

No. Stom-21

Federal State Budgetary Educational Institution  
Higher Education  
"NORTH OSSETIAN STATE MEDICAL ACADEMY"  
Ministry of Health of the Russian Federation



**WORKING PROGRAM OF THE DISCIPLINE**

**"CLINICAL APPLICATION OF MODERN DENTAL MATERIALS  
USED IN THERAPEUTIC DENTISTRY"**

the main professional educational program of higher education - specialist's programs in the specialty  
31.05.03 Dentistry,  
approved May 24, 2023

Form of study \_\_\_\_\_ full-time \_\_\_\_\_

Term of development of OPOP VO \_\_\_\_\_ 5 \_\_\_\_\_

Department of Dentistry №3

Vladikavkaz, 2023

When developing the work program of the discipline, the following are taken as the basis:

1. Federal State Educational Standard of Higher Education in the specialty 31.05.03 Dentistry, approved by the Ministry of Education and Science of the Russian Federation on August 12, 2020 No. 984

2. Curriculum of the OPOP HE in the specialty 31.05.03 Dentistry

Stom-21-01-21

Stom-21-02-22

Stom-21-03-23,

approved by the Academic Council of the Federal State Budgetary Educational Institution of Higher Education SOGMA of the Ministry of Health of Russia 05/24/2023 Protocol No. 8

The work program of the discipline was approved at a meeting of the Department of Dentistry No.3 dated 05/19/2023 Protocol No. 10

The work program of the discipline was approved at a meeting of the central coordinating educational and methodological council from 05/23/2023 Protocol No. 4

The work program of the discipline was approved by the Academic Council of the Federal State Budgetary Educational Institution of Higher Education SOGMA of the Ministry of Health of Russia 05/24/2023 Protocol No. 8

#### **Developers:**

Head Department of Dentistry No. 3, MD, Associate Professor

A.A. Remizova

Associate Professor of the Department of Dentistry No. 3, Ph.D.

Z.G. Dzgoeva

#### **Reviewers:**

Head Department of Orthopedic Dentistry, Propaedeutics and Postgraduate Education  
FSBEI HE SOGU, Doctor of Medical Sciences, Professor R.V. Zoloev

Head Department of Dentistry No. 2 FGBOU VO SOGMA of the Ministry of Health of Russia, MD,  
Associate Professor G.V. Toboev

### **Content of the work program**

1. name of the discipline;
2. a list of planned learning outcomes in the discipline, correlated with the planned results of mastering the educational program;
3. indication of the place of the discipline in the structure of the educational program;
4. the volume of discipline in credit units indicating the number of academic or astronomical hours allocated for contact work of students with a teacher (by type of training) and for independent work of students;
5. the content of the discipline, structured by topics (sections) indicating the number of academic or astronomical hours allocated to them and types of training sessions;
6. a list of educational and methodological support for independent work of students in the discipline;
7. assessment materials for conducting intermediate certification of students in the discipline;
8. a list of basic and additional educational literature necessary for mastering the discipline;
9. a list of resources of the information and telecommunications network "Internet" (hereinafter referred to as the "Internet" network) necessary for mastering the discipline;
10. methodological instructions for students on mastering the discipline;
11. a list of information technologies used in the implementation of the educational process in the discipline, including a list of software and information reference systems (if necessary);
12. description of the material and technical base necessary for the implementation of the educational process in the discipline;
13. conducting educational activities using e-learning and distance learning technologies.

