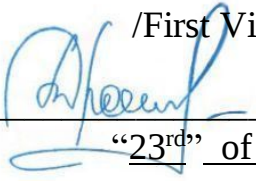


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ФИО: Стегний Кирилл Владимирович  
Должность: И.о. ректора  
Дата подписания: 17.09.2026 15:23:07  
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Federal State Budget Educational Institution  
of Higher Education  
Pacific State Medical University  
of the Ministry of Health of the Russian Federation

APPROVED BY

/First Vice-Rector

 / Dvoynikova E.R./  
“23<sup>rd</sup>” of June 2026

## DISCIPLINE WORK PROGRAM

### B1.C.35 Clinical orthopedic dentistry

(name of discipline)

**Specialty**

**31.05.03 Dentistry for foreign  
students (English-language program)**  
(code, name)

**Degree**

Specialist's degree

**Profile**

02 "Healthcare"  
(in the field of providing health care in  
patients with dental pathology)

**Mode of study**

Full-time

**Period of mastering the BEP**

**5 years**  
(nominal length of study)

**Institute**

of Dentistry

Vladivostok, 2026

Program of the discipline **B1.C.35 Clinical orthopedic dentistry** is based on:

1) Federal State Educational Standard of Higher Education for the specialty approved by the Order No. 984 of Ministry of Science and Higher Education of the Russian Federation dated August 12, 2020.

2) Curriculum for the 31.05.03 Dentistry for foreign students (English-language program), profile 02 "Healthcare" (in the field of providing health care in patients with dental pathology), approved by the Academic Council of FSBEI HE PSMU of the Ministry of Health of Russia Report No. 1-7/25-26 dated March 27, 2026.

Work program for the discipline was developed by the writing team of the Institute of Dentistry of the FSBEI HE PSMU of the Ministry of Health of Russia, under the guidance of the director of the institute, Doctor of Medical Sciences, Associate professor Pervov Yu.Yu.

**Developed by:**

|                           |                                                    |               |
|---------------------------|----------------------------------------------------|---------------|
| Director of the institute | Doctor of Medical Sciences,<br>Associate Professor | Pervov Yu.Yu. |
| (position held)           | (academic degree, academic<br>title)               | (full name)   |
| Assistant                 | -                                                  | Obidnyy K.Y.  |
| (position held)           | (academic degree, academic<br>title)               | (full name)   |
| Assistant                 | -                                                  | Bocharov V.S. |
| (position held)           | (academic degree, academic<br>title)               | (full name)   |
| Assistant                 | -                                                  | Gaeva V.A.    |
| (position held)           | (academic degree, academic<br>title)               | (full name)   |

## 1. GENERAL PROVISIONS

### 1.1. Purpose and Objectives of Mastering B1.C.35 Clinical orthopedic dentistry

**The purpose** of mastering the discipline is ensuring readiness for professional activity of a dentist, development of universal, general professional, and professional competencies necessary to provide labor functions outlined in the Occupational standard "Dentist (General Dental Practitioner)".

**Objectives** of mastering the discipline:

1. Developing skills of diagnosing dental diseases and pathological conditions of patients;
2. Developing skills in providing medical aid in outpatient and day hospital settings;
3. Developing skills for participation in medical rehabilitation and health resort treatment of patients with dental diseases.

## 2. DISCIPLINE AS PART OF THE BASIC EDUCATIONAL PROGRAM

Discipline **B1.C.35 Clinical orthopedic dentistry** is included in the mandatory part of the Unit 1 of the basic educational program for the specialty 31.05.03 Dentistry for international students (in English), profile 02 "Healthcare" (in the field of providing health care in patients with dental pathology), and is part of the 9th and 10th semesters' curriculum.

### 3. PLANNED LEARNING OUTCOMES OF THE DISCIPLINE

3.1. Mastering the discipline **B1.C.35 Clinical orthopedic dentistry** is aimed at the development of students' competencies. The discipline facilitates the development of students' competencies corresponding to the types of professional activity.

