

FIȘA DISCIPLINEI

1. Date despre program

1.1 Instituția de învățământ superior	UNIVERSITY OF MEDICINE AND PHARMACY "VICTOR BABEȘ" TIMIȘOARA
1.2 Facultatea	FACULTY OF DENTAL MEDICINE
1.3 Departamentul	I
1.4 Domeniul de studii de ¹⁾	Bachelor
1.5 Ciclul de studii ²⁾	Bachelor
1.6 Programul de studii/ Calificarea	DM

2. Date despre disciplină

2.1. Denumirea disciplinei	Evaluation and forecasting in dental medicine							
2.2 Titularul activităților de curs	Prof. Dr. Sinescu Cosmin							
2.3 Titularul activităților de laborator	Prof. Dr. Sinescu Cosmin							
2.4 Anul de studiu	III	2.5 Semestrul	5	2.6 Tipul de evaluare	Exam	2.7 Regimul disciplinei	Conținut ³⁾	DO
							Obligativitate ³⁾	DO

3. Timpul total estimat (ore pe semestru al activităților didactice)

3.1 Număr de ore pe săptămână	2	3.2 din care: curs	2	3.3 laborator	0
3.4 Total ore din planul de învățământ	28	3.5 din care: curs	28	3.6 laborator	0
Distribuția fondului de timp					ore
Studiul după manual, suport de curs, bibliografie și notițe					0
Documentare suplimentară în bibliotecă, pe platformele electronice de specialitate și pe teren					0
Pregătire seminarii/ laboratoare/ proiecte, teme, referate, portofolii și eseuri					0
Tutoriat					0
Examinări (1 practical exam, 1 final exam)					0
Alte activități					0
3.7 Total ore studiu individual	0				
3.8 Total ore pe semestru	28				
3.9 Numărul de credite ⁵⁾	1				

4. Precondiții (acolo unde este cazul)

4.1 de curriculum	Not the case
4.2 de competențe	Not the case

5. Condiții (acolo unde este cazul)

5.1 de desfășurare a cursului	<ul style="list-style-type: none"> • Telephone conversations are not tolerated during the course. • Delay of students in the course will not be tolerated, as it proves to be disruptive to the educational process. • Mandatory attendance is required, a maximum of 30% absences being accepted in the course.
5.2 de desfășurare a seminarului/ laboratorului/ proiectului	<ul style="list-style-type: none"> • Telephone conversations are not tolerated during the labs. • Delay of students will not be tolerated, as it proves to be disruptive to the educational process. • Mandatory attendance is required in the labs, a maximum of 15% absences being accepted. • Recovery is allowed up to 15% of the total number of paid absences in the last week of the semester, before the practical examination (except for medical cases that will require individual Dean's approval). • Practical exam will be held in the last week of the semester or in the regular session, from the topics of the labs previously displayed.

6. Competențe specifice acumulate

Competențe Profesionale	<ol style="list-style-type: none"> 1. Improving the knowledge of different direct and indirect evaluation methods in dentistry 2. Possibilities of information in libraries and e-libraries 3. The correct making of a poster presentations 4. The ability to develop an oral presentations 5. How to stay informed about cutting edge technologies in dentistry.
Competențe transversale	<ol style="list-style-type: none"> 1. Preoccupation for professional development by engaging critical thinking skills demonstrated by active participation in the course and laboratory. 2. Involvement in scientific research activities by participating in the elaboration of papers, studies, specialty articles. 3. Effective use of information sources and communication and assisted training resources (Internet portals, specialized software applications, databases, on-line courses, etc.) both in Romanian and in an international languages; 4. Ability to work in a team, to interact socially and to carry out their duties with responsibility and professionalism. 5. Openness to learning and continuous medical education.