## 2. The list of planned learning outcomes in the discipline and the results of mastering the educational program

No. p / p	Number / index of competence	Content of competence (or parts of it)	Topic of the lesson (section)	Competency achievement indicators	Development results		
					know	be able to	own
one	2	3	four	5	6	7	eight
3.	UK-1	Able to carry out a critical analysis of problem situations based on a systematic approach, develop an action strategy	Materials for aesthetic restoration of teeth. Indications and contraindications for direct and indirect restorations. Criterias of choice. The necessary set of tools for the restoration of defects in the hard tissues of the tooth of various classes according to Black	ID-1UK-1 Analyzes the problem situation and decomposes it into separate tasks ID-2UK-1 Develops a strategy for solving problems ID-3UK-1 Forms possible solutions to problems	- methods of abstract thinking in establishing the truth, methods of scientific research by mental dismemberment of the object (analysis) and by studying the subject in its integrity, the unity of its parts (synthesis); - methods and techniques of philosophical analysis and synthesis	- use historical-philosophical and system-analytical methods in the study of the general laws of the functioning of nature, society and man,-use methods of abstract thinking, analysis and synthesis.	- a holistic system of skills for using abstract thinking in solving problems that arise during the performance of research work, - skills of presenting an independent point of view, analysis and logical thinking, public speech
4.	UK-6	Able to identify and implement the priorities of their own activities and ways to improve them based on self-assessment and lifelong learning	Modern approaches to diagnosing the pathology of hard tissues of teeth of various etiologies. Modern composite materials designed to restore defects in hard tissues of teeth of carious and non-carious origin. Devices that allow determining the color of teeth during the restoration	ID-1UK-6 Assesses own resources and their limits (personal, situational, temporary), uses them optimally for the successful completion of the assigned task ID-2UK-6 Determines the priorities of personal growth and ways to improve one's own performance based on self-assessment	- potential strengths and weaknesses of the personality; - effective ways of self-learning; - methods of effective time planning; - major time wasters	- make long-term and short-term plans; - organize your time; - build a portfolio; - plan your life for the period of study in an educational organization	- techniques for analyzing meaningful life problems and setting priorities; - planning your professional trajectory

			of defects in hard tissues of the tooth. Aesthetic tooth restoration				
<b>5.</b>	<b>OPK-1</b>	Able to implement moral and legal norms, ethical and deontological principles in professional activities	Informed voluntary consent of the patient for aesthetic restoration. Ethics and deontology in the clinic of therapeutic somatology	ID-1OPK-1 Complies with moral and legal standards in professional activities. ID-2OPK-1 Able to assess the social and personal characteristics of the patient and the degree of their influence on the course of the disease ID-3OPK-1 Presents professional information in the process of intercultural interaction, observing the principles of ethics and deontology	-professional ethics and deontology of medical practice; -the role of informed consent	- communicate with patients and colleagues; - work in a team in the diagnosis and treatment of various types of pathology	- communication skills with colleagues and patients
<b>6.</b>	<b>OPK-5</b>	Able to conduct an examination of the patient in order to establish a diagnosis in solving professional problems.	Basic and additional methods for diagnosing diseases of hard tissues of teeth. Modern research methods in the diagnosis of recurrent caries. X-ray methods in the preparation of teeth for post-endodontic restoration.	ID-1OPK-5 Uses the algorithm of clinical laboratory and functional diagnostics in solving professional problems. ID-2OPK-5 Competently interprets the results of the main and additional methods of examination ID-3OPK-5 Uses modern classifications to make a final diagnosis	- a method of collecting information from dental patients - a method of examining dental patients - the etiology and pathogenesis of caries and its complications. diseases - modern classification, clinical symptoms of diseases of hard tissues of teeth.	- analyze and interpret the information received from patients - conduct examinations of dental patients - interpret the results of instrumental, laboratory examination of the oral cavity and	- the skills of obtaining information from dental patients) - the skills of primary examination in accordance with the current methodology - the skills of making a diagnosis - re-examination skills in accordance with the current methodology

