

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	Nanoapplications 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						0	3.5 din care: curs		28	3.6 laborator		0
Distribuția fondului de timp											0	
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.
	<ul style="list-style-type: none"> •

6. Competențe specifice acumulate

Competențe Profesionale	<ol style="list-style-type: none"> 1. Acquisition of terminology in nanoapplications 2. Understanding structure and functioning of nanoapplications material. 3. Applications knowledge involving nanoapplications in dental medicine 4. How to make a correct research in nanomedicine and dental nanomedicine
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 genetics and understanding the structure and functioning of nanoapplications
7.2 Obiectivele specifice	<p>Knowledge of nanomedicine and dental nanoapplications</p> <p>Explaining some nanomedicine notions and solutions for research and testing</p> <p>Nanorobot and their applications in dental medicine</p>

8. Conținuturi

8.1 Curs	Metode de predare	Număr de ore	Observații
1. General knowledge of nanomedicine. Terminology, definitions.	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. • Available on University's Moodle e-learning platform . • 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
2. Applications of nanotechnology in diagnostics, pharmacology.		2	
3. Applications of nanotechnology in dental medicine		2	
4. Nanotechnology in dental materials		2	
5. Nanotechnology in dental prosthesis manufacturing		2	
6. Nanotechnology in tissular inginery		2	
7. Nanotechnology in orthodontics		2	
8. Nanotechnology in medical imagistic		2	
9. Nanotechnology in evaluations and treatment of cancer		2	
10. Nanotechnology and treatment of cavities and root canals		2	

11. Nanotechnology in optimization of some dental materials		2	with summarizing the notions presented.
12. Nanotechnology and medical robot. Nanorobotics		2	
13. Interface between micro and nanotechnology. Advantages and disadvantages		2	
14. Nanotechnology quo vadis?		2	

Bibliografie obligatorie:

1. Romînu M, Bratu D, Florița Z, Lakatos S, Ianeș C, Negruțiu Meda – *Materiale dentare. Noțiuni teoretice și aplicații clinice*. Ed. Brumar, Timișoara, 2003.
2. Bratu D, Colojoară C, Leretter M, Ciosescu Diana, Uram-Țuculescu S, Romînu M – *Materiale dentare în laborator de tehnică dentară*. Ed. Helicon, 1994.
3. Romînu M, Florița Z, Negruțiu Meda, Lakatos S, Sinescu C - *Îndreptar de lucrări practice de Materiale Dentare* UMFT, 2000.
4. Romînu Roxana, Romînu M., Negruțiu Meda, Sinescu C., Pop Daniela, Petrescu Emanuela - *Adeziunea amelo-dentară* UMF Timișoara, 2011.
5. O'Brien Wj - *Dental Materials and their selection*. Quintessence Books 2008.

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

The basis of the discipline is made for competence facilitating and for the applicability of nanomaterials and nanotechnology in dental medicine. Moreover, advantages and disadvantages of some nanotechnologies and nanorobotics.

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"> • For grade 5 students must prove knowledge of the basis of some invasive and noninvasive evaluation methods in dentistry • For grade 10, 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 presents the applications of nanomaterials, nanosynthesis and nanorobotics in dental medicine. Special attention is given to the nano and micro technologies with their advantages and disadvantages.

Data completării 19.12.2017	Semnătura titularului de curs Dr. Sinescu Cosmin	Semnătura titularului de laborator/stagiu Dr. Sinescu Cosmin
Semnătura șefului de disciplină .Prof: Univ. Dr. Romînu Mihai.....		
Data avizării în departament	Semnătura directorului de departament Prof. Dr.Podariu Angela Codruța	