| Name of competency category (group) / labor function | Code and Name of competency of the graduate                                                                             | Competency Indicators                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>General Professional Competencies</b>             |                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Diagnosis and treatment                              | GPC-5. Able to examine a patient and make a diagnosis                                                                   | AI.GPC-5 <sub>1</sub> - examines the patient using clinical, laboratory and special instrumental methods<br>AI.GPC-5 <sub>2</sub> - provides a comprehensive evaluation to determine the overall health and functionality of organs and systems to decide if there are no contraindications that might preclude complex and reconstructive dental manipulations<br>AI.GPC-5 <sub>3</sub> - evaluates the results of the exam to make a diagnosis                                      |
|                                                      | GPC-6. Able to administer and control the effectiveness and safety of non-pharmacological and pharmacological therapies | AI.GPC-6 <sub>1</sub> - creates a treatment plan, administers dosages of medication as well as non-pharmacological treatment regimens adhering to treatment requirements<br>AI.GPC-6 <sub>2</sub> - monitors therapy effectiveness and adjusts treatment regimens as necessary, utilizes various forms of medication tailored to specific dental treatments<br>AI.GPC-6 <sub>3</sub> - identifies contraindications and potential adverse events related to medication administration |
| <b>Professional Competencies</b>                     |                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| A/01.7 Patient examination. Making a diagnosis       | PC-1 ability and willingness to implement activities aimed at diagnosing dental diseases using digital health methods   | AI. PC-1 <sub>1</sub> - identifies basic pathologic conditions, symptoms, syndromes in patients with dental diseases<br>AI. PC-1 <sub>2</sub> - interprets and evaluates the information received from patients (their                                                                                                                                                                                                                                                                |

|                                                                                                                     |                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|---------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                                                     |                                                                                                                                                                           | relatives/legal representatives), primary and re-examination data, as well as laboratory and instrumental investigations in patients with dental diseases<br>AI. PC-1 <sub>3</sub> - applying the methods of digital computerized and hardware diagnostics of dental diseases                                                                                                                                                                                                                                                    |
| A/02.7 Prescribing and monitoring the effectiveness and safety of non-pharmacological and pharmacological therapies | PC-2 ability to administer and apply modern methods and/or digital technologies to treat dental patients as well as monitor the effectiveness and safety of the treatment | AI. PC-2 <sub>1</sub> - develop treatment plans for dental patients aligning with clinical recommendations, treatment protocols, and medical care procedures and health care standards<br>AI. PC-2 <sub>2</sub> - demonstrates proficiency in administering non-pharmacological and pharmacological therapies and other treatment methods to dental patients, monitors the efficacy and safety of these methods<br>AI. PC-2 <sub>3</sub> - proficiently uses modern methods and/or digital technologies to treat dental diseases |
| A/03.7 Developing, implementing and monitoring the individual rehabilitation programs effectiveness                 | PC-3 ability to develop, implement and improve the effectiveness of rehabilitation programs for dental patients                                                           | AI. PC-3 <sub>1</sub> - identifies the basic rehabilitation principles of patients with maxillofacial diseases<br>AI. PC-3 <sub>2</sub> - formulates indications and contraindications for rehabilitation measures to be used for various oral cavity diseases and pathological conditions<br>AI. PC-3 <sub>3</sub> - knows the methods of complex dental patients' rehabilitation, considering the patient's overall health and comorbidity                                                                                     |

3.2. Types of professional activity corresponding to competencies developed over the course of mastering **B1.C.35 Clinical orthopedic dentistry**:

Types of professional activity objectives

1. *Medical*
2. *Research and development*
3. *Pedagogical*

Kinds of professional activity objectives

1. *examination of the patient in order to make a diagnosis;*
2. *prescribing pharmacological and non-pharmacological treatment and monitoring its efficiency and safety;*
3. *implementation and monitoring of the effectiveness of individual medical rehabilitation programs*

3.3. Planned learning outcomes of mastering the discipline are represented by knowledge, skills, abilities and/or experience, characterize the stages of developing competencies and ensure achievement of the planned outcomes of mastering the basic educational program. Learning outcomes of a discipline are correlated with competency indicators.

#### 4. SCOPE AND CONTENT OF THE DISCIPLINE

##### 4.1. Scope of the Discipline and Types of Academic Work

| Type of Academic Work | Total Hours | Semesters |       |
|-----------------------|-------------|-----------|-------|
|                       |             | 9         | 10    |
|                       |             | hours     | hours |
| 1                     | 2           | 3         | 4     |

|                                                         |                    |            |            |            |
|---------------------------------------------------------|--------------------|------------|------------|------------|
| <b>Classroom hours (total), including:</b>              |                    | <b>206</b> | <b>106</b> | <b>100</b> |
| Lectures (L)                                            |                    | 20         | 10         | 10         |
| Practical classes (C)                                   |                    | 186        | 96         | 90         |
| <b>Independent work of the student (IW), including:</b> |                    | <b>154</b> | <b>110</b> | <b>44</b>  |
| <i>Preparing for classes (CP)</i>                       |                    | 136        | 104        | 32         |
| <i>Preparing for continuous assessment (CAP)</i>        |                    | 12         | 6          | 6          |
| <i>Preparation for interim assessment (IAP)</i>         |                    | 6          |            | 6          |
| Interim assessment                                      |                    | 36         |            | 36         |
| <b>Type of interim assessment</b>                       | pass/fail test (T) |            |            |            |
|                                                         | exam (E)           | E          |            | E          |
| <b>TOTAL: TOTAL credit value</b>                        | hrs.               | <b>396</b> | <b>216</b> | <b>180</b> |
|                                                         | credits            | <b>11</b>  | <b>6</b>   | <b>5</b>   |

