DISCIPLINE FILE

1. Study programme

1.1.	"CAROL DAVILA" UNIVERSITY OF MEDICINE AND PHARMACY
1.2.	FACULTY OF DENTISTRY
1.3.	DEPARTMENT III
1.4.	DISCIPLINE RESTORATIVE ODONTOTHERAPY I
1.5.	DOMAIN OF STUDY: HEALTH – Sectorally regulated within the European Union
1.6.	STUDY CYCLE: LICENCE
1.7.	STUDY PROGRAME: DENTAL MEDICINE (ENGLISH)

2. Data about discipline

2.1.	Name of the discipline in the educational plan: RESTORATIVE ODONTOTHERAPY I				
2.2.	Discipline code: MD03S02EN				
2.3.	Discipline type (FD/SD/CD): SD				
2.4.	Discipline regimen (MD/OPD/): MD				
2.5.	The holder of the course activities: Prof. dr. Dana Bodnar, Assoc. Prof. dr. Narcis Marcov, Assoc. Prof. dr. Irina Gheorghiu, Lecturer dr. Mărgărit Ruxandra, Lecturer dr. Perieanu Mădălina				
2.6.	The holder of the seminar activities: Prof. dr. Dana Bodnar, Assoc. Prof. dr. Irina Gheorghiu, Lecturer dr. Mărgărit Ruxandra, Lecturer dr. Perieanu Mădălina, asist.dr. Stamate Andrei, asist.dr. Cojanu Loredana, asist.dr. Gliga Alexandru, asist.dr. Budei Roxana, asist.dr. Poeană Roxana				
2.7. Year of study	III	2.8. Semester	V/VI	2.9. Evaluation (E/C/V)	E

3. Total estimated time (hours/semester of didactic activity an self preparation/study

I. Academic training (teaching, practical application, assessment)						
3.1. Nr hours/week	6 hours	from which:	3.2. lecture	2 hours	3.3. seminary/ laboratory	4 hours
3.4. Total hours of educational plan	84 hours	from which:	3.5. lecture	28 hours	3.6. seminary/ laboratory	56 hours
Evaluation (nr. of hours) : 4 hours						
II. Preparation/ individual study						
Time allocation						hours
Study of course materials, textbooks, books, study of the recommended minimal bibliography						30
Additional research in the library, research through the internet						10
Performing specific activities for preparing projects, laboratories, elaborating reviews or other tasks						5
Specific preparation activities for projects, laboratory work, assignments, and reports						11
Tutoring						5
Other activities						5
3.7. Total hours of individual study						66
3.8. Total hours per semester (3.4.+3.7.)						150
3.9. Number of credits						5

3. Preconditions (where applicable)

4.1. of curriculum	The students need to have knowledge of: - biochemistry, biophysics, histology, physiology - anatomy of the teeth and structure of the dental tissues - dental propedeutics and dental materials
4.2. of competences	

3. Conditions (where applicable)

5.1. to conduct the lecture	Amphitheatres, lecture halls with minimum 75 seats, projector, projection screen, personal computer/smart board, speakers, Internet connection
5.2. to conduct the seminar / laboratory	Dental offices, larger rooms with multiple dental units/simulation units, desks, chairs, screen, specific instruments and materials for restorative dentistry

6. Learning outcomes*

Knowledge	Skills	Responsibility and autonomy
The student accumulates, describes, analyzes and evaluates specialized knowledge regarding the structure of dental hard tissues, carious and non-carious pathology of teeth, diseases of oral cavity tissues, as well as the principles of detection, diagnosis and treatment of carious lesions specific to restorative dentistry through classical or digital methods/techniques.	The student acquires and proves specialized clinical experience under appropriate supervision. Gradually, during the years of study, he performs practical and clinical tasks necessary to ensure the specific professional competencies (knowledge, skills and abilities) of restorative dentistry - the restorative treatment of carious lesions.	The student integrates and applies specialized skills necessary for the prevention, diagnosis and treatment activities regarding dental diseases of carious and non-carious causes; The student evaluates, analyzes, differentiates, estimates, interprets and uses the information, knowledge, skills and responsibilities accumulated during the years of study in order to obtain the necessary skills to practice the profession of dentist.

7. Course objectives (aligned with the learning outcomes)

7.1. General objective	The students' knowledge of the basic notions that define the field of cariology and restorative dentistry, the etiology and clinical aspects of the simple dental caries, as well as the therapeutic approach strategies (means for prophylaxis and treatment itself)
7.2. Specific objectives	− Comprehension of the structure and role of the hard dental tissues with reference to the modern restorative approaches − Comprehension of the epidemiological issues of the carious disease and of the prophylaxis methods − Apprehension of the morphological and clinical aspects and signs of the simple dental caries, knowledge of the elements of positive and differential diagnosis − Aquiring of information regarding the methods for detection, diagnosis and treatment of the carious lesions − Comprehension of the biological trend of the modern treatment of cavitated caries regarding the modified approach of removing highly infected and affected dentin and the specific ways for the dentin's sealing and protection of the pulp − Knowledge of the features and use of the dental instruments, materials and direct restoration techniques with adherent and nonadherent materials − Knowledge of the theoretical principles, clinical signs and treatment methods of the dentine's hipersensitivity − Practical skills of accomplishing a direct, adherent or non-adherent, correct restoration

