

**Federal State Budgetary Educational Institution of Higher Education "North Ossetian State Medical Academy" of the Ministry of Health of the Russian Federation**

**annotation**

**WORKING PROGRAM OF THE DISCIPLINE**

**DENTISTRY: MATERIALS SCIENCE**

The main educational professional program of higher education is a specialty program in the specialty 31.05.03 Dentistry, approved on 24.05.2023

**Form of study:** full-time

**The term of development of OPOP in 5 years**

**Department of Dentistry No. 1**

**1. Objective of the discipline:** training of a competitive general dentist who is able to perform preventive diagnostic and therapeutic measures in the scope of outpatient dental care, based on the traditional basis of a personalized approach to each person.

**2. Place of the academic discipline in the structure of the OPOP in the Academy.** The academic discipline belongs to the mandatory part of Block 1 of the Federal State Educational Standard for Higher Education in the specialty "Dentistry"

**3. Requirements for the results of mastering the discipline:** the process of studying the discipline is aimed at the formation and development of competencies: OPK6

**As a result of studying the discipline, the student must:**

**To know**

1. Definition, purpose, tasks and methods of dental materials science.
2. Classification of basic structural materials
3. Classification of auxiliary materials
4. Classification of clinical materials
5. Properties of dental amalgam
6. Properties of dental cements
7. Properties of dental composites
8. Properties of obturation materials
9. Properties of materials for surgical dentistry

**Be able to**

1. Apply specialized terminology and concepts
2. Choose the most optimal construction materials
3. Choose the most optimal auxiliary materials
4. Choose the most optimal clinical materials
5. Determine indications for the use of dental amalgam
6. Determine indications for the use of dental cements
7. Determine indications for the use of dental composites
8. Determine indications for the use of obturation materials
9. Determine indications for the use of materials for surgical dentistry

**Own**

1. Fundamentals of evaluating the resistance of materials.
2. Skills of comparative analysis of the properties of various structural materials.
3. Skills of comparative analysis of properties of various auxiliary materials
4. Skills of comparative analysis of the properties of various clinical materials
5. Apply dental amalgam in practice
6. Apply dental cements in practice
7. Algorithm of application of dental composites in practice
8. Algorithm for applying obturation materials in practice

9. Algorithm of practical application of materials for surgical dentistry

**4. The total labor intensity of the discipline is 4 ZET ( 144 hours).**

**5. Semester: 3.**

**6. Main sections of the discipline.**

1. Subject of dental materials science. Classification of dental materials. Properties of materials.
2. Basic construction materials in orthopedic dentistry.
3. Auxiliary materials in dentistry.
4. Basic requirements for dental materials used in a therapeutic dentistry clinic.
5. Dental amalgam.
6. Dental cements.
7. Polymer materials for dental restoration. Polymer composites, general characteristics and classification. Adhesives and sealants.
8. Dental materials used for filling root canals.
9. Materials for surgical dentistry. General characteristics of materials for reconstructive surgery of the face and dental implants.
10. Temporary materials in dentistry

**Developers:**

Head of the Department of Dentistry No. 1,  
MD, Associate Professor



M. G. Dzgoeva

Associate Professor  
of the Department of Internal Dentistry No.1,



S. K. Khetagurov