/exemplification through short	Formative evaluation through a

forms of chronic pulp inflammation (irreversible asymptomatic pulp inflammation), clinical signs, histopathology, positive and differential diagnosis, evolution, complications, treatment indications		presentations of clinical situations/Visual explanations through diagrams	number of 5 multiple choice questions adapted to the course
14. Accidents in endodontic treatment: instrument fractures, ledges, false paths, damage to the apical periodontium, incomplete or over-filling of the canal, swallowing and aspiration of canal instruments, emphysema of the periapical soft tissues. Diagnosis, prevention and treatment.	2h lecture/ week	Interactive lectures supported by Power Point presentations/conversation/problem solving/exemplification through short presentations of clinical situations/Visual explanations through diagrams	Formative evaluation through a number of 5 multiple choice questions adapted to the course
Total	Total hours per semester = 28		

Mandatory Bibliography

1. Lecture on the UMF Craiova on-line platform www.student.umfcv.ro

Berman LH, Hargreaves KM. Cohen's Pathways of the Pulp, 12th Edition.Elsevier, 2020.

2. Castellucci A. Endodontics, Volume 1 and 2, 1st Edition. Edra, 2022.

3. Rotstein I, Ingle JI. Ingle's Endodontics, 7th Edition. Pmph USA Ltd, 2019.

4. Torabinejad M, Fouad A, Shabahang S. Endodontics: Principles and Practice, 6thEdition. Elsevier, 2020.

Optional Bibliography

1. **Patel Shanon, Justin J. Barnes** *The Principles of Endodontics,3rd ed.,* **Oxford University Press,2019**

2. **Patel Sh.,Harvey S, Shemesh H.,Durack C.,** *Cone Beam Computed Tomography In Endodontics* . Quintessence Publishing, United Kingdom,2016

9.2. PRACTICAL SESSIONS	Allocated time (hours)	Teaching methods and continuous assessment	Practical activities performed by students

1. Endodontic morphology	3h/week	Brief presentation of clinical observations, interactivity. Case-based learning Exercises of clinical reasoning, formulation and argumentation of identified teeth EC by assessing the degree of involvement during practical work	Type of activity: examination of extracted teeth and group identification, radiological analysis of internal morphology Degree of involvement: individual, in a team, assisted Tools used: extracted teeth, periapical radiographs, endodontic instruments, laptop, monitor Objective of the activity - the student will develop the following skills through this activity: K1, CT2, CT 3
2. Endodontic consultation and treatment instruments (handling techniques)	3h/week	Brief presentation of clinical observations, interactivity. Case-based learning Exercises of clinical reasoning, formulation and argumentation of identified teeth EC by assessing the degree of involvement during practical work	Type of activity: endodontic instrument examination and group identification, radiological analysis of internal morphology Degree of involvement: individual, in a team, assisted Instruments used: extracted teeth, periapical radiographs, endodontic instruments, laptop, monitor Objective of the activity - the student will develop the following skills through this activity: C1, CT2, CT 3
3. Anesthesia techniques in endodontics. Isolation of the operating field in Endodontics.	3h/week	Clinical reasoning exercises, interactive discussion with the group tutor; Medical therapeutic exercises with involvement in dental treatment EC by assessing the degree of involvement during practical work	Type of activity: Presentation of the dental dam isolation device. Practicing dam application techniques. Isolation of teeth with dam in various clinical situations. Simulation on phantom/model of various situations requiring isolation with the dam system, interactive collective exercises to practice clinical reasoning and therapeutic prescription exercises;

