MINISTRY OF HEALTH OF THE REPUBLIC OF BELARUS
Educational Institution
«BELARUSIAN STATE MEDICAL UNIVERSITY»

APPROVED
by Rector of the Educational Institution «Belarusian State Medical University»
S.P.Rubnikovich
30.09.2026
Reg. # UD-03-138/2627 /add.

Контрольный экземпляр

MODERN ASPECTS OF PEDIATRIC DENTISTRY

Curriculum of the educational institution in the additional course for the specialty

7-07-0911-03 «Dentistry»

2026

Curriculum of the additional course is based on the educational program «Modern aspects of pediatric dentistry», approved 30.09.26 registration # УД-03-137/2627/р.

COMPILERS:

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RECOMMENDED FOR APPROVAL:

by the Department of Pediatric Dentistry of the Educational Institution «Belarusian State Medical University»
(protocol # 21 of 06.05.2026);

by the Methodological Committee of dental disciplines of the Educational Institution «Belarusian State Medical University»
(protocol # 1 of 30.09.2026)

EXPLANATORY NOTE

«Modern Aspects of Pediatric Dentistry» is the additional course including an indepth study of the issues of a child's management behavior at a dental appointment, early childhood caries, methods of treatment dental caries and its complications in children and adolescents, traumatic injuries to teeth and the oral mucosa lesions in children, as well as modern aspects of systemic and local caries prevention.

The aim of the additional course «Modern Aspects of Pediatric Dentistry» is the formation of students' competencies for conducting an examination, applying a method of diagnosis, prevention and treatment major dental diseases in children.

The objectives of the additional course are to form students' scientific knowledge about mechanisms of development, methods and means of diagnosis and treatment of caries in young children; modern methods of diagnosis, prevention and the latest approaches to the treatment of dental caries, diseases of the pulp and periapical tissues, traumatic injuries to teeth in children; treatment of the oral mucosa lesions in children; about modern view on systemic and local prevention of dental caries; skills and abilities necessary to cooperate with the child and choose the right strategy for behavior management at a dental appointment.

Relations to other academic disciplines

Teaching and successful study of the additional course «Modern Aspects of Pediatric Dentistry» is carried out on the basis of the knowledge and skills acquired by the student in the following sections of the academic discipline «Preventive Dentistry» and «Therapeutic Pediatric Dentistry».

As a result of studying the additional course «Modern Aspects of Pediatric Dentistry» **the student should**

know:

basic concepts of pediatric therapeutic dentistry;

epidemiology of caries in young children;

modern methods of caries diagnosis in young children and its complications;

features of the clinical course of caries in young children and its complications;

modern approaches to the treatment of caries in young children and its complications;

principles of conservative dentistry;

non-invasive and minimally invasive methods for treating dental caries in children;

features of the clinical course of pulp diseases and dental traumatic injuries in children;

modern approaches to the treatment of pulp diseases and dental traumatic injuries in children;

apexification method in the treatment of permanent teeth with incomplete root formation and non-viable pulp;

modern ideas about the etiology and pathogenesis of dental caries;

risk factors for dental caries;

basic concepts of fluoride prevention of dental caries;

basics of fluoride prevention of dental caries: mechanisms, properties of "local" fluoride-containing medications and products, effectiveness;

calcium phosphate technologies in caries prevention;

be able to:

determine risk factors for the development of dental caries and its complications in young children;

organize and provide the implementation of home and office caries preventive measures in young children;

determine indications for treatment methods for dental caries in young children;

treat dental caries in young children using non-invasive methods;

treat dental caries in children using minimally invasive technologies;

examine a child with pulp diseases and traumatic dental injuries;

analyze the results of radiological examination methods for teeth with traumatic injuries and pulp diseases in children;

carry out differential diagnosis of apical periodontitis in children;

determine indications for the treatment of pulp diseases and traumatic dental injuries using the pulp-preserving methods in children;

carry out the apexification method of treatment of permanent teeth with incomplete root formation and non-viable pulp;

identify risk factors for the development of dental caries;

prescribe and apply calcium phosphate technologies in the prevention of caries;

prescribe and use fluoride-containing products for home, office and community prevention;

interpret the results of diagnostic methods such as electroodontodiagnostics, cold test, laser fluorescence, X-ray diagnostics;

formulate a diagnosis for enamel caries, dentin caries, initial pulpitis (hyperemia), acute pulpitis, purulent pulpitis (pulp abscess), chronic pulpitis, ulcerative chronic pulpitis, chronic hyperplastic pulpitis (pulp polyp), pulp necrosis, acute apical periodontitis of pulpal origin, chronic apical periodontitis, periapical abscess with sinus, periapical abscess without sinus, fracture of enamel, tooth crown fracture without pulp exposure, tooth crown fracture with pulp exposure, root fracture, tooth crown and root fracture, multiple tooth fractures, unspecified tooth fracture, luxation of the tooth, intrusion or extrusion of the tooth, tooth dislocation, recurrent aphthae of the oral cavity, recurrent (minor) aphthae (aphthous stomatitis), stomatitis herpetiformis (herpetiform rash), Bednar's aphthae, traumatic ulceration;