7.	<b>OPK-6</b>	Able to prescribe, monitor the effectiveness and safety of non-drug and drug treatment in solving professional problems	Aesthetic restoration of teeth with composites: Indications and contraindications, advantages and disadvantages compared to indirect restorations, materials, tools for aesthetic restoration. Methods and stages of artistic restoration. Features of working with various composite materials.	ID-1OPK-6 Apply clinical recommendations (treatment protocols) on the provision of medical care ID-2OPK-6 Takes into account the clinical and pharmacological characteristics of the main groups of drugs when choosing specific drugs for the treatment of major pathological syndromes, diseases and emergency conditions in dental patients	-Standards of medical care for diseases of hard dental tissues - the mechanism of action of the main groups of anesthetics, antiseptics used in the treatment of hard dental tissues; -properties of modern dental filling materials, methods of direct restoration of teeth	-properly use the dental unit, dental handpieces and other tools necessary for the restoration of hard dental tissues - evaluate the efficacy and safety of drug therapy - evaluate the efficacy and safety of non-drug treatments	- skills in developing a plan for restorative therapy, taking into account the clinical picture of the disease - skills to perform a highly aesthetic restoration of the crown part of the tooth by direct methods in the treatment of caries, as well as after endodontic treatment.
8.	<b>PC-1</b>	Examination of the patient in order to establish a diagnosis	Features of the collection of anamnesis when planning the artistic restoration of teeth. Modern research methods in the diagnosis of recurrent caries. X-ray methods in the preparation of teeth for post-endodontic restoration. International classification of diseases of the latest revision	ID-1PK-1 Competently interprets the results of collecting information from patients ID-2PK-1 Competently interprets the data of instrumental, laboratory and functional studies ID-3PK-1 Takes into account the data of	- features of the structure, functioning, blood supply, innervation of teeth, periodontium, oral mucosa, - age-related changes in the maxillofacial region, features of	- justify the need and scope of instrumental and laboratory studies; - justify the need and scope of additional examinations of patients (including radiographs,	- the skills of collecting complaints, anamnesis of the disease, anamnesis of life in dental patients with changes in the hard tissues of the teeth; - skills of examination, probing

			for caries and non-carious lesions.	consultations of patients by medical specialists ID-4PK-1 Establishes the correct final diagnosis for diseases of the oral mucosa according to the accepted modern international classification of diseases	the impact on it of the external and internal environment -special and additional research methods for the differential diagnosis of dental diseases	teleröntgenograms, radiovisiograms, orthopantomograms, tomograms (on film and digital media)) - conduct physical examinations and interpret their results;	of teeth, palpation, percussion, thermometry; skills in reading the results of additional laboratory research methods
<b>9.</b>	<b>PC-2</b>	Prescribing, monitoring the effectiveness and safety of non-drug and drug treatment	Modern methods of preparation of hard tissues of teeth. Modern approaches to anesthesia in the clinic of therapeutic dentistry. Necessary set of tools and materials. Preparation of the anterior group of teeth for highly aesthetic composite veneers. Clinical application of therapeutic pads and insulating materials in the treatment of pathology of hard dental tissues.	ID-1PK-2 Uses an algorithm for the use of medical technologies, specialized equipment and medical devices in the treatment of a dental patient ID-2PK-2 Competently uses drugs and other substances and their combinations during aesthetic restoration of teeth	-Groups of drugs, their pharmacokinetics, pharmacodynamics, drug compatibility - clinical picture, -Peculiarities devices and rules for the operation of modern dental instruments and equipment for the preparation of hard dental tissues -Standards of medical care for diseases of hard dental tissues	- Prescribe drug therapy for diseases of the hard tissues of the teeth - evaluate the effectiveness and safety of drug and non-drug methods of treatment of hard dental tissues	- skills to provide qualified medical care to dental patients with diseases of hard dental tissues using modern methods of treatment approved for use in medical practice - Skills in providing medical care in emergency and urgent forms

### 3. The place of discipline in the structure of the educational program

The discipline refers to the disciplines at the choice of the part formed by the participants in the educational relations of Block 1 of the Federal State Educational Standard of Higher Education in the specialty 31.05.03 Dentistry

Types of tasks of professional activity that underlie the teaching of this discipline:

- Medical
- Organizational and managerial
- Research.

### 4. Scope of discipline

No · No · p/n	Type of work	Total credit units	Total hours	Semesters
				ten
				hours
one	2	3	four	5
one	<b>Contact work of students with teacher (total), including:</b>	-	48	48
2	Lectures (L)			
3	Clinical Practice (PP)	-	48	48
four	Seminars (C)			
5	Laboratory work (LR)			
6	<b>Student Independent Work (SIW)</b>	-	24	24
7	<b>Type of intermediate certification</b>	credit (G)	offset	offset
		exam (E)		
eight	<b>TOTAL: General labor intensity</b>	hours	72	72
		WE	2	2

