DISCIPLINE SHEET

1. Study programme

1.1.	**"CAROL DAVILA" UNIVERSITY OF MEDICINE AND PHARMACY BUCHAREST**
1.2.	**FACULTY OF DENTISTRY**
1.3.	**DEPARTMENT: I**
1.4.	**DISCIPLINE: SINGLE-UNIT FIXED DENTAL PROSTHESES AND OCCLUSOLOGY; RESTORATIVE ODONTO-THERAPY**
1.5.	**STUDY DOMAIN: Health, sectoral regulated within the European Union**
1.6.	**STUDY LEVEL: I (Bachelor's degree) and II (Master's degree)**
1.7.	**STUDY PROGRAMME: DENTAL MEDICINE IN ENGLISH**

2. Discipline

2.1.	**Discipline name according to the study curriculum: PROFESSIONAL PRACTICE**				
2.2.	**Discipline code: MD03PP15EN**				
2.3.	**Discipline type (FD/SD/CD): SD**				
2.4.	**Discipline optionality (COD/ED/FAD): COD**				
2.5.	**Lectures tenure:** Lecturer dr. Mihaela Pantea				
2.6.	**Practical classes / seminar tenure:** Lecturer dr. Mihaela Pantea, Assoc. Prof. Dr. Irina Gheorghiu, Asist. univ. dr. Ion George				
2.7. Year of study	**III**	**2.8. Semester**	**VI**	**2.9. Evaluation (E/C/V)**	**E**

3. Estimated total time (hours/ semester of teaching and training activity /individual study)

I. University training						
3.1. Number of hours per week	**40**	**from which:**	**3.2. lecture**	**0**	**3.3. practical class/ seminar**	**40**
3.4. Total hours in the study curriculum	**160**	**from which:**	**3.5. lecture**	**0**	**3.6. practical class/ seminar**	**160**
II. Preparation/ individual study						
Time distribution						**hours**
Study of lecture materials, textbooks, books, study of the minimum recommended bibliography						0
Additional documentation activity in the library, on online platforms						0
Specific preparation activities for projects, practical classes, preparation of assignments, reports						0
Preparation for presentations or evaluations, preparation for the final examination						0
Tutoring activity						0
Other activities						0
3.7. Total hours of individual study						0
3.8. Total hours per semester (3.4.+3.7.)						160
3.9. Number of credits						2

4. Prerequisites (where appropriate)

4.1. curriculum	Students must have fundamental knowledge acquired in the preclinical courses studied in previous years: - Basic concepts of biochemistry, biophysics, histology, and physiology. - Basic concepts of the morphology and physiology of the dento-maxillary system. - Fundamental knowledge of dental materials and of technology for the fabrication of dental prostheses.
4.2. proficiencies	Students must have basic/minimal knowledge of the equipment and instruments used in prosthodontics and in restorative odonto-therapy.

5. Conditions (where appropriate)

5.1. for lecture activity	
5.2. for practical class/ seminar activity	Practice in Dental Office and Dental Clinic

6. Learning outcomes*

Knowledge	Skills	Responsibility and autonomy
C1 To have basic knowledge of the symptoms and clinical forms of dental lesions.	**A1** Classic and modern treatment methods used for simple dental caries, according to the classical rules (Black), vs. modern techniques (based on amelo-dentinal adhesion)	**R1 Role skills** - Identification of objectives, available resources, and factors involved in task completion; step-by-step techniques, treatment duration, and associated risks. - Understanding teamwork in dentistry: the role and responsibilities of each member, and establishing effective relationships with colleagues and with the patient.
C2 To have basic knowledge of the methods used for dental lesions detection and diagnostic.	**A2** General features and clinical implications of dental materials used in restorative therapy.	**R2 Professional and personal development** - Identification and efficient use of information and communication sources. - Application of theoretical knowledge in dental practice. - Participation in interdisciplinary activities. - Development of synthesis abilities. - Enhancement of teamwork skills. - Improvement of organizational skills in dental work.

C3 To have basic knowledge of dental prostheses technology.	**A3** To have knowledge of the methods used for obtaining fixed prosthetic restorations for teeth with coronal lesions, and of the fundamental principles of dental preparations for single-unit fixed prostheses.	
	A4 To have knowledge about the clinical examination protocol of static and dynamic dental occlusion, and about the therapeutic strategy for obtaining a functional occlusion.	

7. Discipline objectives (correlated with learning outcomes)

7.1. General objective	The general objective is to study the following: - General treatment objectives for single-unit fixed prosthetic restorations. - Clinical examination of dental occlusion and application of functional criteria in patients with dental prosthetic needs. - Etiology, clinical forms, and therapeutic strategies of dental caries. - Detection and diagnosis of dental lesions: caries, fractures, abfractions, erosions, attrition, abrasion.
7.2. Specific objectives	**Fixed prosthodontics and Occlusology:** Learning about: 1. Clinical examination for prosthetic treatment with single units fixed prostheses: step by step procedures, dental lesions identification, indirect versus direct restorations or tooth extraction. 2. Instruments, materials, equipment and accessories used in fixed prosthodontics. 3. Tooth preparation for monolithic crowns (full metal crowns, full zirconia crowns, total ceramic crowns) and for metal-ceramic crowns. 4. Tooth preparation for metallic and ceramic onlay. 5. Restoration of endodontic treated teeth with severe dental loss. Post and core restoration: indications, advantages, disadvantages, tooth preparation. 6. Centric relation – clinical determination. 7. Materials and techniques used for occlusal contacts registration in Maximum Intercuspal position. 8. Clinical examination and registration of mandibular movements: opening/closure of the mouth; protrusion and lateral movements. 9. Alginate impression and diagnostic stone cast. 10. Dental articulators: components and indications; step by step procedures for mounting stone casts in a semi adjustable articulator.

