Attachment No.3		Course program of the first cycle of studies			
1.	Course title	Pediatric Dentistry 1			
2.	Code	DMMPD4			
3.	Study program	Dentistry - integrated first and second cycle of studies			
4.	Organizer of the study program (unit, i.e., institute, department, division)	UKIM - Faculty of Dentistry – Skopje, Department of Pediatric and Preventive Dentistry			
5.	Degree (first, second, third cycle)	Integrated First and Second Cycle Studies			
6.	Academic year/semester	Year	4	semester	8
7	Course workload expressed in ECTS credits	5			
8.	Teacher (in case of multiple teachers, designated teacher in charge)	Prof. Dr. Elizabeta Gjorgievska, *All professors from the department will be included in the teaching			
9.	Language in which the curriculum is conducted	English			
10.	Necessary prerequisites for taking and passing the course	To complete all compulsory subjects from the third year and to pass all compulsory subjects from the second			
11.	Course objectives (competences) and learning outcomes:	After attending theoretical classes, conducting practical exercises and passing the exam, the student should: be able to perform an examination, assess the psychological type of the patient and determine a treatment plan; know the growth and development in the orofacial region, know the chronology of the dentition in children, and diagnose and treat dental anomalies; diagnose and treat caries in primary and permanent teeth; diagnose and treat diseases of the pulp and periodontal, soft tissues in the mouth, as well as complications from general, nutritional and metabolic disorders; know how to select and apply adequate dental material in accordance with the indication; plan and perform oral surgical interventions in children; diagnose and treat trauma and complications of trauma in children; plan and perform aesthetic procedures in children; plan and perform prosthodontic interventions in children.			
12.	Detailed course content by chapters and units, with learning outcomes for each chapter	Chapter 1. Introductory concepts in Pediatric dentistry Introduction to Pediatric dentistry, goals, tasks, basic principles, physiology of child development (motor, cognitive, emotional, speech, social development, adolescence)……1 class Parents and their influence on dental treatment, dentist-patient relationship…...1 class Dental work with children (division of children into age groups and according to behavior, work with uncooperative children)……...1 class Pain control……..1 class Dental care of children with disabilities - 1 class Anamnesis (personal data, family history, medical and dental history). Clinical examination (extraoral, intraoral)…….1 class Learning outcomes from Chapter 1: The student is introduced to the basic concepts of Pediatric dentistry, including the psychological development of children,			

techniques for establishing collaboration, and methods for assessing and planning dental treatment in this age group.

Chapter 2. Growth and development of the orofacial region
Growth and development of the orofacial region. Prenatal development, postnatal development, tooth development-odontogenesis, enamel development, dentin development, tooth root development, dental pulp and alveolar ridge development, permanent tooth development. 3 classes
Eruption of primary and permanent teeth (phases and mechanisms of eruption). Resorption of the roots of primary teeth. Chronology of development of deciduous and permanent teeth, marking of teeth……2 classes
Anatomohistological characteristics of deciduous and permanent teeth (enamel, dentin, cementum, dental pulp, periodontium)……2 classes
Morphological characteristics of deciduous teeth……..1 class
Morphological characteristics of young permanent teeth, anatomical characteristics of the developing jaws in children……..1 class
Learning outcomes from Chapter 2: The student acquires comprehensive knowledge about the processes of growth and development in the orofacial region, odontogenesis, the chronology of tooth replacement, and the anatomical and histological characteristics of deciduous and permanent teeth that are of essential importance for diagnostics and therapy in Pediatric dentistry.

Chapter 3. Irregularities in tooth development
Irregularities in tooth development. General disorders of tooth eruption, local disorders of tooth eruption, premature tooth eruption, delayed tooth eruption. Disorders during root resorption …1 class
Irregularities in the number of teeth, irregularities in tooth size, irregularities in tooth shape, irregularities in tooth position, irregularities in tooth color…….1 class
Irregularities in tooth structure. Irregularities in tooth structure caused by general factors, irregularities in tooth structure caused by intoxications, irregularities in tooth structure caused by hereditary factors. Clinical aspects…..1 class
Learning outcomes from Chapter 3: The student learns to recognize and differentiate different types of irregularities in tooth development, to identify etiological factors, and to understand their clinical manifestations, which is a prerequisite for proper treatment.

Chapter 4. Caries in primary and young permanent teeth
Dental caries. Development of carious lesion, detection, and diagnosis of caries. Diagnostic methods (visual-tactile and radiographic examination) and auxiliary methods. Classification of caries in treatment in children and adolescents. Caries treatment – non-operative and operative treatment ……..2 classes
X-ray in childhood……...1 class
Indications for restorative treatment in primary teeth (characteristics of caries in primary teeth, localization of caries, restorative techniques, materials for restoration of primary teeth, deep caries). Circular caries……...2 classes
Caries in young permanent teeth (classification, characteristics, therapy). Diagnosis, fissure sealing, caries on smooth surfaces, approximal caries, deep caries. Minimally invasive technique, cavity shape. Atraumatic restorative technique. Preventive composite restorations……. 3 classes
Learning outcomes from Chapter 4: The student acquires knowledge about the etiology, diagnostics and modern concepts of caries treatment in primary and young permanent teeth, with an emphasis on minimally invasive techniques and preventive measures.