master:

skills for managing children's behavior at dental appointments;

skills in identifying risk factors for the development of dental caries and its complications in young children;

methods for diagnosing caries and its complications in young children;

methods of treatment early childhood caries and its complications;

methods of minimally invasive treatment of dental caries in children;

methods of treatment inflammatory pulp diseases in children;

methods of treatment traumatic dental injuries in children;

skills in performing pulp-preserving methods in the treatment of pulp diseases and acute tooth trauma;

apexification method in the treatment of permanent teeth with incomplete root formation and non-viable pulp;

skills in determining oral hygiene indices;

skills in drawing up a plan of preventive measures taking into account identified risk factors for the development of dental diseases;

methods of using fluoride-containing products for home, office and communal prevention (solutions, gels, pastes, foams, varnishes);

methods of using calcium phosphate technologies in the prevention of caries (gels, foams, varnishes);

methods of diagnosis and treatment of the oral mucosa lesions of various etiologies in children.

Total number of hours for the study of the additional course is 40 academic hours. Classroom hours according to the types of studies: practical classes - 21 hours, student independent work (self-study) - 19 hours.

Intermediate assessment is carried out according to the syllabus of the specialty in the form of a credit (10 semester).

Form of higher education – full-time.

THEMATIC PLAN

Section (topic) name	Number of class hours
	practical
1. Early childhood caries, minimally invasive methods of dental caries treatment in children. Features of child's behavior management at a dental appointment	7
2. Modern approaches to the therapy of pulp diseases, apical periodontitis and traumatic injuries of teeth in children	7
3. Features of treatment of the oral mucosa lesions in children. Modern aspects of systemic and local prevention of dental caries	7
Total hours	**21**

CONTENT OF THE EDUCATIONAL DISCIPLINE

1. Early childhood caries, minimally invasive methods of dental caries treatment in children. Features of child's behavior management at a dental appointment

Modern terminology, epidemiology, types of dental caries in young children. The main risk factors for the development of dental caries in young children. The role of microbial factors and routes of infection. Methods of primary prevention, selection of oral care products and methods. Modern approaches to the treatment of dental

caries in young children (sedation, nitrous oxide, general anesthesia), choice of filling material.

Definition of conservative dentistry. Diagnosis and features of the clinical course of caries of primary and permanent teeth in children. Principles of conservative dentistry. Minimally invasive treatment of class I carious cavities (preventive and therapeutic restoration, preventive composite and glass ionomer restoration, defect-oriented preparation). Minimally invasive treatment of class II carious cavities (features of preparation design, "sauce-shaped", "tunnel", "slit-like" preparation) microinvasive treatment ("infiltration"). Choice of restoration materials. Modern advances in dentistry (use of laser, ultrasound, ozone, etc.).

Rules of ethics and deontology: compliance with ethical and deontological principles in case of conflict situations in the medical environment; establishment of mutual understanding with the child and his parents for effective of treatment.

Types of behavior of children and parents at the dental appointment. Assessment of the possibilities of cooperation with a child and choosing a behavior management strategy at a dental appointment. Formation of children's behavioral response during a dental appointment. Age and individual characteristics of mental development and behavior of children and adolescents. Psychological methods for development of positive attitude towards dentistry and adequate behavior during a dental appointment in children and adolescents who are capable and ready to cooperate and anxious children who are not capable of cooperation.

2. Modern approaches to the therapy of pulp diseases, apical periodontitis and traumatic injuries of teeth in children

Morphological features of the structure of hard tissues and pulp of primary and permanent teeth in children, determining the characteristics of clinical manifestations, diagnosis and choice of treatment methods for pulpitis in children. Problems in diagnosis of pulpitis in children. Methods for diagnosing pulp viability. Patterns of clinical manifestations of pulpitis in different age periods. Indications and contraindications for different treatment methods. Stages of treatment. Factors ensuring the success of each method of treatment of pulpitis in children. Causes of possible complications in the treatment of pulp diseases in children and their prevention.

Morphological features of the structure of apical periodontitis of primary and permanent teeth with incomplete root formation, determining the characteristics of clinical manifestations, diagnosis and choice of treatment methods for apical periodontitis in children. Diagnosis of apical periodontitis in children. Patterns of clinical manifestations of apical periodontitis in different age periods. Indications for conservative and surgical treatment methods. Features of conservative treatment of apical periodontitis of primary teeth. Modern methods of treatment of apical periodontitis of permanent teeth with incomplete root formation. Causes of possible complications in the treatment of apical periodontitis in children and their prevention.

Features of the clinical course, examination and diagnosis of traumatic dental injuries in children. The choice of treatment method depends on the type of traumatic injury to the tooth, the age and psycho-emotional state of the child. Clinical

observation of children with dental traumatic injuries. Possible treatment outcomes and complications. Prevention of dental traumatic injuries in children.