8. Contents

8.1. Lecture	Teaching methods	Observations
1. Infection control procedures in the dental office: universal and additional regulations	Multimedia- based oral, interactive presentation, power-point presentations	2 hours
2. The structure of the hard dental tissues - specific structures, clinical connections		2 hours
3. Etiology and pathogenesis of the simple dental caries; histopathological features of enamel, dentine and cementum simple caries. The dentin-pulp complex – clinical implications		2 hours
4. Detection methods of the dental lesions		2 hours
5. The clinical aspects and characteristics of the carious lesions. The diagnosis of the dental lesions- primary and recurrent carious lesions, non-carious lesions		2 hours
6. Fundamentals of the clinical treatment of the simple carious lesions.		2 hours
7. Clinical examination of the patient. Isolation of the operating field.		2 hours
8. Noninvasive and microinvasive treatment protocol of the carious and non-carious lesions.		2 hours
9. Methods of minimally invasive surgical treatment. The disinfection of the cavities.		2 hours
10. Classification of the coronal restorative materials. Interim restorative materials.		2 hours
11. Adherent restorative materials (features and clinical implications)		2 hours
12. Dentin's sealing and protection of the pulp		2 hours
13. Fundamentals of enamel and dentin adhesion.		2 hours
14. Dentinal hypersensitivity – etiology, clinical signs, treatment		2 hours

Recent Bibliography

1. Manual pentru rezidențiat volumul I, sub redacția Prof.dr. Ecaterina Ionescu, Editura Universitară "Carol 1. Manual pentru rezidențiat volumul I, sub redacția Prof.dr. Ecaterina Ionescu, Editura Universitară "Carol Davila" București, 2021
2. Note curs predat - suport teoretic pt. cursul disciplinei
3. E.C. Marcov, D.C.Bodnar, N. Marcov Manual de Odontoterapie Restauratoare. Protocoale de tratament al leziunilor coronare, Editura Universitară "Carol Davila" București, 2020
4. Manual de Odontoterapie Restauratoare (vol.I): Cariologie. Popa M.B., Bodnar D.C., Vârlan C.M.; Ed. Univ. "Carol Davila" Bucureşti, 2007.
5. Manual de Odontoterapie Restauratoare (vol.II): Instrumentar utilizat în odontoterapia restauratoare. Marcov E.C. (coord.); Ed. Ars Docendi – Universitatea din Bucureşti, 2012.
6. Prevenirea şi controlul transmiterii infecţiilor în cabinetul de medicină dentară. Marcov N.; Ed. Cermaprint, Bucureşti, 2006.
7. Carlos Rocha Gomes Torres, Modern Operative Dentistry: Principles for Clinical Practice, Springer International Publishing, 2020
8. Sturdevant's Art and Science of Operative Dentistry" Eight edition, Andre V. Ritter, Lee W. Boushell, Ricardo Walter; Editura Elsevier, 2025
9. Dental caries : the disease and its clinical management, edited by Ole Fejerskov, Bente Nyvad, Fourth edition. Wiley-Blackwell, 2025

8.2. Laboratory/ practical lesson	Teaching methods	Observations
1. Overview of restorative dentistry, treatment fundamentals of the cavitated caries (general rules, theoretical principles, working steps and objectives)	-Presentation (oral/power-point presentation) -Practical demonstrations	2 hours

2.Overview of the dental instruments and equipment for exploring, tooth preparation and restoration, ergonomics data, instructions for use of the dental unit. Overview of the main treatment steps: surgical, dentin's sealing and protection of the pulp and restorative.	of the clinical maneuvers on dental teaching- training casts/phantom manikin heads for dental education/patients -Clinical demonstrations on patients of the prophylaxis and curative maneuvers provided by the curriculum - Colloquies, essays -Periodical assessment tests (oral examinations / written quizzes/multiple choice questions)	2 hours
3.Presentation of the hand and rotary cutting instruments for tooth preparation and restoration. Demonstration of the patient and operator positions, of the instrument exchange between operator and assistent,hands-on demonstration of the treatment techniques using different instruments. The use of the microscope in the treatment of simple caries.		2 hours
4.Presentation of class I and VI tooth preparations and the specific hand/rotary cutting instruments. Tooth preparation-hands-on demonstration and practical session on training casts		2 hours
5.Presentation of class II tooth preparations and the specific hand/rotary cutting instruments. Tooth preparation, hands-on demonstration and practical session on training casts		2 hours
6. Presentation of class III/IV tooth preparations and the specific hand/rotary cutting instruments. Tooth preparation- hands-on demonstration and practical session on training casts		2 hours
7.Presentation of class V tooth preparations and the specific hand/rotary cutting instruments. Tooth preparation- hands-on demonstration and practical session on training casts		2 hours
8.Patient assessment, examination, diagnosis and treatment planning and the oral record filing		2 hours
9.Moisture control methods (instruments and techniques). Hands-on demonstration and practical session on training casts		2 hours
10.The presentation of the interim materials. Hands-on demonstration and practical session on training casts.		2 hours
11.Methods for dentin's sealing and protection of the pulp (instruments and techniques). Hands-on demonstration and practical session on training casts		2 hours
12.Presentation of the restorative dental materials. Hands-on demonstration and practical session on training casts		2 hours
13.Instruments and techniques of the restorative methods.Hands-on demonstration and practical session of applying liners/ bases/cements/other restorative materials on training casts		2 hours
14. Attendence recovery (tooth preparation session) and final recap.		2 hours