#### 4.2. Contents of the Discipline

##### 4.2.1. Topics of Discipline Lectures and Academic Hours per Semester

| No.            | Lecture Topic                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Hours |
|----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|
| 1              | 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 3     |
| Semester No. 9 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |       |
| 1.             | Pathological tooth wear. Etiology. Definition of the terms "physiological", "delayed" and "pathological" wear of hard tissues of the crowns of teeth. Objective examination methods. Study of diagnostic models. Classification of pathological wear by severity and extent. Orthopedic and complex (orthodontic and orthopedic) treatment of localized pathological wear. The role of surgical interventions (compact osteotomy) in accelerating the remodeling of bone tissue of the alveolar processes (parts) of the jaws. Generalized form. Clinical manifestations: with a decrease in the height of the lower face in centric occlusion and without a decrease in height. Otoneurological Costen's syndrome. Differentiated approach to complex treatment. Features of treatment with intact dentition and partial absence of teeth | 2     |
| 2.             | Temporomandibular joint disorders. Etiology and pathogenesis of arthrosis and arthritis. Dislocations and subluxations. Physical examination methods. Diagnosis. First aid and treatment                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 2     |
| 3.             | The role of orthodontic appliances in complex therapy. The influence of denture designs on the development of dental and jaw disorders (occlusal, articular, and muscular). Differential diagnosis. Prevention methods                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 2     |
| 4.             | Anatomical, morphological, and physiological-functional features of the TMJ. Classification and examination methods. Etiology and pathogenesis of TMJ diseases. Habitual dislocations and subluxations of the mandible. Habitual dislocations of the intra-articular meniscus. Parafunction of the masticatory, facial, and tongue muscles. Arthritis and arthrosis of the TMJ                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 2     |
| 5.             | Orthopedic treatment of neuromuscular dysfunction syndrome, habitual dislocations and subluxations of the mandible, and occlusion-articulation syndrome. Treatment of easily reducible and chronic meniscus dislocations. Orthopedic and comprehensive treatment of acute and chronic arthritis and arthrosis                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 2     |

|                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |           |
|-----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
|                 | <b>Hours per semester total</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | <b>10</b> |
| Semester No. 10 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |           |
| 1.              | Maxillofacial orthopedics. Principles of comprehensive treatment of gunshot and non-gunshot fractures. Classification of complex maxillofacial devices. Treatment methods for stiff fractures. Laboratory-made splints and devices. Methods of fabricating prostheses during surgical interventions, designs of forming devices. Orthopedic treatment for malunion of jaw fractures, pseudoarthrosis, contractures, microstomia. Orthopedic treatment methods for defects of the hard and soft palate. Exoprostheses                                                                                               | 2         |
| 2.              | Organization of orthopedic dental care in the army during peacetime. Organization of orthopedic dental care in the troops during wartime. Structure and scope of orthopedic dental care in a single hospital base. Frontline dental detachment and its subdivisions. Orthopedic and mobile dental departments, the procedure for providing orthopedic dental care. Complete standard equipment. Features of providing orthopedic care in cases of radiation injury                                                                                                                                                 | 2         |
| 3.              | Orthopedic treatment of edentulous areas using implants. Implantation methods: direct, one-stage, and two-stage. Theoretical foundations of implantation. Implant design. The body's reaction to a foreign body. The implant-soft tissue interface. Interaction between the implant and the gum. The implant-bone interface. Types of tissue reaction to implants. Primary bone integration. Functional adaptation. Bone fusion. Indications and contraindications for implantation. Bone biology. Bone tissue cells. Macrostructure and bone structure. Macrostructure of the jaws, buttresses. Bone regeneration | 2         |
| 4.              | Implantation materials. Biomaterials. Biocompatible materials. Morphology of implant biocompatibility. Mechanisms of osteogenesis. Stages of contact osteogenesis. Connective tissue integration. Distal osteogenesis. Functional ankylosis. Implant-gingival mucosa fusion. Treatment planning. Principles of implant planning. Planning objectives. Computed tomography. Selecting the number of implants. Methods of implant restoration. Calculating the number of implants in completely edentulous cases. Selecting the shape and size of implants. Bone architecture type                                   | 2         |
| 5.              | Pathological changes in the body, tissues, and oral organs associated with the presence of dentures. Clinical manifestations of pathological conditions: allergies, paresthesia, galvanism, etc. Pathogenesis, diagnosis, and differential diagnosis. Oncological alertness. Prevention and treatment methods                                                                                                                                                                                                                                                                                                      | 2         |
|                 | <b>Hours per semester total</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | <b>10</b> |

