

1	Subject	DENTAL RADIOLOGY			
2	Code	DSR405			
3	Study Program	Study Program of Integrated studies in dental medicine			
4	Organizing Institution (Unit, Institute, Chair, Department)	Department of Pediatric and Preventive Dentistry			
5	Educational degree (first or second cycle)	Integrated study			
6	Study year/semester	4/ 7	7	Number of credits	4
8	Teacher	Prof. Marija Stevanovic			
9	Preconditions	Passed all compulsory courses of 3 and 4 semester. Signatures of 5 and 6 semester courses			
10	Teaching goals: the student will acquire knowledge about the creation of the x-rays, protection from the x-rays, the procedure of taking and processing of the radiographs, interpretation of the radiographs, diagnosis of the pathological conditions in the orofacial region				
11	Brief content				
	Theoretical course				Class
	Basic physical principles of the ionizing radiation; X-ray tube; Creation of x-rays				2
	Biological effects due to x-ray radiation; Protection from x-ray radiation				2
	Types of x-ray imaging in the orofacial region; Taking intraoral, extraoral and special radiographs; Processing of the x-ray films				2
	Digital radiology in the orofacial region				1
	Interpretation of radiographs; Normal radiographic anatomy of the teeth and the supportive tissues				2
	Normal radiographic anatomy of the upper and the lower jaw				2
	Dental anomalies in number and size; Dental anomalies in form and structure				2
	Anomalies in the development of the bones in the maxillofacial region				1
	Radiographic diagnostics of carious lesions				2
	Application of radiographic diagnostics in endodontic therapy; Application of radiographic diagnostics in dentogenic infections				2
	Detection of foreign bodies in teeth and jaws by an x-ray; Radiographic diagnostics of cysts				2
	Radiographic diagnostics of tumors				2
	Radiographic diagnostics of the pathological changes in the salivary glands; Radiographic diagnostics of the pathological changes in the temporomandibular joint (TMJ)				2
	Radiographic diagnostics of traumatic injuries of teeth and supportive tissues				3
	Radiographic diagnostics of traumatic injuries of the upper and the lower jaw				1
	Radiographic diagnostics of resorptive regressive dental conditions				1
	Radiographic diagnostics of impacted teeth				1
	Total				30
	Practical lessons:				Class

	Basics of dental radiology: Creation of x-rays; Introduction with the radiological laboratory and equipment; Protection in the radiological laboratory; Taking intra- and extraoral radiographs; Processing of the radiographs; Intrepretation of the radiographs		6	
	Normal radiographic anatomy of the teeth, supportive tissues and the jaws		1	
	Radiographic appearance in dental and facial anomalies		2	
	Radiographic diagnostic of the tooth decay and in endodontics		1	
	Radiographic diagnostic of the traumatic injuries of the teeth and the supportive tissues		2	
	Radiographic diagnostic of the injuries of the jaws		1	
	Radiographic diagnostic of cysts and tumors		1	
	Radiographic diagnostic of the salivary glands and the temporomandibular joint (TMJ)		1	
	Total		15	
	Seminars			
	Elaboration of topics from the relevant material, presentation of the topics by the students and active involvement in the students until discussion of the given topic.		15	
12	Methods of studying: classroom-oriented lectures, interactive lectures, group work, practical training, seminar paper			
13	Total available time	120 classes		
14	Organization of the course	30 classes - theoretical course, 15 classes- practical course, 15 classes- seminars; 60 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- 15 classes Seminars- 15 classes
16	Other forms of activities	16.1.	Project tasks	
		16.2.	Individual tasks	
		16.3.	Individual (home) learning	60 classes
17	Method of assessment	17.1.	Tests	30 points
		17.2.	Active participation, seminar paper/project (oral/written presentation)	10 points
		17.3.	Final (oral) exam	60 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	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)				
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	Literature					
	22.1.	Mandatory textbooks				
		No.	Author	Title	Publisher	Year
		1	FHH Fromer, JS Savage	Radiology for the Dental Professional	Mosby	2010
	22.2.	Additional literature				
		No.	Author	Title	Publisher	Year
1		Стевановиќ М.	Стоматолошка рендгенологија	Стоматолошки факултет - Скопје	2015	
2		E Whites	Essentials of Dental Radiography and Radiology	Churchill Livingstone	2013	