

FIȘA DISCIPLINEI

1. Date despre program

1.1 Instituția de învățământ superior	UNIVERSITATEA DE MEDICINA ȘI FARMACIE "VICTOR BABEȘ" TIMIȘOARA
1.2 Facultatea	FACULTATEA DE MEDICINĂ DENTARĂ
1.3 Departamentul	I MD
1.4 Domeniul de studii de..... ¹⁾	Health + Sectorial Regulations in the European Union
1.5 Ciclul de studii ²⁾	Diploma
1.6 Programul de studii/ Calificarea	Dental Medicine

2. Date despre disciplină

2.1. Denumirea disciplinei	Dental Microscopy (067MICROD)							
2.2 Titularul activităților de curs	Prof.Dr.Dr.med.dent.Stefan-Ioan Stratul							
2.3 Titularul activităților de laborator	Dr.Ciprian Sarbu							
2.4 Anul de studiu	V	2.5 Semestrul	I	2.6 Tipul de evaluare	COLLOQUIUM	2.7 Regimul disciplinei	Conținut ³⁾	DC
							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	1	3.3 stagii clinice	1
3.4 Total ore din planul de învățământ	28	3.5 din care: curs	14	3.6 stagii clinice	14
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					
Examinări					2
Alte activități					
3.7 Total ore studiu individual		0 (1 credit DO x 30, minus 14, minus 14, minus 2 = 0)			
3.8 Total ore pe semestru		30 (1 credit x 30)			
3.9 Numărul de credite⁵⁾		1			

4. Precondiții (acolo unde este cazul)

4.1 de curriculum	Anatomy, Oral Pathology, Biophysics, Endodontology
4.2 de competențe	Not applicable

5. Condiții (acolo unde este cazul)

5.1 de desfășurare a cursului	<ul style="list-style-type: none"> The course is taught in English Mobile telephones will be switched off or kept on silence during the class; students cannot leave the room to take phone calls; Students arriving after the teacher will not be allowed to attend the class; Attendance to the course is mandatory; a certain number of absences will be tolerated, according to the Regulations of the University The class room must be provided with laptop, projector, interactive board.
5.2 de desfășurare a seminarului/ laboratorului/ proiectului	<ul style="list-style-type: none"> The treatment and demonstration rooms will be provided with computers and projector/screen. Mobile phones will be kept on silent mode Clinical classes will be in Romanian, as patients are Romanian and speak Romanian. The clinical teachers communicate with the student in English, except in the presence of the patient, where the clinical teachers will assist the student in communicating with the patient in Romanian, in order to provide the best cooperation with the patient. Students arriving after the teacher will not be allowed to attend the class. Students will be dressed according to the surgical specific of the Department. Attendance to demonstration/clinical classes is mandatory; a certain number of absences will be tolerated, according to the Regulations of the University, based on documented justification; clinical classes cannot be repeated. To enter the final practical examination, students will have to attend the required number of demonstration/clinical classes.

	<ul style="list-style-type: none"> The place and time of the final written and practical examinations will be decided by the teacher in consultation with the students, according to the Regulations of the University. No individual delays of the written examination will be accepted, unless serious, well-documented justifications will be provided. The practical examination will be in English, during the last week of the 1st semester. Promotion of the practical examination is mandatory for promotion of the final exam of Dental Microscopy.
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6. Competențe specifice acumulate

Competențe Profesionale	<ol style="list-style-type: none"> Knowing the external, internal anatomy of the tooth and of the surrounding tissues. Knowing the sequence of endodontic procedures, conservative and restorative procedures, and basic notions of periodontal treatment planning and periodontal surgical procedures. Understanding the basic principles of medical optics. Understanding basic principles of ergonomy of the work in the dental office. Understanding basic technological principles of medical devices, with emphasis on magnification devices. Understanding basic notions dental practice management and marketing.
Competențe transversale	<ol style="list-style-type: none"> Identification of the roles and responsibilities in a pluridisciplinary team; employing of relationing techniques and efficient team working, to facilitate future interdisciplinary collaborations within the dental specialty and with other medical specialties. Efficient use of informational, communication and assisted professional formation resources (Internet portals, software applications, databases, online courses etc.) available in all international languages. Identifications of the objectives, of the resources, of the requirements to complete the objectives, of the working phases, of the timeline, of the deadlines and of the risks. Initiation of research activities in Endodontics, Conservative and Restorative Dentistry and in Periodontology, also in connection with other dental and medical specialties.