3. Features of treatment of the oral mucosa lesions in children. Modern aspects of systemic and local prevention of dental caries

Etiology, pathogenesis of herpetic infection, erythema multiform exudative, chronic recurrent aphthous stomatitis, infections caused by enteroviruses and traumatic injuries of the oral mucosa in children. Diagnosis, clinical manifestations of these diseases of the oral mucosa in children. Differential diagnosis. Modern approaches to the treatment of the oral mucosa lesions in children.

The modern paradigm of dental caries as a chemical process caused by an imbalance of aggressive and protective factors, leading to the destruction of the mineral structure of the tooth. Possible risk factors, methods and means of minimizing them. Control of the biocenosis of the oral cavity and the processes of demineralization and remineralization. Fluoride in caries prevention: mechanisms, properties of "local" fluoride-containing preparations and products. Rules for prescribing and methods of using fluoride-containing products for home, office and community prevention (solutions, gels, foams, pastes, varnishes, fixed pills, GIC "protection"); efficiency. Calcium phosphate technologies in the prevention of caries: mechanisms, compounds, preparations, methods of application, effectiveness.

ACADEMIC DISCIPLINE CURRICULAR CHART

Section, topic #	Section (topic) name	Number of hours	Self-studies	Form of control
		practical		
1.	Early childhood caries, minimally invasive methods of dental caries treatment in children. Features of child's behavior management at a dental appointment	7	6	interviews, tests
2.	Modern approaches to the therapy of pulp diseases, apical periodontitis and traumatic injuries of teeth in children	7	6	interviews, tests
3.	Features of treatment of the oral mucosa lesions in children. Modern aspects of systemic and local prevention of dental caries	7	7	interviews, tests. Credit
	Total hours	**21**	**19**	

INFORMATION AND INSTRUCTIONAL UNIT

LITERATURE

Basic (relevant):

1. Детская терапевтическая стоматология = therapeutic pediatric dentistry: учебное пособие / Шаковец Н. В., Бурак Ж. М., Кленовская М. И., Наумович Д. Н., Романова О. С. – БГМУ: Минск. – 2025. – 564с.

2. Первичная профилактика кариеса зубов = Primary prevention of dental caries : учебное пособие / Н. В. Шаковец [и др.]. – Минск : БГМУ, 2023. – 172с.

3. Первичная профилактика заболеваний полости рта = Primary prevention of oral diseases : учебное пособие / Н. В.Шаковец, М. И.Кленовская, Д. Н.Наумович, Ж. М.Бурак. – Минск : БГМУ, 2024. – 136 с.

Additional:

4. Dean, J., Avery, D., McDonald, R. McDonald and Avery's dentistry for the child and adolescent. – Elsevier, 2022. – 734 p.

5. Шаковец Н.В., Романова О.С. Герпетический стоматит у детей = Herpetic Stomatitis in Children: учебно-методическое пособие. – Минск: БГМУ, 2021. – 28 с.

LIST OF AVAILABLE DIAGNOSTIC TOOLS

The following forms of current certification are used to diagnose competencies:
interview;
tests.

LIST OF AVAILABLE TEACHING METHODS

Traditional method;
active (interactive) methods:
Team-Based Learning (TBL);
Case-Based Learning (CBL);
Simulation-based learning (RBL).

LIST OF PRACTICAL SKILLS

Name of practical skills	Form of practical skills control
Carrying out examination of the maxillofacial area	Performing a practical skill at the dental chair.
Interpretation of data from clinical, laboratory, and radiological research methods	Performing a practical skill at the dental chair. Solvin situational tasks
Formulating a preliminary diagnosis of the maxillofacial area disease based on the examination	Performing a practical skill at the dental chair. Solvin situational tasks
Carrying out differential diagnosis and choosing a	Performing a practical skill at

treatment method for dental caries and its com lications in children	the dental chair. Solvin situational tasks
Carrying out differential diagnosis and choosing a treatment method for oral mucosa diseases in children	Performing a practical skill at the dental chair. Solvin situational tasks
Treatment of dental caries in children using minimally invasive technologies	Performing a practical skill at the dental chair. Performing a practical skill on simulation equiment
Apexification in the treatment of pulp diseases and traumatic dental injuries	Performing a practical skill at the dental chair. Solvin situational tasks

COMPILERS/AUTHORS:

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Associate Professor of the Department of Pediatric Dentistry of the educational institution «Belarusian State Medical University», PhD, Associate Professor — E.M.Hulko

Head of the Department of Pediatric Dentistry of the educational institution «Belarusian State Medical University», MD, Professor — T.N.Terekhova

Curriculum content, composition and the accompanying documents comply with the established requirements.

Head of the Office of Educational Activities of the Educational Institution «Belarusian State Medical University» — I.L.Kotovich

30.09.2026

Methodologist of the Educational and Methodological Department of the Office of Educational Activities of the Educational Institution «Belarusian State Medical University» — N.A.Kukashinova

30.09.2026