Course Syllabus / Discipline Grid

1. Program Information

1.1.	**"CAROL DAVILA" UNIVERSITY OF MEDICINE AND PHARMACY BUCHAREST**
1.2.	**FACULTY OF DENTISTRY**
1.3.	**DEPARTMENT III**
1.4.	**DISCIPLINE: DENTAL ESTHETICS**
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: CURRENT TOOLS USED IN ORO-DENTAL DIAGNOSTICS**				
2.2.	**Discipline code: MD04OP17EN**				
2.3.	**Type of course (FD/SD/CD): N/A**				
2.4.	**Course status (COD/ED/FAD): ED**				
2.5.	**Lectures tenure:: Assoc. Prof. Dr. Ștefan Milicescu**				
2.6.	**Practical classes / seminar tenure: Assoc. Prof. Dr. Ștefan Milicescu; Assist. Lecturer Dr. Ana Nadia Petre; Assist. Lecturer Dr. Andreea Mihaela Băluță**				
2.7. Year of study	**IV**	**2.8. Semester**	**VIII**	**2.9. Type of assessment (E/C/V)**	**C**

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

I. University training						
3.1. No. of hours per week	**2**	**of which:**	**3.2. lecture**	**1**	**3.3. seminar/ laboratory**	**1**
3.4. Total hours in the curriculum	**28**	**of which:**	**3.5. lecture**	**14**	**3.6. seminar/ laboratory**	**14**
II. Individual study/preparation						
Time distribution						**hours**
Study of course materials, textbooks, books, and core recommended bibliography						**12**
Additional research in the library or online						**5**
Preparation of projects, laboratory work, assignments, reports						**5**
Preparation for presentations or assessments, preparation for the final exam						**4**
Consultations						**4**
Other activities						**2**
Total hours of individual study						**32**
3.9. Total hours per semester (3.4.+3.7.)						**60**
3.10. Number of credits						**2**

4. Prerequisites

4.1. Curriculum prerequisites	Anatomy; Medical Semiology; Medical

	Informatics and Biostatistics; Occlusion; Tooth and Dental Arch Morphology and Dental Materials; Prosthetic Technology; Operative Dentistry; Dental and General Radiology
4.2. Competency prerequisites	Basic knowledge of tooth and dental arch anatomy, medical informatics, and oral radiology

5. Requirements

5.1. Conditions for lectures	Lecture hall, video projector, laptop/PC
5.2. Conditions for seminars/laboratories	Lecture hall, video projector, laptop/PC, dental office

6. Learning Outcomes*

Knowledge	Skills	Responsibility and Autonomy
The student - Consolidate theoretical knowledge accumulated in previous study years. - Acquire, describe, analyse, and evaluate specialist knowledge regarding new instruments and principles of oro-dental diagnosis, both classical and digital	The student - Demonstrate the practical applicability of theoretical knowledge. - Acquire and demonstrate supervised clinical experience. - Perform, integrate, and adapt current oro-dental diagnostic techniques required for the competencies of the dental profession.	The student - Work independently with modern technologies, assuming responsibility for the quality of clinical data obtained. - Demonstrate respect for ethical principles and patient data protection. - Integrate and apply specialist skills required for oro-dental diagnosis. - Evaluate, analyse, differentiate, estimate, interpret, and use knowledge and skills to ensure competencies for dental practice. - Collaborate effectively in multidisciplinary teams, contributing actively to decision-making. - Self-assess and continuously adapt professional practice to technological advances.

7. Course Objectives (aligned with learning outcomes)

7.1. General objective	To develop the ability to explain and apply the operating principles and clinical role of the main modern technologies used in oro-dental diagnosis.
7.2. Specific objectives	At the end of this course, the student should be able to: • Justify the selection of appropriate current tools for various clinical situations. • Apply modern diagnostic methods in simulations or practical work, including acquisition and interpretation of radiographic and 3D images.

	• Integrate digital data into the patient record and into treatment planning. • Collaborate effectively in a multidisciplinary team using digital communication tools. • Demonstrate respect for ethical, confidentiality, and data security standards. • Critically evaluate technological advances in dentistry and show openness to lifelong learning.