7. Obiectivele disciplinei (reieșind din competențele specifice acumulate)

7.1 Obiectivul general al disciplinei	To teach fundamental notions of magnification- and microscope-assisted dental treatments.
7.2 Obiectivele specifice	<ol style="list-style-type: none"> Introduction and detailed explanation of principles, physical fundaments and technological background of magnification devices for Dental Medicine. Description of the advantages, applications and methods of use of optical magnification devices in general and of the dental microscope in particular. To teach students the use of the dental microscope as an investigation, diagnostic and treatment tool in various subspecialties of the dental profession: Endodontology, Periodontology, Restorative Dentistry, Prosthodontics, Dental Esthetics, Oral Implantology.

8. Conținuturi

8.1 Courses	Metode de predare	Număr de ore	Observații
1. The Dental Operating Microscope (DOM). Utility. Anatomical and Physiological Background of Magnification.	Interactive lectures supported by ppt presentations, according to the course topics, including lots of suggestive clinical images. Each lecture begins with the course objectives and the course outline, and ends with a summary and conclusions.	1	The course support is distributed free to the students as electronic PDF file. The textbooks included in the optional reference list are distributed free to the students as PDF files, or can be consulted, on request.
2. The Component Parts of the DOM. Fundamental Notions of Optics.		1	
3. The Varioscope. The Mora Interface. Angled Optical Components.		1	
4. The Co-axial Illumination. The Free Floating and Balance Systems. The Magnetic Brakes. Maintenance of the DOM.		1	
5. Ergonomics in Working with the DOM.		1	
6. The DOM in Endodontology. The Microendodontic Instruments. Examination in magnification of the External Surfaces of the Tooth.		1	
7. Identification of the Anatomic Elements of the Pulp Floor. Removal under Magnification of Coronal Restorations. Identification of internal cracks.		1	
8. Location of Root Canals using the DOM. DOM in the Identification and Negotiation		1	

of Calcified Canals.			
9. Use of DOM to Evaluate and Manage Root Perforations. Use of DOM in the Root Canal Filling and the Anterograde Re-treatment of Root Canals.		1	
10. The DOM in Endodontic Surgery. The DOM for Treatment of Large or Immature Apexes.		1	
11. The DOM in Periodontology and Implantology. Advantages and Disadvantages. The DOM and the "Microsurgical Concept".		1	
12. "The Learning Curve" in using the DOM within the "Microsurgical Concept". Common Errors in the Use of DOM in Surgical Practice.		1	
13. The DOM in Restorative Dentistry and in Prosthodontics.		1	
14. Documentation Using the DOM. FINAL EXAMINATION.		1	

Bibliografie obligatorie:

Stefan-Ioan Stratul. Dental Microscopy. Electronic course support.

Bibliografie facultativă:

1. ***ZEISS. Microscopic dentistry. A practical guide. Carl Zeiss Meditec AG, 2014.
2. Rick Schmidt, Martin Boudro. The Dental Microscope. Why and How. S&B Publishing, 2011.
3. Syngkuk Kim, Gabriele Pecora, Richard A. Rubinstein. Color Atlas of Microsurgery in Endodontics. W.B.Saunders Company, 2011.
4. Massironi D., Pascetta R., Romeo G. Precision in Dental Esthetics. Clinical and Laboratory Procedures. Quintessence Books, 2007.
5. Stephen Cohen, Richard Burns - Pathways of the pulp, Eight Edition, Mosby