#### 4.2.2. Topics of Discipline Practical Classes and Academic Hours per Semester

| No.            | Practical Class Topic                                                                                                                                                                                                                                                                                                                                                    | Hours |
|----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|
| 1              | 2                                                                                                                                                                                                                                                                                                                                                                        | 3     |
| Semester No. 9 |                                                                                                                                                                                                                                                                                                                                                                          |       |
| 1              | Pathological abrasion of natural teeth. Definitions of the terms "physiological," "delayed," and "increased" abrasion. Definition of the term "pathological" abrasion as a functional impairment of hard tissues and dental crowns. Etiology. Pathogenesis                                                                                                               | 6     |
| 2              | Classification of clinical forms of dental changes associated with pathological abrasion without disruption of dental continuity (intact), without loss of lower facial height, and with loss of centric occlusion. Diagnostics, including temporomandibular joint tomography, arthrography, and X-ray cephalometry. Practical training – practical skills demonstration | 6     |
| 3              | Localized pathological wear with intact dentition. Orthopedic or combined (orthodontic and orthopedic) treatment methods.                                                                                                                                                                                                                                                | 6     |

|    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |   |
|----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|
|    | Practical training – practical skills demonstration                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |   |
| 4  | Generalized form of decompensated increased abrasion with intact dentition and decreased lower facial height. Orthopedic treatment, methods of fabricating bridges and removable clasp dentures with cast occlusal onlays.<br>Practical training – practical skills demonstration                                                                                                                                                                                                                                                                                              | 6 |
| 5  | Generalized form of increased abrasion with intact dentition without reduction in the height of the lower face (compensated form). Clinical presentation, diagnostics, stages of combined orthopedic and orthodontic treatment.<br>Practical training – practical skills demonstration                                                                                                                                                                                                                                                                                         | 6 |
| 6  | Orthopedic treatment of various forms of increased tooth wear complicated by partial secondary edentia. Restoration of the anatomical shape of teeth, dental arches, and dental function.<br>Practical training – practical skills demonstration                                                                                                                                                                                                                                                                                                                               | 6 |
| 7  | Deformation of dental arches and bite associated with pathology of hard dental tissues with preserved dental arches                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 6 |
| 8  | Dental arch and occlusion deformities associated with periodontal dysfunction. Orthopedic treatment methods.<br>Practical training – practical skills demonstration                                                                                                                                                                                                                                                                                                                                                                                                            | 6 |
| 9  | Deformation of the dental arches as a result of partial secondary adentia. Popov-Godon phenomenon. Clinical features, diagnosis, treatment. Clinical varieties (forms)                                                                                                                                                                                                                                                                                                                                                                                                         | 6 |
| 10 | Malocclusion due to partial edentulism. Pathogenesis. Clinical presentation. Diagnostics. Formulation of diagnosis. Differential diagnostics. Patient management: orthodontic treatment aimed at normalizing the malocclusion; orthopedic treatment aimed at restoring the original height of the lower face in central occlusion and missing teeth with prosthetics, as indicated                                                                                                                                                                                             | 6 |
| 11 | Dentoalveolar anomalies in adults. Special examination methods for patients with anomalies                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 6 |
| 12 | Anomalies of shape, quantity and position. Clinical forms. Etiology. Pathogenesis. Clinical picture. Diagnostics. Methods of orthodontic, orthopedic and surgical treatment.<br>Practical training – practical skills demonstration                                                                                                                                                                                                                                                                                                                                            | 6 |
| 13 | Demonstration by an assistant to adult patients with anomalies of the dental system:<br>- anomaly of the shape, number and position of teeth<br>- dental anomaly<br>- anomalies in the relationship of dental arches (occlusion).<br>Noting that, unlike in children, anomalies are typically associated with hard tissue pathology of the crowns and partial tooth loss. Treatment for adult anomalies is comprehensive, including surgical (compact osteotomy, if indicated), orthodontic, and orthopedic treatments.<br>Practical training – practical skills demonstration | 6 |
| 14 | Dental anomalies combined with dental hard tissue pathology and partial dental absence. Etiology. Pathogenesis. Clinical manifestations. Diagnosis                                                                                                                                                                                                                                                                                                                                                                                                                             | 6 |
| 15 | Methods of orthodontic treatment, orthopedic correction, and dental prosthetics (as indicated).<br>Practical training – practical skills demonstration                                                                                                                                                                                                                                                                                                                                                                                                                         | 6 |
| 16 | Reinforcement of the theoretical section on the topics of the 9th semester; working with case studies; test control.<br>Development and consolidation of practical skills: all forms of patient examination; clinical judgment; diagnosis; tooth preparation; impression taking; determination of centric occlusion (central jaw relationship); identification and correction of errors during orthopedic treatment; occlusion correction; placement of dentures in the mouth                                                                                                  | 6 |