			case-based learning; learning in interdisciplinary teams Level of involvement: individual, in a team, assisted Tools used: dam isolation device, laptop, monitor Objective of the activity - the student will develop the following skills through this activity: C1, C2, CT 1, CT2, CT 3,
4.Endodontic access cavity (extracted teeth, plastic replica)	3h/week	Assisted and autonomous individual activity Individual clinical portfolio guidance/scale EC by assessing the degree of involvement during practical work	Type of activity Simulation of the access cavity preparation in chemo-mechanical root canal treatment (on extracted teeth/endoblocks) using specific burs Degree of involvement: individual, in a team, assisted Instruments used: extracted teeth/endoblocks, , endodontic access creation burs, irrigation fluid, luerlack syringes, irrigation needles Objective of the activity - the student will develop through this activity the following skills: C1, C2, CT 1, CT2,
5.Working Length measurement. Shaping and cleaning using manual files.	3h/week	Assisted and autonomous individual activity Individual clinical portfolio guidance/scale EC by assessing the degree of involvement during practical work	Type of activity Simulation of chemo-mechanical root canal treatment (on extracted teeth/endoblocks) using the manual files for mechanical treatment Degree of involvement: individual, in a team, assisted Instruments used: extracted teeth/endoblocks, , endodontic access creation burs, manual instruments, endodontic rulers,, lavage fluid, luerlack syringes, irrigation needles Objective of the activity - the student will develop the following

			skills through this activity: C1, C2, CT 1, CT2,
6. Working Length measurement. Shaping and cleaning using manual files.	3h/week	Assisted and autonomous individual activity Individual clinical portfolio guidance/scale EC by assessing the degree of involvement during practical work	Type of activity Simulation of chemo-mechanical root canal treatment (on extracted teeth/endoblocks) using the manual files for mechanical treatment Degree of involvement: individual, in a team, assisted Instruments used: extracted teeth/endoblocks, , endodontic access creation burs, manual instruments, endodontic rulers,, lavage fluid, luerlack syringes, irrigation needles Objective of the activity - the student will develop the following skills through this activity: C1, C2, CT 1, CT2,
7. Rotary shaping of root canals. Ni-Ti bur systems. Types of rotary shaping movements.	3h/week	Assisted and autonomous individual activity Individual clinical portfolio guidance/scale EC by assessing the degree of involvement during practical work	Type of activity Simulation of chemo-mechanical root canal treatment (on extracted teeth/endoblocks) using the rotating system in continuous rotation for mechanical treatment Degree of involvement: individual, in a team, assisted Instruments used: extracted teeth/endoblocks, , endodontic access cavity burs, manual and rotary canal shaping instruments, endodontic micromotors, endodontic rulers,, irrigants, luerlack syringes, irrigation needles Objective of the activity - the student will develop the following skills through this activity: C1, C2, CT 1, CT2
8. Root canal obturation methods.	3h/week	Clinical demonstrations in the laboratory/simulation	Type of activity: practical demonstrations of performing obturation techniques: cold lateral

Endodontic materials Obturation of canals by the cold lateral condensation technique of gutta-percha		Assisted and autonomous practical activities (work on extracted teeth/endoblock) Guidance of the individual clinical portfolio/scale Critical analysis of ethical-deontological case studies Presentation of didactic films Case-based learning EC- Short evaluations - oral and/or written on the topic addressed EC by assessing the degree of involvement during practical work	condensation, calibrated monocone, discussion of possible causes of failure in performing root canal obturation techniques Identification and radiological interpretation of endodontic obturation failures. Simulation of root canal obturation through several techniques on extracted teeth/endoblocks. Degree of involvement: individual, assisted Instruments used: extracted teeth/endoblocks, sealer, gutta-percha cones, heat carrier, paper cones, endodontic ruler, manual files - series 1,2,3 and accessories. Objective of the activity - the student will develop the following skills through this activity: C1, C2, CT1, CT2
9. Root canal obturation methods. Endodontic materials Obturation of canals by the cold lateral condensation technique of gutta-percha	3h/week	Clinical demonstrations in the laboratory/simulation Assisted and autonomous practical activities (work on extracted teeth/endoblock) Guidance of the individual clinical portfolio/scale Critical analysis of ethical-deontological case studies Presentation of didactic films Case-based learning EC- Short evaluations - oral and/or written on the topic addressed	Type of activity: practical demonstrations of performing obturation techniques: cold lateral condensation, calibrated monocone, discussion of possible causes of failure in performing root canal obturation techniques Identification and radiological interpretation of endodontic obturation failures. Simulation of root canal obturation through several techniques on extracted teeth/endoblocks. Degree of involvement: individual, assisted Instruments used: extracted teeth/endoblocks, sealer, gutta-percha cones, heat carrier, paper cones, endodontic ruler, manual files - series 1,2,3 and accessories.

