

1	Subject	<b>Preclinical endodontics</b>			
2	Code	DPE410			
3	Study Program	Study Program of Integrated studies in dental medicine			
4	Organizing Institution (Unit, Institute, Chair, Department)	Department of Dental Pathology and Endodontics			
5	Educational degree (first or second cycle)	Integrated study			
6	Study year/semester	4 / 8	7	Number of credits	6
8	Teacher	Prof. D-r Sonja Apostolska Prof. D-r Lidija Popovska, Prof. D-r Vasilka Rendzova, Prof. D-r Ilijana Muratovska, Doc. D-r Marina Eftimoska			
9	Preconditions	Passed all compulsory courses of 3 and 4 semester. Signatures of 5 and 6 semester courses			
10	Teaching goals: The student, after theoretical and practical exercises, should be trained and ready to work in clinical conditions, where he supposed to learn the basic principles and methods of endodontic therapy, anatomy and morphological characteristics of the root canals at all teeth, to apply the basic principles for the formation of accessible cavity, to understand the different odontometric techniques and methods, to know the basic groups of endodontic instruments and techniques of working with them, to learn the techniques and medicines that are used for irrigation and medical therapy, to get aware with various techniques for final obturation of the root canals, to learn how to perform all the phases of the endodontic procedure and the importance and direct connection to the ultimate goal of treatment of the diseased tooth, as he can properly apply them in a clinical manner conditions.				
11	<b>Brief content</b>				
	<b>Theoretical course</b>				
	Introduction in Endodontics. 2 Endodontic treatment planning 2 Pulp space anatomy and variations in Pulp space anatomy Anatomic and morphological characteristics of the endodontic space. 2 Endodontic instruments - manual, mechanical and ultrasonic. 2 Pulp space anatomy and access cavities . 2 Removal of pulp tissue. 2 Devices to determine working length 2 <b>Colloquium 1</b>  Principles of endodontic treatment of vital and avital teeth. 2 Preparation of the root canal system. 2 Machine-driven rotary ( <b>technology</b> ) methods and techniques. 2 Root Canal Irrigation, 2 Smear layer and its management . 2 Medications in endodontic treatment. 2 Root canal obturation – purpose and criteria. 2 Root canal obturation techniques. 2 <b>Colloquium 2</b>				
	Total				30
	<b>Practical lessons:</b>				Class
	Introduction to the endodontic procedure and working principles. Endodontics instruments (manual and mechanical) and their application. 2 Diagnostic procedures in endodontics 2 Endodontic treatment, plan, basic stages of work in the endodontic procedure and morphological analysis of the root canals of the teeth. 2 Principles of preparation of access cavities in different morphological groups of teeth (incisors, premolars and molars in the upper and lower jaws) 2 Endodontic instruments (design, types....). 2 Working length assessment - root canal working length determination techniques. Electrodontometry. 2 Techniques and methods of root canal preparation with hand instruments (Step - Back, Crown - Down) on acrylic				

	<p>models (single root and multi root) 2          Demonstration of root canal preparation techniques and methods with machine rotating instruments (on acrylic models and extracted teeth). 2          Irrigation of root canals (NaOCl, EDTA), irrigation technique, the importance of irrigation in the endodontic procedure. 2          Medications and their application in root canal system. 2          Single cone Root canal obturation technique . 2          Other root canal obturation techniques. 2          Biopulpectomy. 2          Other methods of root canal therapy on vital pulp. 2          New methods and materials in endodontic therapy 2</p>			
	Total		45	
12	Methods of studying: class room oriented lectures, interactive lectures, group work, practical training, seminar paper			
13	Total available time	180 classes		
14	Organization of the course	30 classes - theoretical course, 45 classes- practical course, 105 classes - home individual learning and other activities		
15	Forms of teaching activities	15.1.	Theoretical course	30 classes
		15.2.	Practical course, seminars	Practical course - 45 classes
16	Other forms of activities	16.1.	Project tasks	
		16.2.	Individual tasks	15 classes
		16.3.	Individual (home) learning	90 classes
17	Method of assessment	17.1.	Tests	15+15 points
		17.2.	Active participation, seminar paper/project (oral/written presentation)	20 points
		17.3.	Final (oral) exam	50 points
18	Grading criteria (points / grade)	Up to 59 points		5 (five) (F)
		from 60 to 67 points		6 (six) (E)
		from 68 to 75 points		7 (seven) (D)
		from 76 to 84 points		8 (eight) (C)
		from 85 to 93 points		9 (nine) (B)
		from 94 to 100 points		10 (ten) (A)
19	Requirement for signature and taking the final exam	<p>The student is required to actively follow all of the planned activities.          Conditional criteria for assessment of knowledge:          In order to get a signature, the student should obtain minimum points in both theoretical and practical courses, and to present seminar paper;          In order to take the final exam, the student should obtain the minimum points from activity and test;          If the student has not obtained the minimum points in the continual assessments, he/she in next exam session will have paper part of the exam (40 points) and final exam (60 points)</p>		
20	Language of the course	English		
21	Method for evaluation of the quality of education	Anonymous student's evaluation of the subject, teachers and collaborators involved in the educational activities		
22	<b>Literature</b>			

	22.1.	<b>Mandatory textbooks</b>				
		No.	Author	Title	Publisher	Year
		1	Bun San Chong	Harty's Endodontics in Clinical Practice, 7th Edition	Churchill Livingstone	2016
	22.2.	<b>Additional literature</b>				
		No.	Author	Title	Publisher	Year
		1	Sonja Apostolska, Vasilka Rendzova	Endodontics	Maring, Skopje	2014