|                 | Hours per semester total                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 96 |
|-----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|
| Semester No. 10 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |    |
| 1               | <p>Temporomandibular joint disorders. Classification (muscular-articular dysfunction, traumatic arthritis and arthrosis). Diseases associated with occlusion pathology and occlusal relationships disorders in case of anomalies, partial absence of teeth, deformations of dental arches and bite, pathological abrasion. TMJ disorders caused by incorrect (poor-quality) dentures. Pathogenesis. Clinical presentation. Consultations with a rheumatologist, neurologist, general orthopedist. Methods of specialized study of the morphological and functional state of occlusal relationships and TMJ: computed tomography; X-ray cinematography, arthrography, etc. Study of mandibular movements using the Kleinrock-Khvatova-Shestopalov functionograph, with the use of a face bow and articulators (average anatomical, individual). Functional analysis. Rationale for orthopedic treatment methods and stages.</p> <p>Practical training – practical skills demonstration</p> | 6  |
| 2               | <p>Criteria for the restoration of occlusal surfaces of dental arches and occlusal relationships during mandibular movements. Identification of characteristic occlusion surfaces, random contact points, and surfaces blocking mandibular movements. Application of occlusography with densitometric analysis of contact density.</p> <p>Indirect orthopedic treatment of non-carious lesions of hard tissue using veneer crowns made of photocomposites.</p> <p>Practical training – practical skills demonstration</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 6  |
| 3               | <p>Orthopedic treatment with combined denture designs for partially edentulous patients. Use of composite bridges. Parallelometric milling using telescopic crown and clasp systems for connecting and fixing combined denture designs. Specific aspects of orthopedic treatment for patients with complete edentulism during re-prosthetics and with reduced lower facial height. Double bases (bases with an elastic lining) for edentulous jaws. Indications and manufacturing method. Use of articulator systems with arches (Arcon system).</p> <p>Practical training – practical skills demonstration</p>                                                                                                                                                                                                                                                                                                                                                                           | 6  |
| 4               | <p>Maxillofacial orthopedics. Principles of comprehensive treatment of gunshot and non-gunshot fractures. Classification of complex maxillofacial devices. Treatment methods for stiff fragments. Demonstration of laboratory-made splints and appliances. Orthopedic treatment methods for pseudoarthrosis, malunion of jaw fractures, mandibular bone defects, and microstoma.</p> <p>Practical training – practical skills demonstration</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 6  |
| 5               | <p>Orthopedic treatment methods for defects of the hard and soft palate. Methods for fabricating prostheses during surgical interventions, and the design of forming devices.</p> <p>Practical training – practical skills demonstration</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 6  |
| 6               | <p>Orthopedic treatment of adentia using implants. Implant - definition, design features of the main types of implants, requirements for structural materials. Features of examination of patients with partial or complete adentia. Contraindications and indications for the use of implants. Specifics of radiographic examinations and radiograph reading. Determination of bone volume parameters of the edentulous jaw - 1) the distance from the alveolar ridge to the mandibular canal or the floor of the maxillary sinus and nasal cavity; 2) determination of the vestibular dimension directly in the oral cavity and on diagnostic models; 3) thickness of the alveolar mucosa.</p> <p>Practical training - practical skills demonstration</p>                                                                                                                                                                                                                               | 6  |
| 7               | <p>Implantation methods – immediate, delayed, one- and two-stage. Analysis of the immediate implantation method when removing one (two) teeth (roots) for medical reasons. Methods of implant(s) fixation. Types and methods of orthopedic</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 6  |