### 5. The content of the discipline

No./n	semester number	Name of the topic (section) of the discipline	Types of learning activities (in hours)					Forms of current progress control
			L	LR	PZ	SRS	Total	
one	2	3	four	5	6	7	eight	9



one.	ten	<p>Modern composite materials designed to restore defects in hard tissues of teeth of carious and non-carious origin. Criteria of choice. The necessary set of tools for the restoration of defects in the hard tissues of the tooth of various classes according to Black.</p> <p>Devices that allow determining the color of teeth during the restoration of defects in hard tissues of the tooth.</p> <p>Aesthetic restoration of the tooth.</p>			16	6	22	S, TK, SZ, UZ
2	ten	<p>Features of the treatment of deep caries (pulp hyperemia) Clinical use of medical pads and insulating materials in the treatment of pathology of hard dental tissues. Classification. Criteria of choice.</p>	0		6	3	9	S, TK, SZ
3	ten	<p>Modern approaches to anesthesia in the clinic of therapeutic dentistry</p> <p>Modern methods of preparation of hard tissues of teeth.</p> <p>Necessary set of tools and materials.</p> <p>Preparation of the anterior group of teeth for highly aesthetic composite veneers.</p>	0		four	3	7	S, TK, SZ, UZ
four	ten	<p>Restoration of defects in hard tissues of teeth with primary hard filling materials.</p> <p>Mistakes and complications in the treatment of defects in hard dental tissues.</p>	0		2		2	S, TK, SZ, UZ

5.	ten	Modern approaches to the passage of root canals. Endodontic revision of root canals. Modern methods of root canal treatment. Tactics of a doctor with impassable root canals and breaking off of an endodontic instrument in the root canal. Medical treatment of root canals in the aspect of modern dentistry.			ten	four	fourteen	S, TK, SZ, UZ
6.	ten	Indications for temporary obturation of root canals. Materials and methods of temporary obturation of root canals. The method of permanent obturation of root canals. Indications. Necessary set of materials tools. Physiotherapeutic methods in practical endodontics.			6	2	eight	S, TK, SZ, UZ
7.	ten	Modular lesson			2	3	5	S, TK, SZ
eight.	ten	offset			2	3	5	S, TK, SZ
<b>TOTAL:</b>					<b>48</b>	<b>24</b>	<b>72</b>	

**Note: S - interview, TK - test tasks, SZ - situational tasks, KZ - training tasks.**

**6. The list of educational and methodological support for independent work of students in the discipline**

No./n	semester number	Name of educational and methodical development
one	ten	Clinical application of modern dental materials used in therapeutic dentistry. Methodological recommendations for performing independent extracurricular work for students in the discipline; Remizova A.A., Morgoeva Z.Z. – 2019 – 11 s
2	ten	Clinical application of modern dental materials used in therapeutic dentistry. Methodological guide to practical exercises for teachers; Remizova A.A., Morgoeva Z.Z. – 2019 – 12 s
3	ten	Clinical application of modern dental materials used in therapeutic dentistry. Teaching aid for practical exercises for students; Remizova A.A., Morgoeva Z.Z. - 2019 - 66 p.

**7. Assissment materials for conducting intermediate certification of students in the discipline**

List of competencies	No. semester	Indicator(s) evaluation	Evaluation criterion(s)	Evaluation scale	Name FOS
2	3	four	5	6	7
UK-1 UK-6 OPK-1 OPK-5 OPK-6 PC-1 PC-2	ten	see the standard for assessing the quality of education, approved. By order of the Federal State Budgetary Educational Institution of Higher Education SOGMA of the Ministry of Health of Russia dated July 10, 2018, No. 264 / o	see the standard for assessing the quality of education, approved. By order of the Federal State Budgetary Educational Institution of Higher Education SOGMA of the Ministry of Health of Russia dated July 10, 2018, No. 264 / o	see the standard for assessing the quality of education, approved. By order of the Federal State Budgetary Educational Institution of Higher Education SOGMA of the Ministry of Health of Russia dated July 10, 2018, No. 264 / o	Tickets to offset. Test tasks. Situational tasks

**8. The list of basic and additional educational literature necessary for mastering the discipline**

p / n o.	Name	The authors)	Year, place of publication	Number of copies	
				in library	on the department
one	2	3	four	5	6
<b>Main literature</b>					
one	Therapeutic dentistry: textbook	ed. E.V. Borovsky	M.: MIA, 2004 2006 2007 2009	eight four one one	
2		ed. G.M. barer		99	

