

	teaching and working methods for the subject	to work in a dental office, as well as the use of devices and instruments in everyday practice.				
15.	Total available classes fund	90 classes				
16.	Forms of teaching activities	16.1.	Lectures - theoretical teaching, classes	30		
		16.2.	Exercises (laboratory, classroom), seminars, teamwork: classes			
		16.3.	Practice: classes			
17.	Other forms of activities	17.1.	Project work: classes			
		17.2.	Individual work: classes	20		
		17.3.	Homework - tasks	40		
18	Signature requirements					
19	Method of the evaluation					
	19.1.	Tests: points		1 colloquia 35		
	19.2.	Seminar work/project, written and oral presentation: points		15		
	19.3.	Final exam: points		50		
20	Evaluation criteria (points/grade)		up to 59 points	5 (five) (F)		
			from 60 to 68 points	6 (six) (E)		
			from 69 to 76 points	7 (seven) (D)		
			from 77 to 84 points	8 (eight) (C)		
			from 85 to 92 points	9 (nine) (B)		
			from 93 to 100 points	10 (ten) (A)		
21.	Method of monitoring the quality of teaching		Self-evaluation by students, control of assistants in carrying out practical teaching and assessment of the achieved success of students, as well as the pass rate of students who have passed the course			
22.	Literature					
	22.1.	Compulsory literature				
		Serial number	Author	Title	Publisher	Year
		1.	Popovska Lidija	Preclinical Cariology	Faculty of Dentistry Skopje	2014
		2.	Apostolska Sonja, Rendzova Vasilka	Endodontics	Apostolska Sonja, Rendzova Vasilka	2014
		3.				
	22.2.	For further reading				
		Serial number	Author	Title	Publisher	Year
		1.	A. Damien Walmsley et al.	Restorative Dentistry	Ars Lamina LLC	2011
		2.	James B. Smith et al	Fundamentals of Dental Restoration	Ars Lamina LLC	2011
		3.				

Serial number: 20

Annex no. 3		First cycle study program
1.	Title of courses	Dental Radiology

2.	Code	PDTEDR2			
3.	Study Program	Professional Dental Technicians			
4.	Organizer of the study program (unit, i.e. institute, department, division)	UKIM - Faculty of Dentistry – Skopje, Department of Children and preventive dentistry			
5.	Degree (first, second, third cycle)	I cycle			
6.	Academic year/semester	Year	2	semester	3
7.	Course load expressed in ECTS credits	3			
8.	Teacher (in case of multiple teachers, a responsible teacher is appointed)	Prof. Dr. Marija Stevanovikj and teachers from the Department of Children and preventive dentistry			
9.	Course language	English			
10.	Necessary prerequisites for listening to and passing the course	n.a.			
11.	Course objectives (competencies) and learning outcomes:	The student will be able to be introduced to: the basic physical principles of X-ray generation, protection from X-ray radiation, types of X-rays in orofacial radiology, X-ray processing, X-ray interpretation. Normal radiographic anatomy of the orofacial region, caries, pathological changes in bone and periapical tissue.			
12.	Detailed content of the course by chapters and units with learning outcomes for each chapter	Theoretical teaching: Chapter 1. Basics of Dental Radiography and Radiology - Basic physical principles of ionizing radiation; X-ray tube; generation of X-rays 1 class - Biological effects of X-rays and protection from X-rays 1 class - Types of X-rays in the orofacial region; Performing intraoral, extraoral and special images; Processing X-ray films 2 classes - Normal radiographic anatomy of teeth and supporting tissues, normal radiographic anatomy of the upper and lower jaws and interpretation of X-ray images 1 class <i>Outcomes of Chapter 1 Students acquire knowledge about the physical principles of X-rays, the biological effects associated with X-rays, the construction of the X-ray apparatus, infection control measures, types of X-ray apparatus and films, methods of storing and processing films, procedures for developing films, and types of X-rays in the orofacial region. Students also become familiar with the normal X-ray structure of the teeth, the supporting apparatus, the alveolar ridge, the upper and lower jaws, as well as all anatomical structures that are of interest to the dentist.</i> Chapter 2. X-ray diagnostics of carious lesions, tooth irregularities, irregularities in the development of the maxillofacial bones, osteoresorptive and osteosclerotic processes of the bones, regressive and resorptive processes, as well as impacted teeth. - X-ray diagnostics of carious lesions 1 class - Irregularities of teeth in number, size, shape and structure 1 class - Irregularities in the development of the maxillofacial bones and osteoresorptive and osteosclerotic processes of the bones 1 class - Regressive, resorptive processes and impacted teeth..... 1 class <i>Outcomes of Chapter 2 Students acquire basic knowledge about X-ray diagnostics of dental caries, about irregularities of the teeth, about irregularities of the face and jaws with reference to</i>			