|    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |           |
|----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
|    | treatment using implants as supporting elements. Memory metals in implantology. Sequence of clinical and laboratory techniques for one- and two-stage implantation. Equipment and instruments. Criteria for assessing the condition of implants.<br>Practical training – practical skills demonstration                                                                                                                                                                                                                                                                                                                                                                                                                                                 |           |
| 8  | Abutment selection. Gum former. Taking an impression. Temporary crown placement. Laboratory-fabricated crown. Single-crown screw-retained restoration. Impression techniques. Open tray, direct transfer method. Impression of the prepared abutment. Impression at the abutment level. Impression at the implant level.<br>Practical training – practical skills demonstration                                                                                                                                                                                                                                                                                                                                                                         | 6         |
| 9  | Dental implant creation diagram. Dental implant classification. Installation of an analog and soft tissue imitation. Removal of the former and installation of the abutment. Placement of transfers. Relining of the temporary prosthesis. Custom impression tray. Screw-retained bridge. Cement-retained bridge. Clinical and laboratory stages of fabrication.<br>Practical training – practical skills demonstration                                                                                                                                                                                                                                                                                                                                 | 6         |
| 10 | Removable denture on ball abutments. Removable denture on a beam. General examination. Extraoral examination. Intraoral examination. Intraoral palpation. Preoperative diagnostics. Treatment plan. Bone volume. Implantation techniques. Autologous bone transplantation.<br>Practical training – practical skills demonstration                                                                                                                                                                                                                                                                                                                                                                                                                       | 6         |
| 11 | Single defects of the dentition. Included defects of the dentition. Terminal defects of the dentition. Complete edentia. Risk factors during implantation. Clinical and late complications of implantation.<br>Practical training – practical skills demonstration                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 6         |
| 12 | Features of orthopedic treatment for patients with chronic diseases of the oral mucosa. The role of conservative and complex treatment, rationale for initiating orthopedic treatment. Selection of structural materials. Techniques for chemical and galvanic silvering and gold plating of base materials.<br>Practical training – practical skills demonstration                                                                                                                                                                                                                                                                                                                                                                                     | 6         |
| 13 | Pathological changes in the body, tissues, and organs of the oral cavity associated with the presence of dentures. Clinical manifestations of pathological conditions: allergies, paresthesia, galvanism, etc. Pathogenesis, clinical presentation, differential diagnosis, and oncological alertness. Differential diagnosis of galvanism phenomena (chemical and mechanical damage, allergic reactions to denture materials). Analysis of saliva composition, blood and urine tests, allergy tests, and other clinical tests. Differential diagnosis of oral mucosal lesions from base materials and manifestations of common oral diseases. Fundamentals of prevention and treatment methods.<br>Practical training – practical skills demonstration | 6         |
| 14 | Diagnostic, tactical, deontological, and technological errors made by dentists. Complications during and after treatment. The concepts of "errors" and "complications." Detection methods. Responsibilities of the dentist and dental technician. Patient responsibility for denture care. The role of oral hygiene                                                                                                                                                                                                                                                                                                                                                                                                                                     | 6         |
| 15 | Esthetics in prosthetic dentistry. General anthropometric patterns in human body structure. Implementation of aesthetic principles in denture designs                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 6         |
|    | <b>Hours per semester total</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | <b>90</b> |

#### 4.2.3. Independent Work of the Student

| No. | Name of the Discipline Section | Type of IW | Total Hours |
|-----|--------------------------------|------------|-------------|
| 1   | 3                              | 4          | 5           |

| Semester No. 9                  |                                                                                                                                                                                                                                                                                                                                |                                                                         |           |
|---------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------|-----------|
| 1                               | Reception of patients with pathological abrasion and deformation of dental arches at the stages of orthodontic and orthopedic treatment                                                                                                                                                                                        | Written report on select questions, preparing for continuous assessment | 13        |
|                                 | Reception of patients with fixation of orthodontic devices; at the stages of orthopedic treatment                                                                                                                                                                                                                              |                                                                         | 13        |
|                                 | Treatment of patients with deformations of dental arches with partial absence of rows                                                                                                                                                                                                                                          |                                                                         | 12        |
|                                 | Mastering anthropometric methods for studying diagnostic models; analysis of teleroentgenograms                                                                                                                                                                                                                                |                                                                         | 12        |
|                                 | Mastering the methods of activating orthodontic devices                                                                                                                                                                                                                                                                        |                                                                         | 12        |
|                                 | Manufacturing of a wax model of a mouth guard with guide planes for moving the jaw to the side using phantom models                                                                                                                                                                                                            |                                                                         | 12        |
|                                 | A localized form of pathological abrasion with intact dental arches                                                                                                                                                                                                                                                            |                                                                         | 12        |
|                                 | Preparation of teeth with a localized form and the presence of space for restoring the anatomical shape under one-piece combined crowns                                                                                                                                                                                        |                                                                         | 12        |
|                                 | Taking impressions of a patient with dental deformities; casting models; manufacturing a base with a bite pad from quick-hardening plastic                                                                                                                                                                                     |                                                                         | 12        |
| <b>Hours per semester total</b> |                                                                                                                                                                                                                                                                                                                                | <b>110</b>                                                              |           |
| Semester No 10                  |                                                                                                                                                                                                                                                                                                                                |                                                                         |           |
| 1                               | Mastering the methods of palpation and auscultation in the area of the TMJ projection                                                                                                                                                                                                                                          | Written report on select questions, preparing for continuous assessment | 5         |
| 2                               | Mastering the methods of palpation and auscultation in the area of the TMJ projection                                                                                                                                                                                                                                          |                                                                         | 5         |
| 3                               | Criteria for the restoration of occlusal surfaces of dental arches and occlusal relationships during mandibular movements. Identification of characteristic occlusion surfaces, random contact points, and surfaces blocking mandibular movements. Application of occlusography with densitometric analysis of contact density |                                                                         | 7         |
| 4                               | Maxillofacial orthopedics. Principles of comprehensive treatment of gunshot and non-gunshot fractures                                                                                                                                                                                                                          |                                                                         | 5         |
|                                 | Orthopedic treatments for pseudoarthrosis, malunion of jaw fractures, mandibular bone defects, and microstoma. Patients are admitted on an inpatient basis                                                                                                                                                                     |                                                                         | 7         |
|                                 | Orthopedic treatments for defects of the hard and soft palate. Patients are admitted on a hospital basis                                                                                                                                                                                                                       |                                                                         | 5         |
|                                 | Diagnostic, tactical, deontological, and technological errors made by dentists. Hospital-type patient admissions                                                                                                                                                                                                               |                                                                         | 5         |
|                                 | Screw-retained bridge. Cement-retained bridge. Clinical and laboratory stages of fabrication                                                                                                                                                                                                                                   |                                                                         | 5         |
| <b>Hours per semester total</b> |                                                                                                                                                                                                                                                                                                                                |                                                                         | <b>44</b> |