Recent bibligraphy:

1. Manual pentru rezidențiat volumul I, sub redacția Prof.dr. Ecaterina Ionescu, Editura Universitară "Carol Davila" București, 2021
2. Note curs predat - suport teoretic pt. cursul disciplinei
3. E.C. Marcov, D.C.Bodnar, N. Marcov Manual de Odontoterapie Restauratoare. Protocoale de tratament al leziunilor coronare, Editura Universitară "Carol Davila" București, 2020

4. Manual de Odontoterapie Restauratoare (vol.I): Cariologie. Popa M.B., Bodnar D.C., Vârlan C.M.; Ed. Univ. "Carol Davila" Bucureşti, 2007.
5. Manual de Odontoterapie Restauratoare (vol.II): Instrumentar utilizat în odontoterapia restauratoare. Marcov E.C. (coord.); Ed. Ars Docendi – Universitatea din Bucureşti, 2012.
6. Prevenirea şi controlul transmiterii infecţiilor în cabinetul de medicină dentară. Marcov N.; Ed. Cermaprint, Bucureşti, 2006.
7. Carlos Rocha Gomes Torres, Modern Operative Dentistry: Principles for Clinical Practice, Springer International Publishing, 2020
8. Sturdevant's Art and Science of Operative Dentistry" Eight edition, Andre V. Ritter, Lee W. Boushell, Ricardo Walter; Editura Elsevier, 2025
9. Dental caries : the disease and its clinical management, edited by Ole Fejerskov, Bente Nyvad, Fourth edition. Wiley-Blackwell, 2025

9. Evaluation

Activity type	9.1. Evaluation criteria	9.2. Evaluation methods	9.3. Percentage of final grade
9.4. Lecture	**Knowledge for mark 5:** -apprehension of the specific medical terms and their correct use in context; -comprehension of the basic information proving the passing through all the subjects to be learned; - the answers are not to have serious errors. **Additional knowledge for mark 10:** -apprehension of the specific medical terms and their correct use in context; -comprehension of the basic information in order to prove passing through all the subjects to be learned; -very good comprehension of essential knowledge of all the lectures of the disciplines, as well as of those belonging to the other bibliographical references; -ability of explanation and interpretation of the contents of the specific notions of the discipline in a multidisciplinary (general medicine and dental disciplines) approach; - all the questions are to have correct answers.	Final theoretical examination Written (written essays on several, different topics – and/or multiple choice questions) from the contents of the lecture in order to evaluate the level of accomplishment/ understanding of the theoretical data and the student's way of thinking.	70%
9.5. Seminary/ practical activity	Periodical assessment tests (oral examinations/ written quizzes/multiple choice questions) Knowledge for mark 5: - knowledge of theoretical and practical concepts relevant to the stage of the traineeship Additional knowledge for mark 10: - acquiring the basic notions that demonstrate the progress of the subject	Assessment of the theoretical and practical necessary notions according to the stage of the clinical session. The assisstant professor/lecturer will appreciate the student's attitude during the internship (frequency of presence, punctuality, attire, attitude towards the patients and the auxiliary staff).	15%

	- all the questions are to have correct answers. Periodical assessments: Evaluation papers	Written evaluation papers (written essays or multiple choice questions).Frequency: twice/semester (during the laboratory sessions, on series of groups).	15%
	Periodical assessment: Practical examination	Practical test performed by the students on training casts and oral examination for verifying the correct assessment of the dental instruments, materials and techniques tought during the laboratory sessions. Frequency: at the end of the laboratory session, at the end of the semester.	
9.5.1. Individual project (if applicable)			

9.6. Minimum performance standard

At the end of the 5th/6th semester of the III year of study, the students are to know the necessary information concerning:
- comprehension and understanding of the carious disease as having a multifactorial etiology
- comprehension and understanding of the methods of detection and diagnosis of the dental lesions
- comprehension, understanding and practice of the principles and methods of convetional and modern treatment of the simple dental caries
- knowledge of the features and use of the essential instruments, techniques and materials involved in the treatment methods of the restorative dentistry

Date of completion:
20.07.2026

Signature of the course holder

Signature of the laboratory holder

Date of approval by the Department Council:
06.11.2026

Signature of the Department Director
Professor Ionescu Ecaterina, PhD