		EC by assessing the degree of involvement during practical work	Objective of the activity - the student will develop the following skills through this activity: C1, C2, CT1, CT2
10. Positive and differential diagnosis in pulp inflammation	3h/week	Clinical demonstrations in the laboratory/simulation Individual clinical portfolio guidance/scale, interactive case presentation; clinical reasoning exercises, formulation and argumentation of positive and differential diagnosis - interactive discussion with the group tutor; EC- Short evaluations - oral and/or written on the topic covered EC by assessing the degree of involvement during practical work	Type of activity: diagnostic/therapeutic current events, clinical case simulation with acute reversible/irreversible, chronic pulp inflammations, clinical-radiological case analysis, emergency development of a treatment plan for pain management. Simulation of chemo-mechanical root canal treatment (on extracted teeth/endoblocks) using the manual system for mechanical treatment, interactive collective exercises to practice clinical reasoning and therapeutic prescription exercises; case-based learning; learning in interdisciplinary teams Degree of involvement: individual, in a team, assisted Tools used: pre, intra and postoperative images of clinical cases from the discipline archive, periapical radiographs/CBCT related to clinical cases, laptop, CS software, monitor, dental unit, extracted teeth/endoblocks, endodontic access cavity burs, manual and rotary canal enlargement instruments, endodontic micromotors, endodontic rulers, irrigants, luerlack syringes, irrigation needles Objective of the activity - the student will develop the following

			skills through this activity:.C1, CT1, CT2.
11. Establishing the treatment plan in reversible and irreversible pulp inflammations	3h/week	Case presentation; Brief presentation of clinical observations, Interactivity; Clinical reasoning exercises, formulation and argumentation of the positive diagnosis and treatment indication - interactive discussion with the group tutor; Presentation of didactic films Case-based learning Short evaluations - oral and/or written from the pathology taught CE by assessing the degree of involvement during practical work	Type of activity: simulation of a clinical case with pulp inflammation, clinical-radiological analysis of the case. Viewing demonstration films of the pre-endodontic build-up. Simulation of chemo-mechanical root canal treatment (on extracted teeth/endoblocks) using the manual and rotary system in continuous rotation for mechanical treatment, interactive collective exercises to practice clinical reasoning and therapeutic prescription exercises; case-based learning; learning in interdisciplinary teams Degree of involvement: individual, in a team, assisted Tools used: pre, intra and postoperative images of clinical cases from the discipline archive, periapical radiographs/CBCT related to clinical cases, laptop, CS software, monitor, dental unit, extracted teeth/endoblocks, endodontic access cavity burs, manual and rotary files, endodontic micromotors, endodontic rulers, irrigants, luerlack syringes, irrigation needles, endodontic micromotor Objective of the activity - the student will develop the following skills through this activity: C1, C2, CT1, CT2, CT3
12. Correct filling of the clinical observation sheet and obtaining the patient's informed	3h/week	Supervised individual activity - anamnesis, objective examination - exo-oral;	Type of activity: examination, simulation, document writing (completion of an observation sheet), clinical-radiological case analysis,