## 5. REQUIREMENTS FOR IMPLEMENTATION OF DISCIPLINE

### 5.1. Discipline Requirements for Educational Materials and Provided Information

#### Essential reading

| No. | Name/Title, Resource Type | Author(s)/Editor | Publisher Imprint, Web Address | Number of Copies (accesses) in |
|-----|---------------------------|------------------|--------------------------------|--------------------------------|
|-----|---------------------------|------------------|--------------------------------|--------------------------------|

|          |                                                         |                                                                           |                                                                                                               | <b>the Library and Information Center</b> |
|----------|---------------------------------------------------------|---------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------|-------------------------------------------|
| <b>1</b> | <b>2</b>                                                | <b>3</b>                                                                  | <b>4</b>                                                                                                      | <b>5</b>                                  |
| <b>1</b> | Orthopedic Dentistry: Textbook [Electronic resource]    | N. N. Abolmasov, N. G. Abolmasov, I. N. Abolmasov                         | M.: GEOTAR-Media, 2024. - 680 p. URL: <a href="http://www.studentlibrary.ru">http://www.studentlibrary.ru</a> | Unlimited access                          |
| <b>2</b> | Orthopedic Dentistry: Textbook for Medical Universities | edited by E.S. Kalivradzhiyan, I.Yu. Lebedenko, E.A. Bragin, I.P. Ryzhova | M.: GEOTAR-Media, 2020. - 799, [1] p.                                                                         | 25                                        |
| <b>3</b> | Dental materials science: textbook                      | edited by S.N. Razumova                                                   | M.: GEOTAR-Media, 2025. - 168 p. - EBS "Student Consultant"                                                   | Unlimited access                          |

#### Supplementary reading

| <b>No.</b> | <b>Name/Title, Resource Type</b>                                          | <b>Author(s)/Editor</b>                                                       | <b>Publisher Imprint, Web Address</b>                                                                             | <b>Number of Copies (accesses) in the Library and Information Center</b> |
|------------|---------------------------------------------------------------------------|-------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------|
| <b>1</b>   | <b>2</b>                                                                  | <b>3</b>                                                                      | <b>4</b>                                                                                                          | <b>5</b>                                                                 |
| <b>1</b>   | Microprosthetics in Dentistry: Textbook [Electronic resource]             | Abakarov S.I., D.V. Sorokin, D.S. Abakarova                                   | M.: GEOTAR-Media, 2019. - 384 p. URL: <a href="http://www.studentlibrary.ru">http://www.studentlibrary.ru</a>     | Unlimited access                                                         |
| <b>2</b>   | Orthopedic Dentistry. Propaedeutic Course: Textbook [Electronic resource] | V.N. Trezubov, V.V. Trezubov; edited by V.N. Trezubova                        | Moscow: GEOTAR-Media, 2024. - 624 p. URL: <a href="http://www.studentlibrary.ru">http://www.studentlibrary.ru</a> | Unlimited access                                                         |
| <b>3</b>   | Introduction to prosthetic dentistry : Textbook                           | A.V. Sevbitov, M. Yu. Kuznetsova, V.V. Borisov [et al.]; ed. by A.V. Sevbitov | M. : MIA , 2020. - 56 p. - EBS "Medlib"                                                                           | Unlimited access                                                         |

#### Online resources

1. Electronic library system "Student Consultant" <http://studmedlib.ru/>
2. Electronic library system "University Library Online" <http://www.biblioclub.ru/>
3. Electronic library system "Urait" <https://urait.ru/>
4. Electronic library system "BookUp" <https://www.books-up.ru/>
5. Resources owned by the Library and Information Center of FSBEI HE PSMU of the Ministry of Health of Russia <https://tgmu.ru/university/bibliotechno-informacionnyj-centr/resursy-bic/sobstvennye/>

Online resources and respective user guides are available on the Library and Information Center website [Library and Information Center — PSMU \(tgmu.ru\)](http://Library and Information Center — PSMU (tgmu.ru))



## **5.2. Discipline Requirements for Facilities and Resources**

Information on the facility and resource availability and requirements of the discipline is available on the [Facility and resource availability and requirements. FSBEI HE PSMU of the Ministry of Health of Russia \(tgmu.ru\)](http://tgmu.ru) page of the official website of the university.