	Therapeutic dentistry: textbook. Part 3. Diseases of the oral mucosa		M. : GEOTAR-Media, 2010	"Student Advisor" <a href="http://www.studmedlib.ru/book/ISBN9785970434604.html">http://www.studmedlib.ru/book/ISBN9785970434604.html</a>	
3	Safe anesthesia in dentistry	S. A. Rabinovich [i dr.].	M. : GEOTAR-Media, 2018	"Student Advisor" <a href="http://www.studmedlib.ru/book/ISBN9785970444788.html">http://www.studmedlib.ru/book/ISBN9785970444788.html</a>	
<b>additional literature</b>					
one	Dental instrumentation: atlas	Bazikyan E. A..	M. : GEOTAR-Media, 2015, 2017	one	"Student Advisor" <a href="http://www.studmedlib.ru/book/ISBN9785970440490.html">http://www.studmedlib.ru/book/ISBN9785970440490.html</a>
2	Oral hygiene: study guide	Ed. A. A. Remizova	Moscow : GEOTAR-Media, 2021	100	
3	Therapeutic dentistry. Cariesology and diseases of hard tissues of teeth. Endodontics: a guide to practical exercises: textbook. allowance	Maksimovsky Yu. M., Mitronin A.V.	GEOTAR-Media, 2014 2016	99 four	"Student Advisor" <a href="http://www.studmedlib.ru/book/ISBN9785970435892.html">http://www.studmedlib.ru/book/ISBN9785970435892.html</a>
four	Therapeutic dentistry: national guidelines	ed. L.A. Dmitrieva	M.: GEOTAR-Media, 2009 2015	one one	
5	Practical therapeutic dentistry: textbook. allowance	Nikolaev A.I., Tsepov L.M.	M.: MEDpress-inform, 2010 2013 2014 2019	3 eight 27 3	
6	Dictionary-reference book of medical dental terms and concepts	Ed. I. M. Rasulova.	M. : Pero, 2019	one	
7	Radiation diagnostics in dentistry: national guidelines	Ed. A. Yu. Vasilyeva	M. : GEOTAR-Media, 2010	one	



### 9. List of resources of the information and telecommunication network "Internet" necessary for mastering the discipline

No. p / p	Resource name	Website address
1. ne	ModernLib - electronic library,	<a href="http://modernlib.ru">http://modernlib.ru</a>
2.	Russian Dental Portal.	<a href="http://www.stom.ru">www.stom.ru</a>
3.	Electronic books on dentistry.	<a href="http://www.web-4-u.ru/stomatinfo">www.web-4-u.ru/stomatinfo</a>
4. our	Aesthetic restorations of teeth.	<a href="http://www.esthetics.ru">www.esthetics.ru</a>
5.	Medical literature on dentistry.	<a href="http://www.mmbook.ru">www.mmbook.ru</a>
6.	Information dental resource.	<a href="http://denta-info.ru">denta-info.ru</a>
7.	Information resource for students of medical universities	<a href="http://www.studmedlib.ru">www.studmedlib.ru</a>
8. ight	Federal Electronic Medical Library (FEMB)	<a href="http://feml.scsml.rssi.ru/feml">feml.scsml.rssi.ru/feml</a>

## **10. Guidelines for students on mastering the discipline**

Organization of the educational process and teaching of the educational module "Clinical application of modern dental materials used in therapeutic dentistry" in modern conditions should be based on innovative psychological and pedagogical methods and technologies aimed at improving the effectiveness of teaching and the quality of student training.

Training consists of contact work (48 hours) consisting of practical exercises (48 hours) and independent work (24 hours).

In the process of teaching students, the main forms are: classroom classes, including lectures and practical exercises, and independent work. The topics of lectures and practical classes correspond to the content of the module program.

For the successful mastering of the discipline "Clinical Application of Modern Dental Materials Used in Therapeutic Dentistry", each student is provided with educational and methodological materials (thematic plans for practical classes, educational and methodological literature, typical test tasks, situational tasks), the possibility of practicing manual skills on phantoms, work with patients, as well as the possibility of working off missed classes.

Practical classes provide the acquisition and consolidation of the necessary skills and abilities, the formation of professional competencies, readiness for independent and individual work, making responsible decisions within the framework of professional competence.