8. Course content

8.1. Lecture	**Teaching Methods**	**Observațions**
1. Dental radiodiagnosis: 2D and 3D	Interactive presentation with multimedia support (PowerPoint)	
2. Digital photography in dentistry		
3. Scanning in dentistry		
4. Condyligraphy and 3D mandibular analysis systems		
5. Computerized systems in periodontology and endodontics		
6. Telemedicine and the electronic dental record		
7. Augmented and virtual reality in modern dentistry		

Recent bibliography :

1. Ingrid Rozylo-Kalinowska, Imaging Techniques in Dental Radiology. Acquisition, Anatomic Analysis and Interpretation of Radiographic Images. Springer International Publishing, 2020
2. AACD. Guidelines for Photography in Dentistry.
3. Feng Liu, Dental Digital Photography. From Dental Clinical Photography to Digital Smile Design. Springer Nature 2019
4. A. Delantoni, K. Orhan (eds.), Digital Dentistry: An Overview and Future Prospects, Springer Nature, 2024
5. Okeson JP. Management of Temporomandibular Disorders and Occlusion. Mosby, 2019
6. Newman and Carranza's Clinical Periodontology and Implantology, Saunders 2023
7. ADA. Guidelines for Teledentistry, 2023

8.2. Laboratory / practical lab	**Teaching Methods**	**Observațions**
1. Digital radiology in practice: comparison, analysis, simulation	Interactive presentation with multimedia support (PowerPoint) Clinical case presentation, simulation	
2. Practical aspects of dental photography		
3. Digital workflow: from scanning to restorative planning		
4. Functional analysis in dentistry: simulation, diagnosis, integration		
5. Integrated endo-periodontal approaches with digital support		
6. Teledentistry: simulated consultation and electronic record management		
7. Augmented and virtual reality in clinical dental simulation		

Recent bibliography :

1. Ingrid Rozylo-Kalinowska, Imaging Techniques in Dental Radiology. Acquisition, Anatomic Analysis and Interpretation of Radiographic Images. Springer International Publishing, 2020
2. Directive 2013/59/Euratom on radiation protection
3. AACD. Guidelines for Photography in Dentistry.
4. Feng Liu, Dental Digital Photography. From Dental Clinical Photography to Digital Smile Design. Springer Nature 2019
5. A. Delantoni, K. Orhan (eds.), Digital Dentistry: An Overview and Future Prospects, Springer Nature, 2024
6. Ender A, Mehl A, Accuracy of complete-arch dental impressions: A new method of measuring trueness and precision, The Journal of Prosthetic Dentistry, Volume 109, 2016
7. Okeson JP. Management of Temporomandibular Disorders and Occlusion. Mosby, 2019
8. Newman and Carranza's Clinical Periodontology and Implantology, Saunders 2023
9. Huang TK, Yang CH, Hsieh YH, Wang JC, Hung CC. Augmented reality (AR) and virtual reality (VR) applied in dentistry. Kaohsiung J Med Sci. 2018
10.ADA. Guidelines for Teledentistry, 2023

9. Assessement

Tip de activitate	9.1. Criteria	9.2. Methods	9.3. Weighting
9.4. Lectures	**Grade 5 (minimum)** • Basic knowledge of modern diagnostic tools (2D/3D radiology, intraoral scanners, DSLR photography, occlusal/periodontal/endodontic systems, patient record). **Grade 10 (maximum):** Advanced knowledge of digital imaging and its integration in diagnosis; digital photography in interdisciplinary planning; intraoral/facial scanning; condylography; computerized periodontal probing; guided endodontics; digital-assisted surgery; telemedicine protocols; AR/VR concepts	Written test (MCQ, 30 questions) Additional criteria: Attendance, motivation, active participation, punctuality, collegiality	55% 5%
9.5. Seminar/ laborator	**Grade 5 (minimum):** Basic notions of current diagnostic tools **Grade 10 (maximum):** Advanced knowledge (digital radiology interpretation, comparative photo quality, digital prosthetic diagnostics, condylar tracing, periodontal mapping, telemedicine protocols, AR integration).	Practical evaluation and presentation of a topic from the literature. Active participation and timely submission required.	35% 5%

9.5.1. Individual Project (if existing)	-	-	-
Minimum performance standard			
Basic knowledge of current diagnostic tools (CBCT, intraoral scanners, DSLR cameras, occlusal/periodontal/endodontic systems, electronic patient record). Elementary knowledge of oro-dental diagnosis and interdisciplinary approach			