consent. Diagnostic tests and examination of the patient in pulp inflammations. Radiographic examination in pulp inflammations		Clinical reasoning exercises, formulation and argumentation of positive and differential diagnosis - interactive discussion with the group tutor EC- Short evaluations - oral and/or written on the topic addressed	Degree of involvement: individual, in a team, assisted Tools used: dental unit, consultation kit, observation sheet, informed consent, pre, intra and postoperative images of clinical cases from the discipline archive, periapical radiographs/CBCT related to clinical cases, laptop, CS software, monitor Objective of the activity - the student will develop the following skills through this activity: C1, CT1, CT2
13. Case selection and treatment plan in reversible/irreversible pulp inflammations. Coronal restoration before endodontic treatment (Pre-endo build-up)	3h/week	Case presentation; Brief presentation of clinical observations, Interactivity; Clinical reasoning exercises, formulation and argumentation of positive and differential diagnosis - interactive discussion with the group tutor; Presentation of educational films Case-based learning Short evaluations - oral and/or written from the pathology taught EC by assessing the degree of involvement during practical work	Type of activity: clinical case simulation with reversible and irreversible pulp inflammations, clinical-radiological case analysis. Viewing of demonstration films of performing pre-endodontic build-up. Simulation of chemo-mechanical root canal treatment (on extracted teeth/endoblocks) using the manual and rotary system in continuous rotation for mechanical treatment, interactive collective exercises to practice clinical reasoning and therapeutic prescription exercises; case-based learning; learning in interdisciplinary teams Degree of involvement: individual, in a team, assisted Tools used: pre, intra and postoperative images of clinical cases from the discipline archive, periapical radiographs/CBCT related to clinical cases, laptop, CS software, monitor, dental unit, extracted teeth/endoblocks, endodontic access cavity burs, manual and rotary instruments, endodontic micromotors,

			endodontic rulers, irigants, luerlock syringes, irrigation needles, endodontic micromotor Objective of the activity - the student will develop the following skills through this activity:.C1, C2, CT1, CT2, CT3
14. Accidents during endodontic treatment. Failures of endodontic therapy and possibilities of diagnosis and treatment	3h/week	Clinical demonstrations in the laboratory/simulation; Assisted and autonomous practical activities (working on phantoms, extracted teeth, endoblock); Presentation of didactic films Guidance of the individual clinical portfolio/scale EC- Short evaluations - oral and/or written on the topic covered EC by assessing the degree of involvement during practical work	Type of activity: Presentations of clinical cases with failures of endodontic treatment. 2D/3D radiological interpretations of endodontic pathology Degree of involvement: individual, in an assisted team Instruments used: extracted teeth/endoblocks, endodontic access cavity burs, manual and rotary instruments, endodontic micromotors, endodontic rulers,, irigants, luerlack syringes, irrigation needles, endodontic micromotor, Objective of the activity - the student will develop through this activity the following skills:.C1, C2, CT1, CT2
Total	Total hours per semester = 42		

Mandatory Bibliography

1.Lecture on the UMF Craiova on-line platform www.student.umfcv.ro
Berman LH, Hargreaves KM. Cohen's Pathways of the Pulp, 12th Edition.Elsevier, 2020.
2. Castellucci A. Endodontics, Volume 1 and 2, 1st Edition. Edra, 2022.
3. Rotstein I, Ingle JI. Ingle's Endodontics, 7th Edition. Pmph USA Ltd, 2019.
4. Torabinejad M, Fouad A, Shabahang S. Endodontics: Principles and Practice, 6thEdition. Elsevier, 2020.

Optional Bibliography

1. **Patel Shanon, Justin J. Barnes** *The Principles of Endodontics,3rd ed.,* **Oxford University Press,2019**
2. **Patel Sh.,Harvey S, Shemesh H.,Durack C.,** *Cone Beam Computed Tomography In Endodontics* . Quintessence Publishing, United Kingdom,2016

10. CORRELATION OF CONTENT, OBJECTIVES AND EXPECTED LEARNING OUTCOMES WITH STAKEHOLDER EXPECTATIONS

- Endodontics is a specialized discipline, mandatory for a student to become a dentist, the discipline proposing the correct training for medical practice and the acquisition of the knowledge necessary for the dissertation and residency exam
- The knowledge, practical skills and attitudes learned in this discipline provide the basis for medical reasoning and clinical activities and constitute the foundation for knowing the therapeutic options that the dentist has at hand to solve patients endodontic problems
- In order to outline, permanently update the contents of the clinical courses/internships and choose teaching/learning methods, the head of the discipline organizes meetings with members of the College of Dentists of Romania, specialized in the field of Endodontics, as well as with other teaching staff in the field, tenured in other higher education institutions. The meetings aim to identify the needs and expectations of employers in the field and coordinate with other similar programs within other dental higher education institutions.