In the practical part of the lesson, the teacher draws attention to the student's ability to clinical thinking and independence, discussions, social interaction with the team, tolerance, using an innovative personality-oriented learning approach in his pedagogical activity.

In accordance with the requirements of the Federal State Educational Standard of Higher Education, active and interactive forms of conducting classes (video films, situational tasks, independent extracurricular work) are widely used in the educational process, aimed at the formation and development of students' professional skills, teamwork. The proportion of classes conducted in interactive forms is at least 20% of the classroom classes.

The work of a student in a group forms a sense of collectivism and sociability.

Independent work of students is carried out outside classroom hours, it is approximately 1/3 of the total labor intensity of the discipline and includes work with literature, preparation of abstracts on a chosen topic, development of practical skills on phantoms, production of materials for dental education, research work, which contributes to the development of cognitive activity, creative thinking of students, instills the skills of independent search for information, and also forms the ability and readiness for self-improvement, self-realization and creative adaptation.

Each student is provided with access to the library funds of the academy and the department.

The current control of mastering the content of the module is carried out by solving test tasks, situational tasks, and assessing practical skills.

Upon completion of the study of the discipline, the final control of students' knowledge is carried out in accordance with the point-rating system.

Control and measuring materials of the discipline "Clinical application of modern dental materials used in therapeutic dentistry" are included in the State Final Certification of graduates of higher medical educational institutions in the specialty 31.05.03 "Dentistry".

## **11. List of information technologies used in the implementation of the educational process in the discipline**

1. Microsoft office
2. Microsoft PowerPoint
3. TestOfficePro testing software
4. Internet Explorer

## 12. Description of the material and technical base necessary for the implementation of the educational process in the discipline

The Department of Dentistry No. 3 is located on the basis of the SOGMA dental clinic (Kirov St., 66). The total area used by the department for the educational process is 283 m<sup>2</sup>.

The department has: phantom class (57 sq. m<sup>2</sup>),

educational and treatment room No. 13 - 18.4 m<sup>2</sup> (one installation);

educational and treatment room No. 14 joint. with a training room - 21.6 m<sup>2</sup>. (one installation);

educational and treatment room No. 15 joint. with a study room -81 m<sup>2</sup>. (four settings);

educational and treatment room No. 25 joint. with a training room (three installations) -26.2 m<sup>2</sup>;

educational and treatment room No. 26 together with the office of the head of the department 31 m<sup>2</sup>(two installations);

educational and methodical room No. 17 (10 m<sup>2</sup>) ;

assistant - 9 m<sup>2</sup>.

(Corridor 2nd floor - 15.3 m<sup>2</sup>. Corridor 3rd floor - 14.3 m<sup>2</sup>)

Part of the classes is held in the educational building No. 2 on the territory of the Federal State Budgetary Educational Institution of Higher Education SOGMA, in classrooms allocated for this purpose.

No./P	equipment identification	Quantity	Technical condition
one	2	3	four
<b>Special equipment</b>			
one	notebook	one	good
2	projector	one	good
3	PC	3	good
four	Dental units	12	good
<b>phantoms</b>			
one	Dental phantom units	fifteen	satisfactory
<b>dummies</b>			
one	Preparation jaws	12	satisfactory

## 13. Conducting educational activities using e-learning and distance learning technologies

In the context of the introduction of restrictive measures (quarantine) associated with an unfavorable epidemiological situation, the threat of the spread of a new coronavirus infection and other force majeure events that do not allow training sessions in full-time mode, it is possible to study this discipline or part of it using e-learning and distance learning technologies.

Teaching discipline in the situations described above will be carried out through the development of an electronic course with access to video lectures and interactive course materials: presentations, articles, additional materials, tests and various tasks. When conducting training sessions, current monitoring of progress, as well as intermediate certification of students, the platforms of the electronic information and educational environment of the academy and / or other e-learning systems recommended for use in the academy, such as Moodle, Zoom, Webinar, etc., can be used.

Lectures can be presented in the form of audio, video files, "live lectures", etc.

Conducting seminars and practical classes is possible on-line in both synchronous and asynchronous modes. Seminars can be held in the form of web-conferences.