Chapter 5. Pulp and periodontal tissue diseases
Pulp and periodontal tissue diseases in primary teeth (classification, etiology, indications for treatment, clinical image and differential diagnosis of pulp diseases, methods of therapy of pulp diseases…….……..3 classes
Pulp and periodontal tissue diseases in permanent teeth (etiology, indications for treatment of teeth, clinical image and differential diagnosis of pulp and periodontal

		tissue diseases)…….1 class Learning outcomes from Chapter 5: The student is introduced to the etiology, clinical image, diagnostics, and therapy of pulp and periodontal diseases in primary and permanent teeth, as well as with the specifics of endodontic treatment in children. Total: ……..30 classes Practical teaching - exercises - Exercises for clinical approach to child patients (16 classes) Basic principles in the treatment of children in a dental office, dentist/patient relationship, attitude towards patients based on the psychological profile, the child's first visit to the dentist.....3 classes Treatment of patients with disability and children with dentophobia....3 classes Dental examination of the child: general assessment of the patient, anamnesis - general data, main complaints, current illness, personal medical history, family anamnesis), clinical examination (head and neck examination - extraoral examination and examination of the oral cavity - intraoral examination), diagnosis, treatment plan, types of dental examinations in children, recording and documenting the obtained data……...4 classes X-ray techniques, guide for performing dental radiographs, criteria for evaluation and reading of radiographs in Pediatric dentistry, protection of children during imaging……...3 classes Pain control during dental Interventions in children: parental/guardian permission, documentation, indications and contraindications, methods of administering anesthesia, complications……...3 classes -Exercises on growth and development and anomalies of teeth (18 classes) Growth and development in the orofacial region, stages and mechanism of eruption, resorption of primary teeth, chronology of tooth development (primary and permanent), tooth marking systems……...3 classes Anatomohistomorphological characteristics of primary and permanent teeth: similarities and differences, characteristics of permanent teeth with incomplete root growth……...3 classes Anomalies in tooth eruption: general and local, dentito praecox, dentition tarda, disorder in resorption of the roots of primary teeth……3 classes Anomalies in the number, size, shape, position, color of teeth……..3 classes Anomalies in the structure of teeth: caused by general, local factors, intoxications, hereditary factors, idiopathic anomalies in the structure of teeth…….3 classes Clinical treatment of dental anomalies in childhood… 3 classes - Exercises on diagnostics and treatment of caries (12 classes) Dental caries in childhood: providing a dry working field, cavity preparation in primary and permanent teeth, treatment of circular caries…….4 classes Minimally invasive treatment of dental caries, atraumatic restorative treatment (ART), chemomechanical treatment of caries, air abrasion, laser……..3 classes Preparation of the cavity for restoration, methods of placing restorations……..4 classes Outcomes of practical instructions: Students acquire practical skills for clinical assessment of pediatric patients, diagnosis of dental anomalies and diseases, and implementation of modern preventive and therapeutic procedures in children, with particular attention to the psychological approach and minimally invasive techniques. Total: ……..45 classes
13	Interrelation of subjects	The course is related to basic medical courses and to courses from preclinical dentistry.
14.	Detailed description of the teaching and working methods for the subject	Interactive instruction, exercises, demonstration of clinical cases, practical work with patients under supervision.
15.	Total available time	150 classes

16.	Forms of teaching activities	16.1.	Lectures - theoretical teaching classes	30 classes
		16.2.	Exercises (laboratory, auditorium), seminar paper, teamwork: classes	45 classes
		16.3.	Practice: classes	
17.	Other forms of activities	17.1.	Project assignments: classes	
		17.2.	Independent assignments: classes	
		17.3.	Home study - assignments	75 classes
18	Signature requirements	In order to receive a signature, the student must fulfill the obligations during the theoretical and practical classes.		
19	Grading method			
	19.1.	Tests: points		30
	19.2.	Seminar paper/project, written and oral presentation: points		10
	19.3.	Final exam: points		60
20	Grading 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 instruction		Self-evaluation by students, control by assistants in carrying out practical instruction, and assessment of the students' success, as well as the pass rate of students who have passed the course	

Required literature

	Ord. No.	Author	Title	Publisher	Year
22.1.	1.	Marija Stevanovikj, Mira Jankulovska, John Nicholson, Elizabeta Gjorgievska (editor), Ana Sotirovska – Ivkovska, Zlatko Georgiev, Dejan Markovikj, Aleksandar Dimkov, Meri Pavlevska, Alberto Benedetti, Dragana Gabrikj, Marko Vuletikj, Bernard Jankovikj, Efka Zhabokova-Bilbilova, Tamara Perikj, Bojan Petrovikj, Vesna Ambarkova, Olga Kokocheva-Ivanovska, Jasna Simonoska	Pediatric dentistry	Ars Lamina	2022
	2.	Beloica D isar.	Deĉjastomatologija	Elit-Medica Beograd	2000
	3.	Bajraktarova B, Bajraktarova-Valjakova E, Bajraktarova-Mishevska C.	Dental anomalies	NUB Skopje	2011

Additional literature

	Ord. No.	Author	Title	Publisher	Year
22.2.	1.	McDonald R, Avery D	Dentistry for the Child and Adolescent	Mosby, 7 ed	1999