	<i>clefts of the lips and palate, about regressive processes and about all types of resorptive processes. Students also acquire knowledge about the methods of correct placement, angulation, exposure and development of X-ray films in the diagnosis of the aforementioned pathological processes including computed tomography imaging CON-bim.</i> Chapter 3. Radiology of endodontium, traumas of teeth and jaws, tumors, cysts, TMJ and salivary glands - Radiology of endodontium and foreign bodies in jaws and teeth 1 class - X-ray diagnostics of dental traumas 1 class - X-ray diagnostics of traumas of the upper and lower jaws ... 1 class - X-ray diagnostics of tumors in the jaws 1 class - X-ray diagnostics of cysts 1 class - X-ray diagnostics of pathological changes of the salivary glands and X-ray diagnostics of pathological changes of the TMJ 1 class <i>Outcomes of chapter 3: Students will acquire knowledge about X-ray diagnostics of all physiological and pathological changes of the endodontium, will acquire knowledge about the etiology of traumas of the dental-jaw apparatus and their X-ray diagnostics, about the types of tumors – benign and malignant, on the role of X-ray diagnostics of cysts, including computed tomography imaging CON-bim. They will be introduced to pathological changes in the salivary glands and sialography, as well as the types of projections that are important in the interpretation of pathological changes in the TMJ.</i> Total 15 classes <i>Exercises</i> - Introduction to ionizing radiation; X-ray tube; generation of X-rays1 class - Ways to protect against X-ray radiation 1 class - Types of X-rays in the orofacial region; Performing intraoral, extraoral and special images; Processing X-ray films 1 class - Presentation of X-ray images with normal radiographic anatomy of teeth and supporting tissues, normal radiographic anatomy of the upper and lower jaws and interpretation of X-ray images 1 class - Diagnosis of carious lesions.....1 class - Analysis of images with irregularities of teeth in number, size, shape and structure1 class - Display and analysis of images with irregularities in the development of the maxillofacial bones1 class - Display and analysis of X-ray images with regressive, resorptive processes and impacted teeth1 class - Radiology of endodontium and foreign bodies in jaws and teeth 2 classes - X-ray diagnostics of dental traumas 1 class - X-ray diagnostics of traumas of the upper and lower jaws1 class - X-ray diagnostics of tumors in the jaws.....1 class
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		- X-ray daignostics in cycts..... 1 class - X-ray diagnostics of pathological changes of the salivary glands and X-ray diagnostics of pathological changes of the TMJ 1 class Total 15 classes					
13.	Interrelationship of courses	/					
14.	Detailed description of the teaching and working methods for the subject	Interactive teaching, clinical exercises, demonstration and performance of digital imaging, presentation of the X-ray laboratory, methods of intraoral and extraoral imaging, analysis of intraoral and extraoral imaging with diagnosis, differential diagnosis and therapy plan, as well as X-ray monitoring of the treatment processes in some patients.					
15.	Total available classes fund	90 classes					
16.	Forms of teaching activities	16.1.	Lectures - theoretical teaching, classes	15			
		16.2.	Exercises (laboratory, classroom), seminars, teamwork: classes	15			
		16.3.	Practice: classes				
17.	Other forms of activities	17.1.	Project work: classes				
		17.2.	Individual work: classes	15			
		17.3.	Homework - tasks	45			
18.	Signature requirements	Attending 60% of the theoretical teaching					
19.	Method of the evaluation						
	19.1.	Tests: points			50		
	19.2.	Seminar work/project, written and oral presentation: points			20		
	19.3.	Final exam: points			30		
20.	Evaluation criteria (points/grade)		up to 59 points	5 (five) (F)			
			from 60 to 68 points	6 (six) (E)			
			from 69 to 76 points	7 (seven) (D)			
			from 77 to 84 points	8 (eight) (C)			
			from 85 to 92 points	9 (nine) (B)			
			from 93 to 100 points	10 (ten) (A)			
21.	Method of monitoring the quality of teaching	Self-evaluation by students, control of assistants in carrying out practical teaching and assessment of the achieved success of students, as well as the pass rate of students who have passed the course					
22.	Literature						
	22.1.	Compulsory literature					
		Serial number	Author	Title	Publisher Year		
		1.	Stevanovikj M.	Dental Radiology	Faculty of Dentistry - Skopje 2015		
		2.	E Whites	Essentials of Dental Radiography and Radiology	Churchill Livingstone 2013		
		3.					

	22.2.	For further reading				
		Serial number	Author	Title	Publisher	Year
		1.	Joen Iannucci, Laura Jansen Howerton	Dental Radiography: Principles and Techniques 6th Edition	Elsevier	2021
		2.	Zadravec Krolo	Dentalna Radiologija	Medicinska naklada d.o.o. Zagreb	2016
		3.				

Serial number: 21

Annex no. 3		First cycle study program			
1.	Title of courses	Oral Hygiene			
2.	Code	PDTEOH2			
3.	Study Program	Professional Dental Technicians			
4.	Organizer of the study program (unit, i.e. institute, department, division)	UKIM - Faculty of Dentistry – Skopje, Department of Oral and Periodontal Diseases			
5.	Degree (first, second, third cycle)	First Cycle			
6.	Academic year/semester	Year	2	semester	3
7.	Course load expressed in ECTS credits	3			
8.	Teacher (in case of multiple teachers, a responsible teacher is appointed)	Prof. Dr. Kristina Mitikj and teachers from the Department of Oral and Periodontal Diseases			
9.	Course language	English			
10.	Necessary prerequisites for listening to and passing the course	Attended all compulsory courses of First year			
11.	Course objectives (competencies) and learning outcomes:	Gaining knowledge about ways to maintain proper oral hygiene and its importance for oral and general health. Students acquire skills to achieve optimal oral hygiene in patients with fixed and mobile prosthetic devices, orthodontic appliances and implants, as well as in patients with special needs.			
12.	Detailed content of the course by chapters and units with learning outcomes for each chapter	Theoretical teaching Chapter 1 - Introduction to the course and patient care..... 1 class - History data related to oral hygiene and detection of dental plaque 1 class - Dental plaque index 1 class - Tartar index 1 class - Plaque control 1 class - Maintaining oral hygiene at home 1 class - Tooth brushing techniques 1 class - Interdental space care 1 class <i>Outcomes of the 1st chapter: The student will focus on education on methods for determining dental plaque and tartar, the most commonly used techniques for brushing teeth, as well as indications</i>			