7. Obiectivele disciplinei (reieșind din competențele specifice acumulate)

7.1 Obiectivul general al disciplinei	Acquiring the fundamental notions of cutting edge technologies in dentistry
7.2 Obiectivele specifice	<p>Applications of invasive and noninvasive evaluation methods in dentistry.</p> <p>Cutting edge technologies in dentistry</p> <p>3D Printing in dentistry</p> <p>Optoelectronic systems in dentistry</p>

8. Conținuturi

8.1 Curs	Metode de predare	Număr de ore	Observații
1. The methodology of dental material research: Purpose of a research talk, research methodology, Cohort studies, Ethics in research;	INTERACTIVE LECTURE	2	<ul style="list-style-type: none"> • Interactive oral lecture also presented in Power Point, systematic, accompanied by an extremely rich and suggestive iconography. • The course is annually updated with the latest information from the international specialized literature. • Each course presents the educational objectives at the beginning and ends with summarizing the notions presented.
2. The Research Enterprise; Challenges to Interdisciplinary Research; Clinical Research; Translational Research.		2	
3. Various Scanning Procedures; Contact versus Non-Contact Methods; Holographic Methods; Computer Tomography versus Voxel Technology; Cone Beam Computer Tomography;		2	
4. Theoretical and Experimental Approach on Dental Research; Numerical Simulation Applications in Dentistry; Strain Gauge; Holography; Photo elasticity		2	
5. Methods Applied in the Identification of Caries; Non-Cavitated Carious Lesions; Cavitated Carious Lesions		2	
6. Application of Optical Coherence Tomography in Dentistry; Validation with MicroCt and Synchrotron Radiation.		2	
7. Dental impression between conventional and modern approaches		2	
8. Dental impression: future trends		2	

9. Diagnostic sonography (ultrasonography) is an ultrasound-based diagnostic imaging technique used for dental applications		2	
10. Scanning Acoustic Microscopy Investigation in Dentistry		2	
11. Two-photon microscopy Application in Dentistry		2	
12. Digital Image Processing Applications in Dentistry		2	
13. Stem Cell Research: Status and Ethics		2	
14. Holographic, acoustic microscopy, mass spectrometry, laser spectrophotometry, electron microscopy		2	

Bibliografie obligatorie:

1. Monika Elzbieta Machoy – Computer Vision in Dentistry, Pomeranian Medical University, ISBN: 978-1-83962-188-8, 2019
2. Jane Manakil – Insights into Various Aspects of Oral Health, DOI: 10.5772/65997, ISBN: 978-93-532-6, 2017.
3. Kaurani, Pragati - Research methodology in Dentistry, 2020.
4. William Trochim Ph.D., James P. Donnelly, Kanika Arora, Research Methods: The Essential Knowledge Base, 2nd Edition,
5. Zohaib Khurshid Shariq Najeeb Muhammad Sohail Zafar Farshid Sefat, Advanced Dental Biomaterials, ISBN: 9780081024768, 2019.

9. Coroborarea conținuturilor disciplinei cu așteptările reprezentanților comunităților epistemice, asociațiilor profesionale și angajatori reprezentativi din domeniul aferent programului

The content of the discipline is designed to facilitate the formation of the student, presenting the latest cutting edge technologies in dentistry. One of the main important feature is the fact that the student is capable to work with two optical coherence tomography special designed for dental applications.

10. Evaluare

Tip activitate	10.1 Criterii de evaluare	10.2 Metode de evaluare	10.3 Pondere din nota finală
10.4 Course	<ul style="list-style-type: none"> • <i>For grade 5</i> students must prove knowledge of the basis of some invasive and noninvasive evaluation methods in dentistry • <i>For grade 10</i>, students must have a thorough knowledge of the cutting edge evaluation and prognostic research methods in dentistry 	<p><i>Continuous evaluation:</i> (appreciation of students' activities during the semester, focusing on aspects of knowledge and synthesis of information)</p> <p><i>Final evaluation:</i> Exam: written multiple choice test (50 questions, one hour).</p>	<p>10%</p> <p>90%</p>

10.6 Standard minim de performanță

The course “Avangard research in dental materials” present the vast domain of dental material’s properties and investigation methods such as: invasive (micoscopy and mechanical tests) and non-invasive methods.

Data completării 17.11.2023	Semnătura titularului de curs Prof. Univ. Dr. Sinescu Cosmin	Semnătura titularului de laborator/stagiu Prof. Univ. Dr. Sinescu Cosmin
Semnătura șefului de disciplină Prof: Univ. Dr. Romînu Mihai		
Data avizării în departament	Semnătura directorului de departament Prof. Univ. Dr.Jumanca Daniela Elisabeta	