8.2 Seminar/ Laborator/stagiu/ proiect	Metode de predare-învățare	Număr de ore	Observații
1.Description of surgical loupes and of the Dental Operating Microscope (DOM): component parts, functioning mode.	<ol style="list-style-type: none"> 1. Short interactiv ppt presentations and educational presentations, movies on CDs 2. Direct examination and testing of the magnification devices and of microsurgical instruments 3. Practical exercises on extracted teeth and on animal tissue models under the DOM 4. Live demonstrations of clinical procedures of endodontology and periodontal microsurgery by the clinical teacher and by the course director 5. Direct assistance of the student in microsurgical interventions 6. Case presentations by clinical teachers. 	1	<p>In performing clinical procedures on patients, students will be assisted by clinical teachers and resident doctors assigned to the case.</p> <p>For patients undergoing clinical demonstrative procedures performed by the clinical teacher, students will effectively participate in the preparation of the patient, will assist to the procedure under MOD and will effectively participate in the post-op care.</p>
2.Exercises of DOM-assisted diagnosis on healthy and diseased oral tissues.		1	
3.Exercises of ergonomic work using the DOM.. Organisation of the working space and of the workflow in dental practices around the DOM.		1	
4.DOM-assisted evaluation of the internal and external tooth anatomy.		1	
5.Practical exercises of locating, negotiating, preparation and re-preparation of root canals, using the DOM and ultrasound devices, on extracted teeth.		1	
6.Practical exercises of root canal filling using the vertical condensation technique, under the DOM.		1	
7. The DOM in apical surgery: practical demonstration.		1	
8. Presentation of the microsurgical armamentarium and materials for the surgical treatment of perforations and internal and external root resorbtions.		1	
9. DOM-assisted diagnosis of coronoradicular fissures; exercises of classification and DOM-assisted therapy.		1	
10. DOM-assisted examination of the		1	

periodontal patient.			
11. DOM-assisted root surface examination and preparation; DOM-assisted defectoscopy.		1	
12. Presentation of the periodontal microsurgical armamentarium and suture materials; practical exercises on siliconic/animal jaws/chicken leg; direct assistance in microsurgical procedures.		1	
13. DOM-assisted adhesive restorations.		1	
14. DOM-assisted prosthodontic preparations, quality assesment of restorations; DOM-assited case documentation; organizig digital archives of images recorded under magnification.		1	
Bibliografie obligatorie: Stefan-Ioan Stratul. Dental Microscopy. Electronic course support.			
Bibliografie facultativă: 1. ***ZEISS. Microscopic dentistry. A practical guide. Carl Zeiss Meditec AG, 2014. 2. Rick Schmidt, Martin Boudro. The Dental Microscope. Why and How. S&B Publishing, 2011. 3. Syngkuk Kim, Gabriele Pecora, Richard A. Rubinstein. Color Atlas of Microsurgery in Endodontics. W.B.Saunders Company, 2011. 4. Massironi D., Pascetta R., Romeo G. Precision in Dental Esthetics. Clinical and Laboratory Procedures. Quintessence Books, 2007. 5. Stephen Cohen, Richard Burns - Pathways of the pulp, Eight Edition, Mosby			

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

With the study of Dental Microscopy (DM), the dental student will benefit of detailed knowledge of principles, of physical and technological background of magnifications in dentistry, as of the advantages, applications and using methodology of magnifications and of the dental operating microscope (DOM) as instrument of diagnosis, investigation and treatment in Endodontology, Periodontology, Restorative Dentistry, Prosthodontics, Dental Esthetics, and Implantology. The content of the optional study of DM is complementary to Dentistry, especially to Endodontology and Periodontology, and is adapted to the rich pathology in populations of all ages in Romania. However, this study is not regulated at European and international level with educational standards for undergraduate and graduate levels. Nevertheless, the standards on which the undergraduate curricula for dental students of the Victor Babes University of Medicine and Pharmacy is based include references to magnifications as mean of diagnosis, evaluation and treatment in Endodontology and Periodontology. From this point of view, the optional study of DM in our university is a world premiere, made possible by devices acquired through research grants of the Department of Periodontology. At present there are hopes for a coordination between Departments of our University and similar Departments of the Faculties of Dentistry of Medical Universities from Bucharest, Iasi, Cluj-Napoca, Targu-Mures and Craiova. The beforementioned curricular contrent was acknowledged by ARACIS, the Romanian Agency for Academic Education Quality, as, since 2009, Endodontology, Periodontology and Prosthodontics became state-recognized dental specialties in Romania. The current private practice of dentistry in Romania uses a constantly increasing number of DOM, and general practitioners and specialists with good skills in using the DOM are requested in multidisciplinary teams, in Romania and abroad.