	Restorative Odonto-therapy: Learning about: 1. Specific instruments for clinical exam, cavities preparation and tooth direct restoration (the preparation and placement of restorative materials); coronal contouring and the shaping and finishing of restorations. 2. Theoretical and practical issues about mouth isolation. 3. Clinical and practical considerations about simple dental caries with/without hard dental loss. 4. Theoretical and practical issues about secondary marginal caries and recurrent caries. 5. Dental lesions detection and diagnostic methods. 6. Theoretical and practical aspects of assessing caries activity, establishing cariogenic risk and caries prevention methods. 7. General principles in direct restorations of teeth with dental caries. Conventional and modified techniques for adhesive restorations. 8. Pulp-dentin complex protection. 9. Clinical and practical considerations about provisional and final dental restorative materials (adherent and non-adherent): characteristics, indications, contraindications, clinical implications. Enamel-dentin adhesion - clinical implication. 10. Techniques for morpho-functional coronal restoration using non-adhesive/adhesive materials through direct techniques in the treatment of carious lesions in vital teeth.

8. Contents

8.1. Lecture	**Teaching methods**	**Observations**
8.2. Practical classes/ seminar	**Teaching methods**	**Observations**
1. Assisting in the clinical examination of the patient for the planning and initiation of treatment with single-unit fixed prostheses and assisting in taking alginate impressions for study models.		8 hours
2. Assisting in the preparation of teeth for monolithic metal crowns, all-ceramic crowns, layered ceramic crowns, and ceramic onlays, as well as for the		32 hours

restoration of endodontically treated teeth with extensive coronal destruction.		
3. Assisting in the clinical examination of the fundamental mandibular positions (rest position, centric relation/CR, and maximum intercuspation/MI); acquiring techniques and materials for recording occlusal contacts in MI and CR under the supervision of the tutor.		16 hours
4. Assisting in the examination and recording of mandibular movements: opening/closing, protrusion, and lateral movements.		16 hours
5. Learning the structure and function of dental articulators and assisting in mounting study models in an occluder and semi-adjustable articulator.		8 hours
6. Assisting in the clinical examination of the patient to identify odontogenic lesions using specific instruments and detection/diagnostic methods; identification of marginal secondary caries and recurrent decay; evaluating caries activity and applying current prophylactic methods, under tutor supervision.		16 hours
7. Assisting in the preparation of conventional and modified cavities for adhesive restorations,		24 hours

using proper instrumentation for preparation, material insertion, coronal shaping, modeling, and finishing.		
8. Learning the methods of isolating the operative field in restorative dentistry.		8 hours
9. Assisting in performing pulp-dentin protection procedures.		16 hours
10. Assisting in the direct restorative treatment of vital teeth using both non-adhesive and adhesive materials: acquiring the techniques, properties/indications of the materials, and the principles of enamel-dentin adhesion.		16 hours

Recent bibliography:

1. Restorative odonto-theraphy lecture notes 3rd year of study
2. Restorative Odontotheraphy text book (vol.I): Cariologie. Popa M.B., Bodnar D.C., Vârlan C.M.; Univ. Ed. "Carol Davila" Bucharest 2007.
3. Restorative Odontotheraphy textbook (vol.II): Instruments used in Restorative Odontotherapy. Marcov E.C. (coord.); Ed. Ars Docendi – University of Bucharest 2012.
4. Restorative Odontotheraphy, Treatment protocols for dental lesions. E.C. Marcov, D.C. Bodnar, N. Marcov, Ed. Univ. „Carol Davila", Bucharest, 2020
5. Summit's Fundamentals of Operative Dentistry: A Contemporary Approach" Hilton T.J., Ferracane J.L., Broome J.; 4th ed., Quintessence Pub. Co. Inc., Chicago, Berlin, London, 2013.
6. Sturdevant's Art and Science of Operative Dentistry" Andre V. Ritter, Lee W. Boushell, Ricardo Walter; 7th ed., Mosby Elsevier Inc.,2019Ocluzology and Prosthetic dentistry Lecture notes; 3`rd year of study
7. Fixed Prosthodontics and Occlusology - lecture notes 3rd year of study
8. Shillingburg, H.T. and D.A. Sather, Fundamentals of fixed prosthodontics. 4th Edition. 2012, Hanover Park, IL: Quintessence Pub.
9. Rosenstiel, S. F., et al. Contemporary fixed prosthodontics. Elsevier, 6th Edition, 2023.
10. Nelson, S.J., Wheeler's dental anatomy, physiology, and occlusion. Tenth edition. ed. 2015, St. Louis, Missouri: Elsevier, Saunders.
11. Klineberg, I. and S. Eckert, Functional Occlusion in Restorative Dentistry and Prosthodontics. 2015, Elsevier Health Sciences UK

9. Assessment

Activity type	**9.1. Evaluation criteria**	**9.2. Evaluation methods**	**9.3. Percentage of final grade**
9.4. Lecture			
9.5. Practical classes/ seminar	Evaluation of the acquisition of practical concepts	**Written examination** with tests (single- or multiple-choice test) or/and synthesis-type questions, essays, problems	**100%**
9.5.1. Individual project (if any)			
Minimum performance standard			
Minimum 5 grade (Exam). Basic information for diagnostic and treatment of teeth with dental lesions using direct and indirect restorative materials and techniques.			