11. RECOVERY PROGRAMMES AND LEARNING MOTIVATION SUPPORT

11.1 Recovery programs					
Activity type	**Maximum number of absences that can be recovered**	**Location**	**Period**	**Responsible staff**	**Topics / content scheduling**
Absence recovery	3	Endodontics Clinic	Last 2 weeks of each semester	Tutor/Lecturer in Endodontics Department	According to the Endodontics schedule
Additional guidance	2h/week	Endodontics Clinic	Weekly	Head of the Endodontics Department	According to the Endodontics schedule

Support programme for underprepared students	4h/semester	Endodontics Clinic	Last 2 weeks of each semester	Head of the Endodontics Department	According to the Endodontics schedule.
11.2. Learning motivation support programs					
	Student scientific group / themes		**Location**	**Period**	**Responsible staff**
Student scientific group	Endo Club		Building B, 4th floor, room 404	October-December March-May	Dr. Anca Gheorghe
Scientific projects					
Workshops	During students Congress Denticity and Interdentis Programme		Building B, 4th floor, room 404	November/April	Dr. Anca Gheorghe Dr. Carina Banica
Student Competitions					
Other activities					
*Additional clarification: ...					

12. ASSESSMENT

Activity type	**12.1. Assessment criteria**	**12.2. Targeted learning outcomes**	**12.3. Assessment methods**	**12.4. Weight in final grade**
12.5. Lectures	Correctness of answers to grid questions; ability to integrate knowledge from the taught topics	K1-K4 S1-S7	Multiple choice test- 40 questions Oral Discussion- 2 subjects from the themes discussed during the semester	50%
12.6. Practical/Laboratory work	Correctness of the execution of the procedure; Compliance with clinical steps and standard protocols; Accuracy and quality of the final result	S1-S7 R&A1-RA 9	Analysis and evaluation of the performed labor scale (minimum 6 endodontic	35%

	Explanation of clinical or technical reasoning;		treatments performed with manual/rotary instruments on extracted teeth/endoblocks) both monoradicular and pluriradicular Discussion of the endodontic morphology of a tooth as well as the recognition and use of a manual or rotary files	
12.7. Semester activity	Ability to argue theoretical concepts; Clarity of expression and logical organization of information; Ability to synthesize and integrate knowledge from the taught topics; Active presence and participation in all practical activities; Correct and complete performance of the specific tasks of each work; Application of theoretical knowledge in practice in a logical manner; Compliance with hygiene, ethics and professional safety standards;	R&A1 –RA 9 CT1-CT 6	Practical verification along the way; Multiple choice test (40 questions) on the topics of the first 7 courses - it is mandatory, the minimum passing grade is 7, it can be taken a maximum of 2 times until the first exam session; Assessment of the internship activity by the group supervisor;	15%

			Evaluation of degree of involvement during the practical work	
12.8. Minimal standard	The minimum performance standard involves achieving a satisfactory level of the competencies provided for in the learning outcomes, by obtaining a minimum of e.g. 50% of the total score for the assessed activities (course + practical work). The student demonstrates the ability to: • identify inflammatory pulp diseases, describe them and establish their correct diagnosis • correctly perform the anamnesis and clinical examination of the patient with endodontic diseases • appropriately interpret the clinical and radiological images characteristic of endodontic diseases • correctly and safely execute specific therapeutic procedures			
12.9. Promotion criteria	To be considered passed, the student must cumulatively meet the following conditions: ● To pass the written test (40 grids) on the topics of the first 7 courses - the minimum passing grade is 7, and it can be taken a maximum of 2 times until the first exam session; ● To meet the minimum labor scale with which the student will present himself to the practical exam in order to analyze it; ● To have 100% attendance at clinical internships or in the case of accumulation of absences, they must be recovered in full, within the maximum number allowed; ● To obtain a minimum grade of 5 (five) in the theoretical evaluation (course - grid test and oral test 2 subjects); ● To obtain a minimum grade of 5 (five) in the practical evaluation ● To comply with university regulations regarding academic conduct and not to have been involved in evaluation fraud.			

Date approved in the Department: 18.09.2026

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