10. Evaluare

Tip activitate	10.1 Criterii de evaluare	10.2 Metode de evaluare	10.3 Pondere din nota finală
10.4 Curs	<p><i>Cunoștințe pentru nota 5:</i> 50% of the MQ test correctly answered, according to the Examination Regulations of the University</p> <p><i>Cunoștințe pentru nota 10:</i> 90% of the MQ form correctly answered, according to the Examination Regulations of the University</p>	Final evaluation: written MQ test with 50 MQs.	50%

10.5 Laborator/Stagiu	<p><i>Cunoștințe pentru nota 5:</i> Exercise & clinical procedures standards completed, weak interest manifested during the clinical classes.</p> <p><i>Cunoștințe pentru nota 10:</i> Exercise & clinical procedures standards completed or even exceeded, strong interest manifested during clinical classes and interest for research.</p>	<p>Final evaluation (practical examination):</p> <p>Standards of MOD-assisted procedure exercises, MOD-assisted clinical endodontic and periodontal procedures completed; standards are announced at the beginning of the academic year; un-completed clinical standards preclude the candidate to participate in the practical examination.</p> <p>The student will be asked to recognize the main parts of the DOM, microsurgical instruments, microendodontic instruments, to manipulate the DOM in procedures on extracted teeth, to execute microsurgical sutures.</p> <p>Periodical colloquial verification of the interest for the study of Dental Microscopy during clinical classes, noted with a mark by the clinical teacher.</p>	40%
10.6 Standard minim de performanță			
The student must be able to recognize and to identify the most common magnification devices, to select among the current technological offer on the market, to recognize the main parts of dental microscopes, to manipulate the dental microscope, to interpret the main clinical data collected by means of high magnifications in order to provide an accurate basic diagnosis in Endodontics and Periodontology, to use the dental microscope in conjunction with other types of devices and instruments for improved therapeutic results.			

Data completării 14.11.2022	Semnătura titularului de curs Prof.Dr.Dr.med.dent. Stefan-Ioan Stratul	Semnătura titularului de laborator/stagiu Dr.Ciprian Sarbu
Semnătura șefului de disciplină Prof.Dr.Dr.med.dent.Stefan-Ioan Stratul		
Data avizării în departament	Semnătura directorului de departament Prof. Dr. Daniela Jumanca	

Notă:

- 1) Domeniul de studii - *se alege una din variantele:* Licență/ Masterat/ Doctorat (**se completează conform cu Nomenclatorul domeniilor și al specializărilor/ programelor de studii universitare în vigoare**) ;
- 2) Ciclul de studii - *se alege una din variantele:* Licență/ Master/ Doctorat;
- 3) Regimul disciplinei (conținut) - *se alege una din variantele:* **DF** (disciplină fundamentală)/ **DD** (disciplină din domeniu)/ **DS** (disciplină de specialitate)/ **DC** (disciplină complementară) - *pentru nivelul de licență;* **DAP** (disciplină de aprofundare)/ **DSI** (disciplină de sinteză)/ **DCA** (disciplină de cunoaștere avansată) - *pentru nivelul de masterat;*
- 4) Regimul disciplinei (obligativitate) - *se alege una din variantele:* **DI** (disciplină obligatorie)/ **DO** (disciplină opțională)/ **DFac** (disciplină facultativă);
- 5) Un credit este echivalent cu 25 – 30 de ore de studiu (activități didactice și studiu individual).
- 6) Pentru specializările și/sau disciplinele a căror tematică se regăsește în bibliografia de rezidențiat, aceasta devine obligatorie.