## **5.3. List of Information Technologies, Information and Reference Systems, Licensed and Free Software (Including Domestically-developed Software):**

1. PolycomTelepresence M100 Desktop Conferencing Application (Videoconference system)
2. SunRav Software tTester
3. 7-PDF Split & Merge
4. ABBYYFineReader
5. Kaspersky Endpoint Security
6. INDIGO online testing system
7. Microsoft Windows 7
8. Microsoft Office Pro Plus 2013
9. 1C:University
10. GARANT system
11. MOODLE (Modular Object-Oriented Dynamic Learning Environment)

## **6. ASPECTS OF THE IMPLEMENTATION OF THE DISCIPLINE FOR STUDENTS WITH DISABILITIES AND SPECIAL NEEDS**

### **6.1. Availability of Accessible Environment**

For students with disabilities and special needs, if a written application is submitted, lectures and practical classes are carried out taking into account health limitations, individual capabilities and medical status (hereinafter referred to as individual characteristics) of the student. Compliance with the following general requirements is ensured: teaching aids for collective and individual use are provided, required technical assistance is provided by an assistant; buildings and premises where lectures and practical classes are taking place meet accessibility requirements, other arrangements lack of which makes it impossible or difficult to master the discipline are made.

### **6.2. Ensuring Compliance with General Requirements**

When lectures and practical classes are carried out at the written application of the student, the following general requirements are met: lectures and practical classes for students with disabilities and special needs take place at the same location as for students who do not have disabilities, if this does not cause difficulties for students; an assistant (assistants), who provide(s) students with the necessary technical assistance taking into account individual characteristics of the student, is (are) provided; necessary teaching aids are provided, taking into account individual characteristics of the student.

### **6.3. Availability of the Internal Policies and Procedures of FSBEI HE PSMU of the Ministry of Health of Russia to Students with Disabilities in a Format Accessible to Them.**

All internal policies and procedures of FSBEI HE PSMU of the Ministry of Health of Russia concerning the discipline are made available to students with disabilities in a format accessible to them.

### **6.4. Increase in the Time Limit of Interim Assessment for Students with Disabilities and Special Needs in Relation to the Established duration**

Format of the interim assessment of academic performance within the scope of the discipline conducted for students with disabilities and special needs is selected taking into account individual characteristics of the students (orally, by writing on paper, by typing on a computer, as a test, etc.). The duration of the interim assessment in relation to the established duration is increased at the written application of the student with disabilities. Time limit for the student's preparation for the test is increased by at least 0.5 hours.

## 7. STAFFING REQUIREMENTS OF THE DISCIPLINE

Academic teaching personnel that ensure the implementation of the discipline education process meet the requirements of the Federal State Educational Standard of Higher Education for the **31.05.03 Dentistry** specialty; list of the aforementioned personnel is available on the website of the educational organization.



## 8. TUTORIAL WORK

| Type of tutorial work         | Forms and approaches to tutorial work                                                                                                                                                                                                                                 | Assessment criteria |
|-------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|
| Assistance in personal growth | Overt<br>Talks and problem-centric debates aimed at promotion of healthy lifestyle.<br>Participation in interdepartmental conferences aimed at formation of healthy lifestyle and development of skills necessary to preserve and improve health.                     | Portfolio           |
|                               | Covert – creating atmosphere and infrastructure.<br>Developing a culture of healthy lifestyle, the ability to preserve and improve health.<br>Creating atmosphere of kindness and respect with a high level of communication during implementation of the discipline. |                     |
| Civic position and values     | Overt<br>Conducting events that facilitate development of civil culture (roundtable discussions, discussions/debates, and talks).<br>Short discussions on current significant events in case the latter occur.                                                        | Portfolio           |
|                               | Covert<br>Focusing on civic values-oriented position and legal awareness.<br>Cultivating mindful social position during professional activity.                                                                                                                        |                     |
| Social values                 | Overt<br>Highlighting aspects of organization of healthy lifestyle based on health-preserving technologies.<br>Highlighting ecology-related questions, environmental issues as a factor affecting population health and select population risks.                      | Portfolio           |
|                               | Covert<br>Identification in social structure during period of education and in professional activity.                                                                                                                                                                 |                     |